

## FINAL REPORT

# Designing a Household Survey of Injuries and Illnesses

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**PRESENTED TO:**

Elizabeth Rogers  
Karen Shahpoori  
US Department of Labor  
Bureau of Labor Statistics  
2 Massachusetts Ave, NW  
Washington, DC 20212

**PRESENTED BY:**

NORC at the University of Chicago  
55 East Monroe Street, 30th Floor  
Chicago, IL 60603  
Phone (312) 759-4000

**AUTHORS:**

Lisa Lee  
Kennon Copeland  
Kristen Neishi  
David Gleicher  
Nola du Toit  
Rene Bautista



*at the* UNIVERSITY *of* CHICAGO

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**Executive Summary**

## Executive Summary

The Survey of Occupational Injuries and Illnesses (SOII) is the primary source of information for the Bureau of Labor Statistics (BLS) on nonfatal workplace injuries and illnesses (Wiatrowski, 2014a). In this surveillance system, sampled employers maintain logs on workplace injuries and illnesses that occur during a specified reference period that meet recordability requirements for occupational injuries and illnesses as defined by the Occupational Safety and Health Administration (OSHA, U.S. Occupational Safety and Health Administration, 2014). The SOII estimates are subject to underreporting due to potential filtering effects on reporting of work-related injuries and illnesses (Wiatrowski, 2014b). Employers may wish to underreport or misclassify injuries and illnesses to keep injury and illness rates low. Further, the employer may not be aware of reportable events that occurred because some workers do not report incidents due to concern that they may risk losing their job or other opportunities such as a raise or promotion.

One way to reduce underreporting due to the effects of filtering is to collect information on workplace injuries and illnesses directly from workers in a household survey. NORC assisted BLS in developing a survey design and questionnaire for a household survey on nonfatal occupational injuries and illnesses (HSOII). The current report (Deliverable #16) presents the work that NORC completed in developing a survey design and a questionnaire for the HSOII. The reports, pretesting materials, draft questionnaire, cognitive interview protocols, memos, and final questionnaire that NORC produced are included in separate sections of this report and in a series of appendices.

Section 1 of this report includes the Report on Suitability of Existing Surveys and Frames (Deliverable #5). This report presents an assessment of the suitability of existing surveys and sampling frames for a household survey or survey module on occupational injuries and illnesses. The key factor that limits the existing surveys that could be used as the vehicle for an HSOII survey module is sample size due to the need to have sufficient sample to allow for calculation of estimates by selected industry and occupation groups. The most cost effective option for the HSOII would be to add a supplemental module to an existing survey. The report discusses the three existing surveys that could potentially provide sufficient sample sizes for this purpose—the American Community Survey (ACS), the Current Population Survey (CPS), and the Behavioral Risk Factor Surveillance System (BRFSS). Of these three, the CPS is the only one that, for various reasons, appears feasible; this survey also provides advantages in terms of the existing collection of employment, industry and occupation data that would be relevant to HSOII. A second, more costly, option would involve using the data from one of these three surveys to screen and

select sample for a standalone follow-up survey. The National Immunization Survey (NIS) could also be used for this purpose. The NIS, unlike the other three existing surveys, provides the opportunity to include an HSOII screener directly in the survey to identify eligible sample for an HSOII follow-up survey. A third, even costlier, option would be to develop an HSOII sample design using an existing sample frame. The feasibility and cost effectiveness of this option is limited in comparison to the other available options; no data on employment/industry/occupation for selected housing units would be available, as would be the case if drawing sample from an existing survey. The report presents additional options for developing a sample frame for HSOII, include the use of multiple surveys, implementing a multi-year survey, or use of a panel survey.

The Report on Household Survey Design (Deliverable #9) in Section 2 of this report presents survey design options given the requirements of sample representativeness, data quality, timeliness, and cost for the HSOII. The research conducted for this report led to the conclusion that the option that best meets the multiple requirements of the HSOII is to conduct the survey through the use of supplemental questions following the CPS Annual Social and Economic Survey (ASEC, also referred to as the March supplement). Persons eligible for the HSOII could be determined immediately after completion of the CPS and ASEC interview, based on data that had been collected during the interview. This option, however, would add burden for those respondents who qualify for the full HSOII interview based on reporting a workplace injury/illness in the HSOII screener. An alternative option that would result in lower burden would be to add the HSOII screening questions to the CPS in another month, such as June or July, when no other major supplements are typically conducted. If the option of adding questions to the CPS is not feasible, another alternative is to use the ACS as a sample frame for the HSOII and conducting a separate standalone survey. This option would entail higher costs but would add flexibility to the sample design and stratification by allowing selected industries and occupations to be targeted, which would not be possible with the CPS options.

NORC presented the work on the HSOII survey design to BLS on June 12, 2016 (Deliverable #10). The slides from this presentation are included in Appendix A.

The Instrument Design activities included a literature review on existing questions on workplace injury and illness, preparation of materials for a submission to the Office of Management and Budget (OMB, including materials for respondent recruitment, draft HSOII questionnaire and protocol), iterative testing of the questionnaire in three rounds of cognitive interviews, preparation of a final report, and a presentation to BLS.

Section 3 of this report presents the Report on Existing Questions and Survey Instruments on Workplace Injuries and Illnesses (Deliverable #6). This report includes a review of the literature on methodological issues related to accurate reporting of information on workplace injuries and illnesses and proxy reporting; the report also includes findings from a search for existing questions that measure concepts relevant to the HSOII. The literature review on existing questions covered methods for screening for potential instances of workplace injury and illness and items on characteristics of the injury/illness, details on the worker's occupation and industry, and demographic questions. Finally, the report presents considerations in designing the HSOII. Differences between the establishment SOII and a household version need to be considered in the design of the HSOII, such as the use of employer vs. household member as respondent, and the longer reference period for recall that a household survey would entail in comparison to the SOII recordkeeping task. Helping respondents to the HSOII understand what type of incidents are eligible to be reported, prompting recall over a 12-month reference period, and proxy reporting are key challenges in designing the HSOII.

Section 4 of this report includes the full package of materials that NORC prepared for BLS to submit for Office of Management and Budget (OMB) clearance (Deliverables #7, #11, and #12). This package presents the methodology of the cognitive testing of the HSOII instrument, as well as sample recruitment materials, an eligibility screener, cognitive interview protocol with draft HSOII instrument, and a participant consent form. The study procedures and materials were approved by OMB and were reviewed and approved by the NORC Institutional Review Board (IRB) as well.

NORC conducted three rounds of cognitive testing of the draft HSOII questionnaire and delivered memos to BLS after each round (Deliverable #13). Cognitive testing was conducted with a total of 64 respondents. Interviews were conducted in person during Round 1 of testing and moved to the phone mode during Round 2. Cognitive probing was conducted concurrently for most interviews, with retrospective probing for the final 13 interviews in order to accurately assess administration time. Fifty-eight of the participants were main respondents who were recruited to be interviewed about a workplace injury or illness. Six of the respondents were other adult household members of the main respondents; they were invited to serve as proxy respondents. Proxy and main respondent pairs reported on their own workplace injuries and illnesses (if any), and those of the other member of pair. The findings indicated that the main and proxy respondents were overall fairly accurate in reporting the workplace injuries and illnesses of other household members. Finally, the report presents administration timing by section for the final 13 timing interviews. Mean administration time (summed across mean timings per section) was 25.49 minutes; median timing was 24.66 minutes.

Appendices B through D include the memos from each round of pretesting and the cognitive interview protocols used in each round. Each memo presents detailed information on recruitment efforts, respondent characteristics, and cognitive interview findings from each round of testing, as well as recommended revisions to the questionnaire. Section 5 of this report presents the final Questionnaire Development Report (Deliverable #14). This report summarizes the three rounds of cognitive testing and provides a section-by-section discussion of the measurement objectives in each questionnaire section, highlights from the cognitive testing, and final decisions on revisions to the questionnaire. The final questionnaire begins with a Screener section that determines whether a respondent worked in the last 12 months. If a respondent did work, the next screener questions capture whether the respondent experienced a workplace injury or illness and the month/year in which the incident occurred. For each incident reported in the screener, the interviewer collects information on the characteristics of the injury/illness, medical attention that may have been received, effects of the injury/illness on work and on pay, occupation and industry at the time of the injury/illness, and demographic characteristics including current occupation and industry. A separate loop through the instrument is completed for each injury/illness captured in the screener. The information collected in the interview allows for determination of whether each injury/illness meets the criteria to be recordable.

NORC gave a presentation to BLS on the development and testing of the HSOII questionnaire On October 28, 2016 (Deliverable #15). Slides from this presentation are included in Appendix E. The final version of the HSOII questionnaire is presented in Appendix F. This version includes final changes decided upon after the final round of testing.

**Report on Suitability of Existing Surveys and Frames  
(Deliverable #5)**

# Survey Design and Questionnaire for a Household Survey on Occupational Injuries and Injuries

## Report on Suitability of Existing Surveys and Frames (Deliverable #5)

JANUARY 11, 2016

PRESENTED TO:  
U.S. Bureau of Labor Statistics  
2 Massachusetts Ave, NW  
WASHINGTON, DC 20212

PRESENTED BY:  
NORC at the University of Chicago  
Kennon R. Copeland, PhD  
Senior Vice President and Director  
Statistics and Methodology  
4350 East West Highway  
Bethesda MD 20814  
Phone (301) 634 9347



*at the* UNIVERSITY *of* CHICAGO

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## Executive Summary

The Bureau of Labor Statistics is seeking to develop a household survey on nonfatal occupational injuries and illnesses (HSOII) to provide information on the level of underestimation of incidence rates from the Survey of Occupational Injuries and Illnesses and to provide information relative to the potential reasons for the underestimates. This report provides NORC's assessment of the suitability of existing surveys and sampling frames for potential use for a household occupational injury and illness module or follow-on survey. The key limiter in terms of what existing surveys could be used as a single sampling frame for the HSOII is sample size, given the need to provide sufficient sample to allow estimates by selected industry and occupation groups. Other factors such as respondent rules, availability of information on employment/industry/occupation/injuries/illnesses, and timing of data collection and release also affect the extent to which an existing survey is suitable for use as a sampling frame for the HSOII.

The least expensive option for implementing the HSOII would be to add a supplemental module to an existing survey (referred to as Option 1 in this report), as contact/response conversion efforts and associated costs are already covered through the existing survey. Only three existing surveys – the American Community Survey (ACS), the Current Population Survey (CPS), and the Behavioral Risk Factor Surveillance System (BRFSS) – offer sufficient sample sizes for such a design. Adding a supplemental HSOII module to the ACS raises substantial feasibility issues in obtaining approvals, while adding to the BRFSS raises substantial operational issues given the federal-state cooperative nature of the survey and states' determining which modules to include. Thus, CPS appears to be the only existing survey that can be considered for use as a single frame approach in which a supplemental HSOII module is added to an existing survey. CPS offers other advantages as well, such as currently collecting employment/industry/occupation data and having short data collection and release periods.

A second, but more expensive option would be to utilize data from an existing survey to screen and select sample for a HSOII conducted as a follow-up survey to the existing survey (referred to as Option 2 in this report). For this option, CPS, ACS, and BRFSS again offer sufficient sample sizes for consideration; however, employment data for BRFSS are collected only if a state-optional module is implemented and thus it would be more difficult to efficiently identify HSOII-eligible individuals from BRFSS. A refinement to this option, which would add the National Immunization Survey (NIS) as a candidate survey in light of its large sample size of selected housing units, would be to add HSOII-specific screener questions to an existing survey and utilize the expanded existing survey data to screen and select sample for a HSOII conducted as a follow-up survey to the existing survey (referred to as Option 3 in this report).

A third, but still more expensive, option would be to develop a sample design specific to HSOII utilizing an existing sampling frame, such as Census Master Address File, United States Postal Service Delivery Sequence File, or landline and telephone numbers (referred to as Option 5 in this report). This option would not have access to information on employment/industry/occupation for housing units and would thus result in a less efficient sample design than that possible under Options 2 or 3. Given the availability of existing surveys under Options 1-3 and the higher costs with developing a sample from a sampling frame rather than from an existing survey, this option does not appear to offer advantages to warrant its recommendation.

Refinements to the selected option, through use of multiple surveys (referred to as Option 4 in this report), implementation of multi-year surveys (referred to as Option 6 in this report), and use of panel surveys (referred to as Option 7 in this report), could be considered made to reduce costs and/or recall error. There appear to be only four other existing surveys sample sufficient to be considered for Option 4: National Health Interview Survey (NHIS); Survey of Income and Program Participation (SIPP); AmeriSpeak (AS); and KnowledgePanel (KP), although issues of coordinating implementation across multiple surveys make such an approach less desirable should other alternatives be available. Options 6 and 7 appear to be the most promising refinements for Options 1-3, offering the ability to target smaller annual sample sizes and thus lower annual costs with a modification to the concept of the time period represented by annual estimates (Option 6) or allowing multiple contacts with sample HUs to reduce data collection costs and reduce recall error.

## 1. Introduction

The Survey of Occupational Injuries and Illnesses (SOII) is the primary source of information on nonfatal workplace injuries and illnesses. Existing research points to an underestimate of injuries and illnesses in the SOII attributed to a variety of factors including an employer/employee incentive to underreport these occurrences.

One way to avoid the filtering effect of collecting establishment data on employee injuries and illnesses is to collect data directly from workers in a household survey. In such a survey, workers eligible for the survey would be identified outside the sphere of the employer. The Bureau of Labor Statistics (BLS) has contracted with NORC at the University of Chicago (NORC) to provide assistance in the development of a survey design and questionnaire for a household survey on nonfatal occupational injuries and illnesses.

This report provides NORC's assessment of the suitability of existing surveys and sampling frames for potential use for a household occupational injury and illness module or follow-on survey. The assessment includes such factors as frame coverage, subject matter overlap, data collection mode, timeline, and cost. This report is intended to provide BLS with a comprehensive review of the key aspects of the existing surveys and sampling frames as they relate to the target population for a household survey of occupational injuries and illnesses (abbreviated in this report as HSOII), along with summary comparisons of the alternatives. This report is not intended to provide recommendations to BLS.

The report begins with background for the problem at hand – key issues associated with the design of a HSOII, including likely design options and the key assessment criteria used in this report. The set of existing surveys and sampling frames considered within this report is then identified. Assumptions made while carrying out the review and assessment of existing surveys are then presented. Detailed and summary information for each criterion is then presented, along with a discussion of implications as they relate to the HSOII. A summary discusses the relationship between the design options, and use of existing surveys, as well as the relative costs associated with the design options and use of existing surveys and sampling frames.

## 2. Background

The sample design for the HSOII must result in a nationally representative household survey of workers that allows estimates by employment relationship (employee vs. self-employed), sector (private vs. government), industry, and occupation meeting publishability/quality criteria for the HSOII.

Total sample size requirements are not addressed in this document, other than a discussion of relative magnitudes that would likely be required. For discussion purposes in this report, the assumption will be made that each sampled person will provide a full year of data for the survey, although we recognize other designs may be considered. This aspect will be addressed later, along with development of recommended data collection procedures.

### 2.1 Design Options

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Rather than developing a new survey design and sample for the HSOII, BLS would like to consider cost-efficient options that leverage existing surveys and/or sampling frames. Given this, several design options could be considered for the HSOII<sup>1</sup>. (See Appendix A for additional detail.)

1. Add a supplemental module to an existing survey. Under this option, BLS would work with the survey sponsor to add a module to the existing survey questionnaire to collect any additional data required for the HSOII.
2. Use data from an existing survey to screen for persons eligible for the HSOII, select a subsample of HSOII eligible persons, and conduct a follow-on survey to collect any additional data required for the HSOII.
3. A variant of Option 2 would be to add appropriate supplemental questions to the existing survey questionnaire to aid in screening for or stratifying persons eligible for the HSOII. As in Option 2, the enhanced data from the existing survey would be used to screen for persons eligible for the HSOII, select a subsample of HSOII eligible persons, and conduct a follow-on survey to collect any additional data required for the HSOII.
4. Utilize multiple surveys under Options 1, 2, and/or 3.
5. Utilize an existing sampling frame to develop an optimal sample design for the HSOII.

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<sup>1</sup> Options 1, 2, and 7 were identified in Survey of Occupational Injuries and Illnesses: Employee Survey Cost Benefit Analysis, May 12, 2015.

6. Implement any of Options 1-5 as a multi-year survey, analogous to the design utilized for the ACS, in which independent samples are interviewed each year and the data aggregated to create multi-year estimates. Such a design could support annual estimates at the national level and multi-year estimates for lower-level estimates, such as by industry and occupation.
7. Implement any of Options 2-6 as a panel survey, analogous to the rotation group design utilized for the CPS, in which sample persons are interviewed in more than one year. Under such an approach, persons sampled for the HSOII would be eligible for interview in multiple years. Note that this option cannot be used with Option 1 (Supplemental Module in Existing Survey) unless the existing survey utilizes a panel design.

## **2.2 Assessment Criteria**

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As stated in the RFP, assessment of HSOII sample frame options must take the following factors into consideration (reordered to reflect the sequence in which they are discussed within this document):

1. Does the survey frame or survey provide an adequate (i.e. unbiased) representation of the population of workers that are in scope for the proposed survey?
2. Is the mode conducive to asking questions that may involve recall bias?
3. Does the respondent selected to respond to the survey also serve as a proxy respondent for others in the household?
4. For existing surveys, is any of the information we wish to collect on occupation, industry, employment relationship, and/or occupational injuries and illnesses already collected?
5. Will the frame permit producing calendar year estimates in a time frame similar to that currently used by SOII?
6. Does the survey frame contain variables that would be useful (i.e. increase sampling efficiencies) for stratification?
7. Would the answers to questions 1-6 change if the survey is merely used to screen for potential respondents rather than including a full module of 15-20 questions on occupational injury and illness?

While information relevant to Factors 1-6 are presented in Section 5: Findings, Factor 7 is addressed, along with information on survey costs, in Section 6: Discussion.

### 3. Review and Assessment Scope

NORC has identified a set of fourteen existing surveys to consider for use in the HSOII using information provided by BLS<sup>2</sup> and NORC knowledge of government and non-governmental surveys. The final list includes the six surveys listed by BLS (CPS, NHIS, BRFSS, MEPS-HH, NHANES, and NLSY), five additional government surveys (ACS, NIS, SIPP, SCF, and NSFG), the General Social Survey (GSS), and two probability-based online panels (POPs) offered by NORC (AmeriSpeak, abbreviated here as AS) and GfK (KnowledgePanel, abbreviated here as KP). Table 3.1 lists the existing surveys, along with the organization conducting the survey, and the sampling frame used for the survey<sup>3</sup>.

**Table 3.1:** Existing surveys under consideration

Survey	Organization	Sampling Frame
American Community Survey (ACS)	Census	Census Master Address File (MAF)
Current Population Survey (CPS)	BLS, Census	Census Master Address File (MAF)
National Health Interview Survey (NHIS)	NCHS, Census	Census data for selecting segments; Listing of housing units (HUs) within sampled segments
Behavioral Risk Factor Surveillance System (BRFSS)	CDC, States	RDD landline and cell phones
Medical Expenditure Panel Survey - Household Component (MEPS-HC)	AHRQ	NHIS Respondents
National Health and Nutrition Examination Survey (NHANES)	NCHS	Census data for selecting segments; Listing of dwelling units (HUs) within sampled segments
National Longitudinal Survey of Youth (NLSY)	BLS	Census data for selecting segments; Listing of housing units (HUs) within sampled segments
National Immunization Survey (NIS)	CDC, NORC	RDD landline and cell phones
Survey of Income and Program Participation (SIPP)	Census	Census Master Address File (MAF)
Survey of Consumer Finance (SCF)	FRB, NORC	US Postal Service Delivery Sequence File (USPS DSF); IRS tax return administrative listing
National Survey of Family Growth (NSFG)	NCHS, ISR	US Postal Service Delivery Sequence File (USPS DSF)
General Social Survey (GSS)	NORC	US Postal Service Delivery Sequence File (USPS DSF)
AmeriSpeak (AS)	NORC	US Postal Service Delivery Sequence File (USPS DSF)
KnowledgePanel (KP)	GfK	US Postal Service Delivery Sequence File (USPS DSF)

In addition, as requested by BLS during an early project status meeting, NORC has identified the set of sampling frames used for the existing surveys. Table 3.2 lists the six sampling frames, noting the existing surveys using the sampling frame.

<sup>2</sup> SOII Research on Data Collection from Employees Literature Review, January 15, 2015

<sup>3</sup> Links to home pages for each of the existing surveys listed in Table 3.1 are provided in Appendix B.

**Table 3.2:** List of sampling frames used for existing surveys under consideration

<b>Sampling Frame</b>	<b>Surveys</b>
Census Master Address File (MAF)	ACS, CPS, SIPP
Census Data plus Listing within Sampled Segments	NHIS, NHANES, NLSY
US Postal Service Delivery Sequence File (USPS DSF)	GSS, SCF, AS, KP
RDD Frame of both Landline and Cellular Numbers	BRFSS, NIS
IRS tax return administrative listing	SCF
NHIS	MEPS-HC

IRS tax return administrative data listing, which is utilized along with USPS DSF for SCF, is excluded for consideration as a sampling frame. NHIS, which serves as the sampling frame for MEPS-HC, is captured in consideration of the existing surveys. Thus the first four sampling frames listed are considered here.

## 4. Assumptions

We present here assumptions that were made for purposes of discussion in this document, along with discussion around derivation of these assumptions.

### 4.1 Eligible Population

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For purposes of this report, it is assumed the target population for the HSOII is workers aged 16+ years, with a worker being anyone who worked in at least one of the prior 52 weeks. Sample counts for existing surveys represent the total number of persons for which a completed interview was obtained, regardless of employment status. Thus, these counts must be scaled to the HSOII target population of workers. It is assumed that 65.1% of the population aged 18+ is eligible for the HSOII, which was determined in the following manner.

Data from the 2014 ACS show that 75.1% of the U.S. population aged 16-64 worked at least one of the prior 52 weeks. This is as compared to November 2015 CPS data reporting 69.0% of the U.S. population aged 16-64 was employed the week containing November 12, 2015. While the difference between the two estimates is a function of the differing collection periods (calendar year 2014 vs Nov 2015), a more important factor is the reference period (employed in the 12 months vs. employed in the week containing Nov 12, 2015). The Nov 2015 CPS ratio of Civilian Labor Force (CLF) to Population (72.5%) for persons aged 16-64 is closer (difference of -2.6 percentage points) to the ACS result. As the Nov 2015 CPS ratio of CLF to Population for persons aged 16+ is 62.5%, adding the 2.6 percentage point difference yields the assumed worker eligibility rate of 65.1% for persons aged 16+. For existing surveys in which the sample population is other than persons aged 16+, similar calculations were used to determine the eligibility rate for the covered population.

### 4.2 Within-HU Sampling

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As little or no correlation among persons within a HU would be expected for the HSOII, it would be most cost-efficient to sample all eligible persons within a HU. The assumption is made that all eligible persons within a HU would be selected. With the exception of designs that are limited by the information available for sampled persons within a sampled HU (such as Option 1 (Supplemental Module in Existing Survey) and possibly Option 2 (Follow-on to Existing Survey, no Change to Existing Survey) for some existing surveys), we assume all persons within a HU eligible for HSOII will be included in the sample.

### 4.3 Minimum Sample Size

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As discussed in the background material provided by BLS<sup>4</sup>, an effective sample size of 5,100 person-years should be targeted to achieve 80% power for detecting a 20% difference from the employer-based SOII (abbreviated here as ESOII) at the national level based on current overall prevalence levels. In addition to quantifying the under-reporting of injuries and illnesses in the ESOII, BLS is also interested in better understanding where under-reporting occurs. This will require a larger total sample size, with determination of specific population subgroups for which larger sample sizes are to be targeted than that expected from an overall effective sample size of 5,100 person-years.

Assuming a required effective sample size of 5,100 to provide adequately powered estimates at the national level for the overall incidence rate and recognizing possible design effects<sup>5</sup>, the minimum number of completed interviews with workers is 6,630 for a CATI survey and 7,295 for a CAPI survey<sup>6</sup>.

We might assume a maximum 75% yield rate of completed interviews from persons sampled from existing surveys, which takes into account person level response rates along with possible eligibility rates (which must be considered as either the information available from the existing survey does not provide the ability to identify all and only eligible workers, or the sampled persons' eligibility status may have changed). This results in minimum numbers of sampled persons of 8,840 for a CATI survey and 9,277 for a CAPI survey.

Thus, the minimum number of sampled persons is 1.73 (CATI) to 1.91 (CAPI) times the effective sample size. As these are likely minimums, for ease of conversion, we assume a ratio of 2.0. These values will be further examined and determined during the course of the project as survey design recommendations are developed.

### 4.4 Potential Maximum Sample Size

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While not an objective of this project, there are several approaches which could be taken to identifying specific subgroups for oversampling and determining the target sample sizes for the subgroups. One approach, which would result in the largest overall effective sample size need, would be to target

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<sup>4</sup> Survey of Occupational Injuries and Illnesses: Employee Survey Cost Benefit Analysis, May 12, 2015.

<sup>5</sup> Within the Pilot Study Design for the SOII Employee Study report (September 1, 2015), possible design effects were listed as 1.3 (due to weighting) for a telephone (CATI) survey and 1.43 (the product of 1.2 due to weighting and 1.192 due to clustering) for a face-to-face (CAPI) survey.

<sup>6</sup> Estimated minimum number of completed interviews calculated as the minimum effective sample size (5,100) as reported in the Survey of Occupational Injuries and Illnesses: Employee Survey Cost Benefit Analysis (May 12, 2015) and the possible design effects (1.3 for a CATI survey and 1.43 for a CAPI survey), as reported in the Pilot Study Design for the SOII Employee Study report (September 1, 2015).

achievement of 80% power for either detecting a 20% difference from the employer-based SOII (abbreviated here as ESOII) or a difference of 0.7 percentage points from the ESOII, based on current prevalence levels at the industry sector and occupational group level. A very rough sample size estimate can be made assuming effective sample size needs of 5,100 for each subgroup<sup>7</sup>, which would yield a total effective sample size need of 102,000 to support the 20 industry sector levels and of 117,300 to support the 23 major occupational groups, implying a total effective sample size need well above 100,000 to support both industry and occupation (this sample size would also support employment relationship and sector), with total number of completed interviews above 130,000-145,000 and a total number of sampled persons in excess of 200,000.

An alternative to the most expansive approach would be to collapse industry and occupation to derive a smaller set of subgroups, say 5-10 each. This would yield total effective sample size needs on the order of 25,000-50,000 (this sample size would also support employment relationship and sector), and a total number of sampled persons on the order of 50,000-100,000.

As an illustration, provided in Table 4.4.1, one could consider defining the seven collapsed industry groups, based upon relative population size and 2014 incidence rates. This grouping would ensure each industry group has at least 10% of workers, and would yield five groupings with 2014 incidence rates about the overall incidence rate. Total effective sample size required would be on the order of 36,000, and a total number of sampled persons on the order of 72,000.

**Table 4.4.1:** Population data, distributions, incidence rates for 7 industry group illustration

Industry Group	Nov 2015 Employment		2014 Incidence Rate		
	Count	Proportion	Group	2 digit Min	2 digit Max
Agriculture & Goods-producing <sup>1</sup>	21,960	15.4%	3.8	3.6	5.5
Trade & Transportation <sup>2</sup>	26,507	18.6%	>3.6	2.9	4.8
Professional & Business Services	19,973	14.0%	1.5	0.9	2.6
Health Care and Social Assistance	18,811	13.2%	4.5	N/A	N/A
Leisure & Hospitality	15,330	10.8%	3.6	3.5	4.2
Other Service-producing <sup>3</sup>	20,598	14.5%	<2.6	0.7	2.6
State & Local Government	19,240	13.5%	5.0	4.1	5.4
Total Non-farm	142,418	100.0%	3.4		

<sup>1</sup>Agriculture & Related Industries (employment from CPS), Mining/Logging, Construction, Manufacturing,

<sup>2</sup>Wholesale Trade, Retail Trade, Transportation

<sup>3</sup>Utilities, Information, FIRE, Education, Other Services

<sup>7</sup> Actual sample size needs would be derived to power detecting differences for the subgroup based upon the current prevalence level for the subgroup.

A third alternative would be to identify selected industry and occupations which might most likely be associated with under-reporting that is of practical significance as well as statistical significance, and are of sufficient size to allow for adequate sample. One could focus on those industries and occupations with high rates of injuries and illnesses, under the assumption that the magnitude of under-reporting of industries and occupations with low rates would be relatively small. For example, the 2014 incidence rate for Finance and Insurance was 0.7. Assuming a 20% under-reporting of injuries and illnesses for this industry, the actual rate would be 0.9, which could be considered not of practical significance. Conversely, the 2014 incidence rate for Health Care and Social Assistance was 4.5; a 20% under-reporting of injuries and illnesses would mean an actual rate of 5.6, a much more dramatic difference in level. Again, this sample size would also support employment relationship and sector.

As an illustration, provided in Table 4.4.2, one could identify the five industry groups with an incidence rate above the overall average of 3.4 and which contain at least 10% of total workers, based upon relative population size and 2014 incidence rates. A sixth grouping would consist of the remaining Service-providing industries. Total effective sample size required would be on the order of 31,000, and a total number of sampled persons on the order of 62,000.

**Table 4.4.2:** Population data, distributions, incidence rates for 6 industry group illustration

Industry	Nov 2015 Employment		2014 Incidence Rate		
	Count	Proportion	Group	2 digit Min	2 digit Max
Agriculture & Goods-producing <sup>1</sup>	21,960	15.4%	3.8	3.6	5.5
Retail Trade & Transportation <sup>2</sup>	20,570	14.4%	N/A	3.6	4.8
Health Care and Social Assistance	18,811	13.2%	4.5	N/A	N/A
Leisure & Hospitality	15,330	10.8%	3.6	3.5	4.2
Other Service-producing <sup>3</sup>	46,608	32.7%	N/A	0.7	2.9
State & Local Government	19,240	13.5%	5.0	4.1	5.4
<b>Total Non-farm</b>	<b>142,518</b>	<b>100.0%</b>	<b>3.4</b>		

<sup>1</sup>Agriculture & Related Industries (employment from CPS), Mining/Logging, Construction, Manufacturing,

<sup>2</sup>Retail Trade, Transportation

<sup>3</sup>Wholesale Trade, Utilities, Information, FIRE, Professional & Business Services, Education, Other Services

#### 4.4 Impact of I/O Sample Requirements on Possible Maximum Sample Size

When considering the adequacy of the sample sizes for the surveys under consideration (this factor does not affect assessment of the sampling frames), it must be remembered that the sample distribution for the existing surveys is predetermined based upon the sample design of the survey and cannot be adjusted to fit the needs of the HSOII. In other words, given the sample designs for the surveys are focused on providing general population estimates (whether for the full population of persons aged 18+ years, or for

some selected age subgroups), the sample distribution relative to industry and occupation can be reasonably expected to be similar to the distribution of the total population. There will be some deviations based upon oversampling of selected populations, if utilized by the survey, but the oversampled populations tend to be minorities and the elderly, which should not dramatically affect the industry and occupation distributions. Thus, in assessing the adequacy of the survey to provide sufficient sample for selected or collapsed industries and occupations, one cannot compare the total sample size need for the HSOII with the total sample size of the survey.

To achieve the roughly 62,000 sampled persons from the immediately prior illustration, we make an assumption for discussion purposes within this document that an effective sample size of 5,100 is needed for each grouping, and a total number of sampled persons from each grouping on the order of 10,200. If sampling from an existing survey of the full population, the existing survey would need to have sufficient numbers of workers to fill sample size requirements for all industry groups. Given the proportion of workers within each industry group (with a minimum value of 10.9%), the existing survey would need to have ~100,000+ workers for an expectation of meeting the sample size requirements for the six industry groups.

## 5. Findings

In this section we address each of the assessment criteria, presenting detailed information on sample design and data collection for each existing survey and sampling frame from documentation available online, and discussing the implications of that information as it relates to an HSOII.

To aid in summarizing the information on the existing surveys, topline “ratings,” ranging from 0 (zero, lowest rating) to +++++ (five, highest rating) were developed for the assessment criteria and are presented here. These topline “ratings” are intended to provide a quick view of the relative value of each survey for the criteria. Appendix C provides the definitions used in the ratings for all the criteria.

### 5.1 Population Representation

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Population representation can be viewed not only in terms of potential for bias (i.e., extent and nature of undercoverage of the population of interest), as referenced in the RFP, but also in terms of adequacy of sample size for generating reliable estimates (i.e., of sufficiently small variance) for subpopulations of interest.

#### Sampling Frame and Survey Coverage Information

Undercoverage for a sampling frame refers to the extent of the population of interest which is missing from the frame. When considering use of an existing survey as the frame for the HSOII, there can also be undercoverage due to population exclusions made as part of the survey data collection process.

Table 5.1.1 provides information on coverage for the surveys under consideration – the sampling frame used by each survey, known coverage gaps in the frame, population exclusions that are made during data collection, and an estimate of the resultant coverage of the target population of workers (based upon the frame exclusions and population exclusions).

**Table 5.1.1:** Profile of existing survey coverage

Survey	Sampling Frame	Coverage		
		Frame Coverage Gaps	Survey Exclusions	Estimated Coverage of Workers in Eligible Sample
ACS	Census Master Address File (MAF)	None	None	100%
CPS	Census Master Address File (MAF)	None	Military, Institutionalized Population	100%
NHIS	Census Data for selecting segments; HU Listing for sampled segments	None	Military, Institutionalized Population	100%
BRFSS	RDD frame of both landline and cellular numbers	HU's without phones	Institutionalized Population	~97%
MEPS-HC	NHIS Respondents	None	Military, Institutionalized Population	100%
NHANES	Census Data for selecting segments; HU Listing for sampled segments	None	Military, Institutionalized Population	100%
NLSY	Census Data for selecting segments; HU Listing for sampled segments	None	Only includes NLSY-97: US residents born 1980-1984 NLSY-79: US residents born 1957-1964	~27%
NIS	RDD frame of both landline and cellular numbers	HU's without phones	Only includes HU's with children aged 6 mo - 17 years	~40%
SIPP	Census Master Address File (MAF)	None	None	100%
SCF	USPS DSF	None	None	100%
NSFG	USPS DSF	None	Only includes persons aged 15-44 years	~50%
GSS	USPS DSF	None	Non-English/Spanish	98%+
AS	USPS DSF	None	Non-English/Spanish	98%+
KP	USPS DSF	None	Non-English/Spanish	98%+

**NOTES**

Coverage is relative to the U.S. population of all workers, including those who work as independent contractors

Frames utilizing the Census Master Address File (MAF), Census data plus listing of selected segments, and the US Postal Service Delivery Sequence File (USPS DSF) offer essentially complete coverage of the population of interest, assuming listing is carried out in areas where the DSF addresses do not provide sufficient information to locate the address (~2% of all HUs). Surveys utilizing these sampling frames that have no exclusions from the population of interest, as is the case for ACS, CPS, NHIS, NHANES, SIPP, and SCF (military and institutionalized population are not in scope for the HSOII), would thus provide unbiased representation of the population of interest for the HSOII.

RDD landline and cell phone sampling frames lack coverage for the roughly 2.9% of adults living in households with no telephone<sup>8</sup>. Persons living in households with no telephone tend to be younger, minority, renters, lower income, and lower education<sup>9</sup>.

<sup>8</sup> Blumberg SJ, Luke JV. Wireless substitution: Early release of estimates from the National Health Interview Survey, July–December 2014. National Center for Health Statistics. June 2015. Available from: <http://www.cdc.gov/nchs/nhis.htm>.

<sup>9</sup> Khare, M. and Chowdhury, S. An Evaluation of Methods to Compensate for Noncoverage of Nontelephone Households using Information on Interruptions in Telephone Service and Presence of Wireless Phones. Proceedings of the Section on Survey Research Methods, Joint Statistical Meetings, American Statistical Association. 2006. 3221-3228.

As mentioned above, survey exclusions may also contribute to undercoverage of the target population of workers. GSS, AS, and KP include only English and Spanish speakers. Census data on languages spoken and degree of English language proficiency from the ACS suggest such an exclusion would affect less than 2% of the population<sup>10</sup>. Eligibility for NSFG is limited to persons aged 15-44 years, and thus represent approximately 50% of the full HSOII target population of workers aged 18+. While the sample frame used for the NIS is nearly complete, the target population is households with children, resulting in a net coverage of the eligible sample on the order of 35% of the full HSOII target population of workers (2014 ACS data show 31.3% of households contain a related child; however, such households will have younger adults who are more likely to be workers than the full 18+ population; thus it was assumed to bump up the coverage of eligible workers). Finally, the target population for the NLSY is an eight year birth cohort (NLSY-79) and a five year birth cohort (NLSY-97), which combined represent roughly 27% of the full HSOII target population of workers aged 18+<sup>11</sup>.

### **Availability of Sample Cases**

Here we look at the extent to which the existing surveys offer sample sufficient to meet the needs for the HSOII (expected to be 100,000+ as discussed in Section 4) and at the frequency necessary to allow for annual estimates for the HSOII.

Table 5.1.2 provides the periodicity of the existing surveys under consideration along with information on annual sample sizes – approximate HU sample sizes (number selected for the survey, number screened, and number at which a completed interview was obtained) and an estimate of the number of completed interviews with workers, based upon number of completed interviews and the assumptions detailed in Section 4.

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<sup>10</sup> Ryan, C. Language Use in the United States: 2011. U.S. Census Bureau. August 2013. Available from <https://www.census.gov/prod/2013pubs/acs-22.pdf>.

<sup>11</sup> 2014 ACS data show that adults aged 30-34 and 50-57 years (the 2014 age range for the two NLSY cohorts) make up ~23.5% of adults aged 18+ years; however, their higher employment rates relative to older age groups increases their proportion of the population of workers aged 16-64 years to 27%.

**Table 5.1.2:** Profile of existing survey sample size and response rates

Survey	Sample Selection Frequency	Sample Size (approximate)				Response Rate	Comments
		Selected HU's	Screened HU's	Completed HU's	Workers		
ACS	Monthly	3.5MM	3.5MM	2.3MM	~3.2MM	96.7%	
CPS	Monthly, 4-8-4 Rotation	225,000	180,000	165,000	~230,000	~90%	Half of annual sample is new in current year
NHIS	Quarterly	68,000	57,000	44,500	~30,000	58.9%	
BRFSS	Annual	6.4MM	850,000	460,000	~300,000	~50%	RoR varies from 34% to 64% across states
MEPS-HC	Annual	17,000	17,000	14,000	~19,000	52.8%	Half of annual sample is new current year
NHANES	Biennial	46,000	Not Found	10,000	~4,000	71.0%	Same sample cases across consecutive odd/even years
NLSY*	Biennial	150,000	135,000	Not Applicable	~11,000	78.7% (79) 83.9% (97)	Same sample cases across time
NIS	Quarterly	9.5MM (phone #'s)	1.1MM	50,000	0	62.6% (Landline) 33.5% (Cell)	State-level design
SIPP	Sample selected every 2.5 to 4 years	65,500	52,000	42,000 (Wave 1) 20,000 (Wave 16)	~58,000 (Wave 1) ~28,000 (Wave 16)	80.6% (Wave 1) 61.8% (Wave 16)	2014 panel to be interviewed once annually 2014-2017
SCF	Triennial	14,000	13,500	6,000	~4,000	51.7%: 68.7% (ABS) 34.7% (list)	Dual-frame design (ABS (4,500) + list sample (1,500) of high income HU's)
NSFG	Varies	12,000	11,500	10,400	~6,700	72.8%	Most recent round collected data from 2011 to 2013
GSS	Biennial	5,200	4,300	2,500	~1,700	71.2%	
AS	As Needed	59,000	15,000	7,500 Panel HUs	~10,000 Panel Members	36.6%	Panel members replaced for attrition; Panel size to triple in 2016
KP	As Needed	Not Found	Not Found	30,000 Panel HUs	~41,000 Panel Members	<10%	Panel members replaced for attrition

\* NLSY79 Response rates represent retention rates of 1991 sample respondents;  
 NLSY97 Response rates represent retention rates of original respondents

The surveys which appear to have sufficient numbers of completed interviews with workers (100,000+, as discussed in Section 4) to be considered as a stand-alone sample frame for the HSOII are ACS, CPS, and BRFSS. The large number of HU's selected and screened for NIS make it a candidate for use under Option 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey).

While NHIS and MEPS-HC both have more than 15,000 annual completed interviews with workers and thus could support the sample needed for the HSOII at the national level, they could not support achieving target sample sizes for selected or collapsed industry and occupation. They could, however, be used in a multiple survey design (Option 4), although not together as MEPS-HC is a subset of NHIS.

SIPP has from ~58,000 to ~28,000 completed interviews with workers, depending upon Wave. However, the SIPP sample is selected every 2.5 to 4 years, suggesting SIPP should be considered only as part of a multiple survey (Option 4) and/or panel design (Option 7).

The POPs (AS, KP), while offering 30,000+ workers on their panels (with the AS expansion planned for 2016), are fairly constant panels, and thus offer little additional sample across time. As such, they should be considered for use only in a multiple survey (Option 4) and/or panel design (Option 7).

The remaining existing surveys (NHANES, NLSY, SCF, NSFG) offer very small sample sizes. In addition samples are not selected every year, which further adversely affects their viability for use in the HSOII, although they could be considered as part of a multiple frame and/or panel design.

Further information on survey and frame suitability for Options 1-4 and single frame vs. multi-frame/multi-year designs is provided in Section 7.

### Implications

Table 5.1.3 provides the summary “rating” indicators of value relative to Population Representation (limited to frame coverage) for the four sampling frames under consideration.

**Table 5.1.3:** Summary ratings for sample frame coverage

Sampling Frame	Frame Coverage
Census MAF	+++++
Census Data	+++++
USPS DSF	+++++
RDD Telephone	++++

Three sampling frames offer complete coverage for the HSOII population of interest – Census MAF, Census data plus listing within sampled segments, and USPS DSF with listing in areas where the DSF addresses do not provide sufficient information to locate the address (~2% of all HUs). Each could thus be used as the sampling frame for HSOII. There is often reluctance on the part of federal agencies to utilize the Census MAF, as confidentiality of the addresses is protected and cannot be provided by Census under Title 13. Another issue for consideration is whether Census data review board (DRB) would allow release of a public use microdata sample (PUMS) file that would meet all BLS needs. RDD frames of landline and cellular phones offer an alternative choice with nearly complete coverage (~97%), although persons in non-telephone households do have different demographic and socio-economic characteristics than the full population, and thus appropriate ratio adjustment methods would be required to minimize any potential coverage bias.

Table 5.1.4 provides the summary “rating” indicators of value relative to Population Representation for the existing surveys under consideration.

**Table 5.1.4:** Summary ratings for existing survey coverage, sample size, and response rates

Survey	Coverage		Sample Selection Frequency	Sample Size			Response Rate
	Frame Coverage	Estimated Coverage of Workers in Eligible Sample		Screened HU's	Completed HU's	Workers	
ACS	+++++	+++++	+++++	+++++	+++++	+++++	+++++
CPS	+++++	+++++	+++++	++++	++++	++++	+++++
NHIS	+++++	+++++	+++++	+++	+++	++	++
BRFSS	++++	++++	++++	+++++	+++++	++++	++
MEPS-HC	+++++	+++++	++++	++	++	++	++
NHANES	+++++	+++++	++	+	++	0	+++
NLSY	+++++	+	++	0	0	+	++++
NIS	++++	0	+++++	+++++	+++	0	++
SIPP	+++++	+++++	++	+++	+++	+++	+++
SCF	+++++	+++++	++	+	0	0	++
NSFG	+++++	++	++	+	++	+	+++
GSS	+++++	+++++	++	0	0	0	+++
AS	+++++	++++	+	0	++	++	+
KP	+++++	++++	+	0	++	++	0

All surveys with the exception of NLSY, NIS, and NSFG were rated 4 or 5 for Coverage. NLSY and NSFG eligible populations are subsets of the full 18+ population, while NIS eligible population is children <18. Six surveys (ACS, CPS, NHIS, BRFSS, MEPS-HC, NIS) were rated 4 or 5 for Sample Selection Frequency, being selected annually or more frequently. Three surveys (ACS, CPS, BRFSS) were rated 4 or 5 for Sample Size, with SIPP being the only other survey rated 3 or higher for Sample Size. Finally, ACS, CPS, and NLSY were rated 4 or 5 for Response Rate, with four others (NHANES, SIPP, NSFG, GSS) being rated 3.

ACS is rated 5 for all criteria, while CPS is rated 4 or 5 for all criteria, suggesting both could be candidates to serve as a single sampling frame for the HSOII. BRFSS is rated 4 or 5 for all criteria with the exception of Response Rate (rating of 2 for response rate ~50%, ranging from 34%-64% across states), suggesting it could likewise serve as a single sampling frame for the HSOII depending upon the potential magnitude of nonresponse bias not controlled through weighting. Finally, although the NIS interviewed sample does not include any workers (NIS target population is children), the selected sample size is of sufficient size to consider for use should additional screening questions be added to the for use in the HSOII design.

Two of the remaining surveys (NHIS, MEPS-HC) could be considered under Option 4 (Multiple Surveys); however, these two surveys could not be used together, given MEPS-HC is selected from

NHIS. Although the remaining surveys could also be considered under Option 4 (Multiple Surveys), their profiles relative to Sample Selection Frequency and Sample Size would likely make their use cost ineffective.

## 5.2 Survey Mode and Use of Proxy Respondents

Given Mode and Respondent Rules are components of the Data Collection process, both are discussed in this section. In addition, given the impact of within-HU person sampling, that factor is also discussed in this section. Table 5.2.1 provides information on data collection mode, within-HU person sampling, and respondent rules for the existing surveys.

**Table 5.2.1:** Profile of existing survey data collection mode and rules

Survey	Mode	Data Collection Sampled Persons	Respondent Rules
ACS	Three stage: 1) Mail/Internet (50%) 2) CATI (7%) 3) CAPI (44%)	All persons	Adult HH respondent
CPS	PV (MIS 1, 5) Phone (MIS 2-4, 6-8 if HH agrees; ~85% telephone)	All persons 16+	Self-report, if possible; Knowledgeable Adult as proxy (~50%)
NHIS	CAPI	One adult 18+ One child <18	Self-report (adult) Knowledgeable adult (child)
BRFSS	CATI	One adult 18+	Self-report
MEPS-HC	CAPI	All persons	Most knowledgeable adult
NHANES	CAPI	One, some, all, or none of persons in the HU	Self-report
NLSY	CATI (90%)/CAPI (10%)	All persons in HH within age cohort	Self-report
NIS	CATI	All children 19-35 mo (NIS) One child 13-17 years (NIS-Teen) One child 6-18 mo/3-12 years (NIS-Flu)	Knowledgeable Adult
SIPP	CAPI (Waves 1,2,6) CATI (Waves 3,4,5,7-16)	All persons 15+	Self-report
SCF	CAPI	Economically dominant single individual or financially most knowledgeable member	Self-report
NSFG	CAPI	One eligible person aged 15-44 years	Self-report
GSS	CAPI	One adult 18+	Self-report
AS	Internet/CATI	All persons 18+	Self-report
KP	Internet	All persons 18+	Self-report

## **Survey Mode**

Survey mode is of interest under Option 1 (Supplemental Module in Existing Survey). For options utilizing a follow-up survey, the mode utilized for HSOII would not have to be the same as that used in the existing survey.

Most surveys utilize an interviewer/respondent interaction in conducting the survey (CAPI and/or CATI). The exceptions are the POPs (AS, KP, which use Web self-reporting) and ACS, in which 50% of completes are self-reported via mail/internet.

Thus, the distinguishing factor among the surveys is whether interviews are conducted in person or over the phone, in either case using computer-assisted interviewing (CAI) technology. The relative advantages/disadvantages of mode relative to minimizing potential recall bias will be addressed in a separate report addressing questionnaire and data collection process.

## **Use of Proxy Respondents**

Respondent rules and the use of proxy respondents are of interest under Option 1 (Supplemental Module in Existing Survey). For options utilizing a follow-up survey, respondent rules utilized for HSOII would not have to be the same as those used in the existing survey. All surveys with the exception of ACS and MEPS-HC instruct interviewers to obtain self-reports for sampled persons aged 18+ years. For CPS, although the interviewer seeks to obtain self-reports, proxy respondents are utilized for roughly half the completed interviews.

## **Sampled Persons within HU**

A consideration for all options, but especially for Option 1 (Supplemental Module in Existing Survey), is whether all persons are sampled within a HU. As little to no correlation between persons within a HU would be expected for the HSOII, it would be most cost-efficient to sample all eligible persons within a HU. ACS, CPS, MEPS-HC, NLSY, and the POPs sample all persons within the HU. NHANES may select all persons, but they may also select one, some, or no persons within the HU.

## **Implications**

Table 5.2.2 provides the mode(s) used and summary “rating” indicators of value relative to Data Collection Rules.

**Table 5.2.2:** Summary ratings for existing survey data collection rules

Survey	Mode	Data Collection	
		Sampled Persons	Respondent Rules
ACS	Mail/Web/CATI/CAPI	+++++	++
CPS	CAPI/CATI	+++++	+++
NHIS	CAPI	+++	+++++
BRFSS	CATI	+++	+++++
MEPS-HC	CAPI	+++++	++
NHANES	CAPI	+++	+++++
NLSY	CAPI/CATI	+++++	+++++
NIS	CATI	N/A	N/A
SIPP	CAPI/CATI	+++++	+++++
SCF	CAPI	+++	+++++
NSFG	CAPI	+++	+++++
GSS	CAPI	+++	+++++
AS	Web/CATI	+++++	+++++
KP	Web	+++++	+++++

Collection mode and respondent rules are of interest under Option 1 (Supplemental Module in Existing Survey), adding a supplemental module to an existing survey. With the exception of ACS (which utilized Mail, Web, CATI, and CAPI collection), all surveys use CAI, either CATI (BRFSS, NIS), CAPI (NHIS, MEPS-HC, NHANES, SCF, NSFG, GSS), Web (KP), a combination of CATI and CAPI (CPS, NLSY), or a combination of Web and CATI (AS). Advantages/ disadvantages of CATI vs. CAPI relative to recall bias will be discussed in a separate report addressing questionnaire and data collection process.

NLSY, SIPP, AS, and KP were each rated 5 for both Sampled Persons and Respondent Rules. ACS, CPS, and MEPS-HC sample all adults within a HU; however, ACS and MEPS-HC obtain data from one HH respondent, while roughly 50% of CPS person level completes are obtained from a proxy respondent. While NHIS, BRFSS, NHANES, SCF, NSFG, and GSS seek self-reports, they do not sample all adults within a HU.

### 5.3 Availability of Key Information

The two primary types of information of interest for the HSOII data collection are employment data and injury/illness data. The greater the concordance between data collected in the existing survey and data needed for the HSOII, the greater the value of the existing survey.

## Employment Data

Table 5.3.1 describes availability of industry, occupation, employment relationship, and sector information from the current data collection for the surveys.

**Table 5.3.1:** Profile of existing survey employment information

Survey	Available Information					
	Employment Status	Multiple Jobholder	Occupation	Industry	Employment Relationship	Sector
ACS	Prior 12 months	Yes	Chief job activity/ business	Chief job activity/ business	Chief job activity/ business	Chief job activity/ business
CPS	Week containing 12th of month	Yes	Up to two jobs	Up to two jobs	Yes	Yes
NHIS	Prior 12 months	Yes	Main current job activity/ business, else for job worked longest	Main current job activity/ business, else for job worked longest	Main current job activity/ business, else for job worked longest	Main current job activity/ business, else for job worked longest
BRFSS	Current/Prior 12 months	No	Obtained in optional module (Industry/ Occupation)	Obtained in optional module (Industry/ Occupation)	Obtained in optional module (Industry/ Occupation)	No
MEPS-HC	Prior 12 months	Yes	Main current job activity/ business, else for most recent job	Main current job activity/ business, else for most recent job	Yes	Yes
NHANES	Current	No	Main job or business	Main job or business	Yes	Yes
NLSY	Prior 12 months	Yes	All jobs worked	Obtained for all jobs worked	Yes	Yes
NIS	No	No	No	No	No	No
SIPP	Prior 3 months	Yes	Up to two jobs	Type (Mfg, Whole Trade, Retail Trade, Service, Oth) for up to two jobs	Yes	Yes
SCF	Current (R); Current (R spouse/partner)	Yes	Up to two jobs	Up to two jobs	Yes	Yes
NSFG	Prior 12 months (R); Prior week (R spouse/partner)	Yes	No	No	No	No
GSS	Current	No	One current job	No	Yes	Yes
AS	If asked as part of a given survey	If asked as part of a given survey	If asked as part of a given survey	If asked as part of a given survey	Yes	If asked as part of a given survey
KP	If asked as part of a given survey	If asked as part of a given survey	If asked as part of a given survey	If asked as part of a given survey	If asked as part of a given survey	If asked as part of a given survey

Industry and occupation (I/O) information and employment relationship, is obtained in all surveys with the exception of NIS (as the survey target population is children) and BRFSS (for which employment data are collected in only if a state-optional module is implemented). In some surveys, I/O information is obtained only if currently employed (CPS, NHANES), while in other surveys I/O information is obtained on most recent job if not currently employed (ACS) or the job the individual worked at for the longest time period (NHIS).

Two other relevant pieces of information for the HSOII are whether the sample person has been employed at some time in the prior 12 months (obtained in ACS, NHIS, MEPS-HC, and NLSY), and whether the sample person is a multiple jobholder (obtained in CPS and NLSY). For multiple jobholders, CPS obtains I/O information for a second job, whereas other surveys collect I/O information for only one job.

In collecting I/O information when persons have multiple jobs, some ask the person to report for the “chief” job activity/business (ACS), and others collect I/O information for the “main” job activity/business (NHIS, MEPS-HC).

### Injury and Illness Data

Table 5.3.2 describes availability of industry, occupation, employment relationship, and sector information from the current data collection for the existing surveys.

**Table 5.3.2:** Profile of existing survey injury/illness information

Survey	Injury/Illness Data		Comments
	Injuries	Illnesses	
ACS	No	No	
CPS	No	No	
NHIS	Number of work days missed in prior 12 months due to injury/illness; non-specific as to where injury/illness occurred	Number of work days missed in prior 12 months due to injury/illness; non-specific as to where injury/illness occurred	Obtains other information in injuries/illnesses which could be informative
BRFSS	Falls within prior 12 months; did fall result in injury	Chronic	
MEPS-HC	Identifies accidents/injuries that occurred while at work	Obtains information on ER/medical provider visits, hospital stays	
NHANES	Obtains information on ER/medical provider visits, hospital stays	Obtains information on ER/medical provider visits, hospital stays	
NLSY	Extent to which pain interfered with work activities in prior 4 weeks	Selected chronic	
NIS	No	No	
SIPP	No	No	Questions on disability payments
SCF	No	No	Questions on disability payments
NSFG	No	No	
GSS	No	No	
AS	If asked as part of a given survey	Selected chronic	
KP	If asked as part of a given survey	If asked as part of a given survey	

As might be expected, NHIS, BRFSS, MEPS-HC, and NHANES are the surveys in which injury and illness information is collected. MEPS-HC is the one survey which collects identifies work-related accidents/injuries, and thus would be of value for screening under Option 2 (Follow-on to Existing Survey, no Change to Existing Survey), as well as providing useful background information for a supplemental module to MEPS-HC under Option 1 (Supplemental Module in Existing Survey). For the other surveys, use of injury and illness data could be of benefit when developing a supplemental module under Option 1 (Supplemental Module in Existing Survey).

## Implications

Table 5.3.3 provides the summary “rating” indicators of value relative to Availability of Employment and Injury/Illness Information.

**Table 5.3.3:** Summary ratings for existing survey employment and industry/occupation information

Survey	Employment Information						Injury/Illness Information	
	Employment Status	Multiple Jobholders	Occupation	Industry	Employment Relationship	Sector	Injury	Illness
ACS	+++++	+++++	+++	+++	+++++	+++++	0	0
CPS	+++	+++++	++++	++++	+++++	+++++	0	0
NHIS	+++++	+++++	+++	+++	+++++	+++++	++++	++++
BRFSS	+++++	0	++	++	+++++	0	++	+
MEPS-HC	+++++	+++++	+++	+++	+++++	+++++	+++++	++
NHANES	+++	0	+++	+++	+++++	+++++	++	++
NLSY	+++++	+++++	+++++	+++++	+++++	+++++	+++	+
NIS	0	0	0	0	0	0	0	0
SIPP	++++	+++++	++++	+++	+++++	+++++	0	0
SCF	+++	+++++	++++	++++	+++++	+++++	0	0
NSFG	+++++	+++++	0	0	0	0	0	0
GSS	+++	0	+++	0	+++++	+++++	0	0
AS	+	+	+	+	+++++	+	+	+
KP	+	+	+	+	+	+	+	+

Availability of employment and I/O information from an existing survey can allow for targeted interviewing under either a supplemental module (Option 1: Supplemental Module in Existing Survey) or use of collected data to screen for follow-up (Option 2: Follow-on to Existing Survey, no Change to Existing Survey) design. NLSY provides the most comprehensive information, being rated 5 for all employment information categories, identifying persons employed at any point within the prior 12 months (the target population for HSOII), and I/O information for all jobs. Other surveys with a rating of 3+ for all employment information categories are ACS, CPS, NHIS, MEPS-HC, SIPP, and SCF. For these surveys, employment status may not cover the prior 12 months and I/O information is often not collected for all jobs. The information from these surveys may be of value under Options 1 (Supplemental Module in Existing Survey), 2 (Follow-on to Existing Survey, no Change to Existing Survey), or 3 Follow-on to Existing Survey, Additional Screening Questions in Existing Survey ().

Availability of relevant injury and illness data is very limited. Only MEPS-HC (identifies accidents/injuries occurring at work) and NHIS (obtains number of work days missed due to injury/illness) obtain data that could potentially be useful for Options 1 (Supplemental Module in Existing Survey), 2 (Follow-on to Existing Survey, no Change to Existing Survey), or 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey).

## 5.4 Timeliness of Calendar Year Estimates

Data from the ESOII is released roughly eleven months following the end of the ESOII estimation period, which is the calendar year. Survey timeliness is primarily of consideration for Option 1 (Supplemental Module in Existing Survey), adding a supplemental module to an existing survey. Survey timeliness must also be considered for Options 2 (Follow-on to Existing Survey, no Change to Existing Survey) and 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey), wherein data from the survey is utilized in the sample design of the HSOII, to avoid deterioration over time of the accuracy of the information for use in the HSOII sample design and data collection process.

In addition to data timeliness, additional related considerations include the frequency with which sample cases are interviewed, the respondent burden associated with the existing survey (based on OMB clearance packages), and the frequency with which estimates are generated from the existing survey.

Table 5.4.1 provides information on these characteristics of the existing survey data collection process and estimate generation. Availability of the survey data is based on publication of the survey data. It may be possible that the information needed for use in a HSOII design may be available for use by BLS earlier.

**Table 5.4.1:** Profile of existing survey frequency, respondent burden, and timing

Survey	Collection Period	Collection Frequency for Sample Unit	Respondent Burden	Estimate Periodicity	Data Release Lag
ACS	Calendar Year	Once	30-40 min	Annual	~9 months
CPS	Two weeks	4 consecutive months, same 4 months 12 months later	~8 min	Monthly	~3 weeks
NHIS	Calendar Year	Once	~53 min	Annual	~6 months
BRFSS	Calendar Year	Once	~16 min	Annual	~9 months
MEPS-HC	5 Months	5 times over 2 years	~107 min	Annual	~7 months
NHANES	24 Month Period	Once	~150 min	Biennial	~10 months
NLSY	12 Months	Every 2 years	~61 min	Biennial	~15 months
NIS	Calendar Year	Once	~32 min	Annual	~9 months
SIPP	One Calendar Year	Once a year for 4 years (current panel)	~60 min	Annual	~9 months
SCF	One Calendar Year	Once	~75 min	Triennial	~9 months
NSFG	12 Month Period (for each of 4 samples)	Once	~70 min (M) ~100 min (F)	Varies (4 years, current)	~12 months
GSS	7 Months	Once	~90 min	Biennial	~9 months
AS	Varies	Multiple	Varies	Varies	~1 month
KP	Varies	Multiple	Varies	Varies	~1 month

Two surveys (NLSY, NSFG) do not publish results prior to current publication of ESOII data. Seven other surveys (ACS, BRFSS, NHANES, NIS, SIPP, SCF, GSS) publish data less than two months prior to

current publication of ESOII data. Only five surveys (CPS, NHIS, MEPS-HC, AS, KP) publish estimates within a timeframe that might be considered “safe” for HSOII.

Several surveys (CPS, MEPS-HC) collect data from a given sample unit multiple times within a year, Such a collection frequency could be advantageous under Option 1 (Supplemental Module in Existing Survey) implemented as a panel survey (Option 7), as it would allow for bounding interviews and recall periods of less than 12 months. These issues will be discussed further in a separate report addressing questionnaire and data collection process.

Seven surveys (MEPS-HC, NHANES, NLSY, SIPP, SCF, NSFG, GSS) have estimated respondent burden of one hour or more, while two (CPS, BRFSS) have estimated respondent burdens less than 20 minutes.

### Implications

Table 5.4.2 provides the summary “rating” indicators of value relative to Timeliness of Calendar Year Estimates.

**Table 5.4.2:** Summary ratings for existing survey frequency, respondent burden, and timing

Survey	Collection Frequency for Sample Unit	Interview Length	Estimate Periodicity	Data Release Lag
ACS	++++	+++	+++++	++++
CPS	+++++	+++++	+++++	+++++
NHIS	++++	++	+++++	+++++
BRFSS	++++	++++	+++++	++++
MEPS-HC	+++++	+	+++++	+++++
NHANES	++++	+	++	++++
NLSY	++	+	++	+
NIS	++++	+++	+++++	++++
SIPP	++++	+	+++++	++++
SCF	++++	+	++	++++
NSFG	++++	+	++	+
GSS	++++	+	++	++++
AS	+++++	++++	+++++	+++++
KP	+++++	++++	+++++	+++++

For Option 1 (Supplemental Module in Existing Survey), only CPS has a short interview length in conjunction with a data release timeframe meeting likely timing necessary for BLS to obtain information from the existing survey and supplemental module to support the existing SOII timeframe for publication of results.

Utilizing screening information from an existing survey to select the HSOII sample (Options 2: Follow-on to Existing Survey, no Change to Existing Survey, 3: Follow-on to Existing Survey, Additional Screening Questions in Existing Survey) should be possible from a timing perspective under all surveys with the exception of NLSY and NSFG.

## **5.5 Availability of Auxiliary Data for Sample Design Efficiency**

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Data collected in the existing surveys can be utilized to improve the efficiency of the HSOII design under Options 2 (Follow-on to Existing Survey, no Change to Existing Survey) and 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey). Under Option 2 (Follow-on to Existing Survey, no Change to Existing Survey), the assumption is that HSOII design will be developed utilizing the information collected as part of the existing survey data collection instrument, whereas Option 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey) assumes additional screening information may be collected in the existing survey to enhance the efficiency of the HSOII design.

The primary gains to be made will be derived from information discussed in Section 5.3: Availability of Key Information. Availability of employment data for persons within sample HUs from existing surveys will be valuable in stratification for the HSOII design under Options 2 (Follow-on to Existing Survey, no Change to Existing Survey) and 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey), especially in terms of obtaining sufficient sample sizes within industry and occupation groups.

While the design could consider screening out sample HUs with only elderly, retired individuals, it is possible that the residents at the HU have changed and thus eligible persons could be missed. A sample design could sample such HUs at a lower rate than other HUs so as to ensure representation but with lower sample sizes and costs.

Other information about the HU and persons within the HU, such as age, race, gender, and number of persons, may be of some value for stratification. Number of person in the HU is available from all existing surveys. Age, race, and gender is available for the sampled persons.

## 6. Discussion

Within this section, we discuss some two topics that are more global in nature:

1. From Section 2, assessment criterion 7 – Would the implications discussed for assessment criteria 1-6 change if the survey is merely used to screen for potential respondents (i.e., Options 2: Follow-on to Existing Survey, no Change to Existing Survey, or 3: Follow-on to Existing Survey, Additional Screening Questions in Existing Survey) rather than including a full module of 15-20 questions on occupational injury and illness (i.e., Option 1: Supplemental Module in Existing Survey)?
2. What can be posited at this stage of the project as to potential costs associated with use of various existing surveys and design options?

### 6.1 Screening vs. Add-on Module

#### Add-on Module

Option 1 (Supplemental Module in Existing Survey) would result in the most cost-effective survey design, as contact/response conversion efforts and associated costs are carried out through the existing survey. The primary challenges in implementing Option 1 (Supplemental Module in Existing Survey) are existing survey: 1) sample size; 2) timing; 3) and respondent burden.

Table 6.1.1 presents counts of the summary ratings of 5, 4, or 3 assigned to existing surveys, across the assessment criteria.

Existing surveys with the largest number of assigned high summary ratings are CPS (12-5's, 17-5/4's, 19-5/4/3's) and ACS (13-5's, 15-5/4's, 18-5/4/3's). These two surveys each have sufficient sample size to be considered as single frames for the HSOII and have high assigned ratings for Employment and I/O Information. These two aspects make CPS and ACS potential candidates for adding a HSOII module to the existing survey. Timing of ACS data release (~9 months) and respondent burden (~30-40 min), result in ACS being less ideal for Option 1 (Supplemental Module in Existing Survey) than is CPS. It may also be argued a priori that ACS could not be utilized in an HSOII design as the likelihood of receiving approval to add a supplemental module to ACS would be near, if not at, zero.

**Table 6.1.1:** Counts of summary ratings of 5/4/3 for existing surveys, by assessment criteria group

Survey	Assessment Criteria Group				Total
	Coverage/ Sample Size/ Response Rate	Data Collection Mode & Rules	Employment & I/O Information	Survey Frequency, Respondent Burden & Timing	
	(7)	(2)	(8)	(4)	
ACS	7/0/0	1/0/0	4/0/2	1/2/1	13/2/3
CPS	4/3/0	1/0/1	3/2/1	4/0/0	12/5/2
NHIS	3/0/2	1/0/1	4/2/2	2/1/0	10/3/5
BRFSS	2/4/0	1/0/1	2/0/0	1/3/0	6/7/1
MEPS-HC	2/1/0	1/0/0	5/0/2	3/0/0	11/1/2
NHANES	2/0/1	1/0/1	2/0/3	0/2/0	5/2/5
NLSY	1/1/0	2/0/0	6/0/1	0/0/0	9/1/1
NIS	2/1/1	0/0/0	0/0/0	1/2/1	3/3/2
SIPP	2/0/4	2/0/0	3/2/1	1/2/0	8/4/5
SCF	2/0/0	1/0/1	3/2/1	0/2/0	6/4/2
NSFG	1/0/1	1/0/1	2/0/0	0/1/0	4/1/2
GSS	2/0/1	1/0/1	2/0/2	0/2/0	5/2/4
AS	1/1/0	2/0/0	1/0/0	3/1/0	7/2/0
KP	1/1/0	2/0/0	0/0/0	3/1/0	6/2/0

NHIS (18-5/4/3's) and SIPP (17-5/4/3's) are the two other existing surveys with similar counts of high ratings. While both have high assigned ratings for Employment and I/O Information, their sample sizes are not sufficient to be considered as single frames for adding a HSOII module to the existing survey, and their respondent burdens are each high. In addition, SIPP sample are only selected every 2.5 to 4 years.

A combination of Option 1 (Supplemental Module in Existing Survey) and Option 4 (Multiple Surveys) could be considered to open up the existing surveys which could be considered. However, coordinating approvals to add modules to multiple surveys and the field effort across multiple agencies make this appear undesirable.

A combination of Option 1 (Supplemental Module in Existing Survey) and Option 6 (Multi-year Survey) could also be considered to increase sample size. However, sample sizes for the other existing surveys would require use of a three-year estimation period, not a two-year estimation period.

CPS is currently used as a frame for a number of supplemental modules, as indicated in Table 6.1.2. Each supplement is conducted in one given month of the year on an annual, biennial, or triennial basis.

**Table 6.1.2:** Timing, frequency of repeated CPS supplements

Month	Supplement	Frequency
Jan	Displace Workers	Biennial
	Job Tenure/Occupational Mobility	Biennial
	Unbanked/Underbanked	Biennial
Feb	Public Participation in the Arts	Annual
Mar	Annual Social and Economic Supplement	Annual
Apr	Child Support	Biennial
May		
Jun	Fertility	Biennial
Jul	Tobacco Use	Triennial
Aug	Veterans	Annual
Sep	Volunteers	Annual
Oct	School Enrollment	Annual
Nov	Voting and Registration	Biennial
Dec	Food Security	Annual

There are a set of nine criteria considered before implementing a CPS supplement, which HSOII would appear to meet. Key among the criteria as they would relate to HSOI are respondent burden (“supplemental inquiry must not add more than 10 minutes of interview time per respondent or 25 minutes per household”), compatibility of the supplement with CPS (“must not introduce a concept that could affect the accuracy of responses to the basic CPS information”), and confidentiality (“information that could be used to indirectly identify an individual with a high probability of success will be suppressed”). Note that, to provide sufficient sample size in implementing HSOII as a CPS supplement, and to reduce the potential for seasonality affecting survey responses, it would be necessary to implement HSOII as a CPS supplement in multiple months

### Screening

When considering implementing Options 2 (Follow-on to Existing Survey, no Change to Existing Survey) or 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey), the primary challenges are existing survey: 1) sample size; 2) timing; 3) and availability of key information.

As discussed in Section 5.1, ACS, CPS, and BRFSS are the only surveys with sample sizes sufficient to serve as single frames for an HSOII survey design. As indicated in Table 6.1.1, the Employment and I/O Information available from BRFSS would likely be insufficient to develop a sufficiently efficient sample design for use with Option 2 (Follow-on to Existing Survey, no Change to Existing Survey). In addition,

as BRFSS is implemented by individual states, not all of which use currently existing available optional modules, it seems best not to consider as a single frame source.

CPS could be considered for both Options 2 (Follow-on to Existing Survey, no Change to Existing Survey) and 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey). As with Option 1 (Supplemental Module in Existing Survey), it is unlikely ACS could be used for Option 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey), although it could be considered for Option 2 (Follow-on to Existing Survey, no Change to Existing Survey). The discussion relative to other existing surveys and Option 1 (Supplemental Module in Existing Survey) would also argue against their use for Option 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey), with one exception. NIS could be considered for use with Option 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey), given its large sample size of sampled telephone numbers. This would require adding a few additional questions to the NIS screener, seeking to identify eligible workers with the sample HU, as well as eligible children.

Use of other existing surveys could be considered for Option 2 (Follow-on to Existing Survey, no Change to Existing Survey), although the smaller sample sizes would likely require combining Option 2 (Follow-on to Existing Survey, no Change to Existing Survey) with Options 4 (Multiple Surveys) and 6 (Multi-year Survey) to achieve the overall sample sizes needed for HSOII.

## 6.2 Survey Costs

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Survey costs are also a critical factor in establishing an approach to an HSOII. The following factors will affect survey costs:

1. Data collection costs associated with Options 1 (Supplemental Module in Existing Survey), 2 (Follow-on to Existing Survey, no Change to Existing Survey), 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey), and 5 (Utilize Existing Sampling Frame) is utilized.
2. The need for and complexity of the sample design and sample selection;
3. The extent of files required and complexity associated with pre-sample selection processing of data from existing surveys;
4. Use of CAPI vs CATI data collection;
5. Required sample size;
6. The extent of files required and complexity associated with processing the HSOII data files;
7. The complexity associated with survey weighting.

8. Use of Option 4 (Multiple Surveys);
9. Use of Option 6 (Multi-year Survey);
10. Use of Option 7 (Panel Survey);
11. Which existing survey(s) is utilized.

Each factor is discussed briefly below. More extensive and detailed discussion will be provided in the Survey Design report.

### **Data Collection**

Option 1 (Supplemental Module in Existing Survey) will incur the lowest data collection survey costs, as it utilizes an existing survey sample and data collection process. Data collection costs would be incurred related to interviewer time to ask the additional questions in the HSOII and potentially additional required follow-ups to complete the HSOII module beyond those needed for the existing survey.

Options 2 (Follow-on to Existing Survey, no Change to Existing Survey) and 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey) would incur substantially higher data collection costs as all interviewer costs associated with contacting, obtaining participation, and screening would be borne by HSOII. Option 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey) would also incur additional costs associated with asking the additional screening questions as part of the existing survey interview. This may be partially, but likely not fully, offset by a reduction in interview time for the HSOII under Option 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey) given improved screening information.

Option 5 (Utilize Existing Sampling Frame) would incur the highest HSOII data collection costs, given additional efforts needed for locating, contacting, obtaining participation, and screening for sample that has not been contacted previously as part of an existing survey.

### **Sample Design**

Option 1 (Supplemental Module in Existing Survey) will incur no costs for developing a sample design and selecting a sample as it utilizes that for the existing survey.

Options 2 (Follow-on to Existing Survey, no Change to Existing Survey) and 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey) will incur sample design and selection costs, for which the design component will likely be more involved than that associated with Option 5 (Utilize Existing Sampling Frame). This will be due to the additional design information available from the

existing survey and the need to oversample selected industry and occupation groups to control total sample size.

Sample design and selection costs for Option 4 (Multiple Surveys) will be even higher than those for Options 2 (Follow-on to Existing Survey, no Change to Existing Survey), 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey), and 5 (Utilize Existing Sampling Frame), due to the additional complexity of optimally designing a dual frame survey.

### **Pre-sample Selection Data Processing**

Costs for this component would be expected to be lowest for Option 5 (Utilize Existing Sampling Frame). This is due to the need under Options 1 (Supplemental Module in Existing Survey), 2 (Follow-on to Existing Survey, no Change to Existing Survey), and 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey) to become familiar with and process data from an existing survey on an annual or perhaps more frequent basis. Depending upon how early in the existing survey data processing the HSOII relevant data files are created, the extent of data checking and cleaning needed before the files are ready for use in the HSOII sample design, selection, questionnaire data feeds may be significant. This issue would be compounded under Option 4 (Multiple Surveys).

### **CAPI vs. CATI**

Data collection costs would be expected to be greater for CAPI than for CATI under Options 2 (Follow-on to Existing Survey, no Change to Existing Survey) and 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey), given higher costs associated with field travel, and assumed useful information from the existing survey for CATI to utilize in contacting the sample cases. Given HSOII would not incur most of the overhead interviewing costs (locating, contacting, screening, obtaining participation, etc.), the cost differential between CAPI and CATI should be much less for Option 1 (Supplemental Module in Existing Survey).

Under Option 5 (Utilize Existing Sampling Frame), there would likely be a need for a larger selected sample size for CATI, to account for ability to contact HUs through a telephone call, along with associated higher locating and contacting costs for CATI than for CAPI, relative to Options 1 (Supplemental Module in Existing Survey), 2 (Follow-on to Existing Survey, no Change to Existing Survey), and 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey). However, CAPI costs would also be much higher given the need for locating and contacting sample HUS.

## **Sample Size**

Costs will be greater with larger required sample sizes, due almost exclusively to increased data collection costs. The impact on costs for sample design and selection, data processing, and survey weighting associated with larger sample sizes can be assumed to be negligible.

## **Pre-weighting Data Processing**

As with Pre-sample Selection Data Processing, costs for this component would be expected to be lowest for Option 5 (Utilize Existing Sampling Frame), again due to the need under Options 1 (Supplemental Module in Existing Survey), 2 (Follow-on to Existing Survey, no Change to Existing Survey), and 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey) to become familiar with and process data from an existing survey on an annual or perhaps more frequent basis. Depending upon how early in the existing survey data processing the HSOII relevant data files are created, the extent of data checking and cleaning needed before the files are ready for use in the HSOII sample design, selection, questionnaire data feeds may be significant. This issue would again be compounded under Option 4 (Multiple Surveys).

## **Survey Weighting**

Cost differences for survey weighting would primarily be associated with the initial development of the weighting methodology and programming. Option 1 (Supplemental Module in Existing Survey) should again be expected to have the lowest costs, as it leverages the survey weights developed for the existing survey. While development of the weighting methodology and programming for Options 2 (Follow-on to Existing Survey, no Change to Existing Survey), 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey), and 5 (Utilize Existing Sampling Frame) would be somewhat greater, they would be expected to have a minimal impact of the overall survey costs. Development of the weighting methodology and programming for Options 6 (Multi-year Survey) and 7 (Panel Survey) should likewise have minimal impact on the overall survey costs. Development of the weighting methodology and programming for Option 4 (Multiple Surveys) will require the greatest effort and costs; however, again should not noticeably affect the overall survey cost.

## **Option 4 (Multiple Surveys)**

Costs for multiple survey approach (Option 4) would be greater than the costs for a corresponding single frame approach, as well as adding more complexity to the sample design creation and post-survey processing. These costs may, however, be partially offset through improved sample design efficiencies resulting in lower required sample sizes than a single survey approach.

### **Option 6 (Multi-Year Survey)**

Costs for a multi-year survey (Option 6) would be lower than those for a corresponding single year survey, due to spreading a given sample size requirement across multiple years. Data collection costs could be as much as 50% lower (as number of interviews per year in a two year design would be roughly half that for the single year survey), although the actual reduction may be less.

### **Option 7 (Panel Survey)**

Costs for a panel survey (Option 7) with one interview per year would be lower than those for a corresponding survey selecting independent sample each survey period, as subsequent interviews of sample persons previously interviewed generally will cost less than new contacts. Note that the HSOII in general should benefit from this situation as it will be recontacting sample persons from the existing surveys (with the exception of Option 5: Utilize Existing Sampling Frame). Cost reductions would be dependent upon the rotation scheme and number of interviews defined for the panel survey. Should a panel design be developed that requires more frequent (e.g., bi-annual or quarterly) interviews of sample cases, then the cost reduction mentioned above would not be realized.

### **Existing Survey(s)**

While pending further investigation and consideration, the survey(s) utilized is believed to have little impact on costs, after accounting for the other factors previously listed.

### **Rough Cost Assessment**

In an attempt to summarize the information presented above and to provide an initial point of discussion, Table 6.2.1 presents a preliminary and very rough assessment of the likely relative costs of the existing survey/sampling frame and design option combinations. Within Table 6.2.1, dollar signs (\$) are used to represent ordering of costs associated with various categories/levels within a factor. The number of dollar signs, however, should not be interpreted as signifying the relative magnitude of costs among categories/levels, nor relative magnitude of costs across factors. Further work along this line will be carried out as part of development of the Survey Design report.

**Table 6.2.1:** Preliminary assessment of relative costs for existing surveys and design options

Factor	HSOII Survey Design Option						
	Option 1: Supplemental Module in Existing Survey	Option 2: Follow-on to Existing Survey, no Change to Existing Survey	Option 3: Follow-on to Existing Survey, Additional Screening Questions in Existing Survey	Option 5: Utilize Existing Sampling Frame	Option 4: Multiple Surveys	Option 6: Multi-year Survey	Option 7: Panel Survey
Data Collection	\$	\$\$	\$\$-\$\$\$	\$\$\$	N/A		
Sample Design	\$	\$\$-\$\$\$	\$\$-\$\$\$	\$\$	\$\$\$\$		
Pre-sample Selection Data Processing	\$\$-\$\$\$	\$\$-\$\$\$	\$\$-\$\$\$	\$	\$\$\$\$		
Mode							
CAPI	\$-\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$\$	N/A		
CATI	\$	\$\$\$	\$\$\$	\$\$\$\$\$	N/A		
Sample Size							
50,000	\$	\$	\$	\$	N/A		
100,000	\$-\$\$	\$\$	\$\$	\$\$	N/A		
150,000	\$\$	\$\$\$	\$\$\$	\$\$\$	N/A		
Pre-weighting Data Processing	\$\$-\$\$\$	\$\$-\$\$\$	\$\$-\$\$\$	\$	\$\$\$\$		
Survey Weighting	\$	\$-\$\$	\$-\$\$	\$-\$\$	\$\$\$		
Option 4: Multiple Surveys							
Single survey					\$\$		
Two surveys					\$\$\$-\$\$\$\$		
Option 6: Multi-year Surveys							
One year						\$\$\$-\$\$\$\$	
Two years						\$-\$\$	
Option 7: Panel Surveys+A10							
One interview per year							\$
Two interview per year							\$\$
Four interviews per year							\$\$\$-\$\$\$\$

## 7. Summary

Utilization of the existing surveys and sampling frames in the HSOII survey design is related to the design option of interest. Table 7.1 presents the existing surveys/sampling frames relative to their potential use in design Options 1-4 and single frame vs. multi-frame/multi-year designs. The assessment as to potential use is based upon sample size, which were assumed to be required to be 100,000+ for use as a single frame, and at least 15,000 to be considered for use in a multi-survey and/or multi-year design.

**Table 7.1:** Summary assessment of use of existing surveys and sampling frames relative to design options 1-4 and single frame vs. multi-frame and/or multi-year design

Survey/Sampling Frame	Design Option					
	Option 1: Supplemental Module in Existing Survey	Option 2: Follow-on to Existing Survey, no Change to Existing Survey		Option 3: Follow-on to Existing Survey, Additional Screening Questions in Existing Survey		Option 4: Utilize Existing Sampling Frame
	Single Frame	Single Frame	Multi-Frame/ Multi-year	Single Frame	Multi-Frame/ Multi-year	Single Frame
ACS	No	Yes	No	No	No	N/A
CPS	Yes	Yes	No	Yes	No	N/A
NHIS	No	No	Yes	No	Yes	N/A
BRFSS	No	Yes	No	No	No	N/A
MEPS-HC	No	No	Yes	No	Yes	N/A
NHANES	No	No	No	No	No	N/A
NLSY	No	No	No	No	No	N/A
NIS	No	No	No	Yes	No	N/A
SIPP	No	No	Yes	No	Yes	N/A
SCF	No	No	No	No	No	N/A
NSFG	No	No	No	No	No	N/A
GSS	No	No	No	No	No	N/A
AS	No	No	No	No	Yes	N/A
KP	No	No	No	No	Yes	N/A
Census MAF	N/A	N/A	N/A	N/A	N/A	Yes
Census Data	N/A	N/A	N/A	N/A	N/A	Yes
USPS DSF	N/A	N/A	N/A	N/A	N/A	Yes
RDD Telephone	N/A	N/A	N/A	N/A	N/A	Yes

When considering most likely approval constraints, CPS is the only existing survey that can be considered for use as a single frame approach under Option 1 (Supplemental Module in Existing Survey), as ACS raises substantial feasibility issues in obtaining approvals, while adding to the BRFSS raises substantial operational issues given the federal-state cooperative nature of the survey and states' determining which modules to include. CPS also appears to be the only existing survey that could be used as a single frame approach under both Options 2 (Follow-on to Existing Survey, no Change to Existing Survey) and 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey). ACS could also be considered for use as a single frame approach under Option 2 (Follow-on to

Existing Survey, no Change to Existing Survey) but not Option 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey), while NIS could also be considered for use as a single frame approach under Option 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey). Given states have the option of determining which modules to implement, BRFSS does not appear to be a desirable source for a sampling frame for HSOII.

NHIS and SIPP have sufficient sample to be considered for use under Option 1 (Supplemental Module in Existing Survey), 2 (Follow-on to Existing Survey, no Change to Existing Survey), or 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey) in a multi-survey (Option 4) and/or multi-year (Option 6) approach. Although they do not routinely collect employment information, AS and KP have sufficient sample to be considered for use under Option 3 (Follow-on to Existing Survey, Additional Screening Questions in Existing Survey) in a multi-survey (Option 4) and/or multi-year (Option 6) approach. Implementation of a multi-survey (Option 4) approach does require consideration of operational aspects of implementation for two or more surveys, such as coordinating approval to add a supplemental module to more than one existing survey, as well as the need for different structures in the modules to account for differences among the multiple surveys.

## Appendix A. Detail About Design Options

As listed in Section 2, seven design options have been identified. These options are not, however, mutually exclusive and some could be used in combination. Options 1, 2, and 3 refer to the survey instrument and data collection process that would be used for the HSOII. Option 4 (Multiple Surveys) was proposed to address potential sample size issues associated with some of the existing surveys, and could be used in conjunction with Options 1, 2, and/or 3. Option 5 (Utilize Existing Sampling Frame) (utilize an existing sample frame) is separate from considering use of an existing survey as the sample frame for the HSOII. Option 5 (Utilize Existing Sampling Frame) (multiple years) was proposed to address potential survey data collection costs associated with sufficient annual sample sizes, and could be used with any of Options 1-5. Finally, Option 7 (panel survey) was proposed to address potential recall error associated with a 12 month recall period, and could be utilized with any of Options 2-6 (this approach would only be utilized with Option 1 (Supplemental Module in Existing Survey) for an existing panel survey [CPS, MEPS-HC]).

### **Option 1: Add a supplemental module to an existing survey**

Under this option, a module of questions would be added to the existing survey questionnaire, to be asked following the completion of the existing survey questionnaire. To the extent possible, data collected as part of the existing survey questionnaire would be used in screening for eligible respondents; however, it may be necessary to include additional screening questions to the HSOII module.

To avoid changes to the data collection process for the existing survey, the assumption is made that:

1. The same within-HU sample selection rules used for the existing survey would be used for the HSOII module (e.g., if the existing survey selects one person age 18+ years for the survey, the HSOII would also treat that same person as sampled for HSOII and would not collect data for other eligible residents within the HU).
2. The same respondent rules used for the existing survey would be used for the HSOII module (i.e., if each existing survey eligible person in the HU is interviewed, then the HSOII module would be conducted with each specific HSOII eligible person; if the existing survey interviews one HU respondent who reports data for all existing survey eligible persons within the HU, then the HSOII module would obtain data for all HSOII eligible persons from the HU respondent).

Under this option, the HSOII would be collected under the same time schedule as for the existing survey. Upon completion of data collection and data processing for the existing survey, HSOII data processing could begin. Data files required to be transmitted from the existing survey would include cleaned data

from the existing survey (for specified data elements such as HU characteristics and person demographics), the raw data from the HSOII supplemental module, sample disposition codes from the existing survey and HSOII supplemental module, and the existing survey weight file (to include weights and adjustment factors from the existing survey weighting calculation). Note that the existing survey weight file could be delivered after the other data files, to allow HSOII data cleaning and editing to begin as early as possible.

HSOII data collected as a supplement to an existing survey could be affected by seasonality if data collection is not evenly distributed across the calendar year; such a situation could occur if the collection period is less than 12 months or if data collection is clustered nonrandomly in certain months.

Refinements to this option could be considered, such as, if the existing survey does not collect data for all HSOII eligible persons, should HSOII data collection be limited to those persons jointly eligible for the existing and HSOII surveys, or should an attempt be made to collect data under the HSOII module for all HSOII eligible person, regardless of their interview status for the existing survey?.

By collecting HSOII data concurrent with collection of existing survey data, Option 1 will result in the lowest HSOII data collection costs among Options 1, 2, and 3.

**Option 2: Use data from an existing survey to screen for persons eligible for the HSOII, select a subsample of HSOII eligible persons, and conduct a follow-on survey to collect any additional data required for the HSOII**

Under this option, the HSOII would utilize data from the existing survey to identify HSOII eligible persons within the HU, after data collection for the existing survey has been completed and a data file of sufficient completeness and quality from the existing survey is available. This option assumes the data currently collected in the existing survey, along with data available on the sample frame and usual auxiliary data will be the only data available for use in the sample design and data collection initiation.

The extent of relevant and correlated data collected in the existing survey will affect the efficiency of the HSOII sample design. For example, if no data on an individual's industry/occupation were available, the HSOII sample design would not be able to a priori oversample selected industry and occupation groups to ensure sufficient sample sizes for each group, such oversampling would need to be built into the data collection process. In addition, the extent of information available from the existing survey would drive the extent of additional screening questions needed to be included in the HSOII.

Regardless of the extent of data available from the existing survey, it would be necessary to also select sample, albeit it at a lower sampling rate, from HUs with no HSOII eligible persons. This is necessary to ensure representation of the target population as persons may change work status between the existing survey interview and the HSOII interview, and residents within a HU may change.

Given the need to collect HSOII data during a follow-up contact with the HU, Option 2 would incur higher data collection costs than Option 1. These higher costs would be more significant for a CAPI approach than for a CATI approach.

**Option 3: Add appropriate supplemental questions to the existing survey questionnaire to aid in screening for or stratifying persons eligible for the HSOII**

Under this option, it is assumed additional screening questionnaires could be added to the existing survey questionnaire. The purpose of the additional screening questions would be to improve the efficiency of the HSOII sample design and selection by providing information that would allow for stratification of the existing survey sample as well as for oversampling of selected subpopulations needed to meet sample size and publication requirements.

By ensuring collection of relevant and correlated data in the existing survey, this Option will result in the most efficient HSOII sample design among Options 1-3. As with Option 2, regardless of the extent of data available from the existing survey, it would be necessary to also select sample, albeit it at a lower sampling rate, from HUs with no HSOII eligible persons

Given the addition of questions to the existing survey, Option 2 would incur higher data collection costs for a given sample size and collection Mode than Option 1 and likely than Option 2. However the improved efficiency of the sample design may offset the per complete collection costs and result in survey costs of a similar magnitude to those for Option 1.

**Option 4: Utilize multiple surveys under Options 1, 2, and/or 3**

This option would be used primarily if it is determined there is no single existing survey which can be used or which meets the planned HSOII budget under Options 1, 2, or 3, and that there are two or more other existing surveys which can be used but which individually do not meet the HSOII sample size requirements. This approach is analogous to that used in dual-frame estimation for RDD surveys selecting sample from both a landline and cell telephone sample frame.

Under this option, the multiple existing surveys can be thought of as independent samples of the population of interest. From a weighting and estimation perspective, the data from each sample is independently weighted to derive survey weights representing the total population. It is at this point the multiple samples are combined, with weights adjusted so as to minimize the variance associated with estimates from the combined samples. The adjustment made to the individual sample weights is proportional to the inverse of the individual variances; thus, samples with lower variance receive larger relative adjustments.

Survey weighting for the multiple survey approach is initially carried out separately for each survey. The final stage of weighting entails adjusting survey weights to combine the sample so as to minimize variance. Essentially, the weights from each survey are adjusted inverse to their variance, with weights for sample cases from the lower variance survey receiving a larger adjustment, and weights for sample cases from the higher variance survey receiving a smaller adjustment. The weight adjustments sum to one, and are derived as in the formula below.

$$\lambda_A = \frac{var(\widehat{Y}_B)}{var(\widehat{Y}_A) + var(\widehat{Y}_B)}$$

where A and B refer to the surveys.

This approach can be utilized for integration of more than two surveys. If information about the bias of each estimate is available, then mean squared error (MSE) is used rather than variance to derive the adjustment factor.

This approach can also be used to combine surveys that only partially overlap in terms of population, such as would be the case if NSFG (for which the eligible adult population is 18-44) were utilized. This is also the situation for dual-frame RDD telephone surveys, as the landline and cell telephone sample frames only overlap for dual use landline/cell telephone HU's. The landline telephone frame uniquely covers the landline only HU population, while the cell telephone frame uniquely covers the cell only HU population. In the case of partially overlapping existing surveys, weighting is again initially carried out separately for each survey, with weights derived appropriate to the overlap population and the non-overlap population. The final stage of weighting entails adjusting survey weights for sample representing the overlap population. Weights for the non-overlap population are not affected.

$$\lambda_{A,P_1} = \frac{var(\widehat{Y}_{B,P_1})}{var(\widehat{Y}_{A,P_1}) + var(\widehat{Y}_{B,P_1})}$$

Where P1 refers to the overlap population between survey A and survey B.

Option 4 would incur sample design/selection, questionnaire design, and data processing costs somewhat greater than those for a single existing survey approach. However, the efficiency of the dual-frame design may yield sample sizes sufficiently less than those from a single survey design to result in total survey costs not substantially higher than those of a similarly efficient single survey design utilizing the same collection mode.

**Option 5: Utilize an existing sampling frame to develop an optimal sample design for the HSOII**

This option makes use of an existing sample frame rather than existing surveys. The advantage of Option 5 is the access to the full target population for sample design and selection, as opposed to being limited to that sample selected and interviewed for an existing sample. This advantage becomes more important the larger the HSOII sample requirement and the more publication levels required.

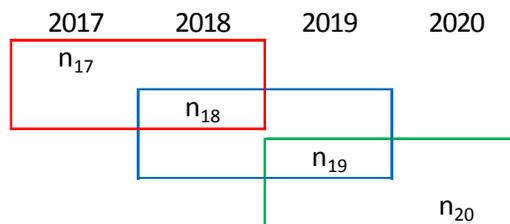
The HSOII sample design would only be able to utilize information available on the sample frame, which are limited to geographic information about the frame units, perhaps supplemented with data from auxiliary data sources. As a result, an HSOII sample design selected from one of the four sample frames would likely be less efficient than that of an HSOII sample design selected from an existing survey.

In addition, data collection costs can be expected to be noticeably greater for an HSOII sample design selected from one of the four sample frames, as all initial locating, sample clean up, etc., will be incurred by the HSOII rather than leveraging information from an existing survey. In addition, one might expect higher response rates when contacting sample cases interviewed previously than when contacting “virgin” sample cases.

**Option 6: Implement any of Options 1-5 as a multi-year survey**

Under this option, sample is combined across multiple years in creating an estimate for a given year (e.g., data collected in 2014 and 2015 would be combined to generate estimates for 2015, data collected in 2015 and 2016 would be combined to generate estimates for 2016, etc.). This approach is analogous to that utilized in the ACS for generating 3- and 5-year estimates.

As illustrated below, utilizing a two-year survey design, the sample (n17) from 2017 would be combined with the sample (n18) from 2018 to generate a two-year estimate for the period 2017-2018. The sample (n18) from 2018 would then be combined with the sample (n19) from 2019 to generate a two-year estimate for the period 2018-2019.



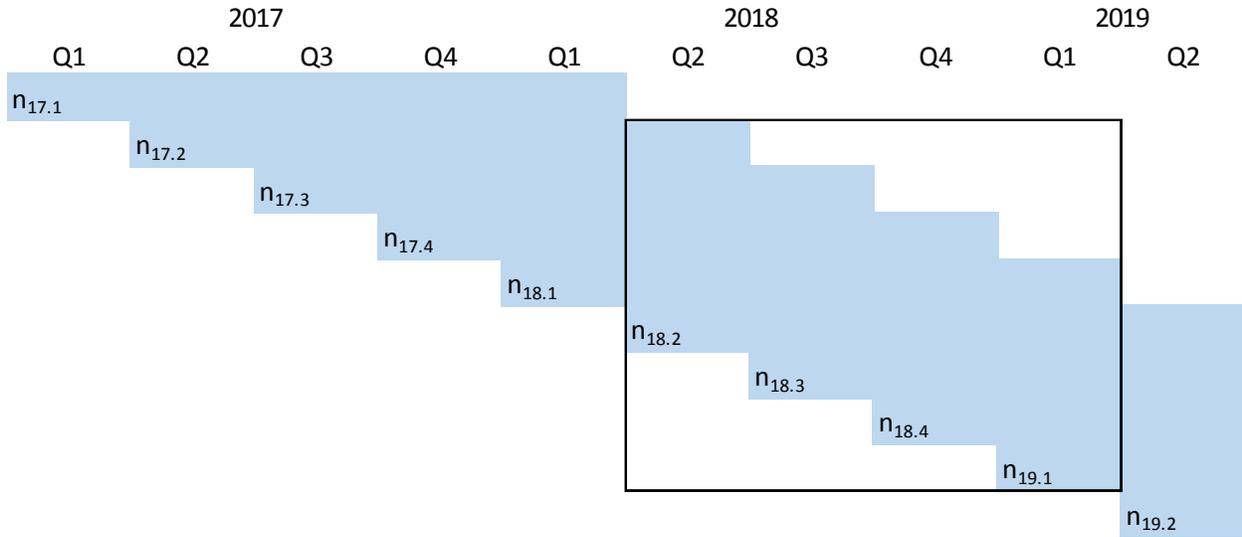
The advantage of the multi-year survey design is reduced data collection costs for a given sample size. In the illustration above, the data collection costs for each year would be roughly half those incurred to achieve an equivalent one year sample size of  $2n_{YY}$  for  $20YY$ .

The consideration is that the estimates released each year would be for a two year period rather than for one calendar year. Given injury and illness incidence rates tend to be stable across time, this approach may be acceptable. One variation of this approach would be to generate national level, overall incidence rate estimates from the sample interviewed within the calendar year, and generate lower level estimates from the sample combined across years.

**Option 7: Implement any of Options 2-6 as a panel survey**

Under this option, selected sample units are interviewed multiple times across a designated period. This approach is analogous to CPS, wherein sample units are interviewed four consecutive months, and then interviewed the same four months the following year. Each month, new sample units are selected into CPS (a new rotation group, RG), and sample units having completed their eighth interview are dropped from the sample (a retired RG).

Illustrated below is a panel design with quarterly interviews. Each RG is interviewed 5 quarters before being retired, with a new RG selected and introduced into the survey each quarter. Thus in any given quarter, interviews would take place with sample from 5 RG's, with sample cases being asked about injuries and illnesses occurring in the prior quarter. Estimates for 2018 would be based upon data from 8 RG's, with two RG's contributing data for all 4 quarters in 2018, while the other RG's would contribute data for the number of quarters they reported for 2018. The net sample size would be  $5n_{YY.RR}$ .



The advantage of the panel survey design is reduced recall error. There may also be some reduced data collection costs as the locating and gaining cooperation would require less effort when interviewing sample cases a second, third, etc., time than when interviewing sample cases for the first time.

## Appendix B. Links to Home Pages for Existing Surveys

Survey	Home Page Link
American Community Survey (ACS)	<a href="http://www.census.gov/programs-surveys/acs/">http://www.census.gov/programs-surveys/acs/</a>
Current Population Survey (CPS)	<a href="http://www.bls.gov/cps/home.htm">http://www.bls.gov/cps/home.htm</a>
National Health Interview Survey (NHIS)	<a href="http://www.cdc.gov/nchs/nhis.htm">http://www.cdc.gov/nchs/nhis.htm</a>
Behavioral Risk Factor Surveillance System (BRFSS)	<a href="http://www.cdc.gov/brfss/">http://www.cdc.gov/brfss/</a>
Medical Expenditure Panel Survey - Household Component (MEPS-HC)	<a href="http://meps.ahrq.gov/mepsweb/survey_comp/household.jsp">http://meps.ahrq.gov/mepsweb/survey_comp/household.jsp</a>
National Health and Nutrition Examination Survey (NHANES)	<a href="http://www.cdc.gov/nchs/nhanes.htm">http://www.cdc.gov/nchs/nhanes.htm</a>
National Longitudinal Survey of Youth (NLSY)	<a href="http://www.bls.gov/nls/">http://www.bls.gov/nls/</a>
National Immunization Survey (NIS)	<a href="http://www.cdc.gov/nchs/nis.htm">http://www.cdc.gov/nchs/nis.htm</a>
Survey of Income and Program Participation (SIPP)	<a href="http://www.census.gov/sipp/">http://www.census.gov/sipp/</a>
Survey of Consumer Finance (SCF)	<a href="http://www.federalreserve.gov/econresdata/scf/scfindex.htm">http://www.federalreserve.gov/econresdata/scf/scfindex.htm</a>
National Survey of Family Growth (NSFG)	<a href="http://www.cdc.gov/nchs/nsfg.htm">http://www.cdc.gov/nchs/nsfg.htm</a>
General Social Survey (GSS)	<a href="http://www3.norc.org/GSS+Website/">http://www3.norc.org/GSS+Website/</a>
AmeriSpeak (AS)	<a href="http://www.norc.org/Research/Capabilities/Pages/amerispeak.aspx">http://www.norc.org/Research/Capabilities/Pages/amerispeak.aspx</a>
KnowledgePanel (KP)	<a href="http://www.knowledgenetworks.com/knpanel/index.html">http://www.knowledgenetworks.com/knpanel/index.html</a>

## Appendix C. Definitions for Criteria Ratings

While the detailed information profiles the survey design environment for each existing survey, it is not conducive to easily comparing surveys nor to readily assessing the extent to which each existing survey fulfills needs for implementing the HSOII. To that end, the following definitions were created to provide for summarization of the survey design environment for each existing survey. These definitions are intended to represent relative, rather than exact, summary ratings. These ratings reflect the existing surveys as they are now configured, and do not imply modifications to existing surveys are not possible.

### Criteria 1: Population Representation

Rating	Coverage		Sample Selection Frequency	Sample			Response Rate
	Frame Coverage Gaps	Estimated Coverage of Workers in Eligible Sample		Screened HU's	Completed HU's	Workers	
++++	None	100%	Monthly or Quarterly	500,000+	350,000+	500,000+	90%+
+++	Non-telephone	90%-99%	Annually	100,000-499,999	70,000-349,999	100,000-499,999	75%-89%
++	N/A	75%-89%	N/A	50,000-99,999	35,000-69,999	50,000-99,999	60%-74%
+	N/A	50%-74%	Biennial+	15,000-49,999	10,000-34,999	15,000-49,999	40%-59%
0	N/A	20%-49%	As Needed	5,000-19,999	4,000-14,999	5,000-14,999	25%-39%
0	N/A	<20%	N/A	<10,000	<7,000	<5,000	<25%

### Criteria 2: Survey Mode and Use of Proxy Respondents

Rating	Data Collection	
	Sampled Persons	Respondent Rules
++++	All persons 18+	Self-respondent
+++	N/A	N/A
++	Sample of persons 18+	Self-report, if possible
+	N/A	HH respondent
0	N/A	N/A

**Criteria 3: Availability of Key Information**

Rating	Employment Information						Injury/Illness Information	
	Employment Status	Multiple Jobholders	Occupation	Industry	Employment Relationship	Sector	Injury	Illness
++++	Prior 12 months	Yes	All jobs	All jobs	Yes	Yes	Accidents/ injuries at work	N/A
+++	Prior 3 months	N/A	Up to 2 jobs	Up to 2 jobs	N/A	N/A	Work days missed	Work days missed
++	Current	N/A	One job	One job	N/A	N/A	Pain interfered w/ work activities	N/A
+	N/A	N/A	Optional module	Optional module	Optional module	Optional module	ER/provider visits; hospital stays; falls w/in 12 mo	ER/provider visits; hospital stays
0	If asked as part of a given survey	If asked as part of a given survey	If asked as part of a given survey	If asked as part of a given survey	If asked as part of a given survey	If asked as part of a given survey	If asked as part of a given survey	Selected Chronic; If asked as part of a given survey
0	Not obtained	Not obtained						

**Criteria 4: Timeliness of Calendar Year Estimates**

Rating	Collection Frequency for Sample Unit	Interview Length	Estimate Periodicity	Data Release Lag
+++++	Multiple times w/in 12 months	<15 min	Annual or more frequent	≤7 months
++++	Once w/in 12 months	16-25 min	N/A	8-9 months
+++	N/A	26-40 min	N/A	10 months
++	Once w/in 24+ months	41-59 min	Less frequently than annual	N/A
+	N/A	60+ min	N/A	11+ months
0	N/A	N/A	N/A	N/A

**Household Survey Design Report  
(Deliverable #9)**

# Survey Design and Questionnaire for a Household Survey on Occupational Injuries and Injuries

## Household Survey Design Report (Deliverable #9)

APRIL 21, 2016

PRESENTED TO:  
U.S. Bureau of Labor Statistics  
2 Massachusetts Ave, NW  
WASHINGTON, DC 20212

PRESENTED BY:  
NORC at the University of Chicago  
Kennon R. Copeland, PhD  
Senior Vice President and Director  
Statistics and Methodology  
4350 East West Highway  
Bethesda MD 20814  
PHONE (301) 634 9347

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## Executive Summary

The Bureau of Labor Statistics is seeking to develop a household survey on nonfatal occupational injuries and illnesses (HSOII) to provide information on the level of underestimation of incidence rates from the Survey of Occupational Injuries and Illnesses and to provide information relative to the potential reasons for the underestimates. This report provides NORC's recommendations for survey design options intended to meet, to the extent possible, requirements in terms of sample representativeness, data quality, timeliness, and cost for a HSOII.

The option identified as best meeting the multiple aims of sample representation, data quality, timeliness, and cost (Option 1) is to conduct the HSOII through use of supplemental questions following the Current Population Survey (CPS) Annual Social and Economic Survey (ASEC, sometimes referred to as the CPS March Supplement) for those sample persons identified as meeting the HSOII eligibility requirements. Using the ASEC for eligibility screening and framing of the reference period would result in the lowest respondent burden and cost for the HSOII. Although roughly one-third of sample persons would not need to be asked any HSOII questions and almost all the remaining sample would be asked only a few injury/illness screener questions, the key disadvantage to this option is extended respondent burden for the roughly 3% of sample persons that would be asked the full HSOII questionnaire after the CPS and ASEC questionnaires.

Given potential issues with cumulative respondent burden associated with adding HSOII supplemental questions to the CPS March Supplement, or to the CPS in January or February when other supplements are already fielded, a second option (Option 2) is to add supplemental questions to the CPS in June or July, when there is no major supplement conducted every year, is also presented. Although slightly more costly than the ASEC option and entailing slightly more screening and respondent burden, this option does meet the HSOII aims of sample representation, data quality, timeliness, and cost.

Finally, should adding supplemental questions to the CPS not be operationally feasible, an option (Option 3) that uses American Community Survey (ACS) respondents as a sampling frame for selecting the HSOII sample is presented. This alternative, while incurring much higher respondent burden and costs, offers flexibility in terms of sample design and stratification to allow targeting selected industries and occupations which is not possible with the CPS options.

Both Option 1 and Option 2 with expected numbers of completed interviews ranging from 51,000 to 57,000 can be expected to have budgets less than \$1 million. The sample size for Option 3 is flexible

based upon budget; however, keeping budget below \$1 million would likely limit number of completed interviews to less than 50,000.

# 1. Introduction

The Survey of Occupational Injuries and Illnesses (SOII) is the primary source of information on nonfatal workplace injuries and illnesses in the U.S. Existing research points to an underestimate of injuries and illnesses in the SOII attributed to a variety of factors including an employer/employee incentive to underreport these occurrences.

One way to avoid the filtering effect of collecting establishment data on employee injuries and illnesses is to collect data directly from workers in a household survey. In such a survey, workers eligible for the survey would be identified and interviewed outside the sphere of the employer. The Bureau of Labor Statistics (BLS) has contracted with NORC at the University of Chicago (NORC) to provide assistance in the development of a survey design and questionnaire for a household survey on nonfatal occupational injuries and illnesses (referred to here as HSOII).

The sample design for the HSOII must result in a nationally representative household survey of workers that allows estimates by employment relationship (employee vs. self-employed), sector (private vs. government), industry, and occupation, and meeting publishability/quality and timing criteria for the HSOII.

In an earlier NORC report<sup>1</sup>, the CPS and American Community Survey (ACS) were identified as the most suitable options for providing the sample frame for the HSOII because they provide sufficient sample size to allow both national estimates and estimates by selected groups, and because information collected in each of these surveys would be available to ease the identification of eligible respondents. This report provides details as to recommended sample design options from the CPS (Option 1 and Option 2) and ACS (Option 3).

This report provides NORC's recommendations for survey design options intended to meet, to the extent possible, requirements in terms of sample representativeness, data quality, timeliness, and cost. The option identified as best meeting the multiple aims of sample representation, data quality, timeliness, and cost is to conduct the HSOII through use of supplemental questions following the Current Population Survey (CPS) Annual Social and Economic Survey (ASEC, sometimes referred to as the CPS March Supplement) for those sample persons identified as meeting the HSOII eligibility requirements. Given potential issues with adding HSOII supplemental questions to the CPS March Supplement, or to the CPS in January or February when other supplements are already fielded, an alternative approach that uses

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<sup>1</sup> Survey Design and Questionnaire for a Household Survey on Occupational Injuries and Illnesses: Report on Suitability of Existing Surveys and Frames, December 14, 2015.

supplemental questions to the CPS in June or July, when there is no major supplement conducted every year, is also presented. Finally, should adding supplemental questions to the CPS not be operationally feasible, an alternative approach that uses American Community Survey (ACS) respondents as a sampling frame for selecting the HSOII sample is presented. This alternative, while much more costly, offers flexibility in terms of sample design and stratification to allow targeting selected industries and occupations which is not possible with the CPS options.

## 2. HSOII as Supplemental Module to CPS

The survey design option identified as best meeting the multiple aims of sample representation, data quality, timeliness, and cost is to conduct the HSOII as a supplement to the Current Population Survey (CPS) in March of each year, following completion of the Annual Social and Economic Supplement (ASEC). Given potential logistical and respondent burden issues associated with fielding the HSOII supplemental questions following a major CPS supplement, an alternative would be to field the HSOII during June or July when there is no major supplement.

The key advantages to adding supplemental HSOII questions to the CPS are that the CPS offers sufficient sample size for the HSOII, provides at least partially screening of the CPS sample for HSOII eligibility, and allows reduced data collection costs through the CPS location, contact, and participation process. Depending upon which CPS month the HSOII questions are included, there will be some potential cognitive issues associated with discrepant reference periods between CPS and HSOII. Additionally, the CPS ASEC provides full screening of the CPS sample for HSOII eligibility, through the Work Experience series of questions, thereby minimizing respondent burden among possible CPS alternatives for including supplemental HSOII questions. The ASEC also serves to reorient respondents to thinking in terms of job and economic experience the prior calendar year as opposed to the prior week as is the case for the core CPS. For these reasons, fielding HSOII in March is the preferred alternative.

### 2.1 CPS Sample Design and Collection Periodicity

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The CPS utilizes a national and state-based sample design with (per the BLS Handbook of Methods<sup>2</sup>) approximately 72,000 housing units (HUs) selected from 754 geographically defined PSU's being identified for interviewing each month. Of the 72,000 HUs, approximately 60,000 are eligible, with approximately 110,000 persons aged 16 years and older interviewed each month. 2015 CPS data provided to NORC by BLS show slightly higher HU sample counts and somewhat lower response rates, as shown in Table 2.1.1.

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<sup>2</sup> BLS Handbook of Methods: Chapter 1, Labor Force Data Derived from the Current Population Survey, <http://www.bls.gov/opub/hom/pdf/homch1.pdf>.

**Table 2.1.1:** CPS monthly sample sizes

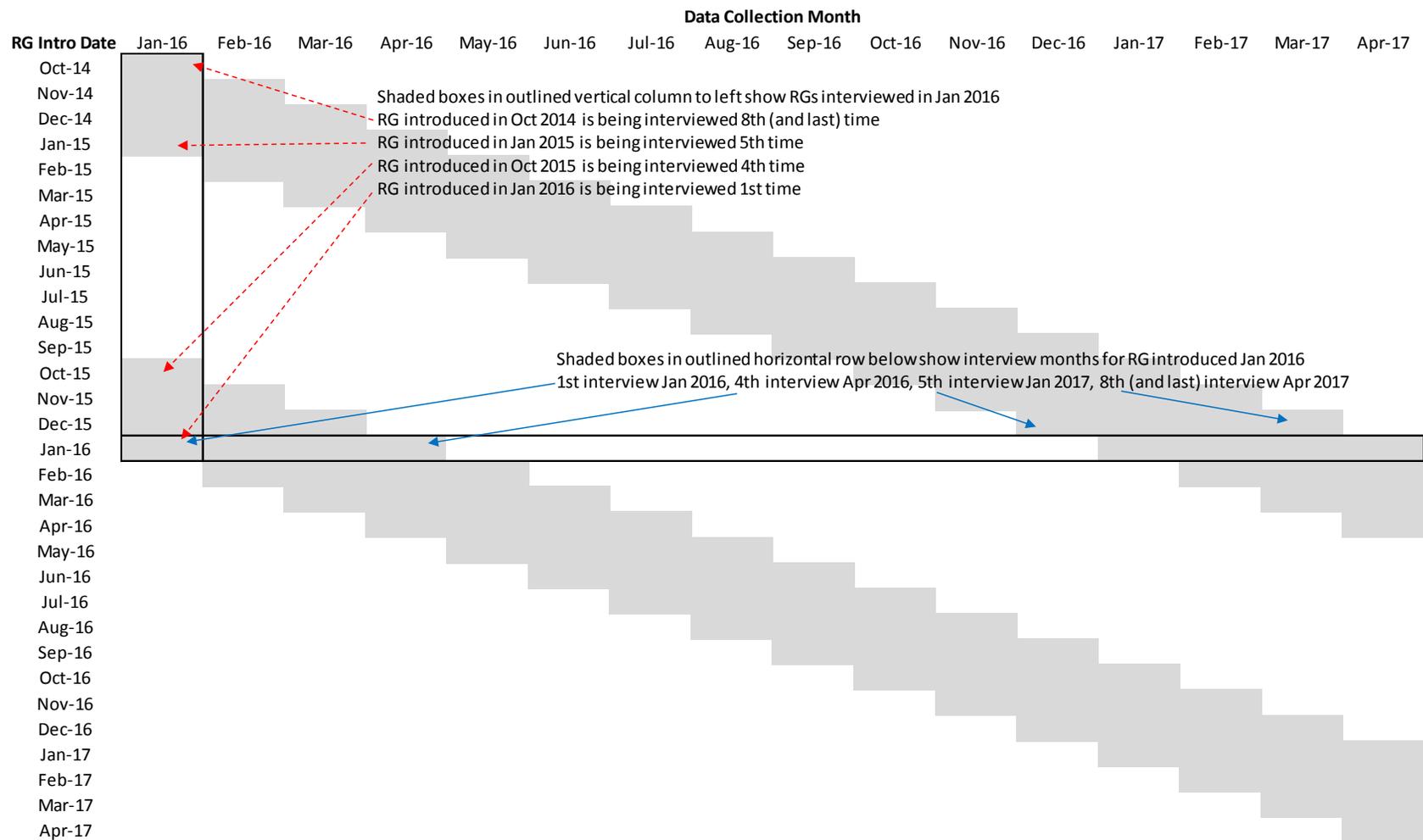
CPS Sample Counts			
		Monthly	
		BLS Handbook of Methods	2015 Monthly Average
HUs	Total	72,000	73,744
	Eligible	60,000	61,117
	w/ Interview <sup>1</sup>	55,500	53,320
Persons	16+	110,000	104,000

<sup>1</sup> Interview rates 92%-93% (BLS Handbook of Methods), 87.2% (2015 Monthly Average)

The CPS monthly sample is organized into eight rotation groups (RGs), with approximately 9,000 sampled HUs in each RG, with each RG being a nationally representative sample of HUs under the same sample design and yielding approximately 13,000 completed CPS questionnaires for persons aged 16+ at more than 6,500 occupied HUs. Each RG is included in the active sample for four consecutive months (referred to as months in sample 1 to 4, or MIS-1 to MIS-4), then rested (i.e., not included in the active sample) for eight months, then returned to the active sample for a final four consecutive months (referred to as MIS-5 to MIS-8, and corresponding to the same four calendar months as initially included in the active sample). CPS estimates for a given calendar month are comprised of sample data from the eight RGs in the active sample for the month. The CPS rotation scheme is visualized as in Figure 2.1.1.

For example, the RG introduced in Jan, 2016 will be in the active sample (following horizontally in the outlined row of Figure 3.1.1) Jan, Feb, Mar, and Apr of 2016 (MIS-1 to MIS-4 for the RG), and again Jan, Feb, Mar, and Apr of 2017 (MIS-5 to MIS-8 for the RG). In Jan, 2016 the RG introduced in Jan, 2016 is in the active sample for its first month in sample (MIS-1) along with (following vertically in the outlined column of Figure 3.1.1) RGs introduced in Oct, Nov, and Dec of 2015, and completing their respective MIS-4, MIS-3, and MIS-2 in active sample, respectively, as well as RGs introduced in Oct, Nov, and Dec of 2014 and Jan 2015, and completing their respective MIS-8, MIS-7, MIS-6, and MIS-5 in active sample.

**Figure 2.1.1:** Illustration of CPS rotation group (RG) collection schedule



**COMMENTS:**

- 1) Sample HUs in a RG are interviewed for four consecutive months (referred to as MIS-1 to MIS-4), then again the same four consecutive months the following year (referred to as MIS-5 to MIS-8)
- 2) In each month, sample HUs from 8 RGs are included in the active sample, with the RGs encompassing MIS-1 to MIS-8

The CPS yields in the order of 1.25MM annual interviews with persons aged 16 years and older. Given the RG structure, however, with the same HUs being in active sample for multiple months, the CPS annually interviews on the order of 350,000 unique individuals aged 16 years and older in roughly 180,000 occupied HUs. Given the proportion of persons 16+ who worked at least one day of the year (~65.1% based on data from the ACS), the CPS annually interviews approximately 230,000 unique workers eligible for HSOII. Table 2.1.2 provides data relative to CPS sample numbers.

**Table 2.1.2:** CPS sample counts by month, RG, and year

CPS Sample Counts (Based on 2015 Monthly Average)					
		Monthly	RG <sup>1</sup>	Annual	
				Total	Unique <sup>2</sup>
HUs	Total	73,744	9,218	884,928	248,886
	Eligible	61,117	7,640	733,404	206,270
	w/ Interview	53,320	6,665	639,840	179,955
16+	Interviewed	104,000	13,000	1,248,000	351,000
	Workers <sup>3</sup>	67,687	8,461	812,245	228,444

<sup>1</sup> RG is comprised of 1/8 of the monthly sample

<sup>2</sup> 27 unique RGs are in the active CPS sample at least one month in the year

<sup>3</sup> Based on data from ACS and CPS, an estimated 65.1% of persons 16+ worked at least one week in the prior year

In each calendar year, there are sample units from a total of 27 RGs in active sample for at least one month in the year. Of these, 18 RGs are in active sample for four consecutive months in the year – nine for their first through fourth months in active sample, and nine for their fifth through eighth months. There are another three RGs in active sample for four non-consecutive months in the year, and six RGs in active sample for less than four months in the year.

## 2.2 CPS-HSOII Survey Design

A HSOII that is a supplemental module or set of questions to the CPS could be designed as one of three alternatives: A) include module in all of the RGs in the active sample in one specific month of the year, as is the case with current CPS supplements; B) include module in all or a specified subset of the RGs in the active sample in several specific months of the year; and C) include module in a specified subset of the RGs in the active sample in all months of the year.

Alternatives B and C, while operational feasible, introduce logistical issues due to the need to coordinate with multiple CPS supplements and the potential for differing context effects in fielding the HSOII

following different introductory questions sets from the different CPS supplements. Thus, two options have been identified for fielding HSOII as a supplemental module or set of questions to the CPS.

The sampling frame for HSOII under both Option 1 and Option 2 will consist of sample HU's selected for the CPS within designated RGs for a specified month. The sample for HSOII Option 1 will consist of all CPS sampled HUs in all RGs active in March, while the sample for HSOII Option 2 will consist of all CPS sampled HUs in all RGs active in either June or July.

Under both Option 1 and Option 2, all sample HUs within all RGs in active sample in one specified month would be included in the HSOII sample. Respondents would be asked to report on injuries and illnesses for a 12 month period, whether the prior calendar year (Option 1) or the most recent 12 month (Option 2) period.

From a recall error perspective, while January would be the most desirable month for the HSOII, due to being able to collect data for the preceding calendar year with the smallest time gap between the end of the reference period and data collection, March is recommended for a different reason – the March Annual Social and Economic Supplement obtains employment status within the prior calendar year, and thus already collects the screening data for the HSOII. The HSOII supplement could be conducted in other months, but the reference period would be the prior 12 months rather than a calendar year, which is less desirable.

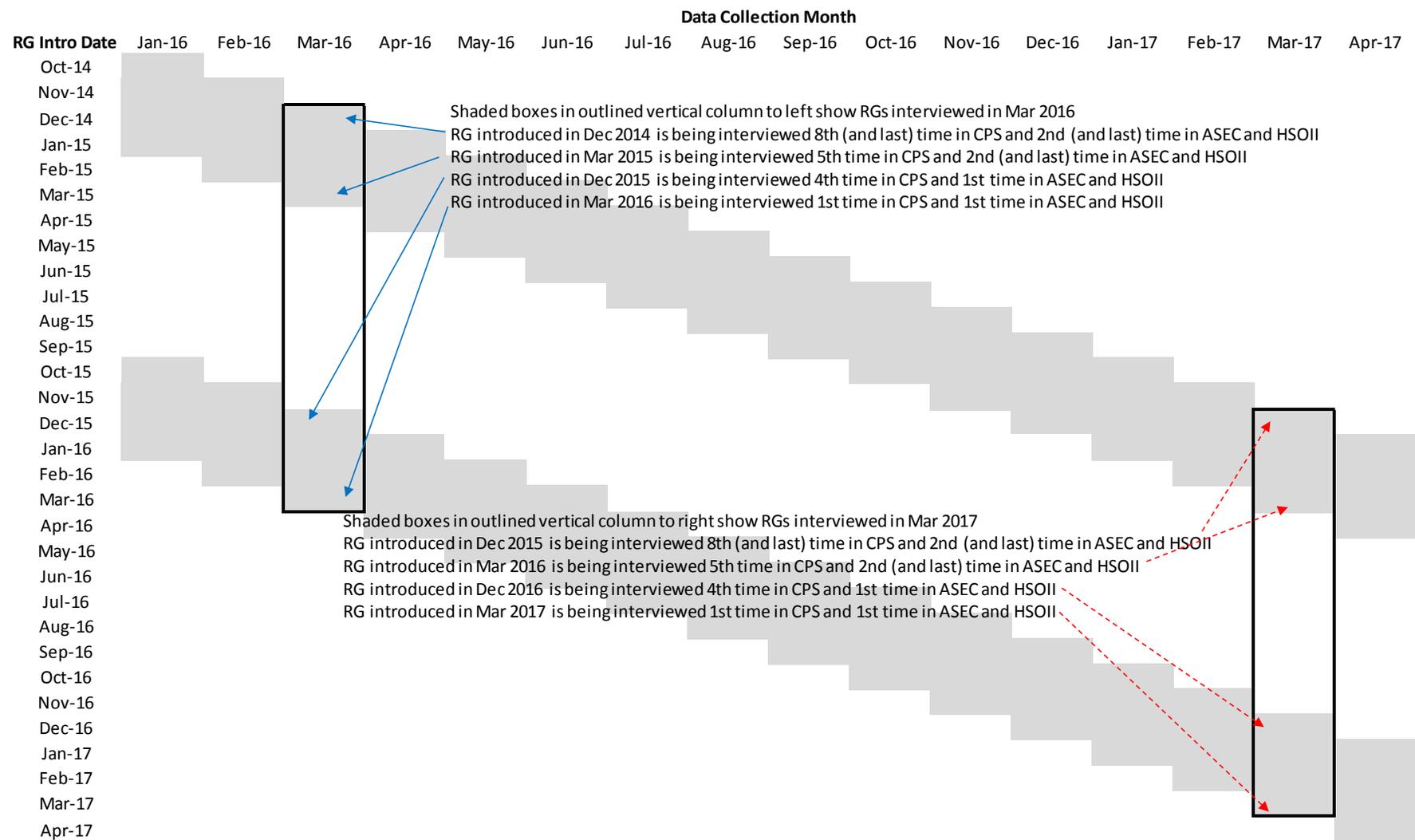
### **2.2.1 Option 1 for HSOII Survey Design: Supplemental questions included in CPS every March, following ASEC**

NORC's preferred survey design option for the HSOII is to conduct it annually in conjunction with the March CPS and Annual Social and Economic (ASEC) Supplement. Among other information, this supplement collects information on worker status for the past calendar year. The content and structure of this supplement blends well with the HSOII because it sets up the prior calendar year as the reference period for the respondent and identifies those HU members who are in the eligible age range and who worked in the last calendar year. Since the ASEC supplement would collect the necessary eligibility screening, no screening questions will be needed for the HSOII. Rather, data collected during ASEC as to work status during the prior calendar year will be used to determine whether to field HSOII questions for individual CPS sample persons. Based upon prior ACS and CPS estimates, roughly 35% of CPS sample persons did not work at least one week in the prior year and thus would be asked no HSOII questions. For the roughly 65% of CPS sample persons that are eligible for HSOII, based upon prior ESOII estimates, roughly 95% would be asked only one or a small number of questions to determine they had no HSOII-qualifying event within the prior calendar year. Thus, it is expected that approximately 3% of the

CPS sample persons would be asked the full HSOII set of questions to collect data on their injury and/or illness event(s). Given data from ACS on worker status, we would expect just over one-third of CPS/ASEC respondents would not be asked any HSOII questions, as they would not have worked in the prior year.

Given the CPS rotation scheme, each HU would be interviewed as part of the HSOII for two consecutive years in March. Each time, they would recall work-related injuries and illnesses for the prior calendar year (January through December); data on injuries and illnesses would thus be collected for a total 24-month period. However, only the second of the two interviews would be a bounded interview. As illustrated in Figure 2.2.1.1, in March 2016, the RGs that entered the sample between December 2015 and March 2016 would be interviewed for the Household SOII for the first time in March 2016; these groups would be interviewed for a second time in March of 2017.

**Figure 2.2.1.1:** Illustration of HSOII Option 1 collection schedule: Annual collection in March, prior calendar year reference period



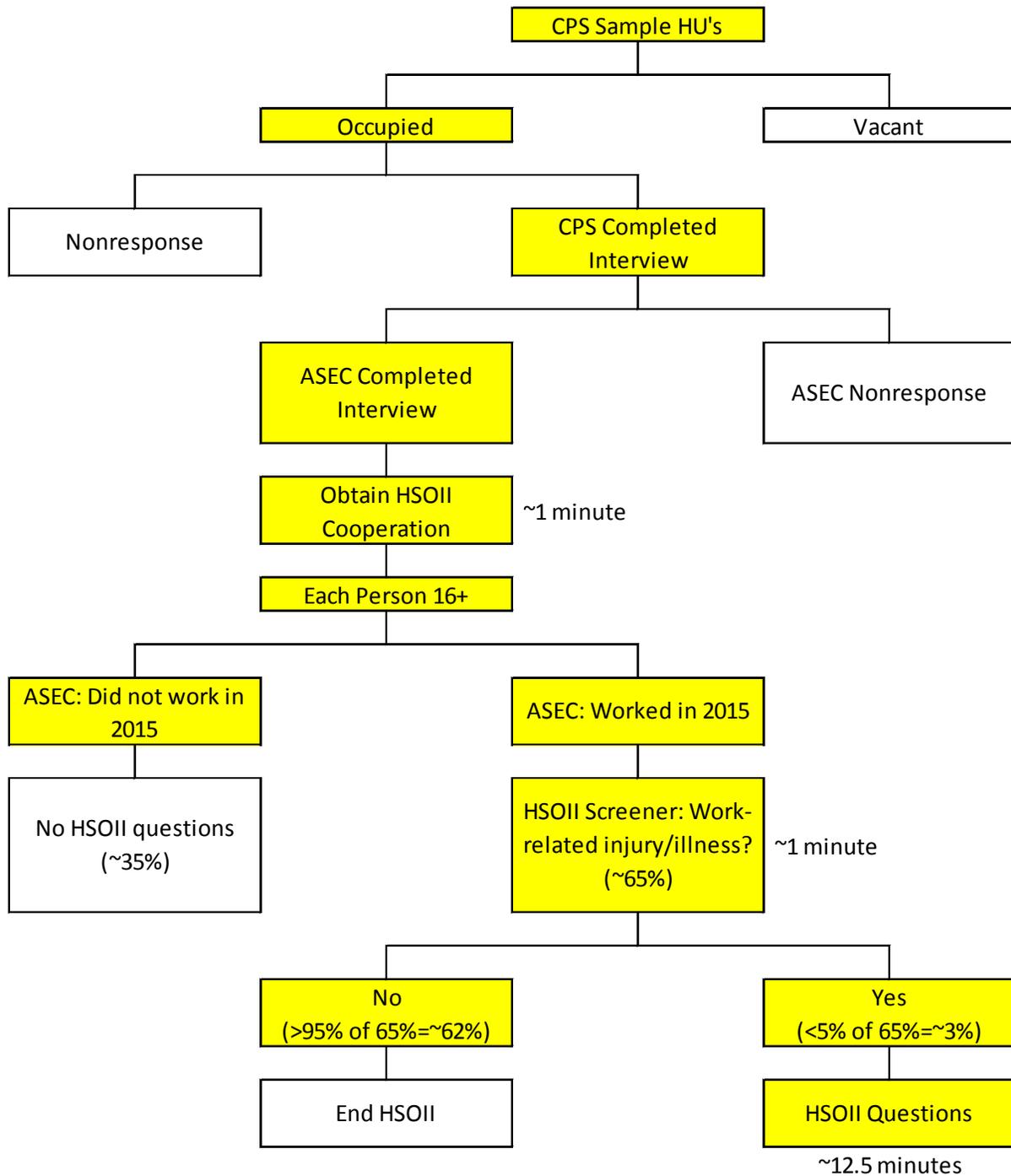
Note, however, that since the CPS is a sample of HUs, not of household members, there will be instances in which members of the HU will have moved between Household SOII interviews. In this case, the new HU members would be interviewed if they meet eligibility criteria, without use of a bounding interview.

An advantage of Option 1 is the utility of conducting the interview in conjunction with the ASEC; using the ASEC for eligibility screening and framing of the reference period will ease the burden for the HSOII. However, the reference period for the survey would be the prior calendar year, which begins up to 15 months prior to the date of the March interview. The longer reference period and more distant beginning of the reference period present issues for recall of relevant incidents. This issue is ameliorated to some degree by the fact that the ASEC asks questions about the prior calendar year and thus the respondent has been keyed in prior to HSOII on thinking in terms of the prior calendar year.

Another advantage of Option 1 is the cost savings which can be realized through a CPS supplement, wherein sample location, contact, and participation is carried out through the CPS process.

A disadvantage to the ASEC is extending respondent burden. Typically the CPS takes less than 8 minutes to complete. However, the ASEC adds 24 minutes to the survey time. The addition of the HSOII would make the survey even longer for respondents who experienced illness or injury, by roughly 10-15 minutes. However, roughly a third of the sample persons would have no additional response burden (the roughly 35% not working in the prior calendar year) and just over 60% would have minimal additional response burden (of the roughly 65% of sample persons working in the prior calendar year, over 95% would only be asked whether they experienced a work-related injury or illness (calculations in this report assume an average of 1 minute of respondent burden for HSOII injury/illness screening), and would answer in the negative, thus incurring only one minute of additional response burden, based upon data from the Establishment SOII). Any sizable increase in respondent burden would be incurred by roughly 3% of the CPS sample persons, those answering affirmatively to the HSOII screening question. This additional response burden would be on the order of 10-15 minutes (calculations in this report assume an average of 12.5 minutes). See Figure 2.2.1.2 for an illustrative flowchart of the HSOII interview process and persons following each stream.

Figure 2.2.1.2: Illustrative flowchart of HSOII Option 1 data collection interview process

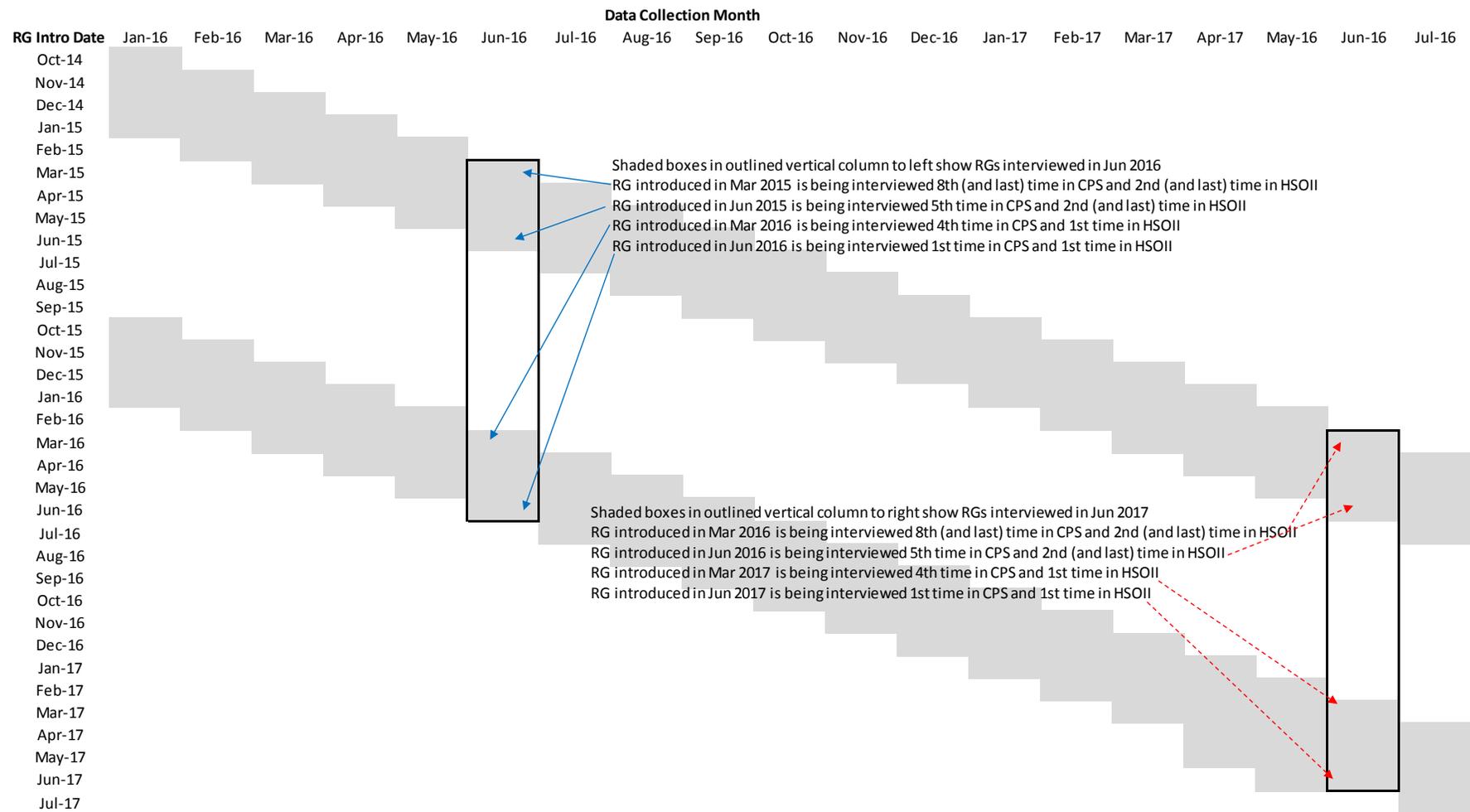


### 2.2.2 Option 2 for HSOII Survey Design: Supplemental questions included in CPS every June or July

Recognizing the potential logistical and respondent burden issues associated with Option 1, Option 2 proposes that HSOII be fielded as a set of supplemental questions following completion of the CPS each June or July. Screening questions will be required of all CPS sample persons not identified in the CPS interview as employed in the CPS reference or reporting having worked in the prior 12 months as part of the CPS unemployment questions. Although the number of screening questions should be small, they would be asked of the least the 35% of persons that ACS and CPS estimate as having not worked in the prior year. For the roughly 65% of CPS sample persons that are eligible for HSOII, they would be read an introductory statement to explain the time period for which questions are being asked to reframe their thinking to the prior 12 months. Roughly 95% of these persons would be asked only one or a small number of questions to determine they had no HSOII-qualifying event within the prior 12 months. Thus, it is expected that less than 5% of the CPS sample persons would be asked the full HSOII set of questions to collect data on their injury and/or illness event(s).

Given the CPS rotation scheme, each HU would be interviewed as part of the HSOII for two consecutive years in June or July. Each time, they would recall work-related injuries and illnesses for the prior 12 month period; data on injuries and illnesses would thus be collected for a total 24-month period for sample persons. However, only the second of the two interviews would be a bounded interview. As illustrated in Figure 2.2.2.1, in June 2016, sample HUs in the RGs that entered the sample between March and June 2016 would be interviewed for the HSOII for the first time in June 2016; these groups would be interviewed for a second time in June of 2017. Note that the persons interviewed in the overlapping RGs from one year to the next may not completely overlap, although this will be a small minority. First, as CPS is a sample of HUs and not persons, households may have moved from one year to the next. Second, HUs interviewed in one year may be nonrespondents the next year, and vice versa.

**Figure 2.2.2.1:** Illustration of HSOII Option 2 collection schedule: Annual collection in June, prior 12 months reference period

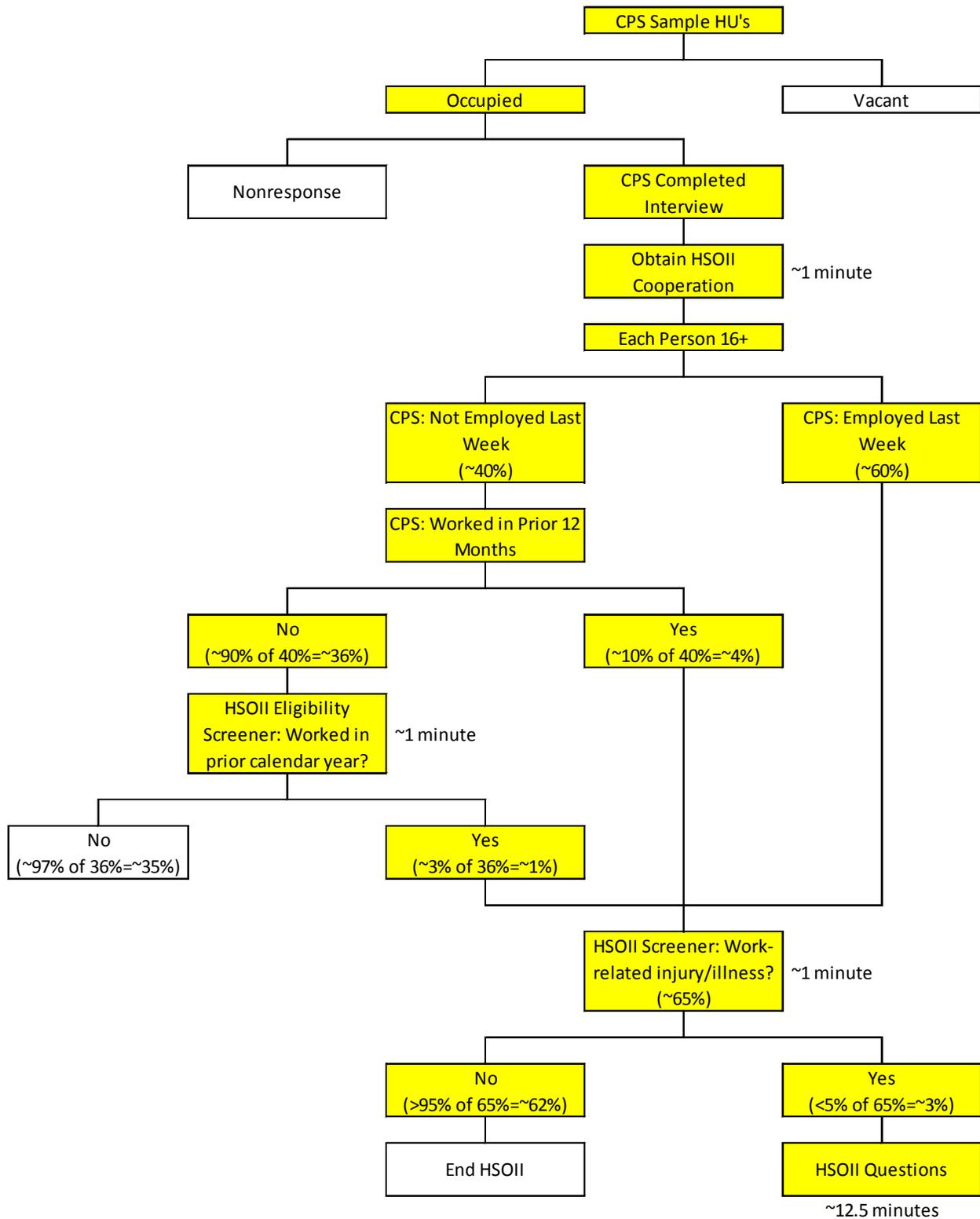


Note, however, that since the CPS is a sample of HUs, not of household members, there will be instances in which members of the HU will have moved between Household SOII interviews. In this case, the new HU members would be interviewed if they meet eligibility criteria, without use of a bounding interview.

A key advantage of Option 2 is the utility of conducting the interview in conjunction with the CPS, i.e., the cost savings which can be realized through a CPS supplement, wherein sample location, contact, and participation is carried out through the CPS process.

A disadvantage of Option 2 is the potential for recall error when asking respondents to report any work-related injury/illness events that occurred in the 12 months prior to the date of the interview. Not only will the respondent be asked to recall events from the prior 12 months, but they will also be implicitly asked to change their frame of reference from the prior week or month, which is the basis for most of the CPS questions, to the prior 12 months. A secondary disadvantage of Option 2 is the need for an eligibility question for any sample persons for which it has not been determined whether they worked in the prior 12 months. For persons determined through the CPS questions to be currently employed, it is known that they are eligible for HSOII. Similarly, for some categories of persons not classified as employed, there are CPS questions that may determine the persons to have worked in the prior 12 months and therefore eligible for HSOII. However, for all others, it will be necessary to ask a HSOII eligibility screener question (calculations in this report assume an average of 1 minute of respondent burden for HSOII eligibility screening). Figure 2.2.2.2 provides an illustration of the process flow for HSOII under Option 2. Proportions for stream under CPS: Worked in Prior 12 Months are assumptions based upon CPS data available from Employment Situation tables.

Figure 2.2.2.2: Illustrative flowchart of HSOII Option 2 data collection interview process



### 2.2.3 CPS-HSOII Sample Size and Precision

The interviewed sample size for Option 1 could be expected to be smaller than that for Option 1, due to the impact of conditional nonresponse to ASEC in addition to conditional nonresponse for HSOII. For Option 1, consideration could be given to including the ASEC supplemental samples of 6,500 Hispanic HUs and 19,000 CHIP HUs<sup>3</sup> which, based upon CPS response rates and ACS worker rates, could add an additional 23,406 sample persons eligible for HSOII. However, these ASEC supplemental samples are carried out under an extended collection period (Feb-Apr rather than just Mar), which may not be advisable for HSOII. As indicated in Table 3.1.2, an expected 67,687 CPS sample persons, less ASEC nonresponse<sup>4</sup> under Option 1, would be eligible for the HSOII in any given month. See Table 2.2.3.1 for expected sample sizes for Option 1 (both using only the March CPS sample and adding in the ASEC Hispanic and CHIP supplemental samples) and Option 2.

**Table 2.2.3.1:** HSOII expected sample counts under Option 1 and Option 2

	HSOII Expected Sample Counts				
	Option 1: March ASEC Supplements				Option 2: June or July
Eligible Workers	CPS	Hispanic	CHIP	Total	
CPS Interviews	67,687	N/A	N/A		67,687
ASEC Interviews	57,534	5,966	17,439	80,940	N/A
HSOII Interviews*	51,781	5,370	15,696	72,846	57,534

\*HSOII conditional response rate assumed to be 90% following CPS+ASEC, 85% following CPS

While the CPS utilizes a state-based sample design, for purposes of discussion, it is reasonable to assume that eligible workers in the CPS or combined CPS/ASEC sample will be distributed by industry and occupation as is the full population. In the Sampling Frame Report<sup>5</sup>, we recommended collapsing across industry groups given the sample size associated with CPS. Table 2.2.3.2.a shows a collapsed seven industry grouping based on industry size and 2014 estimated injury/illness incidence rate, while Table 3.2.3.3 shows a collapsed six occupation grouping based on occupation size and 2014 estimated days away from work incidence rate. Industry and occupation sizes are based upon 2016 Current Employment Statistics (CES) estimates.

<sup>3</sup> Current Population Survey, 2015 ASEC Technical Documentation (<http://www2.census.gov/programs-surveys/cps/techdocs/cpsmar15.pdf>).

<sup>4</sup> 2013 ASEC conditional nonresponse was 10.13% (<http://www.lisdatacenter.org/wp-content/uploads/our-lis-documentation-by-us13-survey.pdf>). Information conveyed by BLS to NORC indicates 2015 ASEC conditional nonresponse was ~15%. For Table III.C.1, a 15% conditional nonresponse for ASEC was used.

<sup>5</sup> Report on Suitability of Existing Surveys and Frames, December 14, 2015

**Table 2.2.3.2:** Sizes, incidence rates by 7-industry grouping

Industry Group	Feb 2016 Employment		2014 Incidence Rate		
	Count	Proportion	Group	2 digit Min	2 digit Max
Agriculture & Goods-producing <sup>1</sup>	22,096	15.4%	3.8	3.6	5.5
Retail Trade & Transportation <sup>2</sup>	20,742	14.5%	>3.6	3.6	4.8
Professional & Business Services	20,019	14.0%	1.5	0.9	2.6
Health Care and Social Assistance	18,977	13.3%	4.5	N/A	N/A
Leisure & Hospitality	15,435	10.8%	3.6	3.5	4.2
Other Service-producing <sup>3</sup>	26,653	18.6%	<2.9	0.7	2.9
State & Local Government	19,273	13.5%	5.0	4.1	5.4
Total	143,195	100.0%	3.4		

<sup>1</sup>Agriculture & Related Industries (employment from CPS), Mining, Construction, Manufacturing

<sup>2</sup>Retail Trade, Transportation

<sup>3</sup>Wholesale Trade, Utilities, Information, FIRE, Education, Other Services

**Table 2.2.3.3:** Sizes, incidence rates by 6-occupation grouping

Occupation Grouping	Feb 2016 Employment		2014 Incidence Rate for Days Away from Work		
	Count	Proportion	Group	Occ Min	Occ Max
Technical <sup>1</sup>	14,134	10.5%	<0.2	0.08	0.19
Management, Science & Arts <sup>2</sup>	9,680	7.2%	<0.5	0.37	0.48
Office, Sales & Education <sup>3</sup>	44,323	32.8%	<0.6	0.50	0.59
Healthcare & Services <sup>4</sup>	26,217	19.4%	<1.1	0.95	1.10
Production, Construction & Installation <sup>5</sup>	19,916	14.7%	<2.1	1.37	2.03
Support, Maintenance, Protection & Transportation <sup>6</sup>	20,858	15.4%	>2.2	2.21	2.99
Total	135,128	100.0%	1.07		

<sup>1</sup>Computer/Mathematical, Legal, Business/Financial Operations, Architecture/Engineering

<sup>2</sup>Management, Life/Physical/Social Science, Arts/Design/Entertainment/Sports/Media,

<sup>3</sup>Office/Administrative, Sales/Related, Education/Training/Library

<sup>4</sup>Community/Social Services, Food Preparation/Serving Related, Healthcare Practitioners/Technical, Personal Care/Service

<sup>5</sup>Production, Farming/Fishing/Forestry, Construction/Extraction, Installation/Maintenance/Repair

<sup>6</sup>Healthcare Support, Building/Grounds Cleaning/Maintenance, Protective Service, Transportation/Material Moving

Assuming eligible workers in the CPS sample were distributed as the full population, Table 2.2.3.4 and Table 2.2.3.5 provide expected HSOII interviews by industry and occupation grouping for Option 1 (using only March CPS ASEC respondents) and Option 2.

**Table 2.2.3.4:** Expected interviewed sample sizes by 7-industry grouping under Option 1 and Option 2

Industry Group	Feb 2016 Employment		Expected HSOII Interviews	
	Count	Proportion	Option 1	Option 2
Agriculture & Goods-producing <sup>1</sup>	22,096	15.4%	7,990	8,878
Retail Trade & Transportation <sup>2</sup>	20,742	14.5%	7,500	8,334
Professional & Business Services	20,019	14.0%	7,239	8,043
Health Care and Social Assistance	18,977	13.3%	6,862	7,625
Leisure & Hospitality	15,435	10.8%	5,581	6,202
Other Service-producing <sup>3</sup>	26,653	18.6%	9,638	10,709
State & Local Government	19,273	13.5%	6,969	7,744
<b>Total</b>	<b>143,195</b>	<b>100.0%</b>	<b>51,781</b>	<b>57,534</b>

<sup>1</sup>Agriculture & Related Industries (employment from CPS), Mining, Construction, Manufacturing

<sup>2</sup>Retail Trade, Transportation

<sup>3</sup>Wholesale Trade, Utilities, Information, FIRE, Education, Other Services

**Table 2.2.3.5:** Expected interviewed sample sizes by 6-occupation grouping under Option 1 and Option 2

Occupation Grouping	Feb 2016 Employment		Expected HSOII Interviews	
	Count	Proportion	Option 1	Option 2
Technical <sup>1</sup>	14,134	10.5%	5,416	6,018
Management, Science & Arts <sup>2</sup>	9,680	7.2%	3,709	4,121
Office, Sales & Education <sup>3</sup>	44,323	32.8%	16,984	18,871
Healthcare & Services <sup>4</sup>	26,217	19.4%	10,046	11,163
Production, Construction & Installation <sup>5</sup>	19,916	14.7%	7,632	8,480
Support, Maintenance, Protection & Transportation <sup>6</sup>	20,858	15.4%	7,993	8,881
<b>Total</b>	<b>135,128</b>	<b>100.0%</b>	<b>51,781</b>	<b>57,534</b>

<sup>1</sup>Computer/Mathematical, Legal, Business/Financial Operations, Architecture/Engineering

<sup>2</sup>Management, Life/Physical/Social Science, Arts/Design/Entertainment/Sports/Media,

<sup>3</sup>Office/Administrative, Sales/Related, Education/Training/Library

<sup>4</sup>Community/Social Services, Food Preparation/Serving Related, Healthcare Practitioners/Technical, Personal Care/Service

<sup>5</sup>Production, Farming/Fishing/Forestry, Construction/Extraction, Installation/Maintenance/Repair

<sup>6</sup>Healthcare Support, Building/Grounds Cleaning/Maintenance, Protective Service, Transportation/Material Moving

To determine precision associated with the expected sample sizes, we first estimate the effective sample sizes. The design effect associated with national level estimates of the Civilian Labor Force (analogous to workers) for the CPS sample is 0.794<sup>6</sup>. With the additional impact of nonresponse, we assume the design

<sup>6</sup> Technical Paper 66: Design and Methodology, Current Population Survey (<https://www.census.gov/prod/2006pubs/tp-66.pdf>)

effect for HSOII equals 1.0, and thus the expected sample sizes in Table 2.2.3.4 and Table 2.2.2.5 are equivalent to the effective sample sizes.

Sample interviews will take place with both full-time and part-time workers, and with workers employed all 52 weeks of the year and those employed for less time. Table 2.2.3.6 presents 2014 ACS data on work status, from which estimates of FTEs for the HSOII sample interviews can be derived.

**Table 2.2.3.6:** 2014 ACS distributions for weeks worked, usual hours worked for persons aged 16-64 years

Population 16 to 64 years		
	Total	Workers
<b>WEEKS WORKED</b>		
Worked 50 to 52 weeks	55.1%	73.8%
Worked 40 to 49 weeks	5.6%	7.5%
Worked 27 to 39 weeks	4.7%	6.3%
Worked 14 to 26 weeks	4.0%	5.4%
Worked 1 to 13 weeks	5.3%	7.1%
Did not work	25.3%	
<b>USUAL HOURS WORKED</b>		
Usually worked 35 or more hours per week	56.7%	75.9%
40 or more weeks	50.6%	67.7%
50 to 52 weeks	47.1%	63.1%
Usually worked 15 to 34 hours per week	14.4%	19.3%
40 or more weeks	8.9%	11.9%
50 to 52 weeks	7.1%	9.5%
Usually worked 1 to 14 hours per week	3.6%	4.8%
40 or more weeks	1.3%	1.7%
50 to 52 weeks	1.0%	1.3%
Did not work	25.3%	

The data in 2.2.3.6 represent persons aged 16-64. It is reasonable to assume that persons aged 65+ are less likely to work full-time and less likely to work all weeks in the year. For purposes of this analysis, we assumed that the proportion of workers aged 65+ working full-time is half that of workers aged 16-64, with the difference equally allocated across part time status categories, and that the proportion of workers aged 65+ working 50 to 52 weeks is half that of workers aged 16-64, with the difference equally allocated across weeks worked categories. The result, along with distribution for total workers aged 16+ is provided in Table 2.2.3.7.

**Table 2.2.3.7:** Estimated distributions for weeks worked, usual hours worked for persons aged 16+ years

Workers			
	16-64	65+	Total
<b>WEEKS WORKED</b>			
Worked 50 to 52 weeks	73.8%	36.9%	71.5%
Worked 40 to 49 weeks	7.5%	16.7%	8.1%
Worked 27 to 39 weeks	6.3%	15.5%	6.9%
Worked 14 to 26 weeks	5.4%	14.6%	5.9%
Worked 1 to 13 weeks	7.1%	16.3%	7.7%
<b>USUAL HOURS WORKED</b>			
Usually worked 35 or more hours per week	75.9%	38.0%	73.6%
40 or more weeks	67.7%	26.2%	65.2%
50 to 52 weeks	63.1%	15.7%	60.1%
Usually worked 15 to 34 hours per week	19.3%	38.3%	20.5%
40 or more weeks	11.9%	18.0%	12.3%
50 to 52 weeks	9.5%	12.6%	9.7%
Usually worked 1 to 14 hours per week	4.8%	23.8%	6.0%
40 or more weeks	1.7%	9.4%	2.2%
50 to 52 weeks	1.3%	8.5%	1.8%

Based on the distributions by weeks worked and usual hours worked, the average FTE across the worker population is 0.80. Assuming this relationship holds across industry, the effective sample size of worker years from Option 1 and Option 2, along with expected standard errors and expected relative standard errors for estimated injury/illness incidence rates are represented in Table 2.2.3.8 and Table 2.2.3.9. Expected standard errors were derived assuming HSOII estimated incidence rates for an industry grouping will be 25% higher than those from ESOII.

**Table 2.2.3.8:** Estimated distributions for weeks worked, usual hours worked for persons aged 16+ years

Industry Group	Expected HSOII Worker Years		Estimated Injury/Illness Incidence Rate		Expected Standard Error for Incident Rate		Expected Relative Standard Error for Incident Rate	
	Option 1	Option 2	2014 ESOII	HSOII	Option 1	Option 2	Option 1	Option 2
Agriculture & Goods-producing <sup>1</sup>	6,392	7,102	3.8	4.8	0.27	0.25	7.0	5.3
Trade & Transportation <sup>2</sup>	6,000	6,667	~3.9	4.9	0.28	0.26	7.1	5.4
Professional & Business Services	5,791	6,435	1.5	1.9	0.18	0.17	11.9	9.0
Health Care and Social Assistance	5,490	6,100	4.5	5.6	0.31	0.30	6.9	5.2
Leisure & Hospitality	4,465	4,961	3.6	4.5	0.31	0.29	8.6	6.5
Other Service-producing <sup>3</sup>	7,710	8,567	~1.8	2.3	0.17	0.16	9.4	7.1
State & Local Government	5,575	6,195	5.0	6.3	0.32	0.31	6.5	4.9
Total	41,425	46,027	3.4	4.3	0.10	0.09	2.9	2.2

<sup>1</sup>Agriculture & Related Industries (employment from CPS), Mining/Logging, Construction, Manufacturing

<sup>2</sup>Wholesale Trade, Retail Trade, Transportation

<sup>3</sup>Utilities, Information, FIRE, Education, Other Services

**Table 2.2.3.9:** Estimated distributions for weeks worked, usual hours worked for persons aged 16+ years

Occupation Group	Expected HSOII Worker Years		Estimated Injury/Illness Incidence Rate <sup>7</sup>		Expected Standard Error for Incident Rate		Expected Relative Standard Error for Incident Rate	
	Option 1	Option 2	2014 ESOII	HSOII	Option 1	Option 2	Option 1	Option 2
Technical <sup>1</sup>	4,333	4,814	0.4	0.6	0.11	0.11	25.4	19.3
Management, Science & Arts <sup>2</sup>	2,967	3,297	1.2	1.5	0.23	0.21	18.4	14.0
Office, Sales & Education <sup>3</sup>	13,587	15,097	1.6	2.1	0.12	0.12	7.4	5.6
Healthcare & Services <sup>4</sup>	8,037	8,930	3.2	4.0	0.22	0.21	6.9	5.2
Production, Construction & Installation <sup>5</sup>	6,105	6,784	5.3	6.6	0.32	0.30	6.0	4.6
Support, Maintenance, Protection & Transportation <sup>6</sup>	6,394	7,105	8.6	10.8	0.39	0.37	4.5	3.4
Total	41,425	46,027	3.4	4.3	0.10	0.09	2.9	2.2

<sup>1</sup>Computer/Mathematical, Legal, Business/Financial Operations, Architecture/Engineering

<sup>2</sup>Management, Life/Physical/Social Science, Arts/Design/Entertainment/Sports/Media

<sup>3</sup>Office/Administrative, Sales/Related, Education/Training/Library

<sup>4</sup>Community/Social Services, Food Preparation/Serving Related, Healthcare Practitioners/Technical, Personal Care/Service

<sup>5</sup>Production, Farming/Fishing/Forestry, Construction/Extraction, Installation/Maintenance/Repair

<sup>6</sup>Healthcare Support, Building/Grounds Cleaning/Maintenance, Protective Service, Transportation/Material Moving

<sup>7</sup>Incidence Rates derived using ratio of injury/illness incidence rates to days away from work incidence rates (3.13) for industry

For comparison purposes, Table 2.2.3.10 presents relative standard errors from the 2014 ESOII for selected industries.

**Table 2.2.3.10:** Estimated distributions for weeks worked, usual hours worked for persons aged 16+ years

Industry Group	Estimated Injury/Illness Incidence Rate 2014 ESOII	Relative Standard Error for Incident Rate 2014 ESOII
Natural Resources & Mining	3.8	2.9
Construction	3.6	2.4
Manufacturing	4.0	0.8
Trade, Transportation & Utilities	3.6	0.9
Information	1.4	4.4
Finance, Insurance & Real Estate	1.2	4.2
Professional & Business Services	1.5	2.6
Educational & Health Services	4.2	0.8
Leisure, Entertainment & Hospitality	3.6	1.4
Other Services	2.5	4.1
State & Local Government	5.0	1.6
Total	3.4	0.5

As can be seen, relative standard errors for the HSOII will be larger than those for the ESOII. However, for the suggested industry and occupation groupings and assumed HSOII estimated incidence rates, the sample size is sufficient to power 95% one-sided tests of differences between ESOII and HSOII incidence

rates, at the 0.80 level, for all with the exception of the occupation groupings with estimated ESOII incidence rates less than 1.5.

### 3. HSOII Sample Selected from ACS

If it is determined to not be feasible to include the HSOII as a supplement to the CPS, the preferred alternative approach would be to select sample from American Community Survey (ACS) respondents and conduct the HSOII as a standalone follow-on survey. The key advantages of the ACS as a sampling frame for a standalone HSOII are its sample size and the data available from the ACS data collection for use in HSOII sample design stratification. In particular, ACS data provides information as to each person's work status, industry, occupation as of the date of the ACS interview. The key disadvantage is cost, as HSOII would incur all data collection costs, from location, to contact, to participation, and respondent burden, as screening and profile information would need to be obtained from all sample.

#### 3.1 ACS Sample Design and Collection

---

The ACS utilizes a county/county-equivalent level sample design to select roughly 3.54MM HUs and 200,000 persons in group quarters (GQs) each year for interviewing. HU sample is released monthly, with data collection occurring over a three month period through a combination of mail, web, telephone, and personal visit. Personal visit followup occurs in the third month with a sample of residual nonrespondents. GQ data collection varies depending on type of GQ, but with a similar annual sample design.

The ACS collects data on worker status in the prior 12 months, along with industry and occupation data and other demographic and socioeconomic characteristics of interest for stratification of the HSOII. As a result, sample size targets could be established by industry group and occupation group, with oversampling of specified groups (whereas in the CPS option, sample size distributions by industry and occupation groups would be expected to be similar to those seen in the general population).

Given average occupancy data for HUs, total annual sample sizes from ACS are represented in Table 3.1.1. As can be seen, the ACS sample interviews include roughly 2.3MM workers.

**Table 3.1.1:** ACS sample sizes

	2014 ACS Sample Size	
	HU Sample	GQ Sample
HUs Selected	3,540,532	N/A
Final HU Interviews	2,322,722	N/A
Occupied HUs	1,881,261	N/A
Persons Selected	N/A	207,403
Final Person Interviews	4,513,063	165,116
16+	3,535,344	162,694
Workers	2,271,962	35,793

As with the CPS sample, it is reasonable to assume that the distribution of workers in the ACS sample is similar to that in the total population. Thus, any industry which constitutes at least 0.5% of the total workforce would be expected to have at least 10,000 sample cases in the ACS.

### 3.2 Option 3 for the HSOII Survey Design: Standalone Survey using ACS Sample

Under Option 3, the ACS would serve as a sampling frame from which a subsample of HUs and GQs would be selected for interview. The design would be stratified by employment relationship, industry, and occupation to provide minimally sufficient sample sizes to meet estimation requirements. In addition, work status would also be used as a stratifier to improve the efficiency of the design. Although sector is the one other dimension of interest for estimates, it is implicitly treated as a stratifier given the proposed industry grouping treats state/local government as a separate grouping.

Given the time lag between ACS data collection and likely availability of the ACS data file for use in HSOII sampling, the ACS information will have aged and will be out of date for some persons (e.g., HU members moved, changes in employment status). The HSOII sample would have to include sample from ACS HUs in which there were no workers at the time of the ACS, to ensure full coverage of the target population, although at much lower sampling rates. Many of these latter sample would result in finding no eligible persons for the HSOII, and thus reduce the efficiency of the sample design.

Stratification for the sample design would look like the layout in Table 3.2.1. ACS HUs and GQs would be designated to strata based upon the characteristics of the persons aged 16+ within the HU at the time of the ACS interview. Most HUs would have more than one person aged 16+, and thus a hierarchy for classifying HUs to strata must be developed. Several approaches could be considered, such as classifying the HU based on a hierarchy established among the strata, using the relative population sizes of the strata

to assign HUs to the smallest stratum for which they qualify, or identifying a reference person for each HU and classifying the HU based upon that person’s characteristics (e.g., youngest, first person listed).

**Table 3.2.1:** Estimated distributions for weeks worked, usual hours worked for persons aged 16+ years

Industry Occupation		Employment Relationship					
		Employee				Self-Employed	Not a Worker
		Work Status					
		Full-time		Part-time			
		All Weeks	Partial Weeks	All Weeks	Partial Weeks		
Overall							
Ind 1	Occ 1						
	Occ 2						
	...						
	Occ m						
Ind 2	Occ 1						
	Occ 2						
	...						
	Occ m						
...							
Ind n	Occ 1						
	Occ 2						
	...						
	Occ m						

As recommended in the Sampling Frame Report, the number of industry and occupation groupings should be limited to five to seven, with effective sample sizes of 5,100 for each industry grouping, occupation grouping, and self-employed stratum, given the data collection costs associated with a standalone survey. As opposed to Option 1 and Option 2, the industry groupings for Option 3 can be defined as preferred for purposes of the HSOII analysis. For example, industries (occupations) with the highest estimated incidence rates of with the highest likelihood of incidence rate underestimation could be defined as strata, keeping one stratum as a residual industry (occupation).

The sample size designated for the stratum consisting of HUs with no reported worker from the ACS would be small, allowing HSOII to represent the full population of workers, but controlling costs as a very small proportion of sample from this stratum would be expected to yield eligible person.

Total selected sample sizes would be derived based upon expected design effect, response rates, persons interviewed per HU, workers per HU, and FTE per worker. Given differential sampling rates across strata and the extremely small sampling rate for the Not a Worker stratum, we can expect design effects to be relatively large, perhaps on the order of 1.5 to 2.0. Response rates could be expected to be in the 50%

to 75% range. Average number of workers interviewed per HU will be on the order of 1.4 to 1.6. FTE per worker should be at least as great as that in the general population, perhaps 0.8 to 0.85.

Translating these data into selected sample sizes to yield effective sample sizes of 5,100 at the industry group, occupation group, and self-employed level is represented in Table 3.2.2. As can be seen, the selected sample size of HUs for each industry grouping, occupation grouping, and self-employed could range from 7,500 to 18,214 depending on the actual parameters. With 5 industry groupings and 5 occupation groupings, this would translate into roughly 38,500 to 91,000 selected HUs, plus some number of HUs selected from the Not a Worker stratum.

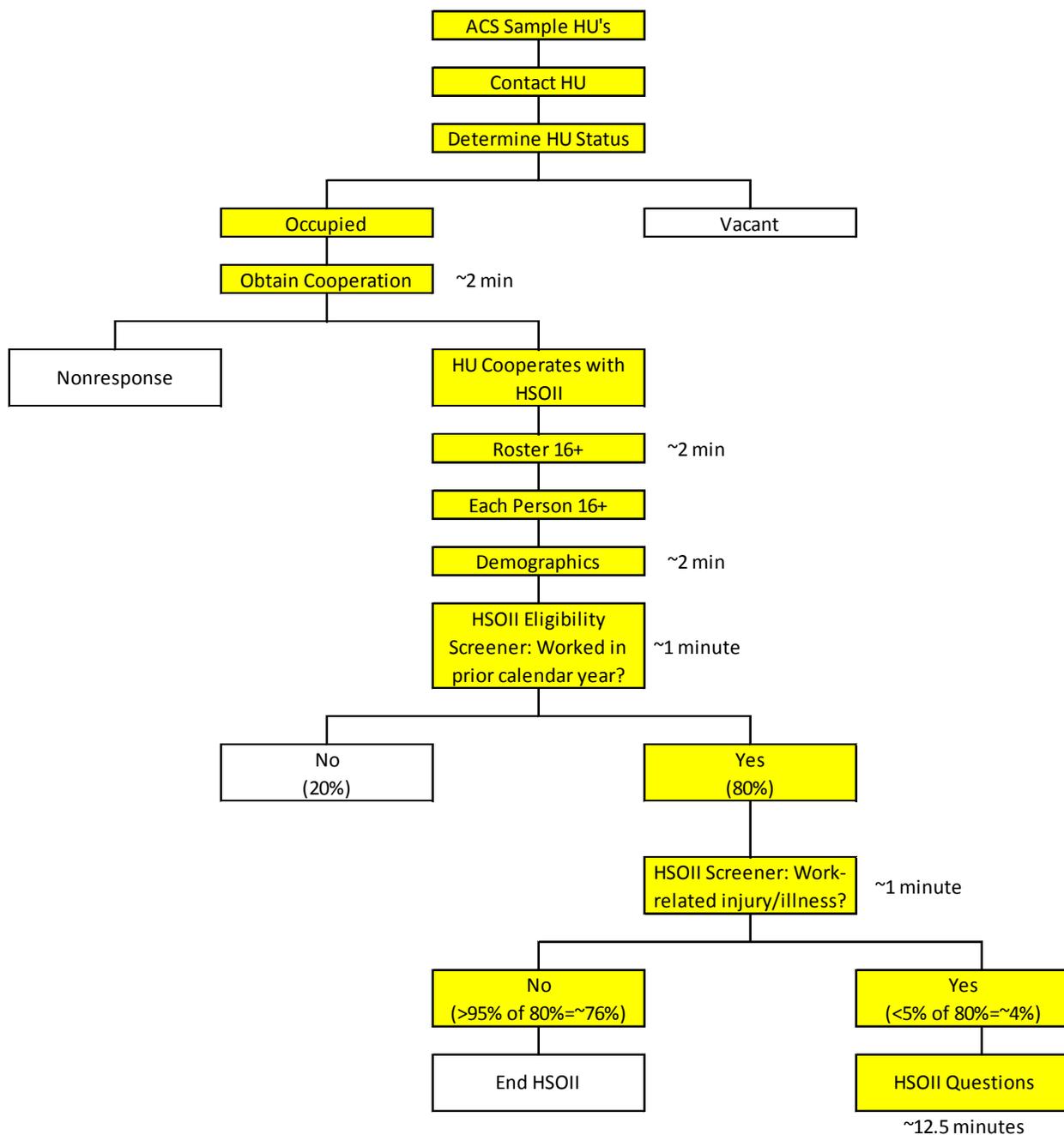
**Table 3.2.2:** Estimated distributions for weeks worked, usual hours worked for persons aged 16+ years

Selected HU Sample	13,661	18,214	12,857	17,143	11,953	15,938	11,250	15,000	9,107	12,143	8,571	11,429	7,969	10,625	7,500	10,000
Response Rate	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
HU Interviews	6,830	9,107	6,429	8,571	5,977	7,969	5,625	7,500	6,830	9,107	6,429	8,571	5,977	7,969	5,625	7,500
Workers per HU	1.4	1.4	1.4	1.4	1.6	1.6	1.6	1.6	1.4	1.4	1.4	1.4	1.6	1.6	1.6	1.6
Worker Interviews	9,563	12,750	9,000	12,000	9,563	12,750	9,000	12,000	9,563	12,750	9,000	12,000	9,563	12,750	9,000	12,000
FTE Rate	0.8	0.8	0.85	0.85	0.8	0.8	0.85	0.85	0.8	0.8	0.85	0.85	0.8	0.8	0.85	0.85
FTE Interviews	7,650	10,200	7,650	10,200	7,650	10,200	7,650	10,200	7,650	10,200	7,650	10,200	7,650	10,200	7,650	10,200
Design Effect	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0
Effective Sample	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100

The overall the costs of conducting the HSOII as a standalone survey would be much higher than conducting it as a CPS supplement, since it will not be possible to take advantage of an existing data collection mechanism. In addition, given the outdated information on worker status, some sample HUs would yield no HSOII eligible persons while still incurring the cost of contact and screening. Should there be any plans for some type of personal visit nonresponse followup, it would be advantageous to utilize a PSU design, perhaps overlapping with CPS PSUs to take advantage of experienced Census interviewers.

Figure 3.2.1 provides an illustration of the process flow for HSOII under Option 2. Prior to beginning the HSOII interview, several steps not required for Option 1 or Option 2 will need to be completed: a) obtaining cooperation at the HU (calculations in this report assume an average of 2 minute of respondent burden for HSOII cooperation); b) rostering individuals in the HU aged 16+ years (calculations in this report assume an average of 2 minute of respondent burden for rostering); and c) collecting demographic information for persons aged 16+ years (calculations in this report assume an average of 2 minute of respondent burden for collecting demographics). Note that, the proportion of HSOII-eligible individuals is assumed to be 80% as opposed to the 65% population average. This is due to the ability to stratify the ACS sample into HUs assumed to have HSOII-eligible persons with undersampling of HUs assumed to have no HSOII-eligible persons.

**Figure 3.2.1:** Illustrative flowchart of HSOII Option 2 data collection interview process



In a standalone survey, it could be possible to reduce survey cost by including data collection via self-administered questionnaire (SAQ). Survey respondents could be provided with a mail or Web questionnaire to complete independently. Given the screening effort required to identify individuals who worked during the survey reference period, and the small percentage of workers who will have experienced a workplace injury or illness, conducting some initial screening via SAQ prior to interviewer contact could increase efficiency. It would require pretesting to determine whether an initial screening

via SAQ would work and whether respondents can report accurately to the employment, injury and illness questions that would be included.

## 4. Summary

Table 4.1 profiles the three Options relative to survey design components, preliminary estimated respondent burden, and preliminary estimated data collection cost per completed interview.

**Table 4.1:** Comparison of Option 1, Option 2, and Option 3 in terms of survey design components

Component	CPS-based		ACS-based
	Option 1	Option 2	Option 3
Max completed interviews	51,781 (could add ~20,000 if utilize ASEC supplemental sample)	57,534	up to ~1.5MM
Ability to stratify by I/O	No	No	Yes
Incur cost for sample unit locating, contact, participation	No	No	Yes
Need for HSOII eligibility screening	No	Yes-some	Yes-all
Reference Period	Calendar year	Recent 12 months	Recent 12 months
Need to reorient respondent to reference period	No - already done with ASEC	Yes	No
Number of years HU in HSOII	2	2	1*
Average respondent burden	~1.8 min	~2.2 min	~7.4 min
Breakout of burden			
Obtain cooperation	100% (ASEC completes) @ 1 min	100% (CPS completes) @ 1 min	100% (sample HUs) @ 2 min
Roster 16+ in HU	none	none	100% (participating HUs) @ 2 min
Demographics	none	none	100% @ 2 min
HSOII eligibility screener	none	36% @ 1 min	100% @ 1 min
HSOII injury/illness screener	65% @ 1 min	65% @ 1 min	80% @ 1 min
HSOII injury/illness questions	3% @ 12.5 min	3% @ 12.5 min	4% @ 12.5 min
Estimated data collection cost per complete	\$5.70-\$6.75	\$5.70-\$6.75	\$15-\$25

\*Sample design could have year-to-year overlap

Preliminary estimated respondent burden is based upon assumed respondent burden for required components of the HSOII data collection as listed in the illustrative flowcharts for the three Options. Preliminary estimated data collection cost per completed interview for Option 1 and Option 2 was determined assuming interviewer time would be equal to estimated respondent burden plus 5 minutes per interview for review and administrative activities along with an assumed four hour per interviewer training in preparation for the HSOII, and that fully loaded interviewer costs are on the order of \$30-\$35 per hour. Preliminary estimated data collection cost per completed interview for Option 3 was assumed to be on the order of \$15-\$25 per completed interview by mail or web, based upon similar NORC experience and depending upon level of incentives offered.

Option 1 (HSOII implemented following March CPS ASEC supplement) provides the lowest expected data collection cost (on the order of \$300k-\$350k) and average respondent burden (~1.8 min), as it

utilizes existing sample and data collection processes. Collected data would be relative to a calendar year. Costs would be related to the cost of the add-on module, questionnaire modifications to accommodate the supplemental HSOII questions, and post-survey data processing for the HSOII.

Option 2 (HSOII implemented following June or July CPS) would avoid the issue of conducting the HSOII in the same month as a Jan, Feb, or Mar CPS supplement. This option would entail an additional screening step for persons not identified as HSOII eligible through the CPS, and thus somewhat higher average respondent burden (~2.2 min) and greater data collection cost (on the order of \$350k-\$400k) than Option 1. Collected data would be relative to the 12 months prior to June or July.

Option 3 (HSOII selected from ACS and conducted as a standalone survey) provides the most flexibility in terms of stratification and establishing sample sizes for specific industries and occupations. However, the average respondent burden associated with Option 3 (~7.4 min) would be roughly three to four times greater than that of Option 1 and Option 2. In addition, data collection costs for Option 3 (on the order of \$15-\$25 per completed interview) would be much greater than those for Option 1 and Option 2, due to the need for more screening and additional questions under an independent survey environment. Thus, under Option 3, between 40,000 and 66,000 completed interviews would incur data collection costs on the order of \$1 million. In addition, Option 3 would incur costs associated with activities not required under Option 1 and Option 2 (sample selection, collecting household roster and demographic data, and sample unit locating, contact, and participation). Collected data would be relative to the 12 month period prior to the collection period, which could be timed somewhat to BLS preference.

**Report on Existing Questions and Survey  
Instruments on Workplace Injuries and Illnesses  
(Deliverable #6)**

# FINAL REPORT

## Existing Questions and Survey Instruments Deliverable #6

NOVEMBER 29, 2016

PRESENTED TO:  
U.S. Bureau of Labor Statistics  
2 Massachusetts Ave, NW  
Washington, DC 20212

PRESENTED BY:  
NORC at the University of Chicago  
55 East Monroe Street, 30th Floor  
Chicago, IL 60603  
Phone (312) 759-4000

AUTHORS:  
Lisa Lee  
Nola du Toit  
Rene Bautista



*at the* UNIVERSITY *of* CHICAGO

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## Introduction

The Survey of Occupational Injuries and Illnesses (SOII), conducted by the U.S. Bureau of Labor Statistics (BLS), serves as the primary source of information on nonfatal workplace injuries and illnesses (Wiatrowski, 2014). In this surveillance system, sampled employers report information on workplace injuries and illnesses according to Occupational Safety and Health Administration (OSHA) requirements. The requirements for recording occupational injuries and illnesses are defined by OSHA to be recordable cases (U.S. Occupational Safety and Health Administration, 2014). In the SOII, private industry and governmental entities report data on non-fatal workplace injuries and illnesses over a one-year survey reference period (U.S. Bureau of Labor Statistics, 2012). Incidents that must be recorded by employers are those that result in (1) loss of consciousness, (2) days away from work, (3) restricted work activity or job transfer, or (4) medical treatment beyond first aid.

Undercounting of injuries and illnesses is thought to be an issue for the SOII (Rosenman et al. 2006; Boden and Ozonoff, 2008). Various factors may contribute to this undercount. BLS has indicated that there may be a filtering effect in the reporting of workplace injuries and illnesses. Filtering occurs when barriers to reporting of workplace injuries and illnesses exist (Azaroff, Levenstein, & Wegman, 2002). For example, employee reports of work-related injuries or illnesses to employers may be subject to filtering because of employee concerns of negative repercussions from the employer, such as job loss or being overlooked for promotion. Days away from work may be subject to filtering if employees do not report the injury due to inability to afford time off from work. Filtering of reports of medical treatment (beyond first aid) that was needed may occur if workers do not realize the connection between their medical condition and the workplace, they cannot afford medical care, or health care providers do not recognize the work-relatedness of the injury or illness. Even if employees are willing to report, it is possible that they do not recognize all the incidents that would be reportable.

BLS has asked NORC to assist in developing a survey design and instrument for a household SOII, in which employees would be asked directly about the workplace injuries and illnesses they have experienced. In this household survey, a nationally representative sample of workers will be selected and surveyed. The Household SOII should collect demographic information, industry/occupation/employment relationship, and the nature of the injury and part of body affected. Further, BLS has noted that the incidents that would be of interest to collect in the Household SOII would include not only those that are OSHA recordable, but other cases as well. For example, federal employees and individuals who are self-employed are currently not counted as recordable cases but could

be of interest in a household survey of workplace injuries and illnesses (*Monthly Labor Review*, June 2014). In addition, it could be useful to collect information on whether injuries or illnesses that occurred were reported to the employer or whether a Worker's Compensation claim was filed for the injury or illness. Although the criteria for the establishment SOII may be too complex for a household survey, the survey should collect information that is reasonably consistent with the establishment survey. This would allow comparison along the same factors, that is, injuries or illnesses resulting in days off from work, restrictions or job transfer, or medical treatment. In addition, the Household SOII would ideally capture information about what happened or caused the injury or illness, the employee's tenure in the job, and where the injury or illness occurred. As part of the process of developing this survey, a review of existing surveys was conducted to identify questions on workplace injuries and illnesses. We present findings from this review of surveys and also present a discussion on the potential effects of recall bias and proxy reporting on the quality of data collected from a household survey of workplace injuries and illnesses.

This report is organized in the following sections. First we discuss issues related to respondent reporting and the use of proxy reporting. Following that, we consider the content proposed by BLS for inclusion in the Household SOII. Next, we present major surveys, including the employer version of the SOII, that collect data on workplace illness and injury, in some form or another, as well as the advantages and disadvantages of these surveys as a model for the Household SOII. Finally, we present a discussion of considerations in designing the Household SOII and next steps in drafting a questionnaire. The report also includes (1) Appendix A, which logs all the relevant questions and response categories from relevant surveys, and (2) Appendix B, with code lists from the surveys reviewed.

## Respondent Reporting of Information on Workplace Injuries and Illnesses

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The current SOII is designed to gather information on workplace injuries and illnesses from a broad spectrum of employer types. In a household version of the SOII, respondents would vary in important characteristics that could affect their ability to report, such as age, education level, health status, and ability to communicate in English. Unlike employers, who may refer to records to report information on injuries and illnesses that occurred, workers may or may not have records from which to report. Records such as worker's compensation forms or medical records may be available to the respondent.

Respondents can be encouraged to collect records and have them available at the time of the interview. However, if respondents have not collected records for the interview, they may have to rely on their memory when responding to the survey or rely on others answering on their behalf. Further, if the Household SOII is added as a module to an existing survey, it is possible that the parent survey will

constrain the ability to provide respondents with advance instructions on records to have available for the interview.

In designing a Household SOII, we will be guided by principles of questionnaire design that are likely to produce the most effective questionnaires (Dillman, Smyth, & Christian, 2014; Krosnick & Presser, 2010; Bradburn, Sudman, & Wansink, 2004; Tourangeau, Rips, & Rasinski, 2000; Converse & Presser, 1986; Sudman & Bradburn, 1983). As survey experts would recommend, survey questions and response options should be crafted to use simple, straightforward language. Questions should ask for information that respondents would generally be able to provide and response options should cover the range of possible answers that respondents would want to give.

In addition to questions that are easy to understand, the burden on the respondent with regard to difficulty of providing answers and time required to complete should also be minimized. Based on guidance from BLS on what should be included in the survey, it is anticipated that the Household SOII respondent questionnaire would not be extremely lengthy. However, the instrument could potentially be difficult for respondents due to the type of information requested and level of detail required. Questions that ask for information that respondents do not have or that require manipulating information (as may be required when attempting to estimate the date of the injury or illness, or length of time in the job) will increase respondent burden.

By following best practices for questionnaire design, we seek to minimize measurement error.

Measurement error occurs when the true value of a construct being measured in a survey is different from the value a respondent provides (Groves, 1989). For example, a respondent who is asked “*Have you had a work-related injury or illness in the past three months?*” might respond “no” even if he had been suffering muscle strain resulting from work-related duties, such as lifting heavy objects. Failing to recognize the muscle strain as an injury that could be reported or not making the connection to work activities would result in measurement error in the form of underreporting.

**Survey response process.** In making recommendations for the design of a survey instrument for the Household SOII, we are guided by survey response models that highlight what respondents must do to successfully answer survey questions (Tourangeau et al., 2000; Dillman et al., 2014; Cannell, Miller & Oksenberg, 1981; Strack & Martin, 1987; Turner & Martin, 1984; Tourangeau & Rasinski, 1988; Sudman, Bradburn & Schwarz, 1996). These models also guide us in determining how to design questionnaires that minimize the challenges that survey respondents face. Respondents must complete four tasks to respond to a survey question; note that although the stages are presented sequentially, these

processes may, in fact, occur in parallel. Measurement error can occur at any stage of the survey response process.

- understanding of the question,
- retrieving relevant information from memory,
- constructing an answer, and
- reporting a response.

Comprehension. At the first stage, understanding of a question can be influenced by factors such as the wording of the question and the context in which it is asked. To be able to correctly report having experienced a workplace injury or illness, workers must recognize that they experienced something that counts as an injury or illness and they must also recognize that it is related to work.

For example, the basic screening question in the National Health Interview Survey (NHIS), asks whether the respondent or anyone in the family has experienced an injury. Although the term “injury” is familiar to most respondents, it may not cue all injuries that would be relevant to a Household SOII. Some injuries, such as muscle strain or tendonitis, may be less clearly defined as injuries as compared to cuts and fractures. Cuts and fractures often result from a discrete event (such as a fall or other accident) whereas conditions such as muscle strain or tendonitis may emerge over time (such as constant lifting of heavy items during routine work activities). The term “injury” could bring to mind for some respondents only discrete events directly tied to an incident at work in which the injury occurred. If other types of injuries are not cued by the question they are unlikely to be reported, resulting in an undercount. Although it may be possible to help clarify what kinds of medical incidents count as injuries and illnesses by including examples (such as “concussion” or “carpal tunnel syndrome”), the use of medical terminology can also pose a barrier to comprehension as well if the examples chosen are unfamiliar to some respondents.

Retrieval. At the second stage of the survey response process, the respondent must retrieve information from memory that is relevant to respond to the question. The cues to aid recall that are available in the question, how recently the relevant events happened, and the salience of the events to the respondent, are among the factors that may play a role in recall (Schwarz & Hippler, 1991; Schuman & Presser, 1981; Tourangeau & Rasinski, 1988).

A further consideration is that there may be aspects of an event that the respondent cannot report on firsthand. If the worker’s injury or illness was severe enough, proxy report would likely be required.

However, such incidents are likely to be rare. The effects of proxy respondents on measurement error are discussed later in this section. Further, there are instances in which the employee may simply not have the information required by the survey. For example, although employers are able to report occupation and industry information of the employees, the employees themselves may vary in their ability to provide this kind of information, particularly industry information.

Judgment and estimation. At the third stage of the response process, the respondent must construct an answer to the survey question. Some questions require the reporting of information that most respondents can retrieve directly without having to estimate or formulate an answer. Demographic questions such as the worker's age and gender are examples of such items. Many other survey questions require respondents to construct an answer in some way with the information he or she has available. For example, the SOII asks for information such as hours worked before the incident in question occurred. If asked of respondents, this may require them to compute a response based on what they can remember about the day of the injury or illness, such as the time they began work and the time the incident occurred. With some injuries or illnesses that may develop more gradually, designating a specific time of the incident may not be possible (for either employee or employer). In addition to the issues of comprehension when injuries or illnesses develop gradually, another issue to consider at this stage of the response process is respondent uncertainty about whether an injury or illness that occurred is related to work. Some instances, such as being injured by a piece of machinery at work, are clearly work-related. It may be less clear to respondents whether to count other injuries, such as hearing loss, as work-related.

Response. At the final stage of the response process, the respondent must provide a response to the question. Although sometimes questions allow respondents to answer in their own words, more often respondents must choose from a set of response options. To minimize burden and measurement error, response options provided for a question should be complete and mutually exclusive. Ability to respond may be affected by whether the respondent finds a choice that adequately represents the response he/she wants to give. Concerns about privacy and confidentiality may also influence response. In particular, respondents who may have been encouraged or pressured by employers not to report the injury or illness may have concerns that their survey information will be used against their employer, with negative consequences for themselves. A household survey holds promise in allowing respondents to report their experiences completely outside the realm of the employer. Yet, if respondents still have concerns about the potential impact of revealing information, underreporting could occur.

In addition to issues of privacy and confidentiality, social desirability may lead to overreporting for certain conditions (Nelson 1996). Social desirability occurs when respondents want to present

themselves favorably, according to the focus of the survey. Regardless of age, education, or injury-related factors and symptoms, respondents who scored higher on a social desirability scale, measured by inclination to be honest, helpful, or polite, were more likely to report health-related problems (Willebrand, Wikehult Ekselius, 2005). However, while in a study on the validity of self-reporting safety and injury within the home, Watson et al (2003) find more underreporting than overreporting. Nederhof (1985) suggests using social desirability scales to identify respondents prone to providing invalid data. Also, the use of specific forced-choice responses, randomizing response options, and self-administration of the questionnaire are used to reduce social desirability (Nederhof 1985).

**Effects of cues on the survey response process.** Since forgetting increases with the passage of time (Ebbinghaus, 1964; Shum & Rips, 1999; Bradburn, Rips, & Shevell, 1987; Wagenaar, 1986; Sudman et al., 1996; Tourangeau et al., 2000), longer survey reference periods could produce more extensive underreporting as compared to shorter reference periods. Regardless of the time period for which employees must report, however, the presence of effective cues will facilitate the survey response process. Broadly speaking, cues range from the background information and instructions given to survey respondents, to the specific wording of the questions themselves. The cues provided in the survey context can help respondents understand the intent of the survey questions (Schwarz & Hippler, 1991; Schuman & Presser, 1981) and can also facilitate the recall of relevant information for answering the question (e.g., Tourangeau & Rasinski, 1988). In a questionnaire, prior survey questions can also provide context for later questions.

The type of information being recalled is also a factor in how forgetting influences recall accuracy, with forgetting varying by topic (Tourangeau, et al., 2000; Wagenaar, 1986; Linton, 1975). As already mentioned, autobiographical information, such as respondent age and gender, are timeless inquiries in which the survey reference period is not expected to affect accuracy of reporting. Events that are unique or more salient may have an advantage for recall. In contrast, recall of event details (such as whether, how, and when an injury occurred, and number of work days missed) may be more sensitive to elapsed time. Thus, an elapsed time of three months could be appropriate for injuries that required hospitalization, whereas superficial injuries may require a shorter elapsed time to minimize underreporting of incidents (Warner et al., 2015).

Apart from the rich context that a survey may provide for enhancing respondent understanding of the questions and recall of relevant information, simply spending time on the survey task is likely to improve the recall process and survey reporting. Providing additional time for respondents to recall information may help improve recall. For example, some evidence suggests that longer questions, even those that do

not provide additional content can aid recall and reporting (Sudman et al., 1996; Bradburn, Sudman, and Associates, 1979).

Some survey items may be more effective in cuing respondents than others. For example, the NHIS begins with a brief introductory statement that provides time for respondents to comprehend what is being asked and begin recall of relevant information. Further the use of randomized cues to types of injuries or poisonings enhances respondents' understanding of what counts and reminds them of specific incidents that could be relevant to report. The NHIS screening question on injuries presents one of ten lists of injury conditions, with each list containing four items (Chen, Warner, Fingerhut, & Makuc, 2009). The survey instrument is programmed to randomly select one of the ten lists to be presented. The examples are intended to provide cues to comprehension of what counts as an injury and what to include in responding to the questions. The use of randomly selected sets of cues is intended to ensure that no particular types of injury conditions being cued become overrepresented in respondent reports. As described in Appendix III of Chen et al. (2009), frequency data from the National Hospital Ambulatory Medical Care Survey—Emergency Department (NHAMC—ED) was examined to determine the frequency of different injuries conditions. Frequency of injury condition was used to determine the frequency with which the condition appeared across the randomized list of cues. In an analysis of the effect of the selected set of examples on reporting, Chen et al. (2009) did not find any evidence that reports of an injury were significantly affected by the particular examples given.

Some evidence from a redesign of the National Crime Survey (NCS), the predecessor survey to the National Crime Victimization Survey (NCVS), suggests that specific cues can enhance recall (Taylor & Rand, 1995). The NCS screener was redesigned to add “short cues” to different kinds of crimes to prompt respondents about the different kinds of crimes they may have experienced. For example, for questioning on attacks and threats, cues to the types of objects that could have been used in the attack were added. Additional screener items cues respondents about various locations in which crimes could have occurred and various persons who could have committed the crime. This redesigned screener increased reports of some types of crime (Kindermann, Lynch, & Cantor, 1977). For example, reports of minor crimes increased relative to reports of major crimes; reports of crimes committed by persons the victim knew relative to reports of crimes committed by strangers. These findings suggest that for the Household SOII, cuing specific types of injuries and illnesses, places in which they could have occurred, and causes of the injuries and illnesses could be effective in cuing recall.

In their research on food consumption, Tourangeau, Conrad, Couper, and Ye (2014) illustrate how providing examples impact the frequency of response and increase accuracy. Unlike Chen et al. (2009),

Tourangeau et al. (2014) did find that reports on specific foods consumed were influenced by the examples given, with reports higher for a food item when it was cued. The effect was greater when the cue was an atypical example of the category. It will be important to clearly define injury and illness. To avoid overreporting of specific types of injuries or illnesses, it will be important to provide a wide range of examples, perhaps randomized across respondents, that will fit into different categories, such as minor or severe injury, or typical versus atypical types of injury or illness.

**Accuracy of event dating.** Accurate estimates of workplace injuries and illnesses depend not only on successful recall of incidents that occurred, but also accurate recall of dates the injuries and illnesses happened. However, people tend to be inaccurate in remembering when events occurred (Bradburn, 2000). Since the Household SOII is intended to produce annual estimates, respondents must report on incidents that occurred during a specified time period, the survey reference period. If the Household SOII is conducted as a prospective survey, with sampled households keeping records on workplace injuries and illnesses for the duration of the study period, issues of recall bias could be minimized, since workers can presumably record incidents as they occur. Recall becomes an issue to the extent that respondents may not always record incident in a timely manner. Accurate recall of dates would be essential in a retrospective survey design.

Most surveys tend to require recall of past events. With the passage of time, errors in recalling the date of an event increase (Gaskell, Wright, & O’Muircheartaigh, 2000; Neter & Waksberg, 1964; Huttenlocher, Hedges, & Bradburn, 1990). Because dating error increases with time, when incorrectly reporting the dates of events, respondents tend to push more events into the survey reference period than they push out of it. Since more events outside the reference period are incorrectly reported as having occurred within it than the other way around, the net effect is forward telescoping, which is often observed as a “piling up” of events at the boundary of the reference period. Establishing accurate annual estimates of injuries and illnesses may require procedures to correct for telescoping, such as including a bounding interview (Neter & Waksberg, 1964). In longitudinal surveys, respondents would provide information at the baseline interview (called the bounding interview) on the injuries and illnesses that they experienced within a specified reference period. The information collected in the bounding interview would be used to eliminate reports from outside the reference period at the subsequent interview. For example, a worker who reported a concussion that occurred a few weeks before the baseline interview could potentially report that concussion again at a follow-up interview a year later. Information from the baseline interview can be used to remind the respondent of the previously reported injury or to confirm with the respondent that the concussion reported at the follow-up is a new injury not related to the previously reported incident. In this way, bounding improves the accuracy of reports by using the information from

prior interviews to reduce reports outside the reference period in later interviews. A cost disadvantage of this approach is that obtaining bounded estimates requires an additional interview.

An alternative method proposed by Sudman and colleagues is to bound within a single interview (Sudman, Finn, and Lannom, 1984). In this method, within a single interview, respondents are asked to recall events that occurred during two different time periods (such as this month vs. last month). In comparison to interviews using unbounded recall, Sudman et al. found that the bounded reports alleviated telescoping. To implement this technique in the Household SOII, respondents would be asked first about work-related injuries and illnesses that occurred more distantly, such as 6 to 12 months ago, and then would be asked to report on the incidents that occurred in the last 6 months. Only data from the second 6-month period would be included in creating estimates.

Since error in recall of dates increases with elapsed time, a shorter reference period will result in less error than a longer one. As will be discussed in the next section, more minor workplace injuries and illnesses may be more subject to forgetting. While a shorter reference period would be helpful to minimize the effect of memory erosion, it will also reduce the number of self-reports experienced in a short period of time. Consequently, the appropriate reference period for the Household SOII will likely depend on additional considerations. In other words, given the low incidence of workplace injuries and illnesses in the general population, shorter reference periods will greatly constrain the number of individuals who would have experienced a relevant incident to report. Although a shorter reference period may yield the most accurate reporting, a survey design that incorporates such a short reference period would likely be cost prohibitive. Further discussion of the balance between costs and optimal design for reducing survey error will be covered in the Household Survey Design Report.

Some aspects of workplace injuries and illnesses may make them easy to remember. For more severe injuries and illnesses, the event itself could be a “personal” *landmark event* (Gaskell, et al., 2000; Loftus & Marburger, 1983). Personal landmark events are unusual or unique events in one’s life. Just as graduating from college or getting married could be landmark events, receiving a serious injury such as fracture or concussion at work that required time off and medical care could be a landmark as well. For these more severe incidents, which would be less likely to be forgotten or dated incorrectly, a longer reference period may be feasible. Since the presence of landmark events can help respondents with the dating of events, it is possible that encouraging respondents to think of personal landmarks that occurred during the reference period can help them both recall and accurately date more minor injuries and illnesses that may have occurred.

An interviewing tool that makes use of landmark events to enhance recall is the Event History Calendar (Glasner, van der Vaart, & Belli, 2012; Freedman, Thornton, Camburn, Alwin, & Young-Demarco, 1988). In a standard “question-list” approach, respondents are presented with scripted questions and their answers are recorded in a set of response options. However, in the EHC approach, respondents participate in a more conversational interview in which they record major life events on a calendar as part of the interviewing process. Completing the calendar is thought to facilitate the recall of autobiographical information and dating of life events by providing more recall cues for respondents than what a standard interview format would provide (Belli, Lee, Stafford, & Chou, 2004). For the Household SOII, a possible approach would be to use an EHC with a 12-month reference period in which the respondent is asked to provide personal landmark events marking three-month intervals.

### **Overview of recall bias in respondent reports in the context of injuries and illnesses.**

Studies on recall bias in studies of injuries and illnesses demonstrate that respondent reports of injuries and illnesses decrease with elapsed time and that this effect is greater for less severe injuries. (Warner, Schenker, Heinen, & Fingerhut, 2005; Moshiro, Heuch, Anstrom, Setel, & Kvale, 2005; Mock, Acheampong, Adjei, & Koepsell, 1999). Warner et al. (2005) found that error was lowest for reporting of less severe injuries when the time between injury and the survey interview was in the range of three to six weeks. They found that more severe injuries were less likely to be forgotten and a longer reference period of three months would be feasible. In an analysis of injury rates among the general population in a region in Tanzania, Moshiro et al. (2005) found similar results for recall of injuries for a recall period of 12 months. In the month prior to the interview, reports of both minor and severe injuries were greater than in succeeding months of the year, with the decline in reporting being greater with elapsed time for more minor injuries. Similarly, in a study with a sample of the general population in Ghana, (Mock et al., 1999) conducted a month-by-month analysis of reporting of injuries showed that rates of injury for months closer to the interview date than for months at the end of the reference period of 12 months. Consistent with other studies, Mock et al. found more severe injuries were less subject to forgetting than less severe injuries.

The effect is seen in proxy reports as well (Harel et al., 1994)—a further elaboration of other issues related to proxy response is presented later in this report. In the NHIS 1988 Child Health Supplement, which included proxy reports of injuries sustained by children, adult household members were asked to report injuries that occurred over the last 12 months. Harel et al. (1994) compared one-month recall periods across the reference period. They found that estimates of injury rates based on a recall period closest to the interview were higher than estimates based on more distant months. These findings also hold true for

reports of workplace injuries among older workers in the Health and Retirement Study (Zwerling et al., 1995).

In a study using data from the NHIS, evidence of forward telescoping was shown in a higher average number of injuries and poisonings reported in the last week of the reference period (Warner et al., 2005). It is likely that respondents reported some incidents that happened outside the reference period. If the Household SOII were to take the form of a panel survey, it would be possible to implement bounding procedures, in which incidents reported during the previous interview are not double-counted in the current one. This would allow for more accurate placement of incidents in the appropriate reference period. However, as the studies reviewed on recall bias (e.g., Warner et al., 2005; Moshiro et al., 2005; Mock et al., 1999), forgetting of injuries and illnesses that occurred may be the greatest barrier to obtaining accurate estimates. Improving the accuracy of estimates of workplace injuries and illnesses will require addressing issues of increased forgetting through the use of both appropriate reference periods and the use of effective cues to enhance recall.

A review by Heinen, McGee, & Warner (2004) of injury questions used in household surveys in 14 different countries found broad differences in methodology, the criteria for inclusion of the injury in the survey, and the length of the reference period. For example, some surveys allowed the use of proxy respondents while others did not. The definition of an injury varied in terms of severity and whether the respondent required medical attention or was limited in activities. Further, the reference period varied from 15 days to one year, with most surveys requiring recall for at least three months. Although not all surveys cited in this article have been reviewed yet, NORC will conduct further review to determine whether we can draw on any of the surveys in drafting the Household SOII.

A report on cognitive testing that was conducted on the NHIS questions on injuries and poisonings reveals some of the difficulties with survey response that respondents can encounter (Miller, Whitaker, Beatty, & Wilson, 2002). The cognitive testing was conducted on the 2002 NHIS questions on injuries and poisonings. The researchers found that the scope of the words “injury” and “poisoning” was not sufficiently understood by respondents. The term “injury” tended to cue more serious incidents; respondents did not consider the full range of severity for injuries that would be in scope for the survey. Similarly, understanding of the term “poisoning” was not broad enough to include all potential types of poisoning. The results also showed limited understanding of what counts as “medical treatment,” excluding tests such as x-rays from consideration. The cognitive interview results also revealed that respondents miss some information when questions are too lengthy; for example, they forgot to include poisoning in their answer. Further, respondents revealed the difficulty of reporting for others in the

family, either because they did not know the circumstances for others in the household or simply forgot to include others in their responses.

### Proxy respondents

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Proxy respondents serve as survey replacements in situations when the selected individuals are unable to report information about themselves (for example, minors or impaired respondents). Similarly, proxy informants are used when selected individuals are not available at the time of data collection. The selected respondent may be, for example, on an extended trip or institutionalized (such as in a hospital or correctional facility). Furthermore, proxies are sometimes used for cost efficiency reasons; for example, to minimize multiple visits in a household, multiple interviews in an establishment survey, or to reduce the number of callbacks in a telephone survey (Clarridge & Massagli, 1989; Cohen, 2008; Mingay, Shevell, Bradburn, & Ramirez, 1994; Moore, 1988; Nelson, Longstreth, Koepsell, & Van Belle, 1990).

While survey protocols allow the use of proxy reporting to increase response rates (and minimize the possibility of nonresponse bias), as in any other survey design, the use of proxy informants involves other trade-offs. Namely, the information reported by proxies may differ from the actual answer that the selected individual would have provided (Cohen, 2008). Proxy-provided information is subject to measurement error. That is, proxy respondents may not be able to provide information accurately due to telescoping or memory erosion, low saliency of the biographical event, or because the selected individual chose not to reveal information to others (Mingay et al., 1994).

Different mechanisms of the proxy interviewing process can contribute to two components of the measurement error; namely, bias and variance. Consequently, information provided by proxies can potentially produce estimates whose uncertainty varies due to different levels of error that occur at random (i.e., not in a consistent direction) or estimates that are likely to be biased due to a systematic under- or overreporting of information (Cohen, 2008; Nelson et al., 1990).

### Sources of error for proxy-reported data in the context of injuries and illnesses

The literature on proxy response includes a study suggesting that proxy reports are likely to increase in quality when proxy respondents are familiar with the situation of the selected sample person. Namely, in the context of labor force activities (i.e., number of hours worked for pay last week), Kojetin and Mullin (1995) found that proxies who indicated that they were familiar with an individual's labor activities (through communication with the individual, reading directly about the event, or by noticing the person's activities) were more likely to provide consistent information about the person, compared to proxies who

did not have this familiarity. Furthermore, it also appears that spouses tend to be better proxies than siblings or relatives (other than parents) when reporting on behalf of the individual (Kojetin & Mullin, 1995).

Although familiarity with the person's situation may be a quality indicator of proxy-provided data in general, the type of illness or symptom is an important factor. Magaziner, Bassett, Hebel and Gruber-Baldini (1996) indicate that when illnesses are likely to be known by others —such as chronic conditions— the chances of underreporting decreases; but when less noticeable conditions are not shared with other members of the household, conditions are likely to be underreported. For instance, in a study focused on information provided by at-home female proxies, arthritis tends to be better reported compared to other less well defined conditions such as sleeplessness (Clarridge & Massagli, 1989). Furthermore, Bassett, Magaziner and Hebel (1990) suggest that the type of illness combined with the role in the family may have an impact on the data reported. The authors found that husbands tend to underreport less noticeable illness of wives such as depression compared to other informants in the household such as daughters. The same effect of visibility on reporting for injuries may hold as well. We may expect, for example, that an injury that limits the full range of arm motion would only be noticeable if the injured individual attempted an action that required full motion. Concussions as well may be difficult to discern unless a bruise or cut were also associated with the head injury. That is, a possible decline in cognitive abilities due to a concussion may not be immediately distinguished from other factors that could have caused the decline, such as aging.

A study conducted among older women —who were asked to nominate a person who knew them well enough to report on their behalf— indicates that cognitive status is better reported compared to affective status (Bassett et al., 1990). According to Bassett and colleagues (1990), the bias (albeit small) found in their study regarding affective measures could be explained by the fact that cognitive questions are less open to interpretation. For instance comparing “Could the respondent tell me today's date” (i.e., a cognitive measure) would yield more consistent answers in the respondent-proxy pair, in contrast to “Do you think the respondent, in the past two weeks has ever felt depressed or very unhappy” (i.e., an affective measure) —despite the fact that the proxy informant seemed to know the individual well. Besides cognitive and affective measures for assessing familiarity with respondent, questioning about physical, observable conditions may also provide a measure of quality. Clarridge and Massagli (1989) examine the number, nature, and length of exposure for health conditions as they related to reporting bias among proxies. They found that length of exposure related to physical complaints, such as joint pain, backache, chest pain, or problems with eye or ears, as well as vision or hearing, aided in the accuracy of reporting.

In a study conducted among older individuals selected for a longitudinal study, proxy respondents were more likely to provide consistent reports of stroke over time than intended individuals, presumably because a stroke may affect some cognitive functions among survivors (Beckett, Weinstein, Goldman, & Yu-Hsuan, 2000). Similarly, Turner and colleagues (1997), report that proxy respondents seem to provide more reliable reports than elderly individuals with chronic obstructive pulmonary disease (characterized by shortness of breath and cough), a condition that typically worsens over time.

In studying the effects of cohabitation, Shardell and colleagues (2012) found that among hip fracture patients, discrepancies on disabilities and depressive symptoms between self-reports and proxy-provided reports decrease when proxies have lived with the intended individual for one year or more. Nonetheless, Shaw, McColl and Senga (2000) documented that proxies not cohabitating with the selected individual (and with less frequency of contact with the individual), yield better proxy-respondent agreement than those in close proximity. It is possible that the nature of metrics could explain these results. In Shaw and colleagues' (2000) study, the metrics of interest were focused on independent living status or functional capacity (i.e., cutting food, washing hair, dressing, ability to go to the toilet, and others). Presumably, more distant proxy respondents were able to observe the individual's condition in a more objective way, compared to proxies in cohabitation. Biases found in Shaw's (2000) study suggest that such proxies tend to under-report the individual's abilities and over-report their dependence.

A recent study of usability testing conducted through eye-tracking technology for online questionnaires suggests that when respondents provide information about themselves, they take longer to answer relative to situations where they report on behalf of others living in the same household (Olmsted-Hawala, Holland, & Nichols, 2014). Olmsted-Hawala and colleagues (2014)<sup>0</sup> examined number of fixations, duration of fixations on questions and answers, and number of times respondents rechecked questions and answers. Based on these qualitative examinations of eye-tracking patterns, the researchers suggest that when proxies are more certain of information they are reporting on behalf of others, they spend more time on the question; when they are unsure, they tend to guess or fabricate data to move on quickly, especially if a skip option is not provided.

In many household surveys, proxies are used to provide information on other members of the household. For example, the NHIS collects health information for all household members from one household respondent. The Consumer Expenditure (CE) survey currently asks one household respondent to provide expenditure information for other household members.<sup>1</sup> Recognizing the issues with data quality in

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<sup>1</sup> Information on the Consumer Expenditure Survey can be found at: <http://www.bls.gov/cex/>

asking one household member to report for others, redesign efforts for the CE survey have focused on methodologies allowing for the collection of expenditure information from all household members ages 15 and older.<sup>2</sup> As an additional example, the NCVS, which collects information on the number of crime victimizations and characteristics of these incidents over the past six months interviews all eligible household members ages 12 and older. The collection of data directly from individuals rather than by proxy is intended to capture more complete data on victimization, since proxy respondents may underreport number of incidents or details of those incidents.<sup>3</sup>

Although obtaining information directly from a respondent rather than by proxy may yield higher data quality, cost considerations often dictate the use of proxies. To maintain data quality at the highest extent possible, it will be important to select the household member that is considered most knowledgeable about the health status of other household members. In addition to selecting the respondent who is most knowledgeable, the interview protocol should allow respondents an avenue for indicating for which questions or household members they do not feel confident reporting about. However, flexibility in selection of the household respondent will vary depending on the design of the Household SOII. If the Household SOII design entails adding a module to an existing survey, then the Household SOII will likely follow the respondent selection criteria for the survey to which the module is added. As a standalone survey, the Household SOII would have the flexibility to adopt the criteria deemed optimal for collecting data on workplace injuries and illnesses. Optimally, the ideal proxy respondent would be the one most familiar with the circumstances of the individual for which he/she is reporting. In a household with multiple members, however, it is possible that no single respondent is the most knowledgeable about all other respondents.

As part of the cognitive testing, the quality of the proxy data could potentially be assessed by interviewing, whenever possible, both the proxy and the sample member about whom proxy reports were obtained. The degree of concordance between the proxy-reported and self-reported data can be compared. However, this would add burden to participating households and complexity to the pretest procedures. As an alternative measure of data quality from proxies, household members can be asked to provide an assessment on the ability of each potential proxy respondent to provide data on them. The concordance among household members on which individual is the best able to report may provide guidance on how to construct a protocol for selecting the household respondent for the Household SOII.

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<sup>2</sup> Information on the redesign of the Consumer Expenditure Survey can be found at: <http://www.bls.gov/ce/geminiproject.htm>

<sup>3</sup> Information on the National Crime Victimization Survey and guidance on proxy reporting can be found at: <http://www.bjs.gov/index.cfm?ty=dcdetail&iid=245>, <http://www.bjs.gov/content/pub/pdf/ncvstd13.pdf>

To make a more definitive recommendation on the ideal selection process for the household respondent, NORC proposes an examination of the selection process used in other national surveys. Given that accurate reporting for the Household SOII depends on knowing that an individual experienced an injury or illness and that the incident was work-related, methodological literature on proxy reporting of work history and health status will likely yield the best information. If this examination would be useful, we will identify available methodological reports and published papers for surveys such as the NHIS, the Behavioral Risk Factor Surveillance System (BRFSS), Current Population survey (CPS), and others to determine best evidence-based practices.

As part of the cognitive testing, we will need to consider options for testing the household respondent selection process and quality of proxy data. Although testing of respondent pairs is an option, this adds complexity to the interview process. Data quality could also be assessed via comparison of the data with records (such as health records, workers compensation claim forms). However, asking respondents to provide this information adds burden and may discourage interview participation. Further, if records are requested in advance of the interview, respondents may review the records prior to the interview, allowing them to report more accurately.

## Conceptual Map and Presentation of Existing Surveys

The section includes two parts. First we present key concepts identified by BLS as required in the Household SOII. We also include optional items that may be included in the survey. The purpose of this first section is to present the concepts that we aim to measure with the Household SOII.

In the second part we review several major large-scale surveys that can be used to inform the Household SOII. We also discuss data collection tools, such as the OSHA log, that include information about employment injury and illness. We focus on the concepts captured in these surveys as they relate to the Household SOII and include a discussion of their strengths and weaknesses. These surveys are included to illustrate the types of information captured in other surveys, but also their limitations. These existing surveys will be used to inform the Household SOII questionnaire.

## Conceptual Map

We created the following conceptual map of the Household SOII (Figure 1). Variables identified as important by BLS are noted, along with suggestions that emerged from our review of existing surveys.

**Figure 1:** Conceptual Map for the Household SOII

Domain	Sub domain	Details	Timing or type	Levels
Screener	Direct	Any injury/illness	Most severe flag	Caused by work
	Indirect	Health conditions	Most recent flag	Made worse by work
			All injury/illness (loops)	
Occupation/industry	Industry	Relationship (e.g. contractor)	At time of injury/illness	Length of time at job
	Occupation	Sector (e.g. gov, public)	Current	Job history
		Type (e.g. self-empl)		
		Level (e.g. full time)		
Illness/injury	Illness	Event (e.g. fell of ladder)	At time of accident	Days from work
	Injury	Source (e.g. ladder)	Long-term effects	Worker's compensation
		Body part (e.g. head)		Reporting
		Location of injury/illness	Transfer/restriction	
		Number of accidents	Medical attention	
		Conditions (e.g. neck pain)		
		When it occurred, timing		
Demographics	Respondent	Age/DOB		
	Household roster	Race/ethnicity		
		Sex/gender		
		Current employment		
Proxy	Respondent			
	Proxy			

LEGEND
Requested by BLS
Suggested by NORC
Structural

## Existing Surveys

We consulted multiple sources of information, including current literature on accidents and injuries, academic research centers, such as ICPSR, and general internet searches, to discover surveys that include measures of accidents and injuries that would be relevant to a Household SOII. Below we discuss the limitations to the surveys in general. Following that we present the advantages and disadvantages of each survey as they pertain to injury and illness at the workplace. Together these surveys can inform a

Household SOII, but they also illustrate the dearth of measures compatible to the establishment SOII. We will keep these limitations in mind when crafting items for the Household SOII.

### Limitations of Existing Surveys

This section illustrates the types of information captured by other surveys, but also notes limitations. Overall, we find the following limitations. First, surveys vary by focus. To some extent, they capture injury, illness, poisonings, or accidents. However, no one survey captures all these items as they relate to work. In addition, they do not capture accidents that did not result in injury, or the effects of illness that were exacerbated by the workplace. Second, they do not completely capture all illness and injury. Some surveys ask for the most recent, while others only ask about the most severe. Yet others ask about all injuries directly tied to work, but neglect illness that results from work, but manifesting later in life. Third, the primary survey for comparison, the establishment SOII, is limited in its scope by only including in the sample certain types of employers and excluding those who are self-employed, part-time, or performing contract work. A fourth limitation to existing surveys is that they do not clearly outline which injuries or illness were reported to the employer and thus captured in the establishment SOII. While the existing surveys present many options, none of the surveys are ideal. Consequently, while using the surveys discussed below for guidance, NORC will craft new measures for the Household SOII.

The sections below present the surveys we examined, their primary concepts, as well as their strengths and weaknesses. In addition, Appendix A presents the actual survey items. The Appendix classifies the questions into four types, focusing on the key concepts that should be measured in the Household SOII: (1) screener questions, (2) occupation and industry of the employee, (3) incidents of work-related injury and illness and questions that details of the incident, and (4) employee characteristics.

### The SOII

The SOII captures the items listed below. While the Household SOII will collect data that is also reflected in the SOII, it will extend beyond this survey to include data from the population outside the SOII’s scope, including the self-employed and private households.

SOII survey	
<ul style="list-style-type: none"> <li>■ Employee name</li> <li>■ Job title</li> <li>■ Date of injury or onset of illness</li> <li>■ Number of days away from work</li> <li>■ Number of days of job transfer or restriction</li> <li>■ Type of work, date hired or length of service</li> </ul>	<ul style="list-style-type: none"> <li>■ Medical care—emergency room, in-patient treatment</li> <li>■ Time employee began work</li> <li>■ Time of event</li> <li>■ Timing—before, during, after work shift</li> <li>■ Description—what happened, what was the injury/illness, what object or substance harmed the employee</li> </ul>

SOII survey	
<ul style="list-style-type: none"> <li>■ Demographics: age, racial and ethnic background, gender<sup>4</sup></li> </ul>	

### OSHA log and OSHA Form 301

These forms are completed by employers for each recordable incident of workplace injury or illness. Employers use these records to inform the SOII. BLS has expressed interest in capturing incidents beyond those that meet the criteria for being recordable incidents. Examples of cases that are beyond the criteria for recordable incidents include incidents involving employees who are not in scope, such as private contractors, workers on small farms and those who are self-employed.

The concepts recoded in the OSHA documents include:

OSHA log	
<ul style="list-style-type: none"> <li>■ Job title</li> <li>■ Date hired</li> <li>■ Where the event occurred</li> <li>■ Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill.</li> <li>■ Check only one box for the most serious outcome for that case (e.g., DAFW or DJTR)</li> <li>■ What was the employee doing just before the incident occurred?</li> <li>■ What happened?</li> <li>■ What object or substance directly harmed the employee?</li> <li>■ Date of injury or onset of illness</li> <li>■ Date of injury or illness</li> </ul>	<ul style="list-style-type: none"> <li>■ Time employee began work</li> <li>■ Time of event</li> <li>■ If the employee died, when did the death occur?</li> <li>■ Type: Injury</li> <li>■ Type: skin disorder</li> <li>■ Type: Respiratory condition</li> <li>■ Type: Poisoning</li> <li>■ Type: Hearing loss</li> <li>■ Type: All other illnesses</li> <li>■ Days away from work</li> <li>■ Job transfer or restriction</li> <li>■ Other recordable cases</li> <li>■ Days away from work</li> <li>■ Days on job transfer or restriction</li> </ul>
OSHA form 301	
<ul style="list-style-type: none"> <li>■ Date of birth</li> <li>■ Sex</li> <li>■ What was the injury or illness?</li> <li>■ Name of physician or other health care professional</li> </ul>	<ul style="list-style-type: none"> <li>■ If treatment was given away from the worksite, where was it given?</li> <li>■ Was employee treated in an emergency room</li> <li>■ Was employee hospitalized overnight as an in-patient?</li> </ul>

### National Longitudinal Survey of Youth 1979 (NLS79 2014 and NLS79 1993)

The NLS79 is a longitudinal study with a nationally representative cohort of 12,686 American men and women born between 1957 and 1964. The NLS79 is conducted by the Bureau of Labor and Statistics. Launched in 1979, the biennial survey collects data on labor force participation, education, household characteristics, dating and marriage, income, health, attitudes, and crime and substance abuse. The

<sup>4</sup> Reporting of race and ethnicity on the SOII is voluntary.

NLS79 also periodically includes supplements to the core questionnaire. Beginning in 1988, the NLY79 started collecting data on work-related injury and illness. The NLS79 (1993) included questions that asked respondents (R) about their health and injuries at work.

The NLSY questions collect a wide array of information of relevant to the Household SOII, including the following topics:

<ul style="list-style-type: none"> <li>■ A screener question that asks for incidents at any job that resulted in an injury or illness</li> <li>■ Asks for month/year instead of exact date of incident</li> <li>■ Asks for activity at time of incident (e.g., meal break, normal work activity)</li> <li>■ Part of body affected</li> <li>■ Type of injury (illness?) it was</li> </ul>	<ul style="list-style-type: none"> <li>■ Total days missed</li> <li>■ Did injury (illness) cause lay off, quitting of job, firing</li> <li>■ Which of injury/illness discussed was most severe?</li> <li>■ Did injury cause missed work, reassignment, working less than full time, reduced duties</li> </ul>
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**Screening for injury and illness:** As part of the NLSY survey the respondent reports on all jobs held since the last interview. When answering the questions on injury and illness, the respondent would have already reported on these jobs. The respondent is asked about any incident at any of these jobs that resulted in injury or illness. The respondent must respond “yes” to this screener question before being asked for details about the incident.

**Advantages:** The NLSY survey covers both injuries and illnesses. Also, at the time the respondent answers questions about injuries or illnesses experienced, he/she has recalled all jobs held in the reference period. The prior recall of jobs held may enhance recall of work-related incidents, since it allows the respondent time to think about all jobs held. For respondents with multiple jobs, reporting jobs held first may help the respondent account for all jobs in formulating an answer to the injury and illness question. Finally, the NLS79 has good coverage of the measures in the SOII (see Appendix A).

**Disadvantages:** There is only one screener question, and so only one opportunity to capture relevant incidents. A response of “no” to the screener question could result in underreporting. There are no explicit cues regarding the types of injury and illness that are relevant to the survey. Some types of injury and illness may be easily recalled but respondents may be unaware of the full scope of incidents that should be reported. This could lead to underreporting of certain types of injuries and illnesses.

**Helpful links**

<p>NLS79 (2014)</p> <p><a href="https://www.nlsinfo.org/content/cohorts/nlsy79">https://www.nlsinfo.org/content/cohorts/nlsy79</a></p> <p><a href="https://www.nlsinfo.org/content/cohorts/nlsy79/other-documentation/questionnaires">https://www.nlsinfo.org/content/cohorts/nlsy79/other-documentation/questionnaires</a></p> <p><a href="https://www.nlsinfo.org/sites/nlsinfo.org/files/attachments/141219/nlsy79r26mainquex103114_ONJOB_S.html">https://www.nlsinfo.org/sites/nlsinfo.org/files/attachments/141219/nlsy79r26mainquex103114_ONJOB_S.html</a></p> <p>NLS79 (1993)</p>
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<https://www.nlsinfo.org/sites/nlsinfo.org/files/attachments/121210/11.Health.html>

### Australian Bureau of Statistics: National Health Survey (NHS 2011)<sup>5</sup>

The National Health Survey is a household survey conducted by the Australian Bureau of Statistics (ABS) in 2011/2012. Data are collected using Computer Assisted Personal Interview (CAPI), as well as face-to-face interviews. The survey collects basic demographic and relationship data on all household residents. Data are also collected on the health and socio-economic characteristics of a randomly selected adult and child aged 0 to 17 years. Questions include long term health conditions and health-related risk factors, such as smoking and alcohol consumption. Physical measurement are also taken from respondents and children over age 2. The NHS 2011/2012 includes data on 18,355 households.

This survey includes questions on the following topics related to the Household SOII:

<ul style="list-style-type: none"> <li>■ A screener question on whether a condition the respondent reported is the result of an injury.</li> </ul>	<ul style="list-style-type: none"> <li>Age when injury occurred</li> <li>Where injury occurred (e.g., work, school, etc.)</li> </ul>
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**Screening for injury:** This survey collects information on the respondent’s medical conditions. Following that, the survey asks whether the conditions resulted from an injury. The survey collects relatively limited information about the injury.

**Advantages:** Thinking about current medical conditions may help cue recall of workplace injuries that would be relevant for the Household SOII. Although asking about current medical conditions would not capture all the incidents of interest in the Household SOII, it is worthwhile to consider questions on medical conditions as cues to recall.

**Disadvantages:** Medical conditions due to workplace injuries that are resolved by the time of the survey would not be reported. Also, conditions that may develop gradually, such as carpal tunnel syndrome or muscular and skeletal disorders that respondents may not associate with a specific injury, are also not covered by this survey.

#### Helpful links

<ul style="list-style-type: none"> <li><a href="http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/03622F616EBBF87CA257B8D00229E7F?opendocument">http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/03622F616EBBF87CA257B8D00229E7F?opendocument</a></li> <li><a href="http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4363.0.55.001Chapter2002011-13">http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4363.0.55.001Chapter2002011-13</a></li> <li><a href="http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4363.0.55.0012011-13?OpenDocument">http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4363.0.55.0012011-13?OpenDocument</a></li> </ul>
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<sup>5</sup> We are currently attempting to contact staff at the Australian Bureau of Statistics to obtain a copy of the Multipurpose Household Survey (MPHS). The MPHS is a questionnaire module fielded as part of the Labour Force Survey. This module contains questions on Accidents at Work.

### National Health Interview Survey (NHIS 2014 and NHIS 1991)

Since 1957, the NHIS has monitored health in the U.S. The survey is conducted by the National Center for Health Statistics (NCHS) which is part of the Centers for Disease Control and Prevention (CDC). The household survey covers a wide range of topics. The Core questionnaire includes demographic information about everyone in the household. Health status, injuries, access to health care and utilization, health-related behaviors, and activity levels, as well basic income and demographic data, is collected from a randomly selected adult and child in the home. The NHIS (2014) included data from 44,552 households.

Besides the core questionnaire, the NHIS also includes supplemental surveys that include topics relevant to current health concerns. In 1991, the NHIS (1991) included a supplement on unintentional injury and poisoning. While some questions on injury and poisonings have been asked in some form or another at every survey since 1957, the 1991 supplement also included sections on unintentional injuries and occupational health.

This survey includes questions on the following topics related to the Household SOII:

<ul style="list-style-type: none"> <li>■ A screener question on injuries and poisonings in the last three months. The question begins with some statements about injuries and poisonings, and that they can be unexpected, accidental or on purpose and that they or others could have caused the injury or poisoning.</li> <li>■ What activity involved in at time</li> <li>■ How many different times injured</li> <li>■ Did R seek medical advice/How many times serious enough to seek medical professional</li> <li>■ When injury happened (date/how long ago)</li> <li>■ How injury or poisoning happened (e.g., on a bike, fall, etc.)</li> <li>■ Parts of body hurt</li> <li>■ In what way body part was hurt (e.g., broken, cut)</li> <li>■ Did R get follow-up care—ambulance/fire truck, emergency room, doctor’s office, phone call to doctor</li> </ul>	<ul style="list-style-type: none"> <li>■ Was R hospitalized for at least one night, and how many nights hospitalized</li> <li>■ How did R fall (e.g., stairs, ladder) and what caused fall (e.g., slipping, jumping)</li> <li>■ R’s activity at time of injury or poisoning (includes working at paid job)</li> <li>■ Where R was when the injury or poisoning happened (e.g., home, school). It is not clear how place of employment would be categorized.</li> <li>■ Was R employed and level of employment (e.g., full time, part time) at time of injury or poisoning</li> <li>■ Days of work missed as a result of the injury or poisoning</li> </ul>
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**Screening for injury and illness:** The NHIS includes a detailed set of questions focusing on injuries and poisonings. The survey does not cover illnesses in general. A household respondent reports for himself/herself and for other household members.

**Advantages:** The length and content of the screener question allows respondents time to retrieve information about any injuries and illnesses they may have experienced. This may result in more complete reporting of incidents relevant to the survey. In addition, the use of randomized examples of

injuries and poisonings provides cues to the respondent about what types of incidents are of interest and should be reported. Also, the reference period for this survey is three months, which is a relatively short time frame that may help alleviate underreporting due to forgetting. Finally, the survey captures injuries and poisonings that happened while the respondent was at work.

**Disadvantages:** The survey does not collect some of the detailed measures required by the SOII. The opening statement in the screener question provides some cues to the relevant incidents but could include additional cues (such as need for medical attention). Finally, the questions on poisonings are rather specific and the survey does not explicitly ask about illnesses.

**Helpful links**

- [http://www.cdc.gov/nchs/nhis/about\\_nhis.htm](http://www.cdc.gov/nchs/nhis/about_nhis.htm)
- [ftp://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Dataset\\_Documentation/NHIS/2014/srvydesc.pdf](ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NHIS/2014/srvydesc.pdf)
- [http://www.cdc.gov/nchs/nhis/injury\\_poisoning.htm](http://www.cdc.gov/nchs/nhis/injury_poisoning.htm)
- [http://www.cdc.gov/nchs/nhis/injury\\_poisoning/ip\\_questions.htm](http://www.cdc.gov/nchs/nhis/injury_poisoning/ip_questions.htm)
- [http://www.cdc.gov/nchs/data/nhis/injury\\_poisoning/ip\\_questions\\_1997\\_present.htm](http://www.cdc.gov/nchs/data/nhis/injury_poisoning/ip_questions_1997_present.htm)

**Health and Retirement Study (HRS 2014)**

The Health and Retirement Study (HRS), sponsored by the National Institute on Aging and the Social Security Administration, is a longitudinal panel study of Americans over the age of 50. Conducted since 1992, this study includes a representative sample of about 20,000 individuals who are interviewed every two years. The HRS examines changes in labor force participation, income, work, physical health and functioning, and other topics, among older Americans.

This survey includes questions on the following topics related to the Household SOII:

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>■ What health condition causes this impairment or problem?</li> <li>■ Are you limited in any way in activities because of an impairment or problem?</li> <li>■ Was the impairment or health problem you just mentioned the result of an accident or injury?</li> <li>■ Did the accident or injury occur at work, at home, or somewhere else?</li> <li>■ Was this impairment or health problem in any way caused by the nature of your work?</li> <li>■ How many times have you been injured on the job since R's last interview; date of last injury</li> </ul> | <ul style="list-style-type: none"> <li>■ Does your employer do anything special to help you out so that you can continue working?</li> <li>■ Did your employer get someone to help you?</li> <li>■ Did your employer shorten your work days?</li> <li>■ What kind of business or industry did you work in that is, what did they make or do at the place where you worked? <input type="checkbox"/></li> <li>■ What sort of work did you do on that job?</li> </ul> |
|--|---|

**Screening for injury and illness:** The HRS focuses on impairments or health problems that the respondent may currently have that limit the kind of paid work or amount of work the respondent may engage in. Thus, this survey does not collect information needed to create an annual estimate of workplace injuries and illnesses.

**Advantages:** The screener question cues respondents by focusing attention on current impairments and health problems that may limit paid work. This is slightly different from asking about specific incidents of workplace injury and illness that may have occurred. Although this question alone would not capture all the incidents of interest in the Household SOII, it suggests an approach that can be used in conjunction with direct questioning to cue workplace injuries and illnesses that may be in scope for a Household SOII.

**Disadvantages:** The incident that may have led to the respondent’s impairment or health problem is not limited to those occurring within a given time period. Unlike what is needed for the Household SOII, the questions focus is on the respondent’s current state.

**Helpful links**

- <http://hrsonline.isr.umich.edu/>
- [http://hrsonline.isr.umich.edu/modules/meta/2014/core/codebook/h14\\_00.html](http://hrsonline.isr.umich.edu/modules/meta/2014/core/codebook/h14_00.html)
- [http://hrsonline.isr.umich.edu/modules/meta/2014/core/codebook/h14m1\\_ri.htm](http://hrsonline.isr.umich.edu/modules/meta/2014/core/codebook/h14m1_ri.htm)

**European Union: Labour Force Survey (EU LFS 2013)**

The United Kingdom’s version of the European Union’s (EU) Labor Force Survey (LFS) has been administered quarterly to residents of Great Britain since 1992. The survey is conducted on behalf of the Department of Enterprise, Trade and Investment (DETI) by the Office for National Statistics (in Great Britain) and the Central Survey Unit of the Department of Finance and Personnel (Northern Ireland). The sample is representative of the entire population of the UK and currently includes approximately 41,000 respondent households in each quarter. In this panel design, households participate for five quarters and each quarter a fifth of the panel rotates out and replace by new sample.

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>■ Thinking of the last 12 months, have you had any accidents at work or in the course of work?</li> <li>■ Did any of these accidents result in an injury to yourself?</li> <li>■ How many accidents resulting in injury did you have during those months?</li> <li>■ How soon were you able to start work again after the accident?</li> <li>■ Please could you describe how the accident happened?</li> </ul> | <ul style="list-style-type: none"> <li>■ Was that (most recent) injury caused by...a road accident?</li> <li>■ (Thinking of your most recent injury) how would you describe the injury you received?</li> <li>■ Which bones did you fracture/break?</li> <li>■ Was the job you were doing when this accident occurred the one you previously mentioned as.....?</li> <li>■ May I just check, was the job you were doing when you were injured the one you previously mentioned as...?</li> </ul> |
|---|--|

**Screening for injury and illness:** The survey includes a question on injury and illness that may have prevented the respondent from working. Household respondents who have worked within the last three months are asked this question.

**Advantages:** The EU LFS (2013) asks directly about getting injured at work and how the injury came about. It also asks, in detail, about the types of injuries received and the body parts affected. In addition, the survey includes questions about the respondents' employment at the time of the injury and how the accident affected their job.

**Disadvantages:** The reference period for questions on injuries at work is 12 months. Respondents are less likely to accurately recall accidents and injuries over that length of time. Some questions only refer to the most recent injury, limiting the scope of the survey. The focus of the question is on “accidents” the respondent experienced that may have caused injury. It is unclear how the use of this term could alter respondent interpretation of what to include and whether their interpretation will be consistent with information collecting in the SOII.

#### **Helpful links**

<http://www.ons.gov.uk/ons/guide-method/method-quality/specific/labour-market/labour-market-statistics/volume-2---2013-questionnaire.pdf>

<http://www.ons.gov.uk/ons/about-ons/get-involved/taking-part-in-a-survey/information-for-households/a-to-z-of-household-and-individual-surveys/labour-force-survey/index.html>

<http://www.ons.gov.uk/ons/guide-method/method-quality/index.html>

## **Discussion**

### **Designing the Household SOII**

A household version of the SOII differs in significant ways from the establishment SOII. These differences are important to consider in designing a survey that best minimizes measurement error. The primary difference between the establishment SOII and a household version is in who responds to the survey. In the Household SOII, the employee or a proxy is the respondent whereas for the establishment survey an individual representing the employer completes the survey. The individual who completes the survey for the employer may have the advantage of having been trained in how to complete the task and being more experienced with the reporting requirements as compared to household respondent such as the employee or proxy.

Additionally, the employer has been required to maintain logs from which to complete the survey, keeping records in prospective fashion as incidents occur. In contrast, most survey respondents either report from memory or must locate records that would be helpful in completing the survey task. Depending on the survey design, the Household SOII could be either a prospective design (such as diary-keeping) or a retrospective design.

As a further consideration, household respondents can face additional challenges in completing the Household SOII due to complexities of their employment histories. Employers only report on incidents that happened at their establishment. Employees may have more than one job at a given time or in succession during the reference period; recalling incidents that may have happened at any job held during the reference period will add to the task demands for them.

In designing the Household SOII, it will be important to consider carefully the structure of the screener questions that will capture eligible incidents, an appropriate reference period for the survey, suitable modes of administration, as well as the optimal selection of proxy respondents.

**Screener Questions.** Currently, employers complete forms for the establishment SOII whenever a recordable incident occurs. Successful reporting of incidents relies on employee and supervisor recognition of eligible incidents and follow-through by the employer to record the incident on OSHA forms. Unlike the household survey, the establishment SOII does not have an item analogous to a screener question.

The household survey relies on household informants to report eligible incidents in response to one or more screener questions designed to capture potentially eligible incidents. In order to produce accurate annual estimates of workplace injuries and illnesses, screener questions must effectively cue respondents to report that a workplace injury or illness did occur. Unless an employee who experienced a workplace injury or illness, or his/her proxy reports affirmatively to the screener question(s), the incident will go uncounted.

The screener questions in the surveys we examined vary in how directly they screen for workplace injuries and illnesses. NLS79, the HRS, and the EU Labour Force survey each include screener questions that ask directly whether a workplace injury occurred (with the NLS79 including illnesses as well). The NHIS Unintentional Injuries supplement, NHS, NHIS 2014 and the HRS ask less directly. They ask questions on illnesses, poisoning, conditions the respondent currently has, or limitations in his/her activities first. Then a follow-up question asks whether the health problem is related to an incident at work. Although less direct, screener questions framed around the respondent's conditions or limitations

suggest alternatives for cuing recall that could be of value to the Household SOII. As noted in our discussion of issues of memory and recall, retrieval of relevant information requires effective cues. Using different kinds of cues for recall can allow respondents more time to process and more avenues for retrieving the needed information. However, it is important to consider that respondents could have difficulty ascertaining whether a health condition was actually work-related, or whether work only worsened an existing condition. Further, questions on general health conditions may be received differently and may be more sensitive than questions that directly address work-related injuries and illnesses. Even the direct approach taken by the NLS79 incorporates cues, since the respondent will have already answered questions about jobs held during the reference period before being asked about any injuries or illnesses that may have occurred. Stepping through the respondent's job history serves as a reminder of the workplaces at which incidents would have occurred. Especially for respondents with more complex job histories, this exercise could enhance recall. To further enhance the cues available for recall, questions concerning duties performed at work, physical demands of these duties, and characteristics of the work environment, could be included as well.

An approach to screening that would require additional time, but would provide rich cues for recall of workplace injuries and illnesses would incorporate multiple screening questions. As an example, the NCVS<sup>6</sup>, is a two-part survey instrument in which respondents are first administered a brief screener consisting of a series of questions to capture crime incidents that could potentially fall in the scope of the survey. Respondents who answer affirmatively to any of the screener questions would complete an incident report to provide the details necessary to ascertain whether the incident is eligible, and to collect details about the incident. The Household SOII could take a similar approach to screening and collection of follow-up information.

For the Household SOII, it will be useful to consider different approaches to structuring the screener questions. As we develop a draft questionnaire, we will discuss with BLS the factors to consider in the design of the screening:

- The number of screener questions to use
- Direct questioning vs. indirect questioning
- Types of recall cues to incorporate in the screening

In our examination of the screener questions in various surveys, we noted that some questioning is *direct*, asking a targeted question on whether an injury or illness related to work was experienced. However,

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<sup>6</sup> Information on the NCVS is available at: <http://www.bjs.gov/index.cfm?ty=dcdetail&iid=245>

some screener questions take what we consider an *indirect* approach, asking first about illnesses, injuries, or health conditions in general, and then establishing whether they may be a result of the workplace injury or illness.

**Reference Period.** In the current SOII, establishments are aware of the requirement to report on all incidents of workplace injury and illness that occur during the specified 12-month period. This prospective approach has the advantage that employers are aware of reporting requirements and can record the needed information at the time incidents occur. Recall bias should be far less of an issue with this approach. However, for the Household SOII, an issue that remains to be decided is whether a similar prospective approach is feasible. In a prospective approach, households would be notified in advance that they were selected to participate in the survey. They would be instructed on how to keep records and would then record any incidents of workplace injury or illness that occur during the study period. Issues of forgetting would be somewhat reduced in this approach, although households could still delay reporting and then ultimately record the details from memory.

The surveys we examined all involve retrospective recall, that is, recall of events that occurred during a specified reference period. As the survey reference period increases, addressing issues of recall bias become more urgent, since recall of workplace injuries and illnesses declines with elapsed time (e.g., Warner et al., 2005; Oshiro et al., 2005; Zwering et al., 1995). Forgetting is more pronounced for less serious incidents. Thus, if workplace injuries and illnesses of all levels of severity are to be captured most accurately, a shorter reference period would be preferable. Based on the limited number of articles we have found to date on recall of injuries, the reference period should be three months or even less if possible. However, although the level of forgetting would be reduced, a short reference period would capture relatively few incidents. A longer reference period, perhaps six months to a year, would likely be feasible. The idea reference period for the Household SOII will be determined out as part of the work on the household survey design that is currently in progress.

**Survey mode.** The surveys we examined are all conducted in computer-assisted interviewer-administered modes. As can be seen in Appendix A, many of the example survey questions we found include complex series of questions in which navigation and text fills would be difficult without the use of a programmed instrument. In addition, the presence of an interviewer to encourage full reports from respondents and to clarify questions is likely to be advantageous for data quality.

Although the potential complexity of the Household SOII instrument suggests that a computer-assisted telephone interview (CATI) or a computer-assisted personal interview (CAPI) survey format would be

better modes than mail or Web modes, the low incidence of workplace injuries and illnesses could make survey costs prohibitive if the Household SOII were a standalone interviewer-administered survey. However, adding the Household SOII as a module to an existing survey would have significant cost advantages. A further option to consider is whether, once a sample has been selected, whether conducting screening via mail or Web mode, potentially with telephone follow-up, would be an effective way to identify workers within a household who may have experienced a workplace injury or illness. These screening methods would require access to respondent addresses to facilitate the sending of a mail questionnaire or invitation to complete the screener via a Web survey. Once respondents have screened in as having experienced a potential workplace injury or illness, follow-up interviews could occur to collect information needed to ascertain that a reportable incident occurred and to capture the details of the incident.

**Proxies.** Some of the surveys examined allow proxies to report for household members who may not be available at the time of the interview. While proxy respondents may represent some cost efficiencies related to data collection (i.e., reduce the number of visits to the household), proxy reports may introduce some bias. Namely, if proxy informants are asked to report on injuries or illness that are not noticeable, or if the proxy does not know the details of other household members' injuries and illnesses, or the proxy informant is simply not familiar enough with the selected participant, proxy reports are likely to be less complete than self-reports. Nonetheless, proxies may offer some advantages in situations where respondents are unable to participate (i.e., cognitive impairment) or in situations where respondents have communication limitations (for instance, language barriers). Given that proxy respondents are used as a method to minimize nonresponse and proxy answers are typically considered equally valuable as respondent information, it will be important to design the Household SOII with proxy response in mind. In the household SOII consideration should be given to selecting an appropriate proxy and adding skip patterns for information that is unknown to the proxy informant, regardless of whether the household survey is a stand-alone questionnaire or a module of an existing survey.

## Next Steps

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After discussion with BLS, NORC will embark on next steps toward designing the Household SOII. We will draft a questionnaire incorporating the key concepts to be measured in the Household SOII. We will draw on questions we identified in our search and conduct further search as needed to identify additional candidate items from the literature. The survey items we identified, for the most part, cannot be used directly in the Household SOII. We will adapt the questions and draft additional questions as needed.

Key considerations in designing the Household SOII include the following:

- Standalone survey or module in existing survey
- Mode
- Proxy respondent selection criteria
- Reference period
- Number of screener questions
- Effective cues to recall
- Definitions of key terms

In collaboration with BLS, we will consider whether the Household SOII will be a standalone survey or a module of an existing survey. If it will be a module in an existing survey then certain features of the survey, such as mode, selection of the household respondent, and perhaps the reference period, would be consistent with the parent survey. Some key variables, such as respondent demographics, employment history, and industry and occupation, could be available from the sampling frame of the parent survey. We will work together with BLS to select the most suitable strategies for cuing and screening for incidents of workplace injury and illness. NORC anticipates creating draft questionnaires to share and discuss with BLS prior to submitting the full draft questionnaire (Deliverable #11). We look forward to working with BLS on the drafts to arrive at the optimal instrument for upcoming cognitive testing activities.

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# Appendix A

## Screener questions

### Direct screener

A few surveys ask directly about injuries or illnesses that occur at work.

NLS79 1993		
Q10-12 [R42853.00]	First, since [lintdate], have you had an incident at any job we previously discussed that resulted in an injury or illness to you?	Yes
		No
Q10-45 [R42883.00]	Is the [injury] we've just discussed the MOST SEVERE injury or illness that you have received or gotten since [lintdate] while you were working at any job we have already talked about?	Yes
		No
HRS 2014		
M051	Since R's LAST IW MONTH, YEAR, have you had any injuries at work that required special medical attention or treatment or interfered with your work activities?	Yes
		No
M052	How many times have you been injured on the job since R's LAST IW MONTH, YEAR?	
EU LFS (UK) 2013		
ACCDNT	Thinking of the twelve months since [full date], have you had any accident resulting in injury at work or in the course of your work?	Yes
		No
ANYACC	Thinking of the last 12 months [reference to time period], have you had any accidents at work or in the course of work?	Yes
		No
INJURY	Did any of these accidents result in an injury to yourself?	Yes
		No
INJNO	How many accidents resulting in injury did you have during those months?	One
		Two or more

HEALNO	How many health problems have you had in the last 12 months [reference to time period] that have been caused or been made worse by your work?	One
		Two or more

**Indirect screener**

Other surveys ask respondents to first establish if they have an illness, injury, or health condition. Some of the surveys include follow up questions about the illness, injury, or condition and whether it occurred as a result of their job or an accident at work.

NHIS 1991: Unintentional Injuries Supplement		
1a	During the past 12 months, did anyone in the family have a head injury where he or she lost consciousness or completely blacked out?	Some evidence of head injury, but not conclusive
		Yes
		No
		Not ascertained - head injury reported for family, no individual identified
		Not ascertained, includes dummy records
		Unknown
2a	How many head injuries did ____ have in the past 12 months where ____ lost consciousness or completely blacked out?	
3b	Was ____ at work at ____ job or business when this injury occurred?	Yes
		No
		Not ascertained
		Unknown
		NA (Did not have head injury)
NHS 2011/2012		
ALLCON_Q02	The next few questions are about [all of] the [condition/s] you have told me about. [Are any of these/Is this] [condition/s] the result of any injury?	Yes
		No
ALLCON_Q07	Thinking about the injury that resulted in your [condition], where did that injury occur?	Work

		School/study
		In a motor vehicle accident
		Exercise or sport
		Home
		Other
NHIS 2014		
FIJ.010_00.000	The next set of questions is about INJURIES AND POISONINGS. People can be injured or poisoned unexpectedly, accidentally or on purpose. They may have hurt themselves or others may have caused them to be hurt. DURING THE PAST THREE MONTHS, that is since [fill1: (date 91 days before today's date)], [fill2: did you/did you or anyone in your family] have an injury where any part of [fill3: your/the] body was hurt, for example, with a [fill4: (random set of injury examples)]?	Yes
		No
FIJ.150_00.000	What activity [fill1: were you/was ALIAS] involved in at the time of the [fill2: injury/poisoning]?	Driving or riding in a motor vehicle
		Working at a paid job
		Working around the house or yard
		Attending school
		Unpaid work (such as volunteer work)
		Sports and exercise
		Leisure activity (excluding sports)
		Sleeping, resting, eating, or drinking
		Cooking
		Being cared for (hands-on care from other person)
		Other, please specify
HRS 2014		
M507	Are you <b>limited in any way in activities</b> because of an impairment or problem?	Yes
		No
M523	Did the accident or injury occur at work, at home, or somewhere else?	Work
		Home
		Somewhere else

M557	Was this impairment or health problem in any way caused by the nature of your work?	Yes
		No
M002	Do you have any impairment or health problem that <b>limits the kind or amount of paid work you can do?</b>	Yes
		No
M020	Was the impairment or health problem you just mentioned the result of an accident or injury?	Yes
		No
M021	Did the accident or injury occur at work, at home, or somewhere else?	Work
		Home
		Somewhere else

### Occupation

Surveys capture the occupation and industry of respondents. Some surveys ask respondents about the job they had at the time of an injury, or illness. Length at current job and hire dates are also captured.

### Direct questions about occupation and industry

SOII		
None	Employee job title	[open ended]
1	Check the category which best describes the employee's regular type of job or work: (optional)	Office, professional, business, or management staff
		Healthcare
		Delivery or driving
		Sales
		Food service
		Product assembly, product manufacture
		Cleaning, maintenance of building, grounds
		Repair, installation or service of machines, equipment
		Material handling (e.g., stocking, loading/unloading, moving, etc.)

		Construction
		Farming
		Other: _____
4	Employee's date hired: ____/____/____ OR check length of service at establishment when incident occurred:	Less than 3 months
		From 3 to 11 months
		From 1 to 5 years
		More than 5 years
OSHA Log		
C	Job title	
4	Date hired	
NLS79 2014		
Q6-23K	Since [Date of last interview], have you done any work at all for which you were paid?	Yes
		No
Q6-8_JOBVER_3	What [is your current/was your ([dli loop 1])] employment situation with [employer name ([dli loop 1])] [just before you left ([dli loop 1])]? Would you characterize it as..	Traditional/regular employment (employee working for employer)
		Non-traditional employment (temporary/contract/on-call work)
		Self-employment
		Other
Q6-8H_A1	On this job with [employer name ([dli loop 1])], [are/were ([dli loop 1])] you self-employed?	Yes
		No
	On this job, [are/were ([dli loop 1])] you an independent contractor, independent consultant, or freelancer? That is, someone who [obtains/obtained ([dli loop 1])] customers on [HISR/HERR] own to provide a product or service.	Yes
		No
	On this job, [are/were ([dli loop 1])] you paid by a temporary help agency that [assigns/assigned ([dli loop 1])] you to assist other employers?	Yes
		No
	On this job, [are/were ([dli loop 1])] you an on-call worker?	Yes

		No
	Please give me the name of your business, or a brief description of the type of work you [do/did ([dli loop 1])] in this job.	
HRS 2014		
M579	Which company or organization was that?	Current employer
		Most recent employer
		Last employer
		Self-employment
		Other
W200_3	Did you work for someone else, were you self-employed or what?	SOMEONE ELSE
		SELF-EMPLOYED
W202_3	What kind of business or industry did you work in, that is, what did they make or do at the place where you worked?	[open ended]
W201_3	What sort of work did you do on that job?	[open ended]
EU LFS (UK) 2013		
INDD	What did the firm/organisation you worked for mainly make or do (at the place where you worked)? Describe fully - probe manufacturing or processing distribution etc. and main goods produced, materials used, wholesale or retail etc.	EQ
INDT	[Enter a title for the industry]	
SECTOR	And was that...	A private firm or business, a limited company
OCCT	What was your (main) job in the week ending Sunday the [date]?	or some other kind of organization
OCCD	What did you mainly do in your job?	
STAT	Were you working as an employee or were you self-employed?	Employee
		Self-employed
		Government Scheme
		Unpaid family worker

**Employment at time of illness or injury**

NLS79 1993		
Q10-13 [R42854.00]	What is the name of the employer you were working for when the MOST RECENT incident that resulted in an injury or illness to you occurred?	
EU LFS (UK) 2013		
WCHJB	May I just check, was the job you were doing when you were injured the one you previously mentioned as...?	[Occupation title – main job]
		[Occupation title – second job] or (N/A)
		or was it some other job?
WOCCT	What was your job?	
WOCCD	What did you mainly do in your job?	
JOB1	Was the job you were doing when this accident occurred the one you previously mentioned as.....?	Main job [reference to main job]
		Second job [reference to second job]
		Last job
		Job one year ago, if other than last job
		Some other job
NHIS 2014		
FIJ.170_00.000	At the time of this [fill1: injury/poisoning], [fill2: were you/was ALIAS] employed full-time, part-time, or not employed?	Full-time
		Part-time
		Not employed

Description of the illness or injury

What happened

SOII		
10	What was the employee doing just before the incident occurred? Describe the activity as well as the tools, equipment, or material the employee was using. Be specific. Examples: “climbing a ladder while carrying roofing materials”; “spraying chlorine from hand sprayer”; “daily computer key-entry.”	[Link to code list: <a href="http://www.bls.gov/iif/osh_oiics_2010_3.pdf">http://www.bls.gov/iif/osh_oiics_2010_3.pdf</a> ]
11	What happened? Tell us how the injury or illness occurred. Examples: “When ladder slipped on wet floor, worker fell 20 feet”; “Worker was sprayed with chlorine when gasket broke during replacement”; “Worker developed soreness in wrist over time.”	[Link to manual for event code list: <a href="http://www.bls.gov/iif/osh_oiics_2010_2_4.pdf">http://www.bls.gov/iif/osh_oiics_2010_2_4.pdf</a> ]
12	What was the injury or illness? Tell us the part of the body that was affected and how it was affected; be more specific than “hurt,” “pain,” or “sore.” Examples: “strained back”; “chemical burn, hand”; “carpal tunnel syndrome.”	[Link to manual for code list for body part and nature of illness/injury: <a href="http://www.bls.gov/iif/osh_oiics_2010_2_2.pdf">http://www.bls.gov/iif/osh_oiics_2010_2_2.pdf</a> <a href="http://www.bls.gov/iif/osh_oiics_2010_2_1.pdf">http://www.bls.gov/iif/osh_oiics_2010_2_1.pdf</a> ]
13	What object or substance directly harmed the employee? Examples: “concrete floor”; “chlorine”; “radial arm saw.” If this question does not apply to the incident, leave it blank.	[Link to manual for source code list: <a href="http://www.bls.gov/iif/osh_oiics_2010_2_3.pdf">http://www.bls.gov/iif/osh_oiics_2010_2_3.pdf</a> ]
OSHA Log		
E	Where the event occurred	[open ended]
F	Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill.	[open ended]
G	Check only one box for the most serious outcome for that case	Death (part of another question)
14	What was the employee doing just before the incident occurred?	[open ended]
15	What happened?	[open ended]
17	What object or substance directly harmed the employee?	[open ended]
NLS79 1993		
Q10-18 [R42856.00]	Which one category on this card best describes the activity you were engaged in at the time of the incident?	1 Employer-directed travel
		2 Employer-directed training
		3 Meal break

		4 Rest break
		5 Personal business
		6 Normal work activity
		7 Other activity (SPECIFY)
EU LFS (UK) 2013		
ROAD	Was that (most recent) injury caused by...?	A road accident
		Or in some other way?
EROAD	May I just check, was this accident a road accident?	
NHIS 1991: Unintentional Injuries Supplement		
3c	What was the cause of this head injury?	Motor vehicle accident
		Other accident
		Assault
		Other non-accident
		Not ascertained
		Unknown
		NA (Did not have head injury)
NHIS 2014		
FIJ.060_00.000 FIJ.065_00.000	[fill1: How did [fill2: your/ALIAS's] [fill3: injury/poisoning] on [fill4: ^IPDATEM ^IPDATED (starting with most recent if multiple)] happen?/How did this [fill3: injury/poisoning] happen?] Please describe fully the circumstances or events leading to the [fill3: injury/poisoning], and any objects, substances, or other people involved.	In a motor vehicle
		On a bike, scooter, skateboard, skates, skis, horse, etc.
		Pedestrian who was struck by a vehicle such as a car or bicycle
		In a boat, train, or plane
		Fall
		Burned or scalded by substances such as hot objects or liquids, fire, or chemicals
		Other
FIJ.130_00.000	How did [fill: you/ALIAS] fall?	Stairs, steps, or escalator
		Floor or level ground

		Curb (including sidewalk)
		Ladder or scaffolding
		Playground equipment
		Sports field, court, or rink
		Building or other structure
		Chair, bed, sofa, or other furniture
		Bathtub, shower, toilet, or commode
		Hole or other opening
		Other
FIJ.150_00.000	What activity [fill1: were you/was ALIAS] involved in at the time of the [fill2: injury/poisoning]?	Driving or riding in a motor vehicle
		Working at a paid job
		Working around the house or yard
		Attending school
		Unpaid work (such as volunteer work)
		Sports and exercise
		Leisure activity (excluding sports)
		Sleeping, resting, eating, or drinking
		Cooking
		Being cared for (hands-on care from other person)
		Other, please specify

### Timing of the injury or illness

Also included in this section are questions as to how long respondent has had a health condition, or age at time of injury or illness.

SOII		
None	Date of injury or onset of illness	
8	Time employee began work:	Am/pm
9a	Time of event:	Am/pm
		Check if time cannot be determined
9b	Event occurred: (optional)	Before
		During
		After work shift
OSHA Log		
D	Date of injury or onset of illness	[open ended]
11	Date of injury or illness	[open ended]
12	Time employee began work	[open ended]
13	Time of event	[open ended]
18	If the employee died, when did the death occur?	[open ended]
NLS79 2014		
Q10-17 [R42855.02]	In what month and year did the most recent incident occur that resulted in an injury or illness to you?	[open ended]
HRS 2014 — SECTION M		
M052	How many times have you been injured on the job since R's LAST IW MONTH, YEAR?	[open ended]
M053	On what date did your (most recent) injury happen?	[open ended]
NHIS 2014		
FHS.288_01.000	How long [fill: have you/has ALIAS] had [CONDITION]?	[open ended]
FHS.288_01.000	How long [fill1: have you/has ALIAS] had the injury that caused [fill2:your/his/her] limitation?	[open ended]
NHS 2011		
ALLCON_Q08	How old [were/was] [you/(proxy name)] when the injury occurred?	[open ended]

Type of injury or illness

OSHA Log		
M1	Type: Injury	
M2	Type: skin disorder	
M3	Type: Respiratory condition	
M4	Type: Poisoning	
M5	Type: Hearing loss	
M6	Type: All other illnesses	
OSHA form 301		
16	What was the injury or illness?	
NLS79 1993		
Q10-19 [R42857.00]	Did the incident result in an injury or an illness?	Injury
		Illness
Q10-21 [R42859.00]	What part of the body was hurt or affected?	[open ended then coded]
Q10-27 [R42865.00]	What kind of [Q10-19] was it?	<a href="#">[Link to code list in Appendix]</a>
EU LFS (UK) 2013		
TYPINJ	(Thinking of your most recent injury) how would you describe the injury you received?	Amputation (not loss of fleshy finger tips, teeth or nails - count as superficial)
		Fracture/broken bones (not cartilage in nose - count as superficial)
		Dislocation of joints (without fracture)
		Strain/sprain
		Superficial (inc. bruising, abrasions, scratches, foreign body in eye)
		Lacerations/ open wounds
		Loss of sight (temporary or permanent)
		Chemical or hot metal burn to the eyeball, or any penetrating injury to the eyeball (not the eye area of the face generally)
		Burns/ scalds (not to the eye)
		Lack of oxygen (asphyxia) or poisoning

		Other type of injury
		Multiple injuries, no one injury type obviously more severe
SITEFR	Which bones did you fracture/break?	Fingers or thumbs
		Toes
		Wrist or ankle
		Other bones in hand or foot
		Other bones in arm or leg
		Head, neck, spine or pelvis
		or other bones
ACCURH	Still thinking of the accident you just mentioned, did you...	Lose consciousness, even briefly?
		Suffer from hypothermia or heat induced illness?
		Need resuscitation?
		Stay in hospital for more than 24 hours?
		Not experience any of the above
ACCKIND	Please could you describe how the accident happened?	Contact with moving machinery or material being machined
		Hit by a moving, flying or falling object
		Hit by a moving vehicle
		Strain/sprain
		Superficial (inc. bruising, abrasions, scratches, foreign body in eye)
		Lacerations/ open wounds
		Loss of sight (temporary or permanent)
		Chemical or hot metal burn to the eyeball, or any penetrating injury to the eyeball (not the eye area of the face generally)
		Burns/ scalds (not to the eye)
		Lack of oxygen (asphyxia) or poisoning
		Other type of injury
		Multiple injuries, no one injury type obviously more severe
SERIOS	How would you describe this health problem? Consider most serious health problem	Bone, joint or muscle problem
		Breathing or lung problem
		Skin problem

		Hearing problem
		Stress, depression or anxiety
		Headache and/or eyestrain
		Heart disease or attack, or other problems in the circulatory system
		Infectious disease (virus, bacteria or other type of infection)
		Stomach, liver, kidney or digestive problem
		Other types of health problem
NHIS 2014		
FIJ.070_00.000	In this injury, what parts of [fill: your/ALIAS's] body were hurt?	<a href="#">[Link to list in Appendix]</a>

**Types of health conditions that are not specifically work-related**

NHS 2011		
ALLCON_Q04	Which conditions?	[open ended]
NHIS 2014		
FHS.270_00.000	What conditions or health problems cause [fill: ALIAS]'s limitations?	Vision/problem seeing
		Hearing problem
		Speech problem
		Asthma/breathing problem
		Birth defect
		Injury
		Intellectual disability, also known as mental retardation
		Other developmental problem (for example, cerebral palsy)
		Other mental, emotional or behavioral problem
		Bone, joint, or muscle problem
		Epilepsy or seizures
		Learning disability
		Attention Deficit/Hyperactivity Disorder (ADD/ADHD)
		Other impairment/problem (Specify one)

		Other impairment/problem (Specify one)
		Refused
		Don't know/not sure
FIJ.072_00.000	In what way was [fill1: your/ALIAS's] [fill2: first entry--^IJBODY (text) or ^IJBODYOS] hurt?	Broken bone or fracture
		Sprain, strain, or twist
		Cut
		Scrape
		Bruise
		Burn
		Insect bite
		Animal bite
		Other, specify
		Refused
		Don't know
HRS 2014		
M503	What health condition causes this impairment or problem?	[list]
EU LFS (UK) 2013		
HEAL	Do you have...?	Problems or disabilities (including arthritis or rheumatism) connected with your arms or hands?
		...Legs or feet?
		...Back or neck?
		Difficulty in seeing (while wearing spectacles or contact lenses)?
		Difficulty in hearing?
		A speech impediment?
		Severe disfigurements, skin conditions, allergies?
		Chest or breathing problems, asthma, bronchitis?
		Heart, blood pressure or blood circulation problems?
		Stomach, liver, kidney or digestive problems?
		Diabetes?
		Depression, bad nerves or anxiety?
		Epilepsy?

		Severe or specific learning difficulties?
		Mental illness or suffer from phobias, panics or other nervous disorders?
		Progressive illness not included elsewhere (eg cancer not included elsewhere, multiple sclerosis, symptomatic HIV, Parkinson's disease, Muscular Dystrophy)?
		Other health problems or disabilities?

**Effect of illness or injury**

*Medical care*

SOII		
6	Was employee treated in an emergency room?	Yes
		No
7	Was employee hospitalized overnight as an in-patient?	Yes
		No
OSHA form 301		
6	Name of physician or other health care professional	
7	If treatment was given away from the worksite, where was it given?	[Address]
8	Was employee treated in an emergency room	
9	Was employee hospitalized overnight as an in-patient?	
NHIS 1991: Unintentional Injuries Supplement		
2b	Did ___ receive medical care for ___ most recent injury?	Yes
		No
		Not ascertained
		Unknown
		NA (Did not have head injury)
2d	Did ___ stay in a hospital overnight or longer because of this head injury?	Yes
		No
		Not ascertained

		Unknown
		NA (Did not have head injury or did not get/ did not know if medical treatment received for most recent head injury)
NHIS 2014		
FIJ.018_00.000	Of [fill1: the ^TFINJ3M/all the] times that [fill2: you were/ALIAS was] injured, how many of those times was the injury serious enough that a medical professional was consulted?	01-91 1-91 times
FIJ.080_02.000	Did [fill1: you/ALIAS] get MEDICAL ADVICE, TREATMENT, or FOLLOW-UP CARE for this [fill2: injury/poisoning]? An emergency vehicle, such as an ambulance or fire truck	Yes
		No
FIJ.080_02.000	Did [fill1: you/ALIAS] get MEDICAL ADVICE, TREATMENT, or FOLLOW-UP CARE for this [fill2: injury/poisoning]? A visit to an emergency room	Yes
		No
FIJ.080_02.000	Did [fill1: you/ALIAS] get MEDICAL ADVICE, TREATMENT, or FOLLOW-UP CARE for this [fill2: injury/poisoning]? A visit to a doctor's office or other health clinic	Yes
		No
FIJ.080_02.000	Did [fill1: you/ALIAS] get MEDICAL ADVICE, TREATMENT, or FOLLOW-UP CARE for this [fill2: injury/poisoning]? A phone call to a doctor, nurse, or other health care professional	Yes
		No
FIJ.080_02.000	Did [fill1: you/ALIAS] get MEDICAL ADVICE, TREATMENT, or FOLLOW-UP CARE for this [fill2: injury/poisoning]? Any place else?	Yes
		No
FIJ.090_00.000	[fill1: Were you/Was ALIAS] hospitalized for at least one night as a result of this [fill2: injury/poisoning]?	Yes
		No
FIJ.091_00.000	How many nights [fill: were you/was ALIAS] in the hospital?	1-94 nights
		95+ nights

Effect on work

SOII		
None	Number of days away from work	[open ended]
None	Number of days of job transfer or restriction	[open ended]
OSHA Log		
h	Days away from work	[open ended]
i	Job transfer or restriction	[open ended]
j	Other recordable cases	[open ended]
k	Days away from work	[open ended]
l	Days on job transfer or restriction	[open ended]
NLS79 1993		
Q10-30 [R42868.00]	Did the [Q10-19] cause you to miss one or more scheduled days of work, not counting the day of the incident?	Yes
		No
Q10-32 [R42870.00]	Did the [injury] cause you ... to be assigned to another job on a temporary basis?	Yes
		No
Q10-33 [R42871.00]	Did the [injury] cause you ... to work at your regular job less than full time?	Yes
		No
Q10-34 [R42872.00]	Did the [injury] cause you ... to work at your regular job, but be unable to perform all of the normal duties of the job?	Yes
		No
Q10-31 [R42869.00]	Not counting the day of the incident, how many days altogether was this?	[open ended]
Q10-37 [R42875.00]	Did the [injury] (also) cause you... to be laid off?	Yes
		No
Q10-38 [R42876.00]	Did the [injury] (also) cause you... to quit?	Yes
		No
Q10-39 [R42877.00]	Did the [injury] (also) cause you... to be fired?	Yes
		No

Q10-40 [R42878.00]	Did the [injury] (also) cause you... to change occupations?	Yes
		No
Q10-41 [R42879.00]	Did you lose any wages because of the [injury]?	Yes
		No
EU LFS (UK) 2013		
GOBACK	How soon were you able to start work again after the accident?	Still off paid work,
		Expects never to do paid work again,
		Same day,
		The day after the accident,
		On the second day after the accident,
		On the third day after the accident,
		On the fourth day after the accident,
		On the fifth day or longer after the accident,
TIMEDAYS	How many days after the accident did you go back to work?	
NHIS 2014		
FIJ.171_00.000	As a result of this [fill1: injury/poisoning], how many days of work did [fill2: you/ALIAS] miss?	None
		Less than one day
		One to five days
		Six or more days
HRS 2014		
M028	At the time your health started to limit your ability to work, did your employer do anything special to help you out so that you could stay at work?	Yes
		No
		No help needed
		Left immediately
W211_1	Did your employer get someone to help you?	Yes
		No
W214_1	Did your employer shorten your work days?	Yes
		No

Employee characteristics

SOII		
None	Employee's name	[open ended]
2	Employee's race or ethnic background: (optional-check one or more)	American Indian or Alaska Native
		Asian
		Black or African American
		Hispanic or Latino
		Native Hawaiian or Other Pacific Islander
		White
		Not available
3	Employee's age _____ OR date of birth: ____/____/____	
5	Employee's gender:	Male
		Female
OSHA form 301		
3	Date of birth	
5	Sex	Female
		Male

## Appendix B

### NLS79 Attachment 8 – code list for injuries

11800 - 11807 Railway accidents	11880 - 11888 Accidental falls
11810 - 11819 Motor vehicle traffic accidents	11890 - 11899 Accidents caused by fire and flames
11820 - 11825 Motor vehicle nontraffic accidents	11900 - 11909 Accidents due to natural and environmental factors
11826 - 11829 Other road vehicle accidents	11910 - 11915 Accidents caused by submersion, suffocation and foreign bodies
11830 - 11838 Water transport accidents	11916 - 11929 Other accidents and late effects of accidental injury
11840 - 11845 Air and space transport accidents	11930 - 11949 Drugs, medicaments and biological substances causing adverse effects in therapeutic use
11846 - 11848 Vehicle accidents not elsewhere classifiable	11950 - 11959 Suicide and self-inflicted injury
11850 - 11858 Accidental poisoning by drugs, medicaments and biologicals	11960 - 11969 Homicide and injury purposely inflicted by other persons
11860 - 11869 Accidental poisoning by other solid and liquid substances, gases and vapours	11970 - 11978 Legal intervention
11870 - 11876 Misadventures to patients during surgical and medical care	11980 - 11989 Injury undetermined whether accidentally or purposely inflicted
11878 - 11879 Surgical and medical procedures as the cause of abnormal reaction of patient or later complication	11990 - 11999 Injury resulting from operations of war

### NHIS list of body parts

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1	Ankle
2	Back
3	Buttocks
4	Chest
5	Ear
6	Elbow
7	Eye
8	Face
9	Finger/thumb
10	Foot
11	Forearm
12	Groin
13	Hand
14	Head (not face)
15	Hip
16	Jaw
17	Knee
18	Lower leg
19	Mouth
20	Neck
21	Nose
22	Shoulder
23	Stomach
24	Teeth
25	Thigh
26	Toe
27	Upper arm
28	Wrist
29	Other, specify

**OMB Package  
(Deliverables #7, #11, and #12)**

# FINAL REPORT

## OMB Package

(Deliverables #7, #11, and #12)

MARCH 24, 2016



*at the* UNIVERSITY of CHICAGO

NOTE TO THE REVIEWER OF: OMB CLEARANCE 1220-0141  
“Cognitive and Psychological Research”

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FROM: Polly Phipps and Robin Kaplan  
Office of Survey Methods Research

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SUBJECT: Submission of Materials for the Household Survey of  
Injuries and Illnesses

Please accept the enclosed materials for approval under the OMB clearance package 1220-0141 “Cognitive and Psychological Research.” In accordance with our agreement with OMB, we are submitting a brief description of the study.

The total estimated respondent burden for this study is 165 hours.

If there are any questions regarding this project, please contact Polly Phipps at 202-691-7513.

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## Introduction

The purpose of this memorandum is to inform you that the Bureau of Labor Statistics (BLS) plans to conduct cognitive interviews for Designing a Household Survey of Injury and Illness (HSOII) under the generic clearance of survey improvement projects (OMB #1220-0141).

The objectives of the cognitive interviews are to evaluate the HSOII survey questions for correct interpretation and to assess the ability of respondents to accurately answer the survey questions. The results of this research will be used to refine the HSOII questionnaire items and item order.

## Background

The Survey of Occupational Injuries and Illnesses (SOII) is an annual survey of over 230,000 establishments used to generate estimates of non-fatal workplace injuries and illnesses that occur during the survey year. Existing research points to an underestimate of injuries and illnesses attributed to a variety of factors including an employer/employee incentive to underreport these occurrences. A potential solution is to contact workers directly through a household survey. Such a survey would be expected to produce estimates that are not “filtered” by establishment-level reporting involved in the SOII. Ideally, a household survey would sample from the universe of all workers, including those who work as independent contractors. It should also allow BLS to produce annual calendar year estimates of injuries and illnesses by employment relationship (contractor vs. employee), sector (private, government), and broad industry and occupational groups. BLS intends to conduct a series of cognitive interviews between March and September 2016 to develop and test an HSOII instrument.

### Purpose

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The purpose is to develop a survey design and questionnaire on non-fatal occupational injuries and illnesses that covers the population of workers and allows BLS to estimate injuries and illnesses by employment relationship, broad industry, and occupation at the national level.

A series of cognitive interviews will be conducted to test and fine-tune wording and question ordering revisions to the existing instrument. The cognitive interviews will enable the research team to identify problems with items, the organization and order of the instrument, revealing potential sources of response error in the HSOII that the research team will draw on to inform their design efforts.

The cognitive interviews will assess issues such as:

- Respondent understanding of terms in the survey, such as illness and injury
- Respondent confidence in responses
- Recall techniques when answering factual questions, such as when an injury or illness occurred and what happened
- Suitability of response options
- Ease of answering questions
- Issues with sensitive questions
- Consistency of answers within the questionnaire and in comparison to the expected range of answers

## Methodology

### General approach

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The cognitive interviews will be conducted by staff with training and experience in cognitive interviewing. The research team anticipates completing up to three rounds of cognitive interviews with 30 respondents per round for a maximum total of 90 cognitive interviews. Interviewing in rounds will allow the team to evaluate the effectiveness of a set of proposed instrument changes in one round, revise the instrument as needed, and test the revisions in the next round. The interviews will be audio-recorded if respondent consent is granted.

A full set of materials for use in conducting interviews are attached to this OMB clearance package. These materials include: sample flyer, Frequently Asked Questions, eligibility screener, cognitive interview protocol, and participant consent form.

### Recruitment

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**Sampling.** The study will be conducted in the Chicago and Bethesda areas. NORC at the University of Chicago (NORC) will use a non-probability sample of 90 participants for this research. Respondents will be adults who have experienced a workplace injury or illness in the past 12 months and adults who work in occupations that place them at higher risk of experiencing workplace injuries and illnesses. In addition, some respondents will be from the general population of workers, who may not have experienced a workplace injury or illness. For testing of proxy response, described further below, the proxy respondent will be an adult from the household of a recruited respondent.

**Method for recruiting.** NORC will obtain participants through a variety of channels. Flyers (see Attachment 1) will be distributed through neighborhoods, community centers, public libraries, supermarkets, and shopping malls. The flyer will also be posted online on Craigslist and other social media sites (Twitter, Facebook, etc.).

Additional recruitment avenues to explore are American Job Centers (One-Stop Career Centers)<sup>1</sup>, which provide assistance to those seeking employment. These centers may be helpful in providing outreach to recently or newly employed individuals who would be willing to be interviewed. In addition, the Outreach Training Program<sup>2</sup>, which provides basic safety and health information and education for employers and employees, will be approached to help with reaching individuals whose occupations increase their likelihood of experiencing a workplace injury or illness. In addition, we will contact trade unions in Chicago to distribute information. We will provide copies of the recruitment flyer to these centers for them to make available to interested individuals.

Other sites of interest are community colleges and not-for-profit organizations focused on human services offering vocational training. Also, temporary work agencies and associations in alliance with the Occupational Safety & Health Administration can be approached for recruiting. These institutions will be contacted by email and telephone to inform them of the study. We will gain cooperation and provide flyers for these organizations to distribute and post.

As an additional method of recruiting, we will ask respondents who have agreed to participate in the study to pass on study information to others they know. To assure that we recruit individuals in occupations in which workers have a higher risk of experiencing workplace injury and illness, we will ask respondents to recruit others in the same occupation.

Recruitment materials will direct individuals interested in participating in an interview to contact NORC (via telephone or email, to be determined). A trained NORC staff member will explain the study and the cognitive interview process, answer any questions the respondent may have, and screen the respondent. The Frequently Asked Questions are presented in Attachment 2; the recruitment script and screener and are presented in Attachment 3.

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<sup>1</sup> <http://www.dol.gov/dol/topic/training/onestop.htm#doltopics> and <http://www.careeronestop.org/>

<sup>2</sup> <https://www.osha.gov/dte/outreach/generalindustry/index.html>

## Interviews

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We anticipate that the first round of interviews will be conducted face-to-face with respondents in laboratory cognitive interviews. Recruited respondents who are completing in-person laboratory cognitive interviews will come to NORC's offices in either downtown Chicago or the University of Chicago campus, to NORC's Bethesda office. An in-person interview allows the interviewer to observe both verbal and nonverbal cues in assessing how the instrument is working. Later interview rounds will include some telephone interviews as well.

Interviewers will follow a cognitive interview protocol in which the interviewer asks probing questions throughout the survey to examine question comprehension, recall of information, judgment processes, and sensitivity of questions. The protocol is included in Attachment 4. Analysis of the cognitive interview data, revision of the questions, and updating of the cognitive interview protocol will be ongoing throughout data collection. Since this research involves pretesting of a questionnaire, we expect that modifications to the questionnaire will be made throughout the course of the study. The goals of the testing and overall design of the study will remain the same. However, findings from earlier interviews will be used to improve the survey instrument to be tested in later interviews.

Prior to participating in the study, respondents will first be informed of their rights and the study confidentiality. The interviewer will address the respondent's questions and concerns and then participants will sign the consent form (Attachment 5). At the end of the interview respondents will receive compensation of \$40.

## Participants

### Sample characteristics

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There are several characteristics of respondents that are of specific interest in the sample recruitment for this study. Individuals who respond to the recruitment flyer will be screened (Attachment 3) to ensure that a broad range of respondent characteristics in terms of gender, age, education level, race and ethnicity, and occupation are included in the sample. Respondents will also be asked about whether they have experienced a workplace injury or illness to ensure that respondents who have experienced a workplace injury or illness are included in the sample. All respondents will be 18 years of age or older.

Potential respondents who are in professions in which workers have a high likelihood of experiencing a workplace injury or illness (such as individuals who work in construction, food service, manufacturing, and health care), and individuals who indicate that they have experienced a workplace injury or illness, will be the focus of recruitment efforts. However, some respondents from the more general population of workers or who have not experienced a workplace injury or illness will also be invited to participate to ensure that the questionnaire works well with a variety of respondents. In addition, some respondents participating in pairs interviews, described below, will be adult members of a recruited respondent's household.

### **Proxy reporting**

An individual who is knowledgeable about the household, or knowledge about the work history and injuries/illnesses of other household members could potentially serve as respondent or proxy. In developing initial plans for respondent recruitment, we will conduct interviews that include both proxy and self-reporting. As the survey design develops, the recruitment plans will be adapted according to decisions made concerning the use of proxy respondents. To test the accuracy of proxy reports, we will interview two adult members from the same household. We will attempt to recruit up to 20 pairs of respondents so that self and proxy reports may be compared. Each member of the respondent pair will receive the \$40 compensation for study participation.

## Burden Hours

Respondent burden includes time spent on the following:

1. Responding to the flyer
2. Screening process and collection of background information
3. Appointment scheduling and confirmation
4. Interview

The total estimated burden associated with this study is 165 hours

Activity	Number of Respondents	Average Time (minutes)	Total Burden (minutes)
Telephone inquiry: Estimate that 300 individuals will respond to the flyer and receive information about the study	300	5	1500
Screening and collection of background information: Estimate that 200 individuals will decide to be screened for participation	200	10	2000
Appointment scheduling and confirmation: Estimate that 100 individuals will be scheduled for an interview and receive confirmation phone call or email	100	10	1000
Interview: 90 individuals will be interviewed	90	60	5400
		Total burden	9,900 minutes (165 hours)

## Data Confidentiality

Cognitive interview respondents will be informed of confidentiality verbally and through the consent form (Attachment 5). The consent form indicates that the purpose of the study is to improve a BLS survey, that participation is voluntary, and that responses will be used for statistical purposes only. Respondents will also be informed that the interview will be audio-recorded or that someone may observe the interview. To protect respondent confidentiality, respondents will be assigned a unique identifier.

Although quotes may be used in the final reports, quotes will not be attributed to a name and no respondent will be identifiable based on any quotes used. The signed consent forms will be kept separately from the interview files in a locked cabinet for the duration of the study and will be destroyed after the final report is completed.

## Attachments

- 1: Sample flyer
- 2: Frequently Asked Questions
- 3: Eligibility Screener
- 4: Cognitive Interview Protocol
- 5: Participant Consent Form

## Appendix

*Attachment 1: Recruitment Materials: Flyer*



### **EARN \$40 BY COMPLETING AN INTERVIEW!**

- Have you had an on-the-job injury in the last year?
- Have you had an illness related to your job in the last year?
- Do you do any of the following kinds of work?
  - Construction
  - Food service
  - Health care
  - Cleaning and maintenance
  - Manufacturing
  - Stocking, loading, moving

If you said YES to *any* of these questions, we want you to take part in an interview on workplace injuries and illnesses!

The interview will last no more than 60 minutes and can be completed at NORC's offices in downtown Chicago or the University of Chicago campus [OR Bethesda] during regular business hours.

If you are interested, please contact NAME at:

[WorkerStudy@norc.org](mailto:WorkerStudy@norc.org)

312-XXX-XXXX

## *Attachment 2: Frequently Asked Questions*

### ***What is the study about?***

This study is being conducted on behalf of the Bureau of Labor Statistics to try to learn how many people experience workplace injuries or illnesses each year.

### ***Who is the Bureau of Labor Statistics (BLS)?***

The Bureau of Labor Statistics (BLS) is the principal fact-finding agency for the Federal Government in the broad field of labor economics and statistics. The BLS is an independent national statistical agency that collects, processes, analyzes, and disseminates essential statistical data to the American public, the U.S. Congress, other Federal agencies, State and local governments, business, and labor. Learn more at [www.bls.gov](http://www.bls.gov).

### ***Who is NORC?***

NORC is a not-for-profit social science research organization affiliated with the University of Chicago. NORC is conducting this study on behalf of the Bureau of Labor Statistics (BLS). You can learn more about NORC at its website, [www.norc.org](http://www.norc.org), or by contacting the Study Director, Dr. Lisa Lee at [Lee-Lisa@norc.org](mailto:Lee-Lisa@norc.org) or calling xxx-xxx-xxxx.

### ***Do I have to participate?***

Participation is voluntary. You may choose whether or not you want to be in this study. If you decide to be in the study, you may choose to skip any question you do not want to answer or stop participating at any time.

### ***How much will I be paid?***

You will be given \$40 for participating in the study.

### ***How long will the study take?***

The interview will take less than 60 minutes.

### ***Why should I participate?***

Your input on how the questionnaire is working will help improve the data BLS collects. By participating in this study you can help make sure that the BLS collects the most complete and accurate data possible on workplace injury and illness in the United States, information that is used to inform policies designed to keep employees safe

### ***Who do I contact if I have questions about my rights as a respondent?***

If you have any questions regarding your rights as a study participant, you may call the NORC IRB Manager, toll-free, at 866-309-0542.

### ***How is my privacy protected?***

Your answers will always be kept private, and none of the information that you provide will be used for any purpose other than research. Your name or any information that could identify you will never be used.

*Attachment 3: Recruitment Script and Screener Questions*

Hello. My name is [NAME] and I work for NORC at the University of Chicago. I am calling you about your interest in the Worker Study. Is this a good time to talk? I would like to tell you about the study and you can let me know if you are still interested.

NORC is conducting this study for the Bureau of Labor Statistics (BLS) under OMB number 1220-0141 in an effort to try to improve the way that information on work-related injuries and illnesses is collected. We are helping to develop a survey for workers like yourself to ask about the injuries and illnesses related to your job that you may have experienced. For this study, you will come to NORC's offices for an interview. The interview will include questions on the type of work you do, whether you have had a work-related injury or illness, and details about any injury or illness you may have experienced. The interview will take about one hour and you will be paid \$40 in compensation.

Your answers will always be kept private, and none of the information that we collect about you will be used for any purpose other than research. BLS will not receive your name or any other identifying information about you. Also, your participation is completely voluntary and you may choose to skip any questions the interviewer asks or stop participating at any time. We will first ask some questions which will take approximately 10 minutes to determine if you are eligible to participate.

Would you like to participate?

- ➡ [IF YES] Great. I am going to ask you a few background questions to confirm your eligibility. Then we can schedule an appointment time for you. → GO TO SCREENER QUESTIONS
- ➡ [IF NO] That's okay. We appreciate your call. But for research purposes, we would like to know why you choose not to participate. Thank you. NOTE TO RECRUITER: IF POTENTIAL RESPONDENT DECIDES AFTER HEARING ABOUT THE STUDY THAT HE/SHE DOES NOT WANT TO PARTICIPATE, ASK WHY NOT AND OFFER TO ANSWER QUESTIONS. RECORD THE RESPONDENT'S REASONS FOR NOT PARTICIPATING BELOW:

### Eligibility Screener

1. Since [DATE], did you do ANY work for pay or profit?
  - a. YES
  - b. NO
  
2. How many jobs have you had since [DATE]?  
  
\_\_\_\_\_ jobs
  
3. What type of work do you do [did you do] at each job?: [RECORD VERBATIM AND CODE]
  - a. Office, professional, business, or management staff
  - b. Healthcare
  - c. Delivery or driving
  - d. Sales
  - e. Food service
  - f. Product assembly, product manufacture
  - g. Cleaning, maintenance of building, grounds
  - h. Repair, installation or service of machines, equipment
  - i. Material handling (e.g., stocking, loading/unloading, moving, etc.)
  - j. Construction
  - k. Farming
  - l. Other: \_\_\_\_\_
  
4. Since [DATE], have you experienced any injuries or illnesses related to any job you had?
  - a. YES → Please describe this incident.
  - b. NO

Now I would like to ask you about other adult members of your household, that is, persons ages 18 and older who live with you.

5. Since [DATE], has any adult member of your household done any work at all for which they were paid? [RECORD NAMES]

[ASK Q6 THROUGH Q8 FOR EACH HOUSEHOLD MEMBER.]

6. How many jobs has [NAME] had since [DATE]?  
  
\_\_\_\_\_ jobs

7. What type of work does/did [NAME] do? [RECORD VERBATIM AND CODE]
  - a. Office, professional, business, or management staff
  - b. Healthcare
  - c. Delivery or driving
  - d. Sales
  - e. Food service
  - f. Product assembly, product manufacture
  - g. Cleaning, maintenance of building, grounds
  - h. Repair, installation or service of machines, equipment
  - i. Material handling (e.g., stocking, loading/unloading, moving, etc.)
  - j. Construction
  - k. Farming
  - l. Other: \_\_\_\_\_
  
8. Since [DATE], did [NAME] experience any injuries or illnesses related to any job he/she had?
  
9. [IF INTERVIEW TO BE CONDUCTED IN PERSON] Would you and [OTHER ADULT HOUSEHOLD MEMBER NAME] be able to come in person to our offices in downtown Chicago/Bethesda to complete an interview?
  - a. YES, DOWNTOWN OFFICE
  - b. YES, HYDE PARK OFFICE
  - c. YES, BETHESDA OFFICE
  - d. NO → FIND OUT WHERE RESPONDENT WOULD LIKE TO BE INTERVIEWED; WE WILL DETERMINE IF TRAVEL ARRANGEMENTS CAN BE MADE; CONTINUE SCREENING.
  
10. RESPONDENT GENDER. ASK IF UNSURE.
  - a. MALE
  - b. FEMALE
  
11. How old are you?  
  
\_\_\_\_\_ years

12. What is the highest degree or level of school you have completed?
- a. NO SCHOOLING COMPLETED
  - b. NURSERY SCHOOL TO 8TH GRADE
  - c. 9TH-12TH GRADE, NO DIPLOMA
  - d. HIGH SCHOOL GRADUATE (HIGH SCHOOL DIPLOMA OR THE EQUIVALENT)
  - e. VOCATIONAL/TECHNICAL/BUSINESS/TRADE SCHOOL CERTIFICATE OR DIPLOMA (BEYOND THE HIGH SCHOOL LEVEL)
  - f. SOME COLLEGE, BUT NO DEGREE
  - g. ASSOCIATE DEGREE
  - h. BACHELOR'S DEGREE
  - i. MASTER'S, PROFESSIONAL OR DOCTORATE DEGREE
  - j. DON'T KNOW
  - k. REFUSED
13. Are you of Hispanic, Latino, or Spanish origin?
- a. YES
  - b. NO
14. What is your race? Please choose one or more.
- a. American Indian or Alaska Native
  - b. Asian
  - c. Black or African American
  - d. Native Hawaiian or other Pacific Islander
  - e. White
  - f. DON'T KNOW
  - g. REFUSED

IF RESPONDENT IS ELIGIBLE

- ➡ OK, it looks like you are eligible to participate in the study. SCHEDULE APPOINTMENT

We would like to audio-record the interview so that we may review our conversation as we prepare a summary of our findings. Is this OK with you? [NOTE TO RECRUITER: THIS QUESTION IS NOT MEANT TO ASK FOR CONSENT. RESPONDENTS WILL BE ASKED AGAIN ABOUT RECORDING DURING THE CONSENT PROCESS. THEY WILL HAVE THE OPPORTUNITY TO DECIDE NOT BE RECORDED AND STILL PARTICIPATE IN

THE INTERVIEW. WE PREFER TO RECRUIT RESPONDENTS WHO ARE LIKELY TO CONSENT TO RECORDING.]

- a. YES
- b. NO

- ➡ Ok, let's schedule an appointment for you [and NAME] to come in for the interview.
- ➡ COLLECT CONTACT INFORMATION AND SCHEDULE APPOINTMENT. IF PAIRS INTERVIEW, WHEN CALLING/EMAILING TO REMIND RESPONDENT OF APPOINTMENT, CONFIRM THAT OTHER ADULT HAS AGREED TO COME AND KNOWS OF APPOINTMENT.

IF RESPONDENT IS NOT ELIGIBLE

- ➡ I'm sorry that right now we have enough people who have similar characteristics as you. Could I put your name on the waiting list and call you if a slot opens up?
  1. YES
  2. NO

*Attachment 4: Cognitive Interview Protocol*

**HOUSEHOLD SURVEY OF OCCUPATIONAL INJURIES AND ILLNESSES  
DRAFT cognitive interview protocol**

***MATERIALS NEEDED FOR INTERVIEW***

- INTERVIEWER PROTOCOL BOOKLET (THIS BOOKLET)
- CONSENT FORM (TWO COPIES)
- \$40 CASH IN ENVELOPE
- PAYMENT RECEIPT
- FULLY CHARGED DIGITAL RECORDER AND EXTRA BATTERIES
- NOTE PAPER, PENS AND PENCILS

***STEP 1: INFORMED CONSENT***

PROVIDE RESPONDENT WITH A COPY OF THE INFORMED CONSENT FORM. ASK THE RESPONDENT TO READ THE FORM, ANSWER ANY QUESTIONS, AND HAVE THE RESPONDENT SIGN THE FORM. LEAVE A SEPARATE COPY OF THE FORM WITH THE RESPONDENT.

- SIGNED CONSENT FORM COLLECTED
- COPY OF CONSENT FORM GIVEN TO RESPONDENT
- IF THE RESPONDENT HAS CONSENTED TO RECORDING, START THE RECORDER.

***STEP 2: COMPLETION OF THE QUESTIONNAIRE***

BEGIN QUESTIONNAIRE.

**Interviewer probe bank (use as appropriate):**

- “How did you come up with that answer?”
- “Can you tell me in your own words what you think the question is asking?”
- “Can you tell me more about that?”

If you pick up on a visual cue that suggests an issue or confusion:

- “Tell me what you are thinking.”
- What does the word [term] in this question mean to you?
- You said [answer]. Can you tell me more about that?

If R is uncertain and asking for confirmation:

- There is not a right or wrong answer for this question. I am interested in hearing your thoughts on what the question is asking.

**INTERVIEWER:** If this interview is with a proxy respondent, please modify language accordingly. For example, instead of asking “Did you do ANY work for pay or profit?” ask “Did [your husband/wife/brother/he/she] do ANY work for pay or profit?”

### Survey Introduction

This survey is about work-related injuries and illnesses that you may have experienced. I would like to ask you questions about your work history and about the injuries and illnesses you may have had that are related to your job. The information that you provide in this survey is confidential. Your name and your answers to the questions will not be shared with anyone outside of NORC, the survey organization conducting this survey. I would be happy to answer any questions you may have about the survey. [ANSWER RESPONDENT QUESTIONS.] Let’s begin.

### Screenener

1. Since [DATE: ONE YEAR AGO FROM TODAY], did you do ANY work for pay or profit?
  - a. Yes → ELIGIBLE, CONTINUE
  - b. No → NOT ELIGIBLE, END INTERVIEW
  - c. DK
  - d. REF

### Any injury

2. Since [DATE: ONE YEAR AGO FROM TODAY], have you experienced any injuries or illnesses related to any job you had?
  - a. Yes → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
  - b. No
  - c. DK
  - d. REF

3. Since [DATE: ONE YEAR AGO FROM TODAY], have you experienced an injury or illness, related to any job you had, that caused you to...
  - a. Lose consciousness? 1) YES 2) NO 3)DK 4)REF
  - b. Be unable to work for a day or more? 1) YES 2) NO 3)DK 4)REF
  - c. Restrict your work activities? 1) YES 2) NO 3)DK 4)REF
  - d. Transfer jobs? 1) YES 2) NO 3)DK 4)REF
  - e. Get medical treatment other than first aid? 1) YES 2) NO 3)DK 4)REF

IF YES, COLLECT BRIEF DESCRIPTION AND CONFIRM WORK-RELATED.

4. Since [DATE: ONE YEAR AGO FROM TODAY], have you experienced any of the following injuries related to any job you had? CUES:

- a. Sprains, strains or tears
- b. Soreness or pain
- c. Bruises or contusions
- d. Cuts, lacerations or punctures
- e. Broken bones
- f. Injury to muscles or joints
- g. Open wounds
- h. Burns
- i. Carpal tunnel syndrome
- j. Any other injury?
  - 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
  - 2) NO
  - 3) DK
  - 4) REF

5. Since [DATE: ONE YEAR AGO FROM TODAY], have you experienced any of the following illnesses, related to any job you had? CUES:

- a. Skin disorders
- b. Respiratory conditions
- c. Poisonings,
- d. Hearing loss
- e. A disease or infection
- f. Cancer
- g. Any other illness?
  - 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
  - 2) NO

- 3) DK
- 4) REF

IF R HAS NOT REPORTED ANY INJURIES OR ILLNESSES ASK ABOUT INJURIES/ILLNESSES EVER EXPERIENCED. ELSE GO TO Q7.]

- 6. Have you EVER experienced any injuries or illnesses related to any job you had?
  - a. YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
  - b. NO → GO TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS
  - c. DK → GO TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS
  - d. REF → GO TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS
  
- 7. [IF YES TO ANY INJURIES OR ILLNESSES] How many total times [since [DATE: ONE YEAR AGO FROM TODAY], did you experience/have you ever experienced] an injury or illness related to any job you had? [THIS WILL CREATE THE LOOPS.]  
\_\_\_\_\_TIMES
  
- 8. [FOR EACH INJURY/ILLNESS] In what month and year did this injury/illness occur?

MONTH/YEAR  
ENTER MM/YYYY  
DK  
REF

INTERVIEWER: CONFIRM NUMBER OF INCIDENTS AND BRIEF DESCRIPTION OF EACH. IF INJURY/ILLNESS EXPERIENCED WITHIN PAST YEAR, RESPONDENT WILL REPORT ON THOSE. OTHERWISE, IF NO INJURY/ILLNESS WITHIN PAST YEAR, RESPONDENT WILL REPORT ON INJURIES/ILLNESSES EVER EXPERIENCED.

***Probes:***

*Screeener*

- I started off by telling you that this survey is about work-related injuries and illnesses, or injuries and illnesses related to your job. In your own words, what would be a

work-related injury or illness? Can you give me some examples of some things that would count as work-related injuries and illnesses? What would not count?

- I asked you this question: “Since [DATE: ONE YEAR AGO FROM TODAY], have you experienced any injuries or illnesses related to any job you had?” In your own words, what is this question asking?
- Tell me about the kind of work you do. Did you ever get hurt or sick because of the work you do? Tell me about that.
- I asked you about whether you ever experienced any injury or illness, related to any job you had, that caused you to get medical treatment other than first aid. What does “first aid” mean to you? What kind of treatment counts as first aid? What kind of treatment doesn’t count?
- Have you *ever* experienced a work-related injury or illness? Tell me about that.
- The questions gave some examples of injuries and illnesses [LIST FROM Q4 AND Q5]. Tell me what you think of this list. Which ones have you heard of? Which ones had you not heard of?
- How easy or hard was it to remember when the injury/illness happened? Can you tell me more about that? How did you figure out when the injury/illness happened?

***Notes to interviewer:***

The goal of the screener section is to enumerate all instances of work-related injuries and illnesses that occurred during the reference period. What issues do respondents have in reporting these incidents? Do they understand the types of injuries and illnesses to report? Can they accurately report only those that are work-related? How do they determine the boundary of the reference period and determine whether an incident occurred within the RP?

IF NO INCIDENTS OF WORK-RELATED INJURIES AND ILLNESSES, GO TO DEMOGRAPHICS SECTION.

## Injury or Illness

[FOR FIRST INJURY/ILLNESS START AT Q10]

[FOR SECOND AND FOLLOWING INJURY/ILLNESS START AT Q9]

9. [FOR SECOND/THIRD/ETC. LOOPS] How is this injury/illness related to the other injury/illness you mentioned? Is this related to [the other/another] injury/illness you already mentioned or is it a different injury/illness?

- a. RELATED TO THE OTHER/ANOTHER INJURY/ILLNESS [GO TO NEXT LOOP]
- b. THIS IS A DIFFERENT INJURY/ILLNESS [CONTINUE]
- c. DK
- d. REF

10. [FOR EACH LOOP] What happened? How did the injury or illness occur? [For example: “When ladder slipped on wet floor, I fell 20 feet”; “I was sprayed with chlorine when gasket broke during replacement”; “I developed soreness in wrist over time.”]  
[OPEN ENDED]

11. [FOR EACH LOOP] What were you doing just before the incident occurred? Describe the activity as well as the tools, equipment, or material you were using. Be specific. [Examples: “climbing a ladder while carrying roofing materials”; “spraying chlorine from hand sprayer”; “daily computer key-entry.”]

a. DESCRIBE THE ACTIVITY.

DK  
REF

b. DESCRIBE THE TOOLS, EQUIPMENT, OR MATERIAL THAT YOU WERE USING.]  
[OPEN ENDED]

DK  
REF

12. [FOR EACH LOOP] What object or substance directly harmed you? [Examples: “concrete floor”; “chlorine”; “radial arm saw.”]

- a. FLOORS, WALKWAYS, GROUND SURFACES
- b. VEHICLES
- c. WORKER MOTION OR POSITION
- d. CONTAINERS
- e. PARTS AND MATERIALS
- f. OTHER \_\_\_\_\_
- g. NOT APPLICABLE
- h. DK
- i. REF

Body part/type of injury

13. [FOR EACH LOOP] [INTERVIEWER NOTE: R should be more specific than “hurt,” “pain,” or “sore.” For example: “strained back”; “chemical burn, hand”; “carpal tunnel syndrome.”]

- a. How did this injury or illness happen?
  - a. OVEREXERTION AND BODILY REACTION WHILE LIFTING, PULLING, ETC., OR PERFORMING A REPETITIVE MOTION
  - b. FALLS, SLIPS OR TRIPS, FALLS ON THE SAME LEVEL
  - c. CONTACT WITH OBJECTS OR EQUIPMENT, STRUCK BY OBJECT OR EQUIPMENT
  - d. INJURY CAUSED BY ANOTHER PERSON OR AN ANIMAL
  - e. INCIDENT RELATED TO A CAR, TRAIN, AIRPLANE OR OTHER FORM OF TRANSPORTATION
  - f. EXPOSURE TO SOMETHING HARMFUL, SUCH AS ELECTRICITY, RADIATION, HEAT OR COLD, A NEEDLE OR SHARP OBJECT
  - g. OTHER \_\_\_\_\_
  - h. DK
  - i. REF
  
- b. What part of your body was affected?
  - a. ARM
  - b. WRIST
  - c. SHOULDER
  - d. FINGERS

- e. HANDS
  - f. HEAD
  - g. KNEE
  - h. ANKLE
  - i. FOOT
  - j. TOE
  - k. BACK LOCATIONS (THORACIC, LUMBAR, SACRAL, COCCYGEAL)
  - l. ENTIRE BODY
  - m. LUNGS
  - n. OTHER ORGANS
  - o. OTHER \_\_\_\_\_
  - p. DK
  - q. REF
- c. How was it affected? What type of injury or illness affected your [PART OF BODY]?
- a. SPRAINS, STRAINS, TEARS
  - b. SORENESS, PAIN
  - c. BRUISES, CONTUSIONS
  - d. FRACTURES
  - e. CUTS, LACERATIONS, PUNCTURES
  - f. BROKEN BONE
  - g. INJURY TO MUSCLES OR JOINTS
  - h. STRAINS OR SPRAINS
  - i. OPEN WOUNDS, CUTS, BRUISES OR BURNS
  - j. PAIN
  - k. CARPAL TUNNEL SYNDROME
  - l. SKIN DISORDERS
  - m. RESPIRATORY CONDITIONS
  - n. POISONINGS
  - o. HEARING LOSS
  - p. A DISEASE OR INFECTION
  - q. AN ILLNESS SUCH AS CANCER
  - r. ANY OTHER INJURY OR ILLNESS?
  - s. DK
  - t. REF

***Probes:***

*Date of injury/illness*

- You said that the injury/illness happened in [Q8 MONTH/YEAR]. Tell me how you remembered the month and year this injury/illness occurred. How sure are you about that date?

***Notes to interviewer:***

How certain is the R of the month/year of the injury/illness? How did R determine when the incident happened?

***Probes:***

*Characteristics of incident*

- Tell me more about what happened.
- [READ QUESTION] Can you tell me in your own words what you think this question is asking?
- [IF R DOES NOT INDICATE HOW INJURY/ILLNESS IS WORK-RELATED] Tell me more about how this injury/illness was related to your job. Where were you when this happened? What were you doing? What caused the injury/illness? Tell me more about the injury/illness.

***Notes to interviewer:***

Questions 10 through 13 are intended to capture (event or exposure, source of the injury/illness, part of body affected, and nature of the injury/illness). Do the questions elicit the information needed? Are the response options adequate to capture the information Rs give? Use general probing to elicit more information about the incident. (For example, if R says “I cut myself” ask: What part of your body was injured? What did you get cut with? What were you doing at the time?)

Medical attention

14. [FOR EACH LOOP] Was the injury/illness serious enough that a medical professional was consulted?

- a. Yes → What type of medical professional did you see? (specify)\_\_\_\_  
\_\_\_\_\_
- b. No
- c. DK
- d. REF

15. [FOR EACH LOOP]Did you get medical advice, treatment, or follow-up care for this injury/illness from...?

	Yes	No	Not needed	DK/REF
An emergency vehicle, such as an ambulance or fire truck				
An emergency room				
A doctor's office or other health clinic <i>Please include on site offices or clinics at your place of employment</i>				
A phone call to a doctor, nurse, or other health care professional				
Any place else? Specify				

16. [FOR EACH LOOP] Were you in the hospital?

- a. YES → How many nights were you in the hospital? \_\_\_\_\_ nights
- b. NO
- c. DK
- d. REF

17. Did you receive a medical diagnosis from your healthcare professional?

- a. YES → What was your medical diagnosis?
- b. NO
- c. DK
- d. REF

Effect on work

18. [FOR EACH LOOP] Did you report this injury/illness to your employer?

- a. YES [SKIP TO Q20]
- b. NO
- c. DK
- d. REF

19. [FOR EACH LOOP] IF NO TO REPORTING TO EMPLOYER: Why did you not report this injury/illness to your employer?

- |   |     |    |    |     |
|---|-----|----|----|-----|
| a. Avoid being laid off   | YES | NO | DK | REF |
| b. Avoid loss of wages  | YES | NO | DK | REF |
| c. Avoid loss of promotion or advancement                             | YES | NO | DK | REF |
| d. Avoid job transfer or restriction                                  | YES | NO | DK | REF |
| e. Employer would not recognize the injury/illness as work-related    | YES | NO | DK | REF |
| f. Employer wants to keep injury and illness rates low                | YES | NO | DK | REF |
| g. Realized the injury/illness was work-related after leaving the job | YES | NO | DK | REF |
| h. Other (specify)  | YES | NO | DK | REF |

20. [FOR EACH LOOP] Did the injury/illness cause you to...?

	YES	NO	NOT NEEDED	DK/REF
a. Be unable to work the next day, whether or not you were actually scheduled to work? [ASK FOLLOW-UP QUESTION]				
b. Work at your regular job less than your usual number of hours?				
c. Work at your regular job, but be unable to perform all of the normal duties of the job?				
d. Be assigned to another job on a temporary basis?				
e. Be transferred?				
f. Receive temporary disability benefits?				

g. Quit your job?				
h. Be laid off?				
i. Be fired?				
j. Change occupations?				
k. Lose any wages?				
l. OTHER (SPECIFY)				

IF NO WORK DAYS MISSED, GO THROUGH PROBES THEN SKIP TO INTRO TO Q23.

**Probes:**

*Medical attention (tailor probes based on whether R reported receiving medical attention)*

- Can you tell me in your own words what you think this question is asking?
- Who do you think of as a medical professional? Who would you include or not include? [IF NEEDED ASK IF THESE WOULD COUNT: medical doctor, nurse, physician’s assistant, chiropractor, paramedic]
- Did you go to a doctor, nurse, or other health care provider after [INCIDENT]? Did you go to the hospital or did paramedics come?
- Is/Was there a medical clinic at your place of employment? Did you see anyone at that clinic?
- Did you speak to a doctor, nurse, or another health care provider by phone after the incident?
- Tell me more about the medical care you received after the injury/illness happened.
- I asked you about whether you received a medical diagnosis. What does the term “medical diagnosis” mean to you? How do you get a medical diagnosis? Who gives you a medical diagnosis? Does a medical diagnosis have to come from a doctor or other health care professional?

*Temporary disability*

- I asked about whether you received temporary disability benefits. Have you heard of temporary disability benefits? Can you tell me what this term means?

***Notes to interviewer:***

Does the R consider all potential sources of medical attention? Does R provide a complete report of medical care received, including both immediate and follow-up care?

***Probes:***

*Effect on work*

- [IF YES TO MORE THAN ONE ITEM IN Q19] Tell me more about the reasons why you did not tell your employer about this injury/illness. Which was the main reason for not telling your employer?
- IF YES TO ANY ITEM IN Q20: Tell me more about [TEXT FILL]. [E.g., Tell me more about your normal job duties. What duties were you unable to perform? OR Tell me more about why you quit your job? When did you quit? How was that related to your injury/illness?]
- What does the term [TEXT FILL] mean to you? Can you give me an example? [E.g., What does it mean to you to be assigned to another job on a temporary basis? What does it mean to you to be transferred?]
- What kind of effect did the injury/illness have on your work schedule? Job duties? Ability to work? Ability to keep your job? The pay you received?

***Notes to interviewer:***

Observe for signs of acquiescence bias in Q19. Are Rs saying “yes” because a reason sounds plausible or because it was a reason why R did not report an injury/illness? Ask for more detail and main reasons. How did R determine an answer to each item in Q19? Probe to explore understanding of terms, ability to accurately report on consequences of the injury/illness.

21. [FOR EACH LOOP] IF YES ON MISSING DAYS OF WORK: How many calendar days, or days in a row, were you not able to work? *This may include both the days you were scheduled to work and days you were not scheduled.*

\_\_\_\_ DAYS

DK

REF

22. [FOR EACH LOOP] How many days after the injury/illness were you able to start work again?
- a. \_\_\_\_\_ DAYS AFTER THE INJURY/ILLNESS
  - b. STILL OFF PAID WORK
  - c. EXPECTS NEVER TO DO PAID WORK AGAIN
  - d. BACK TO WORK SAME DAY
  - e. DK
  - f. REF

***Probes:***

*Calendar days missed*

- How did you figure out the number of days you were not able to work?
- Walk me through the timeline of when you were injured and when you got back to work.
- I asked you [REPEAT QUESTION AND ITALICIZED INSTRUCTION ON CALENDAR DAYS NOT ABLE TO WORK]. Can you tell me in your own words what you think this question is asking? Can you think of a simpler way to ask this question? What does the term “calendar day” mean to you?
- You said you missed XX calendar days of work. How did you figure that out?
- Did your doctor or another medical professional recommend that you take days off from work? How many days off did they recommend?

***Notes to interviewer:***

Is R able to distinguish between work shifts vs. calendar days of work missed? Does R correctly report calendar days missed? How does R determine the days missed?

If reported no days missed in Q20, confirm that R is thinking of calendar days, not work shifts.

## Workers' compensation

Workers' compensation is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job. The next questions are about income you may have received from workers' compensation.

23. [FOR EACH LOOP] Has anyone filed a workers' compensation claim for this injury/illness?

- a. YES
- b. NO [SKIP TO Q25]
- c. DK
- d. REF

24. Who filed the workers' compensation claim?

- a. EMPLOYER
- b. EMPLOYEE
- c. FAMILY MEMBER OF EMPLOYEE
- d. OTHER SPECIFY
- e. DK
- f. REF

GO TO SKIP INSTRUCTION BEFORE Q26.

25. [FOR EACH LOOP] IF NO ON QUESTION ABOUT WORKERS' COMPENSATION:  
What was the main reason you or your employer did not file a workers' compensation claim for this injury/illness?

- a. Not eligible (did not meet waiting period)
- b. Employer refused
- c. Did not inform employer
- d. Worker unaware of workers' compensation coverage
- e. Other reason, please specify
- f. DK
- g. REF

SKIP INSTRUCTION: IF YES TO Q20—MISSED DAYS OF WORK, GO TO Q26. ELSE IF WORKERS' COMPENSATION CLAIM FILED (i.e., Q23=YES) SKIP TO Q27. ELSE GO TO PROBES AT END OF SECTION THEN SKIP TO Q28.

26. IF R MISSED DAYS OF WORK FOLLOWING THE INJURY/ILLNESS: *MARK YES OR NO FOR EACH QUESTION*

	YES	NO	NOT NEEDED	DK/REF
<i>Workers compensation</i> is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job. Did you receive workers' compensation?				
Being <i>kept on salary</i> means that, after an injury or illness, your employer continued to pay the wages and other compensation you were receiving when the injury or illness occurred. Were you kept on salary?				
<i>Short-term or temporary disability</i> benefits provide you with a portion of your income if you are temporarily unable to work due to a medical condition. Did you receive short term (temporary) disability?				
Did you use sick leave, annual leave, or personal time off?				
Did you take leave without pay?				
Other-specify _____				

Definitions:

*Workers compensation* is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job.

Being *kept on salary* means that, after an injury or illness, your employer continued to pay the wages and other compensation you were receiving when the injury or illness occurred.

*Short-term or temporary disability* benefits provide you with a portion of your income if you are temporarily unable to work due to a medical condition.

SKIP INSTRUCTION: IF WORKERS' COMPENSATION CLAIM FILED (i.e., Q23=YES), GO TO Q27. ELSE GO TO PROBES AT END OF SECTION AND THEN SKIP TO Q28.

27. [FOR EACH LOOP] IF FILED A WORKERS' COMPENSATION CLAIM: Is there an open claim pending for this injury/illness?

- a. YES
- b. NO
- c. DK
- d. REF

***Probes:***

*Workers' compensation*

- ASK PROBES TAILORED TO THE REASONS R REPORTS ON WHY NO WC CLAIM WAS FILED BY EMPLOYER. EXAMPLES: Tell me more about the reasons why your employer did not file a workers' compensation claim for this injury/illness? What did your employer say? Why did the employer refuse? How sure are you about whether or not your employer filed a claim?
- Can you tell me what it means to file a workers' compensation claim? Tell me what you know about that process.
- Have you heard of [TEXT FILL]? Please tell me in your own words what you think [TEXT FILL] means: workers' compensation, kept on salary, short-term or temporary disability, sick leave/annual leave/personal time off, leave without pay.

***Notes to interviewer:***

Do Rs know what workers' compensation is? Do they know whether a WC form was filed? Are the terms in Q26 familiar to Rs and are the definitions helpful?

## Occupation and Industry at Time of Injury or Illness

[FOR EACH LOOP] Thinking about the time of the injury/illness [TEXT FILL DESCRIPTION].

Were you employed full-time or part-time?

- a. Full-time
- b. Part-time
- c. DK
- d. REF

28. In a typical week, how many hours did you work? \_\_\_\_\_ hours

IF NECESSARY: Was it greater than or equal to 35 hours per week?

- DK
- REF

### ***Probes:***

#### *Hours worked*

- Do you work the same number of hours per week, or not? How did you determine how many hours per week you typically work?

#### ***Notes to interviewer:***

Does R have any difficulty recalling FT vs. PT work? How do Rs with irregular work schedules, seasonal employment, etc., answer the question? Does the number of hours per week typically worked accord with report of FT/PT status?

29. At the time of the injury/illness, were you ...?

- a. An employee of a private for-profit company or business, or of an individual, for wages, salary, or commissions?
- b. An employee of a private not-for-profit, tax-exempt, or charitable organization?
- c. A local government employee (city, county, etc.)?
- d. A state government employee?
- e. A federal government employee?
- f. Self-employed in own not incorporated business, professional practice, or farm?
- g. Self-employed in own incorporated business, professional practice, or farm?
- h. Working without pay in family business or farm?
- i. DK
- j. REF

30. For whom did you work? [OPEN ENDED]

- DK
- REF

31. What kind of business or industry was this? [OPEN ENDED]

- DK
- REF

32. Was this business or organization mainly manufacturing, retail trade, wholesale trade, or something else?

- a. Manufacturing
- b. Retail trade
- c. Wholesale trade
- d. Something else
- e. DK
- f. REF

33. What did they make or do where you worked? [OPEN ENDED]

- DK
- REF

34. In what state were you employed at this job?

- DK
- REF

35. What kind of work did you do? (For example: registered nurse, personnel manager, supervisor of order department, secretary, accountant) [OPEN ENDED]

DK  
REF

36. What were your most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, typing and filing, reconciling financial records) [OPEN ENDED]

DK  
REF

37. At this job, were you a member of a union or covered by a collective bargaining agreement?

- a. YES
- b. NO
- c. DK
- d. REF

38. About how many workers were employed by [TEXT FILL EMPLOYER NAME]?

- a. 1 to 10 workers
- b. 11 to 49 workers
- c. 50 to 249 workers
- d. 250 to 999 workers
- e. 1000 or more workers
- f. DK
- g. REF

***Probes:***

*Employment characteristics for job at time of injury/illness*

- Q38 (union): Have you heard of unions? Have you heard of a collective bargaining agreement? Tell me what those words mean to you.
- Q38: Tell me how you decided on your answer. Tell me about the collective bargaining agreement. What union do/did you belong to?

- Q39 ON HOW MANY WORKERS: Tell me how you figured out your answer to this question. Walk me through how you figured out that answer. How certain are you of your answer?

***Notes to interviewer:***

Observe respondent ability to understand and respond to questions about employment at time of the injury/illness. Probe as needed to explore an issues with response. Are respondents able to accurately report answers for Q38 and Q39?

IF R HAS ADDITIONAL INJURIES/ILLNESSES TO REPORT, GO BACK TO Q9. ELSE GO TO Q40.

**Demographic Characteristics**

Race/ethnicity

39. Are you Spanish, Hispanic, or Latino?

- a. YES
- b. NO
- c. DK
- d. REF

40. [I am going to read you a list of five race categories.] Please choose one or more races that you consider yourself to be:

- a. White
- b. Black or African American
- c. American Indian or Alaska Native
- d. Asian
- e. Native Hawaiian or Other Pacific Islander
- f. Other \_\_\_\_\_
- g. DK
- h. REF

## Age

41. What is your date of birth? Enter MM/DD/YYYY

DK  
REF

42. As of last week, that would make you approximately (AGE) years old. Is that correct?

[IF NECESSARY] Even though you don't know your exact birthdate, what is your best guess as to how old you were on your last birthday?

\_\_\_\_\_ years

DK  
REF

## Marital Type

43. Are you now married, widowed, divorced, separated or never married?

- a. MARRIED - SPOUSE PRESENT
- b. MARRIED - SPOUSE ABSENT
- c. WIDOWED
- d. DIVORCED
- e. SEPARATED
- f. NEVER MARRIED
- g. DK
- h. REF

## Gender

44. Are you male or female?

- a. MALE
- b. FEMALE

## Education

45. What is the highest level of school you have completed or the highest degree you have received?
- a. Less than 1st grade
  - b. 1st, 2nd, 3rd or 4th grade
  - c. 5th or 6th grade
  - d. 7th or 8th grade
  - e. 9th grade or 10th grade
  - f. 11th grade
  - g. 12th grade NO DIPLOMA
  - h. High school graduate - high school diploma or the equivalent (For example: GED)
  - i. Some college but no degree
  - j. Associate degree in college - Occupational/vocational program
  - k. Associate degree in college -- Academic program
  - l. Bachelor's degree (For example: BA, AB, BS)
  - m. Master's degree (For example: MA, MS, MEng, MEd, MSW, MBA)
  - n. Professional School Degree (For example: MD, DDS, DVM, LLB, JD)
  - o. Doctorate degree (For example: PhD, EdD)

## Current Industry and Occupation

The next questions are about your **current job**. *If you have more than one job, please tell me about the job at which you usually work the most hours. If you work the same number of hours at two jobs, please tell me about the job where you were employed the longest.*

46. What is your current employment status? Are you currently employed full-time, part-time, or are you not employed?
- a. FULL-TIME
  - b. PART-TIME
  - c. NOT CURRENTLY EMPLOYED [SKIP TO END OF SURVEY]
  - d. DK
  - e. REF
47. [IF CURRENTLY EMPLOYED] Is this job the same job with the same employer that you have already told me about?
- a. Same job with same employer [FOLLOW SKIP BELOW]
  - b. Different job, same employer [SKIP TO Q49]
  - c. Different employer [SKIP TO Q49]
  - d. DK
  - e. REF

48. [IF YES AND ONLY ONE LOOP FOR INJURY/ILLNESS THEN SKIP TO END OF SURVEY. ELSE IF YES AND MORE THAN ONE REPORTED INJURY/ILLNESS AND EMPLOYER ASK:] Which job and employer is that?

49. Currently, in a typical week, how many hours do you work? \_\_\_\_\_ hours

IF NECESSARY: Was it greater than or equal to 35 hours per week?

DK

REF

50. Are you ...?

- a. An employee of a private for-profit company or business, or of an individual, for wages, salary, or commissions?
- b. An employee of a private not-for-profit, tax-exempt, or charitable organization?
- c. A local government employee (city, county, etc.)?
- d. A state government employee?
- e. A federal government employee?
- f. Self-employed in own not incorporated business, professional practice, or farm?
- g. Self-employed in own incorporated business, professional practice, or farm?
- h. Working without pay in family business or farm?
- i. DK
- j. REF

51. For whom do you work? [OPEN ENDED]

DK

REF

52. What kind of business or industry is this? [OPEN ENDED]

DK

REF

53. Is this business or organization mainly manufacturing, retail trade, wholesale trade, or something else?

- a. Manufacturing
- b. Retail trade
- c. Wholesale trade
- d. Something else, specify:
- e. DK
- f. REF

54. What do they make or do where you work? [OPEN ENDED]

DK  
REF

55. What kind of work do you do? (For example: registered nurse, personnel manager, supervisor of order department, secretary, accountant) [OPEN ENDED]

DK  
REF

56. What are your most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, typing and filing, reconciling financial records) [OPEN ENDED]

DK  
REF

***Probes:***

*Employment characteristics for current job*

- Use general probes as needed to investigate issues with these questions.
- Is the job you reported your only job or do you have more than one job?
- [REREAD THE ITALICIZED INSTRUCTION ON WHICH JOB TO REPORT ON].  
In your own words, what do you think this instruction means?

***Notes to interviewer:***

These questions are the same as for the job at time of the incident. Continue to observe for issues to explore.

Does R notice that this set of questions is about the current job? If R has more than one job, did R report on the correct one?

How do Q47 and Q48 function for determining that the current and former job are the same?

***Debriefing questions for self-interview:***

*Recall and reference period*

- How easy or difficult was it for you to answer questions about injuries/illnesses that occurred over the last year?
- How sure are you that the injury/illness you told me about happened in the last year?
- Were there any questions that were particularly difficult to answer? Tell me more about that?
- If I asked you about injuries/illnesses that happened during the past year, how easy or hard would it be to answer the questions I asked you?
- When you signed up to do the survey, you may have seen a flyer or someone from NORC ask you about injuries and illnesses related to work that you may have had. Did you think about those injuries/illnesses you had, or did you do anything to get ready for the interview before you came? Tell me about that.
- Imagine that you didn't know ahead of time that this survey was going to be about work-related injuries and illnesses. If someone called you or came to your door, and asked you whether you had ever had a work-related injury or illness, do you think you would have remembered? How hard would these questions in the survey be, if you didn't know in advance what the survey was about?

*Sensitivity*

- Were you worried/Would you be worried about telling your employer about an injury/illness? Was it/Would it be hard for you to tell your employer? Tell me more about that.
- Were you worried/Would you be worried about telling the government about an injury/illness? Why? Tell me more about that.
- Were you worried/Would you be worried about telling anyone else about a work-related injury/illness? Tell me more about that.

*Review of selected items*

- I'd like to ask you a little more about [QUESTION]. You said [FILL]. In your own words, what do you think that question was asking? How did you decide on your answer?

*General debriefing*

- What are your suggestions on how to improve the survey?
- What questions were the most difficult for you to answer?
- What questions were the easiest to answer?

***Notes to interviewer:***

Is reporting work-related injuries and illnesses to the employer a sensitive issue? Why or why not? Is telling others outside the workplace about these incidents sensitive? Why or why not?

What questions are the most and least difficult for Rs to answer? What answers are they uncertain about? Do they have suggestions for improving the survey?

Return to any questions that need further exploration.

***Debriefing questions for proxy respondents:***

*Proxy*

- What is your relationship to [RESPONDENT NAME]?
- How much would you say you know about R's job?
- How familiar would you say you are with R's work-related injury/illness? Are you aware of the medical treatment he/she received when the injury/illness occurred? Are you aware of how this affected R's job? How did you learn about R's injury/illness? Who in your household besides R would be the best person to answer the kinds of questions I asked?
- What questions were the hardest for you to answer for R? Why? How much would you say you know about [QUESTION TOPIC]? How easy/hard is it to remember the information the question asked about? Tell me more.
- What questions were the easiest for you to answer for R? Why? How much would you say you know about [QUESTION TOPIC]? How easy/hard is it to remember the information the question asked about? Tell me more.

*Sensitivity*

- Were you worried/Would you be worried about telling anyone else about R's work-related injury/illness? Tell me more about that.

*Review of selected items*

- I'd like to ask you a little more about [QUESTION]. You said [FILL]. In your own words, what do you think that question was asking? How did you decide on your answer?

*General debriefing*

- What are your suggestions on how to improve the survey?
- What questions were the most difficult for you to answer?
- What questions were the easiest to answer?

***Notes to interviewer:***

Is proxy reporting of work-related injuries and illnesses a sensitive issue? Why or why not?

What questions are the most and least difficult for Rs to answer? What answers are they uncertain about? Do they have suggestions for improving the survey?

Return to any questions that need further exploration.

***Debriefing questions for those with no injury/illness to report:***

*Terms*

How familiar are you with the following terms? Please tell in your own words what these terms mean to you?

*Workers' compensation, etc.*

- Worker's compensation
- Temporary disability
- Short-term disability
- Being kept on salary
- Sick leave
- Annual leave
- Personal time off

*Medical professional/calendar days/work shifts*

ASK R: In the last year, have you had any injury or illness that was serious enough that a medical professional was consulted? Please include any injury whether or not it was work-related.

- Who do you think of as a medical professional? Who would you include or not include? [IF NEEDED ASK IF THESE WOULD COUNT: medical doctor, nurse, physician's assistant, chiropractor, paramedic]
- When you became injured or ill, how many calendar days were you unable to do your usual activities?
- Did you miss any work shifts? How many?
- You said you were not able to do your usual activities for XX calendar days. How did you figure that out?
- You said you missed XX work shifts. How did you figure that out?

*Unions/collective bargaining agreement*

- Have you heard of unions? Have you heard of a collective bargaining agreement? Tell me what those words mean to you.
- Q39 (how many workers): Tell me how you figured out your answer to this question. Walk me through how you figured out that answer. How certain are you of your answer?

*Understanding of terms*

- Have you heard of the term “calendar days”? What does that term mean to you? What about the term “work shift”? What does that term mean to you? How are these terms the same? Different?
- Who do you think of as a medical professional? Who would you include or not include? [IF NEEDED ASK IF THESE WOULD COUNT: medical doctor, nurse, physician’s assistant, chiropractor, paramedic]
- Now I’d like to ask you about the term “medical diagnosis.” What does the term “medical diagnosis” mean to you? How do you get a medical diagnosis? Who gives you a medical diagnosis? Does a medical diagnosis have to come from a doctor or other health care professional?

***STEP 3: END OF INTERVIEW***

Thank you for taking part in this survey.

STOP THE RECORDER.

***RECRUITMENT QUESTION:***

We are looking for additional respondents like you who would be interested in helping with the study. Do you know anyone who had a work-related injury or illness who might be interested in participating? If yes, would you mind if we gave you a flyer about the study and send you an email about the study that you could forward to them?

INTERVIEWER: ANSWER ANY RESPONDENT QUESTIONS.

This concludes the interview. I would be happy to answer any questions that you have. Thank you for your help with this study.

- PAY THE RESPONDENT AND OBTAIN SIGNATURE ON RECEIPT.

*MATERIALS TO TAKE AWAY FROM INTERVIEW*

- INTERVIEWER PROTOCOL BOOKLET (THIS BOOKLET)
- SIGNED CONSENT FORM
- SIGNED PAYMENT RECEIPT
- DIGITAL RECORDER AND BATTERIES
- NOTE PAPER, PENS, PENCILS

*Attachment 5: Participant Consent Form*

CONSENT FORM

The Bureau of Labor Statistics (BLS) is conducting research to increase the quality of BLS surveys. This study is intended to suggest ways to improve the procedures the BLS uses to collect survey data.

The BLS, its employees, agents, and partner statistical agencies, will use the information you provide for statistical purposes only and will hold the information in confidence to the full extent permitted by law. In accordance with the Confidential Information Protection and Statistical Efficiency Act of 2002 (Title 5 of Public Law 107-347) and other applicable Federal laws, your responses will not be disclosed in identifiable form without your informed consent. The Privacy Act notice on the back of this form describes the conditions under which information related to this study will be used by BLS employees and agents.

During this research you may be audio and/or videotaped, or you may be observed. If you do not wish to be taped, you still may participate in this research.

We estimate it will take you an average of [enter #] minutes to participate in this research (ranging from [enter #] minutes to [enter #] minutes).

Your participation in this research project is voluntary, and you have the right to stop at any time. If you agree to participate, please sign below.

Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. The OMB control number is 1220-0141 and expires April 30, 2018.

-----  
I have read and understand the statements above. I consent to participate in this study.

\_\_\_\_\_  
Participant's signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Participant's printed name

\_\_\_\_\_  
Researcher's signature

**Questionnaire Development Report  
(Deliverable #14)**

# FINAL REPORT

## Designing a Household Survey of Occupational Injuries and Illnesses Questionnaire Development Report (Deliverable #14)

NOVEMBER 15, 2016

PRESENTED TO:  
U.S. Bureau of Labor Statistics  
2 Massachusetts Ave, NW  
WASHINGTON, DC 20212

PRESENTED BY:  
NORC at the University of Chicago  
55 East Monroe Street, 30th Floor  
Chicago, IL 60603  
Phone (312) 759-4000

AUTHORS:  
Lisa Lee  
Kristen Neishi  
David Gleicher



*at the* UNIVERSITY *of* CHICAGO

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## Introduction

NORC conducted cognitive testing on behalf of the Bureau of Labor Statistics (BLS) to inform the design of the Household Survey of Occupational Injuries and Illnesses (HSOII). As detailed in the review of literature on existing questions, the Survey of Occupational Injuries and Illnesses (SOII) is the primary source of information for BLS on nonfatal workplace injuries and illnesses. The SOII is an establishment survey that relies on reports from employers to derive estimates of the incidence of workplace injuries and illnesses.

However, underreporting of injuries and illnesses is a concern for the SOII. Potential filtering effects may lead to employers and workers not reporting all injuries or illnesses that may be in scope for the survey. Employers may wish to keep injury and illness rates low, or may not be aware of all injuries and illnesses that occur. Workers may avoid reporting injuries and illnesses due to concern about job loss, and loss of pay or opportunities for advancement.

BLS requested that NORC assist in developing a survey instrument for the HSOII that would successfully capture non-fatal recordable injuries and illnesses as determined by the Occupational Safety and Health Administration (OSHA) criteria. Specifically, incidents that result in any of the following need to be captured by the HSOII:

- Loss of consciousness
- Days away from work
- Restricted work activity or transfer to another job
- Medical treatment beyond first aid

Based on a review of the literature, NORC identified existing survey questions that addressed issues of interest for the SOII. NORC also explored cognitive issues that HSOII respondents could face, such as comprehension of complex questions or recall of dates and event details. Further, due to the potential that survey data would need to be collected by a household respondent rather than the injured/ill worker, the literature review examined issues associated with proxy reporting.

This report presents the results of the HSOII questionnaire design effort. The report begins with a methodology section that describes the recruitment process, respondent characteristics, interviewing staff, and cognitive interview procedures. The report then presents the final HSOII instrument along with discussion of the major findings from the three rounds of cognitive testing.

Appendix A includes a copy of the final HSOII questionnaire. Appendices B and following include memos presenting the findings from each of the three rounds of cognitive interviews and the cognitive interview protocols used in each round.

## Methodology

Cognitive interviews were conducted to test and refine the draft HSOII questionnaire. These interviews examined respondents' cognitive processing of the questions. The data from the interviews were used to inform revisions to the questionnaire to improve clarity of the questions and response options and to improve question flow.

NORC conducted three rounds of interviews with a total of 64 respondents. Cognitive probing was conducted concurrently for most interviews. In the final 13 interviews, conducted as part of Round 3, interviewers switched to retrospective probing in order to obtain estimates of questionnaire administration time. Round 1 interviews (n=12) were conducted in-person in Chicago. In Round 2 (n=22 interviews), 15 interviews were conducted in-person in Chicago and Bethesda and seven were conducted by phone. Round 3 interviews (n=30) were all conducted in the phone mode.

Recruitment strategy varied by round. Several different strategies and avenues for recruitment were tried. In Round 1, NORC posted online advertisements on Craigslist in Chicago and posted paper flyers in targeted locations in the Chicago area. Round 2 continued these methods, expanding to Craigslist advertisements in Bethesda as well, and incorporating Facebook advertisements in both Chicago and Bethesda. Though the reach for these Facebook ads was extensive and the click rate was on-par with the rate found in previous NORC internal research (7%), we received no calls or e-mails from people who were interested in participating based on the Facebook ads. Respondents who participated in Round 2 were recruited through Craigslist, personal contacts or contacts of previous respondents, and flyers.

In Round 3, NORC paid to have two screening questions placed in the August Amerispeak Omnibus Survey (see Exhibit 1):

**Exhibit 1: Screening and Recruitment Questions Included in AmeriSpeak Omnibus Survey**

Q1. The next question is about work-related injuries and illnesses you or someone in your household may have had in the last year.

In the last year, have you (or anyone in your household) experienced any injuries or illnesses related to any job you had?

*Examples: sprains, pain, bruises, cuts, broken bones, burns, carpal tunnel syndrome, skin problems, respiratory problems, hearing loss, diseases, infections.*

Yes → GO TO Q2

No → END

Q2. Would you or your household member like to be contacted in the next few weeks about participating in an interview on workplace injuries and illnesses?

Interviews would be by phone and each eligible participant in your household will receive [\$40 in AmeriSpeak points].

Yes

No

A total of 183 of 1096 respondents indicated that they or a household member had experienced a workplace injury or illness in the last 12 months. Of these, 115 participants indicated they were interested in participating in an interview for HSOII. NORC followed up with all of these respondents. Forty-four respondents replied to NORC's request for an interview, and NORC was able to secure and complete 19 interviews as a result of this recruitment strategy, including three proxy interviews with other household members. The rest of the interviews for Round 3 were recruited through Craigslist postings. Since the mode for Round 3 was that of a phone interview, NORC was able to post in different locations and recruitment through this method was quite effective.

NORC posted Craigslist ads in the following cities for Round 3:

Tucson, AZ

Houston, TX

Louisville, KY

San Francisco, CA

Oklahoma City, OK

Exhibit 2 shows the number of people reached, as well as the number responding to a recruitment advertisement and number interviewed for each recruitment method.

**Exhibit 2: Respondent Recruitment**

Method	Number reached – Number that saw the initial ad or were sent an initial contact	Personal contacts – number that contacted NORC to express interest in participating	Number interviewed from this source (includes proxies recruited through other respondents)
Flyer/personal contact	Unknown	23	6
Craigslist	Unknown	61	39
Facebook	Number of people shown an ad (reach): 100849 Number of clicks ads received: 7621	0	0
AmeriSpeak	Survey respondents: 1096 Screened in: 183 Agreed to be contacted: 115	44	19

Exhibit 3 shows respondent characteristics for all respondents that were interviewed, including proxies. 64 were interviewed, data are missing from one respondent for whom demographic data was not collected.

**Exhibit 3: Respondent Characteristics**

Characteristic	Category	Number of Respondents
<b>Q41 – Ethnicity (Spanish, Hispanic or Latino?)</b>	Yes	8
	No	53
	Do not know	2
	Refuse	0
<b>Q42 - Race</b>	White	26
	Black or African American	29
	American Indian or Alaska Native	5
	Asian	4
	Native Hawaiian or Other Pacific	0
	Other (specify)	6
	Do not know	0
<b>Q43-44 – Age categories</b>	Refuse	0
	Under 25	3
	25-39	26
	40-54	21
	55-70	13

Characteristic	Category	Number of Respondents
	70 or older	0
<b>Q45 - Marital Status</b>	Married	19
	Widowed	0
	Divorced	10
	Separated	0
	Never married	34
	Do not know	0
	Refuse	0
<b>Q46 - Sex</b>	Male	31
	Female	32
<b>Q47 – Education level</b>	High school diploma or less	15
	Some college but no degree	8
	Associate’s degree (any type)	18
	Bachelor’s degree or above	22
<b>Q48 – Current Employment Status</b>	Full-Time	31
	Part-Time	15
	Not currently employed	17
	Do not know	0
	Refuse	0
<b>Q52-Q59 – Description of occupation at the time of injury</b>	Oil field equipment operator	1
	Firefighter	1
	Mechanic	2
	Casino tournament manager	1
	Retail worker	3
	Warehouse worker	3
	Legal clerk	1
	Maintenance	1
	Landscaping	2
	Drain equipment production	1
	Nursing	2
	Data entry	2
	Civil engineering	1
	Medical staff associate	1
	Electrical equipment installation	1
	NA because proxy (no injury)	3
	Projection equipment specialist	1
	Welding	1
Quality control in oil refinery	1	
Teaching	1	
<b>Q52-Q59 – Description of occupation at the time of injury</b>	Medical waste disposal driver	1
	Maintenance	2
	Personal care aide	2
	Construction worker	3

Characteristic	Category	Number of Respondents
	Retail worker	3
	Warehouse worker	1
	Restaurant food service	4
	Merchandiser	1
	Office manager	1
	Mail carrier	1
	NA because proxy (no injury)	1
	Security services	1
	Cake decorator	1
<b>Q52-Q59 – Description of occupation at the time of injury</b>	Stocking/inventory	3
	Commodity trader	1
	NA (Respondent was a proxy)	2
	Bank assistant manager	1
	Shipping/loading	2
	Museum assistant	1
	Administration	1
	Accounting	1

## Screeners

The Screener section of the questionnaire includes an introductory statement to be read to all respondents and a series of questions to determine whether the respondent experienced a workplace injury or illness in the last 12 months, how many injuries/illnesses the respondent experienced, and month/year of occurrence for each. The introductory statement indicates that the survey is about work-related injuries and illnesses and that incidents that occurred in the last 12 months (since CURRENT MONTH of LAST YEAR) are in scope.

Respondents who did not work for pay or profit in the last 12 months (A1) do not continue with the survey. They skip immediately to the end of the interview. Those who have worked in the last 12 months proceed to a series of questions on injuries and illnesses they may have experienced that are related to a job they had. A2 is a general question, while A4 and A6 include cues to specific injuries and illnesses in order to prompt recall. For any injury or illness the respondent names, the respondent provides a brief description of what happened and is asked to report the month and year in which the injury/illness occurred.

During cognitive testing, we found that the questions on when the injury/illness occurred did not work well for injuries and illnesses that are gradual in onset (such as carpal tunnel syndrome, asthma, or

anxiety). We developed an alternative wording for asking about month/year of occurrence for these types of incidents. In this alternative wording, if necessary, the interviewer determines whether the injury/illness occurred on a specific day or whether it developed over time. For those injuries/illnesses that developed over time, the interviewer ascertains that the respondent did experience symptoms during the reference period.

The final version of the questionnaire reflects some additional changes made after the last round of testing. In consultation with BLS, the following changes were made:

- Question A8 was removed. This item screened for work-related injuries and illnesses that may have resulted in symptoms that related directly to recordability (such as losing consciousness or being unable to work for a day or more). Due to the length of the instrument, NORC suggested removing this question, since it seems to yield few additional reports.
- Question B1 from the section on Injury or Illness, which asks whether the injury/illness reported is related to an injury/illness already mentioned, was moved to the Screener. This question became a probe to be read if necessary to determine whether the injuries/illnesses reported in the Screener were separate instances of injury/illness.

## Injury or Illness

The Injury or Illness section of the questionnaire is intended to capture the characteristics of the work-related injury or illness that are reported in the Screener section. The questions are open-ended to capture narrative responses for determining the nature, part of body, event, and source(s) for each injury or illness.

An earlier version of the questions, derived from the SOII forms (i.e., What happened? How did the injury or illness occur? What were you doing just before the incident occurred?), was found to work well for acute and physical injuries such as breaking a bone due to falling off a ladder, but was problematic for non-physical and gradual onset conditions such as carpal tunnel or asthma. Revisions were made to adjust the wording of the questions to address this issue. Based on two rounds of cognitive interview data, the current question wording appears to work well for both types of injuries and illnesses.

As reflected in the final questionnaire, a few additional changes were made to this section after the three rounds of cognitive interviews were completed. One change was to remove one of the questions from this section (formerly B1: How is this injury/illness related to the other injury/illness you mentioned? Is this

related to [the other/another] injury/illness you already mentioned or is it a different injury/illness?). This set of questions was removed since it was determined that it would function better as a probe in the Screener section to determine the relatedness of and the total number of injuries/illnesses the respondent experienced. Another change is that the examples that were read to respondents as part of questions B1 and B3, formerly B2 and B4, were removed (i.e., “When ladder slipped on wet floor, I fell 20 feet”; “I developed soreness in wrist over time.”; “strained back”; “chemical burn on hand”; “fainted or passed out.”). These were instead included as optional examples to be read only if the interviewer deems it necessary for enhancing clarity for respondents.

Overall, we did not observe that respondents had any other notable issues with this section of the questionnaire and the questions appear to provide sufficient information to determine the nature, part of body, event, and source(s) for each injury/illness. Exhibit 4 shows two examples of the coding for the reported injuries and illnesses based on responses to the questions in this section combined with verbatim responses collected in the “Screener” section, and other questions such as medical diagnosis if relevant.

**Exhibit 4:** Example coding of the Characteristics of Reported Injuries and Illnesses

Characteristic	Description
Nature	Third degree burn
Part of Body	Leg, hip
Event	Machine press caught R’s leg after it had been activated or turned on accidentally by someone else.
Source	Machinery

Characteristic	Description
Nature	Pain in neck, back and shoulder; strained neck
Part of Body	Neck, back, and shoulder
Event	Developed over time due to carrying heavy books and use of computer
Source	Books, computer

## Medical Attention

The questions on Medical Attention are intended to capture the medical advice and treatment that respondents received for their reported injury or illness. The medical attention questions are primarily closed-ended, asking about who provided the medical advice or treatment, where the medical advice or treatment was administered, and what (if any) medical diagnosis the respondent received.

This series of questions was iteratively revised after each round of cognitive interviews to address issues with respondent confusion about specific terms or phrases and to improve the overall content and flow. A number of changes were implemented and tested across the three rounds of cognitive interviews:

- Incorporated the phrase “health care professional” to replace “medical professional” to more inclusively refer to the professionals who may provide medical attention to the respondent.
- Rephrased the question “Were you in the hospital?” to clarify that being “admitted” to the hospital is the focus of the question.
- Added questions on whether the health care professional recommended that the respondent take days off from work.
- Added simplified language for the term “medical diagnosis” to be read by the interviewer if necessary.
- Reordered questions and revised skip patterns to improve flow.

Overall, based on what we observed across the three rounds of interviews, the revised questions on medical attention worked well. A few final changes were made to this section after the third round of cognitive interviews to address the remaining sources of respondent confusion and incorporate additional content requested by BLS. For example, we observed respondent confusion about what counts as being treated at or admitted to the hospital, particularly with regard to urgent care, outpatient care, and ER. These changes have been implemented into the final questionnaire and include:

Combined two separate questions on getting medical advice or treatment for the injury/illness into one single series of questions to improve question flow.

- Added text to clarify the reporting of receiving medical advice or treatment from an urgent care or outpatient facility.

- Added a follow-up question to the question asking about how many days off the health care professional recommended to ascertain whether the respondent took the recommended days off of work.

## Effect on Work

The “Effect on Work” section of the questionnaire captures information on how a respondent’s work-related injury or illness affected various aspects of his/her ability to work. The questions ask about the respondent’s ability to work the next day; work the usual number of hours; perform normal duties of the job; quitting, being laid off or fired, and changing occupation due to the injury/illness.

In earlier rounds of testing, we found that some questions did not function well. Respondents were uncertain about the difference between being “assigned to another job on a temporary basis” and being “transferred.” Some interpreted these terms to refer to changing job locations, changing their job duties, or changing jobs entirely. Questions on ability to work the day after an injury/illness were potentially confusing for respondents who worked part-time, had not been scheduled to work the day after the injury/illness, or never returned to work after the injury/illness. In addition, cognitive testing revealed that in some cases, respondents may not receive medical care or take time off for their injury/illness until well after it occurs. Further, some of the items that worked well with physical injuries (e.g., broken arm) and injuries/illnesses related to a specific incident (e.g., falling off a ladder), did not work well with chronic and gradual onset conditions. In addition, initial testing revealed that the term “calendar days,” used in questions concerning days of work missed, was not understood well.

To address the issues described above, some of the key changes implemented across rounds of testing include:

- Reordered questions. Some questions on whether the employer knew of the injury/illness that had been included in this section were moved to the section on Effect on Pay, since they were more closely related to that section.
- Revised questions to eliminate confusing terminology. For example, “change occupations” was revised to “change the kind of work you do.”
- Added questions to capture days of work missed due to the injury or illness to accommodate situations in which medical care and effects on work do not occur until much later after the injury or illness occurred.

- Added a new series of questions on Effect on Work that is more relevant to those with chronic or gradual onset injuries or illnesses. Interviewers ascertain in the Screener whether the injury/illness reported is chronic/gradual onset. If so, in the section on Effect on Work, the interviewer would ask the alternate set of questions. These questions determine whether the symptoms of the chronic or gradual onset injury/illness resulted in effects on work at any time during the reference period.

After the final round of cognitive testing, a few additional changes were made to this section upon discussion with BLS:

- Combined two separate questions on being laid off and being fired into one question since respondents did not always make a distinction between these two options.
- Added a skip instruction so that respondents indicating they quit would not be asked about being laid off or fired.

## Effect on Pay

The questions in the section on Effect on Pay are intended to capture the various ways the injury or illness affected respondents' income or pay. The section begins with questions on whether the respondent's employer knew about the injury/illness and, if not, why the employer did not know. The questions then turn to workers' compensation, ascertaining whether a claim was filed, why a claim may not have been filed, and whether the respondent received workers' compensation. The section closes with questions on short-term or temporary disability, paid time off, and taking leave without pay due to the work-related injury or illness.

This series of questions was tested and revised to improve clarity of specific terms and improve question flow. As noted in the discussion of the section on Effect on Work, questions were moved across sections to improve question flow.

Some of the key changes implemented across rounds of testing include:

- Moving the series of questions on employer knowledge of the injury/illness to this section from Effect on Work.
- Revising skip patterns to assure that questions were directed at the appropriate group (e.g., questions on receiving workers' compensation directed only to respondents who had filed a claim).
- Removing the phrase "kept on salary." This term was not familiar to respondents.
- Revising the terms "sick leave," "annual leave," and "personal time off." Respondents were not certain whether these terms referred to paid or unpaid time off. These terms were changed to "paid sick leave," "paid annual leave," and "paid time off."

Cognitive testing indicated that the questions on whether the employer knew of the injury/illness and reasons why an employer did not know worked well. The list of reasons resonated with respondents who had not informed their employers of their injury/illness. However, the findings also indicated that respondents varied considerably in how certain they were about the source of the compensation they received due to a workplace injury/illness. Some respondents who had received workers' compensation expressed this with certainty. These respondents often knew the percentage of their pay being provided by workers' compensation and by their employers and were clear on the number of days off they were given to recover from their injury/illness. However, other respondents indicated that they were directed to a particular doctor or clinic for care, but were uncertain who was paying for the medical care.

After the final round of cognitive testing, a few additional changes were made to this section upon discussion with BLS:

- Turning the separate yes/no questions in E2 (question on reasons for not telling the employer) into an open-ended question. This change was made both to reduce administration time for the question and to capture the most important reason(s) for not telling the employer about the injury/illness.
- Revising the response options in E5, the question on the main reason for not filing a workers' compensation claim. The option, "you did not inform employer" was removed since this topic was already covered in earlier questions in this section. Further, the remaining response options were revised and reordered to both shorten the question and to clarify meaning.

## Occupation and Industry and Demographic Characteristics

The latter sections of the questionnaire are intended to capture respondents' demographic characteristics and their occupation and industry both at the time of the injury or illness and currently at the time of the survey. The demographic characteristics section includes standard questions that ask about race and ethnicity, date of birth, age, marital type, gender, and education. No issues were observed with the demographic questions over the three rounds of cognitive interviews and therefore, no revisions were made to questions in this section.

The occupation and industry questions capture full-time vs. part-time employment status, hours worked in a typical week, type of employer, name of employer, and the relative size of the employer. For the majority of cases, the interviewer simply confirmed that the respondent's employer and position remained the same from the time of the injury or illness to the current time period. However, this series of questions was repeated if the respondent had changed employers or positions since the injury or illness occurred.

While we did not observe any significant issues that respondents had answering the occupation and industry questions, many of the questions were identified as needing minor revision to address issues with respondent comprehension and clarity. The questions about full-time vs. part-time employment status and name of employer were revised for Round 2 testing to clarify that it is the employer’s designation of the respondent as full- or part-time and the name of the respondent’s employer that are of interest. Another change that was made for Round 2 testing was to revise the structure of the question on type of employer to help prompt respondents prior to hearing the response options that the question was asking them to select the best fitting category. The question about the size of the employer (based on number of employees) was also revised for Round 2 testing to clarify that it is asking about the size of the employer at the respondent’s particular work location. This was based on the Round 1 finding that respondents were unclear whether to report the number of employees across all employer locations or just the location at which they were employed.

We also observed an issue that was specific to respondents who worked for a temporary help/staffing agency or were contractors assigned to different work locations. Respondents with these circumstances were sometimes uncertain as to which company to report on. Thus for Round 3 testing, revisions were implemented to direct this group of respondents on how to answer questions on their employment. These revisions included:

- A new question asking whether the respondent worked for a temporary help agency or a temporary staffing agency.
- Instruction for those working for temporary agencies that they should answer the questions based on the place where they work on a day-to-day basis.

While the above changes appeared to improve respondent’s understanding of the questions, we continued to observe a few respondents that answered incorrectly or were unsure of how to arrive at the correct answer, particularly for the questions on type of employer and size of employer.

After the final round of cognitive testing, one additional change was made to this section upon discussion with BLS:

- Added new questions for respondents who report more than one injury or illness to determine if they are working for the same employer and in the same position as they previously reported for the first injury or illness. Based on responses to these questions, the interviewer will be able to determine whether to skip the respondent to the next section/end of the questionnaire or to proceed with asking the occupation and industry questions for the second (or subsequent) injury or illness.

## Proxy Interviewing

Across the three rounds of data collection, we conducted six proxy interviews where another member of the respondent's household was also invited to take part in an interview to assess the accuracy of proxy response. We collected data on each member of the pair and compared self- and proxy-reported answers to selected questions.

In general, for work-related injuries/illnesses that occurred because of a discrete event or incident, we found that respondents and their proxies provided consistent responses to questions about the incidence of a work-related injury or illness in the last 12 months, timeframe of when it occurred, characteristics of the injury/illness, medical attention or treatment received, and workers compensation. We observed slightly more discrepancies between self-and proxy-reporting for chronic/gradual onset injuries or illnesses. A few examples are provided below:

- Self-respondent (12A) reported the incidence of carpal tunnel during the screener section of the questionnaire; however, proxy respondent (12B) did not report carpal tunnel occurring in respondent 12A.
- Proxy respondent (64B) reported that respondent (64A) had anxiety/depression that started in 2015. Self-respondent (64A) did not report anxiety/depression in response to any of the screener questions.

Regardless of the type of injury (discrete or chronic/gradual), we observed a few minor discrepancies between self and proxy reporting on questions about effect of the injury/illness on work, effect of the injury/illness on income or pay, and employment at the time of the injury/illness, specifically with regard to using paid sick leave, paid annual leave, or paid time off, taking leave without pay, part-time or full-time employment status, and name of employer. A few examples are provided below:

- Self-respondent (17A) said he was laid off, referring to the months he was unable to work; however, proxy respondent (17B) reported that 17A was not laid off. Self-respondent reported no to losing wages whereas proxy respondent reported yes to 17A losing wages because 17A does not earn as much as he used to. Self-respondent reported yes to getting paid sick leave, paid annual leave, or paid time off) whereas proxy respondent reported no.
- Self-respondent (12A) reported taking 22 days off from work and 25 days before returning to work. However, proxy respondent (12B) reported that 12A did not return to work. Self-respondent further explained that the doctor advised she take 3 weeks off. She then returned to work but was not working full-time hours and her hours kept getting reduced so she eventually quit.

## Interview Timing

For the last 13 Round 3 cognitive interviews, the cognitive interview protocol was switched from concurrent to retrospective probing to allow for timing of interview administration. When looking at total administration time, interviews ranged from 20 to 48 minutes, with respondents completing from one to three loops depending on the number of injuries/illnesses they reported.

To provide more detailed information on the contribution of each section of the questionnaire to administration time, NORC determined the mean and median administration time for each section of the instrument. Exhibit 5 shows these timings by section. When a respondent completed more than one loop, their time for a particular section was averaged across each loop they completed for that section. Note that for the section on Occupation at Time of Injury/Illness, if the respondent had the same job for more than one incident, the timing for the first loop was used for calculating mean and median, since the interviewer only spent enough time on the second loop to ascertain that the questions could be skipped. A measure of total time for each respondent was calculated by adding up the mean times across sections for each respondent. The exhibit includes mean and medians for this total time.

Note that subsequent to Round 3 interviews, in collaboration with BLS, NORC implemented additional changes to the instrument, some of which were intended to reduce administration time. For example, removing Screener question A8, and converting question E2 in Effect on Pay from a yes/no format to open-ended both reduce administration time. Some streamlining of the questions on Medical Attention also likely reduced administration time.

**Exhibit 5:** Administration Time for the HSOII

Section	Mean Timing (minutes)	Median Timing (median)
Screener	7.22	6.67
Injury/Illness	3.61	3.00
Medical Attention	2.78	2.83
Effect on Work	3.11	2.42
Effect on Pay	2.73	2.28
Occupation at Time of Injury/Illness	3.26	3.25
Demographics	1.40	1.25
Current Occupation	1.37	0.83
Total Time	25.49	24.66

**Appendices**

**Appendix A: Presentation of Household  
Survey Design Report  
(Deliverable #10)**

# Designing a Household Survey on Occupational Injuries and Illnesses (HSOII)

## Household Survey Design Report

June 1, 2016

# Outline

- Motivation/Objectives
- Existing Surveys/Sampling Frames Assessment
- Fielding HSOII through CPS Supplement
  - Following completion of March CPS Annual Social and Economic (ASEC) supplement
  - Following completion of June or July CPS
- Fielding HSOII through Sample from ACS
- Summary/Comments

# Motivation/Objectives

- Current Status
  - Establishment-based SOII (ESOII)
  - Research points to underestimates
    - ✓ Employer/employee incentive to underreport, among other factors
- Potential Future State
  - Parallel survey of households, with estimates not “filtered” by establishment level reporting
  - Provide “unbiased” estimates from which to adjust ESOII estimates or to better discuss levels and trends
- Sample Design Considerations
  - Representativeness
  - Allow national level estimates by employment relationship, sector, broad industry and occupation
  - Meet cost ( $\leq$ \$1MM), publication timing, publishability/quality requirements

# Existing Surveys/Sampling Frames Assessment

- Sampling Frame Options

- Add supplemental HSOII module to existing survey
- Screen for eligible persons from existing survey, conduct follow-on survey for HSOII
  - ✓ Add HSOII-specific screeners to existing survey as necessary
- Select HSOII sample from existing survey/sampling frame
- Utilize multiple surveys

- Sample Design Options

- Independent samples each year
- Rotating panel survey
  - ✓ As in CPS, sample units interviewed more than one year, with panels rotating in and out
- Multi-year survey
  - ✓ As with ACS, data aggregated across years

# Existing Surveys/Sampling Frames Assessment

- Surveys Considered

Survey	Organization	Sampling Frame
American Community Survey (ACS)	Census	Census Master Address File (MAF)
Current Population Survey (CPS)	BLS, Census	Census Master Address File (MAF)
National Health Interview Survey (NHIS)	NCHS, Census	Census data for selecting segments; Listing of housing units (HUs) within sampled segments
Behavioral Risk Factor Surveillance System (BRFSS)	CDC, States	RDD landline and cell phones
Medical Expenditure Panel Survey - Household Component (MEPS-HC)	AHRQ	NHIS Respondents
National Health and Nutrition Examination Survey (NHANES)	NCHS	Census data for selecting segments; Listing of dwelling units (HUs) within sampled segments
National Longitudinal Survey of Youth (NLSY)	BLS	Census data for selecting segments; Listing of housing units (HUs) within sampled segments
National Immunization Survey (NIS)	CDC, NORC	RDD landline and cell phones
Survey of Income and Program Participation (SIPP)	Census	Census Master Address File (MAF)
Survey of Consumer Finance (SCF)	FRB, NORC	US Postal Service Delivery Sequence File (USPS DSF); IRS tax return administrative listing
National Survey of Family Growth (NSFG)	NCHS, ISR	US Postal Service Delivery Sequence File (USPS DSF)
General Social Survey (GSS)	NORC	US Postal Service Delivery Sequence File (USPS DSF)
AmeriSpeak (AS)	NORC	US Postal Service Delivery Sequence File (USPS DSF)
KnowledgePanel (KP)	GfK	US Postal Service Delivery Sequence File (USPS DSF)

# Existing Surveys/Sampling Frames Assessment

- Sampling Frames Considered

<b>Sampling Frame</b>	<b>Surveys</b>
Census Master Address File (MAF)	ACS, CPS, SIPP
Census Data plus Listing within Sampled Segments	NHIS, NHANES, NLSY
US Postal Service Delivery Sequence File (USPS DSF)	GSS, SCF, AS, KP
RDD Frame of both Landline and Cellular Numbers	BRFSS, NIS
IRS tax return administrative listing	SCF
NHIS	MEPS-HC

# Existing Surveys/Sampling Frames Assessment

- Factors Assessed

- Population representation

- ✓ Coverage of population of interest
- ✓ All persons in HU included in existing survey
- ✓ Availability of sufficient sample size

- Survey mode and use of proxy respondents

- ✓ Mode of interest for HSOII as supplement to existing survey
- ✓ Ideally, would not use proxies

- Availability of information key to HSOII

- ✓ Worker status
- ✓ Injury/illness data

- Timeliness of calendar year estimates

- Availability of auxiliary data for sample design efficiency

- ✓ e.g., number of persons, gender, age, race/ethnicity

# Existing Surveys/Sampling Frames Assessment

- Conclusions

- Least expensive option: field HSOII as supplement to existing survey
  - ✓ Require sample size 100,000+
  - ✓ Three surveys meet criteria: ACS, CPS, BRFSS
  - ✓ Given other factors, CPS is only option
- Second, more expensive option: screen for and select HSOII from existing survey and conduct follow-on survey
  - ✓ Again, ACS, CPS, BRFSS meet criteria
  - ✓ NIS could be considered if HSOII screeners added to NIS screeners
  - ✓ Given other factors, ACS most favorable option
- Third, most expensive option: utilize existing sampling frame to implement HSOII-specific sample design
  - ✓ e.g., Census MAF, USPS DSF, RDD (landline, cell phone)
  - ✓ Cost will exceed target, option discarded

# HSOI Sample Design Options

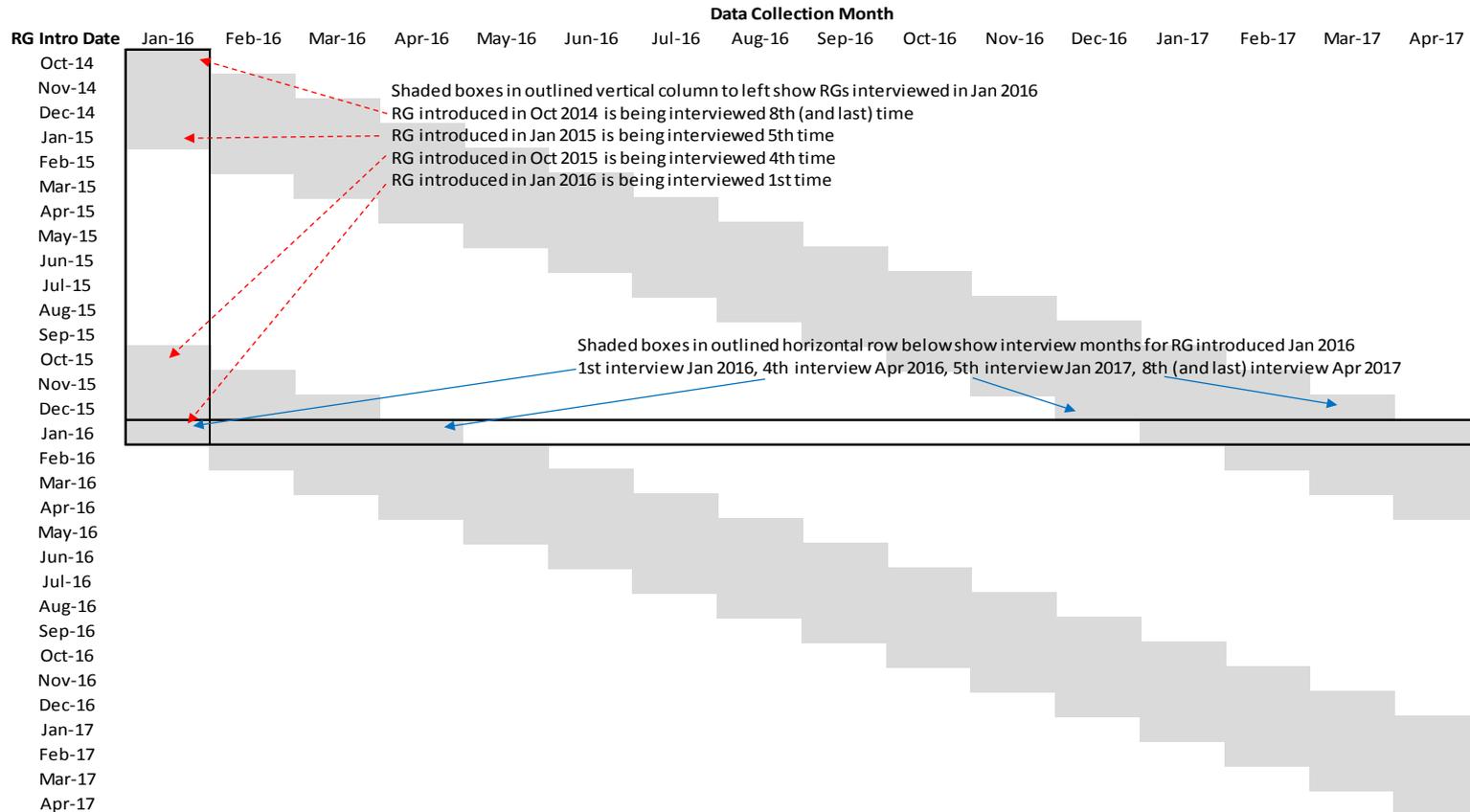
- Option 1: Supplement to March CPS ASEC
- Option 2: Supplement to June or July CPS
- Option 3: Independent Survey, Sample Selected from ACS

# CPS Overview

- National and state based sample design
  - Approximately 72,000 sample HU's per month
  - 4-8-4 rotation group (RG) scheme
    - ✓ Each RG nationally and state based representative sample of HU's
    - ✓ RG in sample 4 consecutive months, out of sample 8 months, in sample same 4 consecutive months following year
  - CPS monthly sample comprised of 8 RG's
- CPS collects information of interest to HSOII
  - Employment status prior week (employed, unemployed, NILF)
  - Industry/occupation for employed
- Supplements conducted most months of the year
  - Supplement follows completion of CPS interview
  - March supplement (ASEC) collects worker status for prior 12 months

# CPS Overview

## • Illustration of CPS RG data collection schedule



**COMMENTS:**

- 1) Sample HUs in a RG are interviewed for four consecutive months (referred to as MIS-1 to MIS-4), then again the same four consecutive months the following year (referred to as MIS-5 to MIS-8)
- 2) In each month, sample HUs from 8 RGs are included in the active sample, with the RGs encompassing MIS-1 to MIS-8

# CPS Overview

- CPS sample counts

CPS Sample Counts (Based on 2015 Monthly Average)					
		Monthly	RG <sup>1</sup>	Annual	
				Total	Unique <sup>2</sup>
HUs	Total	73,744	9,218	884,928	248,886
	Eligible	61,117	7,640	733,404	206,270
	w/ Interview	53,320	6,665	639,840	179,955
16+	Interviewed	104,000	13,000	1,248,000	351,000
	Workers <sup>3</sup>	67,687	8,461	812,245	228,444

<sup>1</sup> RG is comprised of 1/8 of the monthly sample

<sup>2</sup> 27 unique RGs are in the active CPS sample at least one month in the year

<sup>3</sup> Based on data from ACS and CPS, an estimated 65.1% of persons 16+ worked at least one week in the prior year

# HSOII as Supplement to CPS

- Options

- Include HSOII as supplement in all RG's in one specific month each year
- Include HSOII as supplement in all/subset of RG's in multiple specific months each year
- Include HSOII as supplement in all/subset of RG's in all months each year

- Discussion

- 2<sup>nd</sup>, 3<sup>rd</sup> options discarded due to logistical issues
  - ✓ Reduce recall period, but introduce logistical issues
  - ✓ Need to coordinate across multiple supplements
  - ✓ Potential varying context effects by month
- 1<sup>st</sup> option pursued under two scenarios
  - ✓ Optimal key information availability, recall scenario
  - ✓ No/infrequent overlap with other supplement

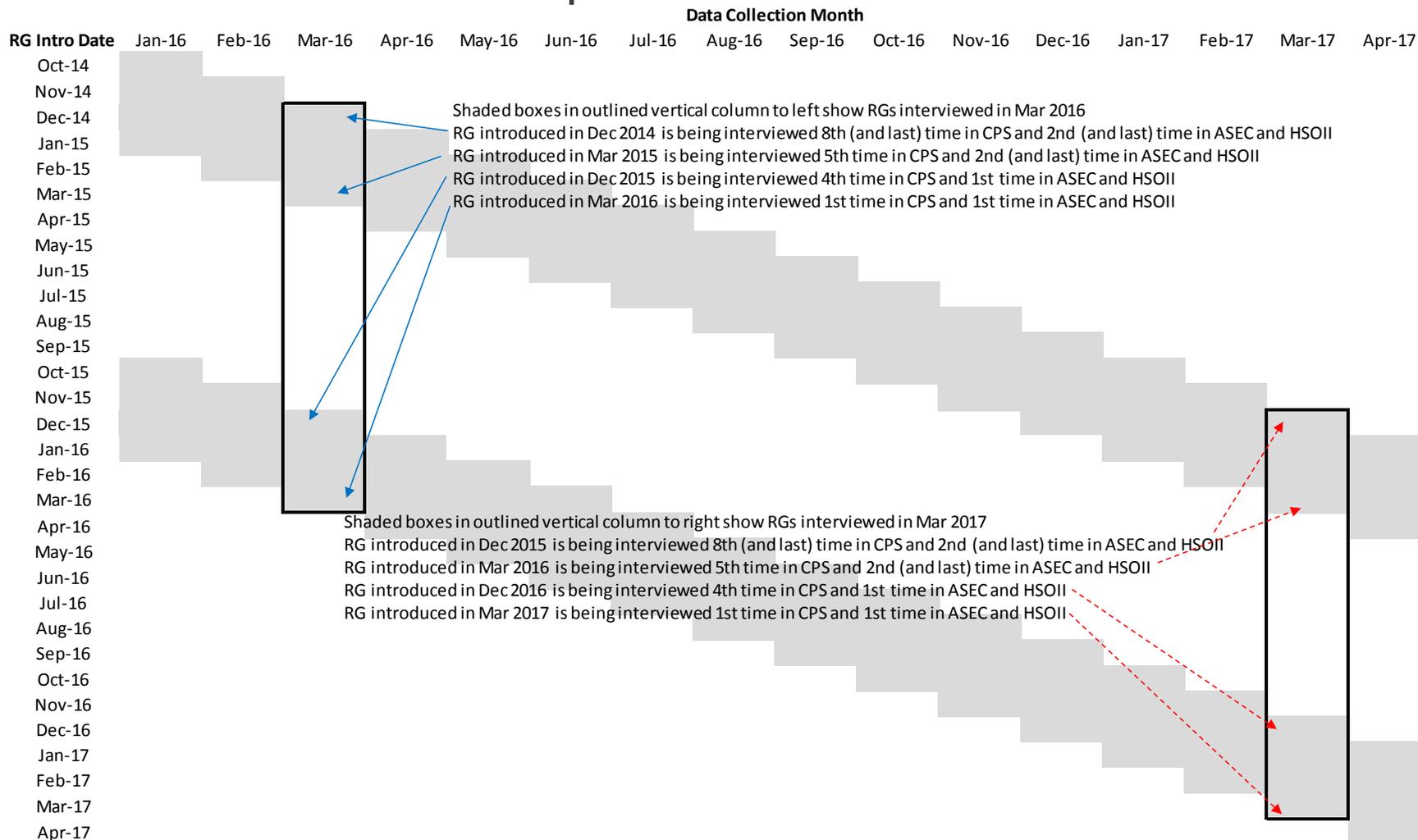
# Option 1: HSOII Supplement to March CPS ASEC

- Logistics

- HSOII implemented in all RG's each March
  - ✓ HSOII would follow completion of ASEC
- ASEC questions on worker status in prior calendar year serve as screener for HSOII
  - ✓ Roughly 35% of CPS sample would receive no HSOII questions – screened as HSOII-ineligible as indicated did not work in prior 12 months
- Sample HU's in HSOII two consecutive years
  - ✓ Follows CPS RG scheme
  - ✓ Each year, half sample would experience 2<sup>nd</sup> HSOII, half 1<sup>st</sup> HSOII
- Respondents to report on injury/illness in prior calendar year
  - ✓ During first HSOII interview, recall will be unbounded
  - ✓ During second HSOII interview, recall is bounded by prior year interview

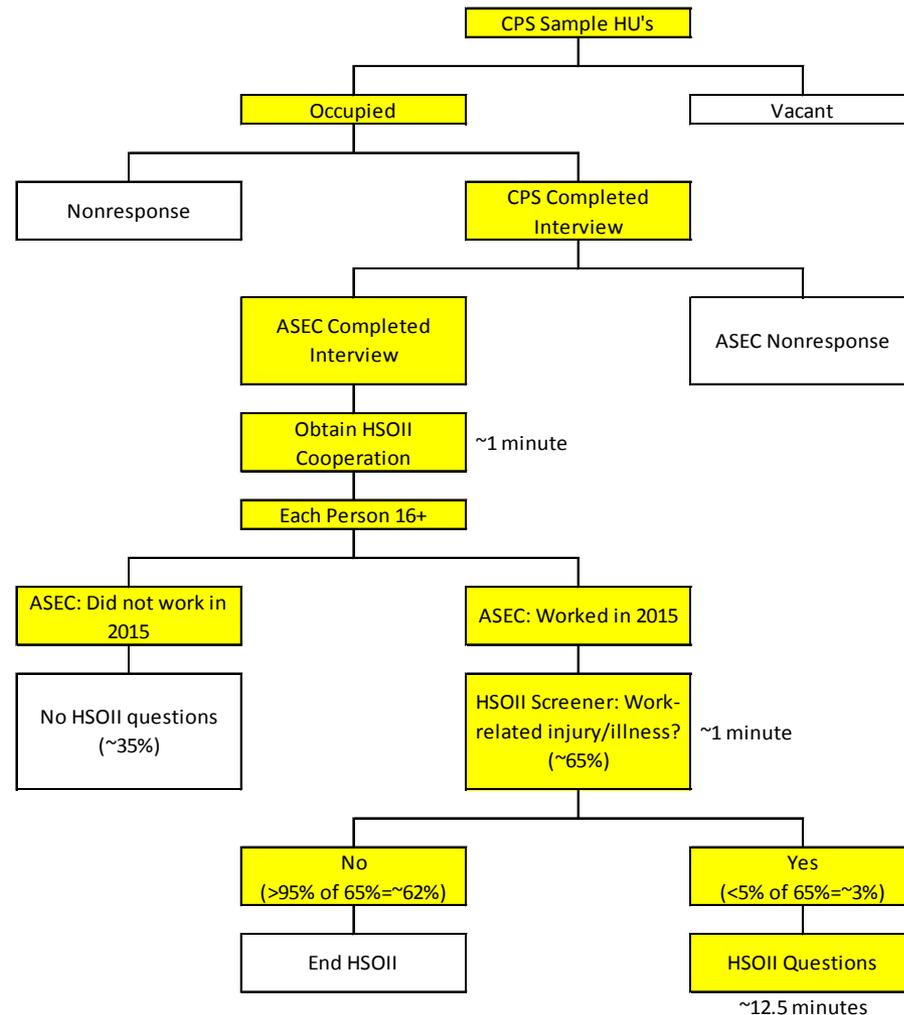
# Option 1: HSOII Supplement to March CPS ASEC

## • Illustration of HSOII Option 1 data collection schedule



# Option 1: HSOII Supplement to March CPS ASEC

- Illustrative flowchart of HSOII Option 1 interview process



# Option 1: HSOII Supplement to March CPS ASEC

- Advantages

- ASEC offers fully screened sample
  - ✓ Collects worker status for prior calendar year
  - ✓ Roughly 35% of CPS sample would receive no HSOII questions
- ASEC frames reference period to prior calendar year
  - ✓ Reduces potential for recall error due to misunderstanding period
- Offers lowest HSOII cost
  - ✓ Sample locating, contact, nonresponse follow-up incurred by CPS
  - ✓ Shortest HSOII interview time given available auxiliary information

- Disadvantages

- Extends respondent burden for March CPS
  - ✓ CPS: ~8 minutes, ASEC: ~24 minutes
  - ✓ HSOII: 10-15 minutes for ~3% of sample reporting injury/illness, ~1 minute for 62% reporting no occurrence of injury/illness
- Sample distributed roughly as general population

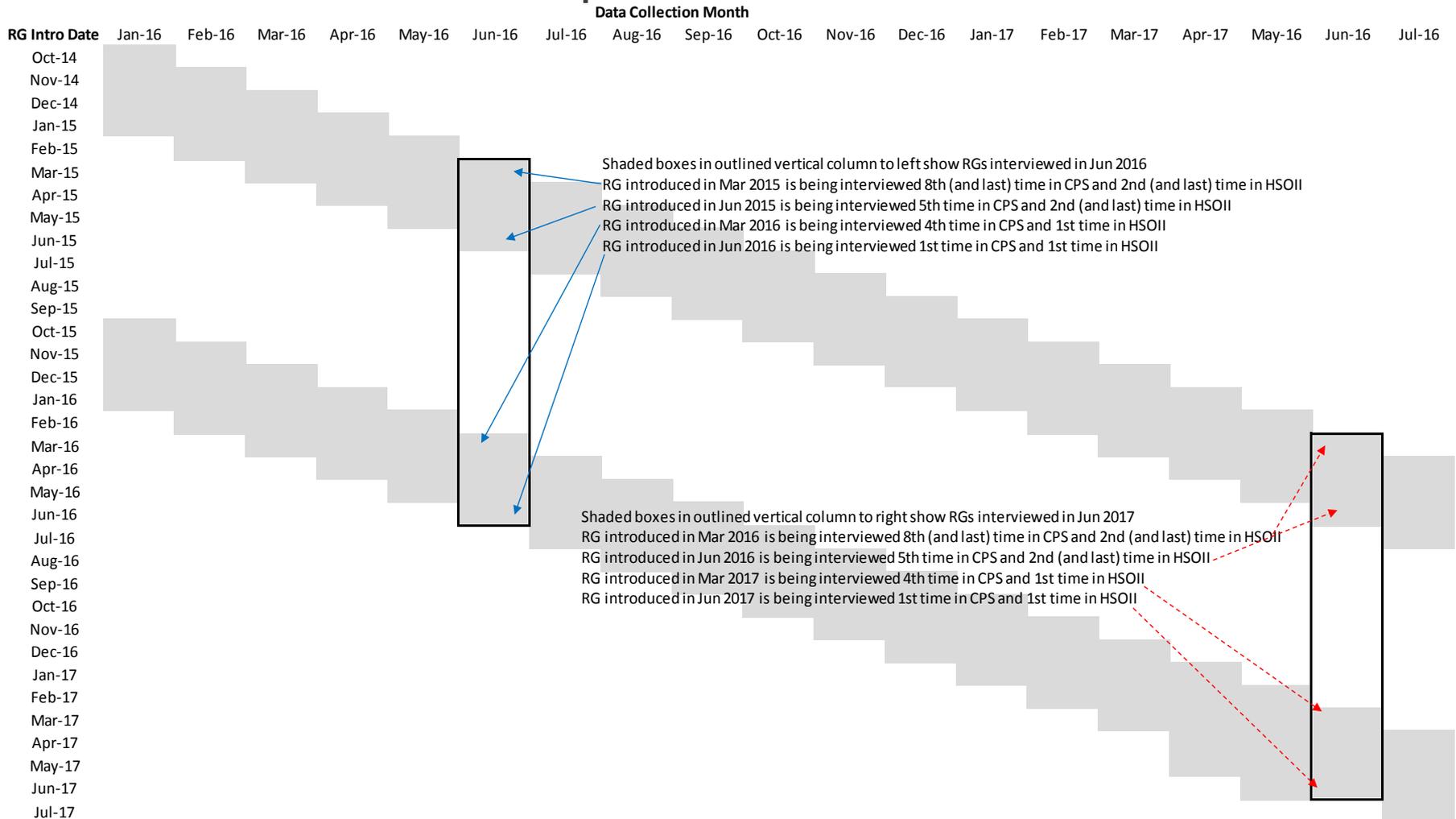
# Option 2: HSOII as Supplement to June or July CPS

- Logistics

- HSOII implemented in all RG's each June or July
  - ✓ HSOII would follow completion of CPS
- CPS questions on employment status in prior week serve as partial screener for HSOII
  - ✓ CPS sample identified as not employed, and worker status in prior 12 months not determined (up to ~35%) would be asked screener to determine if eligible for HSOII
- Sample HU's in HSOII two consecutive years
  - ✓ Follows CPS RG scheme
  - ✓ Each year, half sample would have 2<sup>nd</sup> HSOII, half 1<sup>st</sup> HSOII
- Respondents to report on injury/illness in prior calendar year
  - ✓ During first HSOII interview, recall will be unbounded
  - ✓ During second HSOII interview, recall is bounded by prior year interview

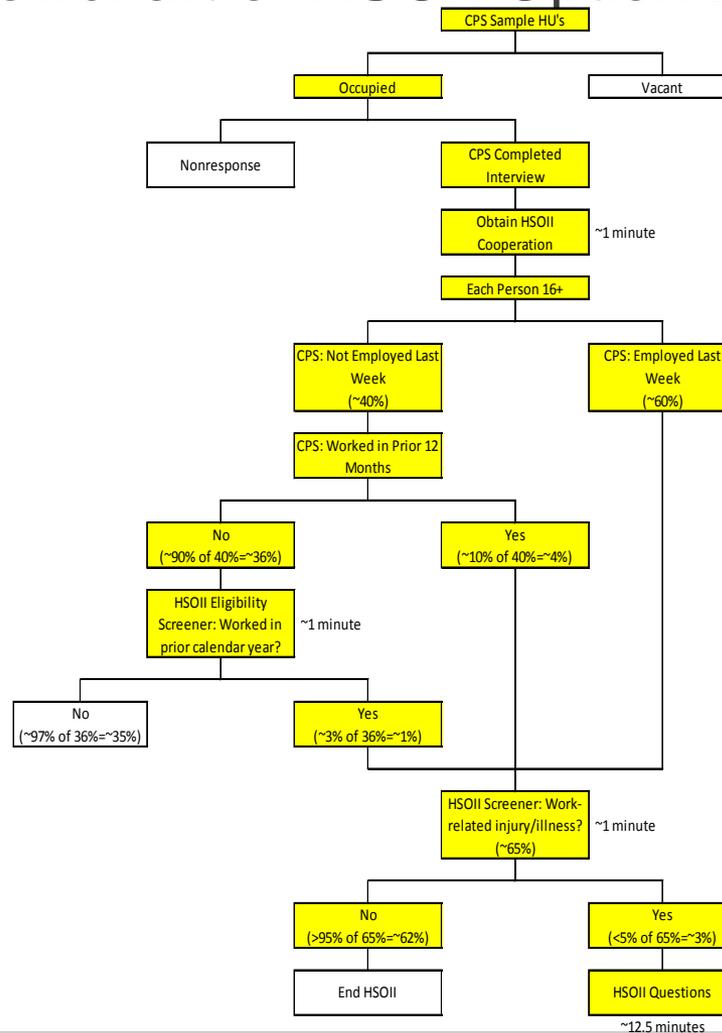
# Option 2: HSOII as Supplement to June or July CPS

## • Illustration of HSOII Option 2 data collection schedule



# Option 2: HSOII as Supplement to June or July CPS

- Illustrative flowchart of HSOII Option 2 interview process



## Option 2: HSOII as Supplement to June or July CPS

- Advantages

- Avoids regularly scheduled supplements
- CPS offers partially screened sample
  - ✓ Not employed (~35% of CPS sample) may require screener, if not determined in CPS interview
- Offers low HSOII cost
  - ✓ Sample locating, contact, nonresponse follow-up incurred by CPS

- Disadvantages

- Greater potential for recall error
  - ✓ Reference period would be prior 12 months, not calendar year
- Need to screen most persons not employed in prior week
  - ✓ Work status in prior 12 months determined for some, not all
- Need to reframe reference period to prior 12 months, not prior week
- Sample distributed roughly as general population

# ACS Overview

- County/county-equivalent level sample design
  - Approximately 3.5MM sample HU's, 200k persons in group quarters (GQ's) per year
  - HU sample released monthly
    - ✓ Data collection over 3 months for each release
    - ✓ Combination of mail, web, telephone, personal visit (PV) – PV occurs in third month for sample of residual nonrespondents
  - GQ data collection varies by type
- ACS collects information of interest to HSOII
  - Worker status in prior 12 months
  - Industry/occupation
  - Other demographic/socio-economic data

# ACS Overview

- ACS sample sizes

	2014 ACS Sample Size	
	HU Sample	GQ Sample
HUs Selected	3,540,532	N/A
Final HU Interviews	2,322,722	N/A
Occupied HUs	1,881,261	N/A
Persons Selected	N/A	207,403
Final Person Interviews	4,513,063	165,116
16+	3,535,344	162,694
Workers	2,271,962	35,793

# Option 3: HSOII as sample selected from ACS

- Logistics

- ACS treated as sampling frame for HSOII
  - ✓ Time lag between ACS data collection and availability for HSOII sample selection and fielding will result in aged information
- Stratify ACS responding sample
  - ✓ Key variables: employment relationship, industry/occupation (Sector falls out from I/O)
  - ✓ ACS eligible worker/no eligible worker (due to aged ACS information)
- Allocate sample to meet target reliability for designated population subgroups
- Utilize telephone number (when available) for HU contact
- Screen each HU member aged 16+ years
- Conduct HSOII interview for each eligible HU member

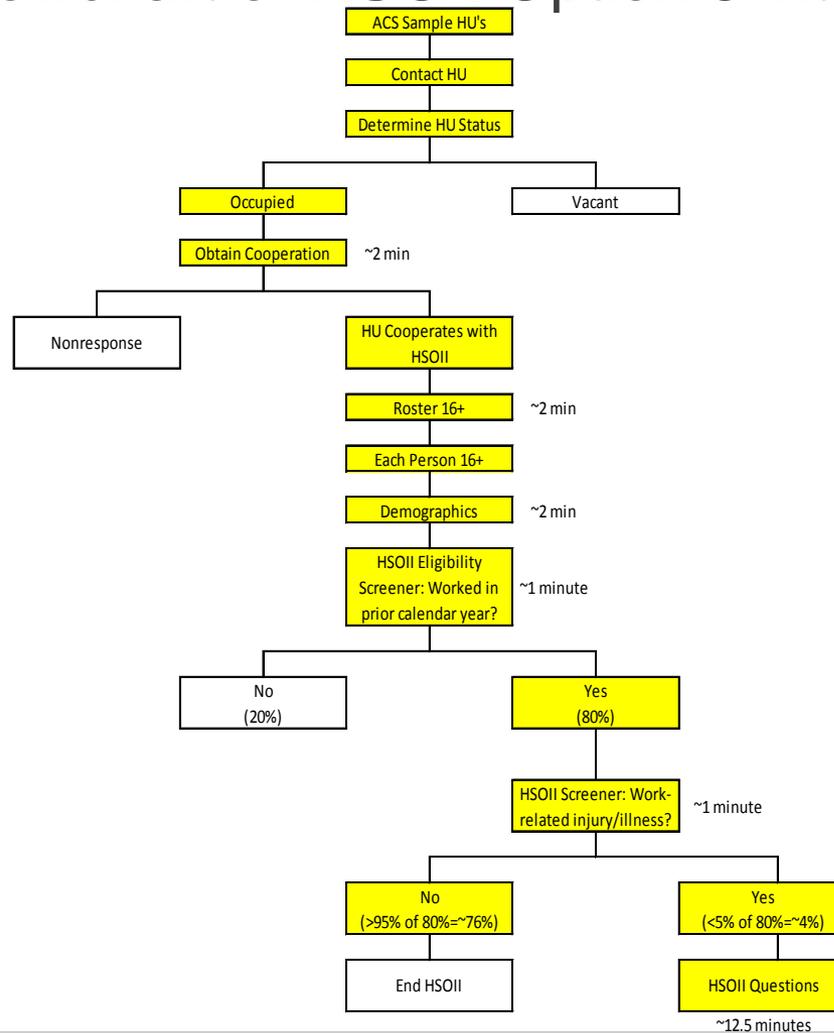
# Option 3: HSOII as sample selected from ACS

- Illustration of HSOII Option 3 stratification

Industry Occupation		Employment Relationship					
		Employee				Self-Employed	Not a Worker
		Work Status					
		Full-time		Part-time			
All Weeks	Partial Weeks	All Weeks	Partial Weeks				
Overall							
Ind 1	Occ 1						
	Occ 2						
	...						
	Occ m						
Ind 2	Occ 1						
	Occ 2						
	...						
	Occ m						
...							
Ind n	Occ 1						
	Occ 2						
	...						
	Occ m						

# Option 3: HSOII as sample selected from ACS

- Illustrative flowchart of HSOII Option 3 interview process



# Option 3: HSOII as sample selected from ACS

- Advantages

- Most flexible for targeting industries, occupations
  - ✓ e.g., industries (occupations) with highest estimated incidence rates from ESOII allocated higher target sample
  - ✓ Group all other industries (occupations) in residual stratum

- Disadvantages

- Highest HSOII cost
  - ✓ Sample locating, contact, nonresponse follow-up incurred solely by HSOII
  - ✓ Longest HSOII interview time given need to conduct screener for all persons
- Need for sample from “no ACS-eligible persons” stratum to ensure full coverage of population
  - ✓ Yield (eligible persons) will be small from this stratum

# Summary Assessment

- Expected sample sizes for Options 1 and 2\*
  - Industry grouping

Industry Group	Feb 2016 Employment		Expected HSOII Interviews	
	Count	Proportion	Option 1	Option 2
Agriculture & Goods-producing <sup>1</sup>	22,096	15.4%	7,990	8,878
Retail Trade & Transportation <sup>2</sup>	20,742	14.5%	7,500	8,334
Professional & Business Services	20,019	14.0%	7,239	8,043
Health Care and Social Assistance	18,977	13.3%	6,862	7,625
Leisure & Hospitality	15,435	10.8%	5,581	6,202
Other Service-producing <sup>3</sup>	26,653	18.6%	9,638	10,709
State & Local Government	19,273	13.5%	6,969	7,744
<b>Total</b>	<b>143,195</b>	<b>100.0%</b>	<b>51,781</b>	<b>57,534</b>

<sup>1</sup>Agriculture & Related Industries (employment from CPS), Mining, Construction, Manufacturing

<sup>2</sup>Retail Trade, Transportation

<sup>3</sup>Wholesale Trade, Utilities, Information, FIRE, Education, Other Services

\*Sample sizes for Option 3 can be varied

# Summary Assessment

- Expected sample sizes for Options 1 and 2\*

- Occupation grouping

Occupation Grouping	Feb 2016 Employment		Expected HSOII Interviews	
	Count	Proportion	Option 1	Option 2
Technical <sup>1</sup>	14,134	10.5%	5,416	6,018
Management, Science & Arts <sup>2</sup>	9,680	7.2%	3,709	4,121
Office, Sales & Education <sup>3</sup>	44,323	32.8%	16,984	18,871
Healthcare & Services <sup>4</sup>	26,217	19.4%	10,046	11,163
Production, Construction & Installation <sup>5</sup>	19,916	14.7%	7,632	8,480
Support, Maintenance, Protection & Transportation <sup>6</sup>	20,858	15.4%	7,993	8,881
Total	135,128	100.0%	51,781	57,534

<sup>1</sup>Computer/Mathematical, Legal, Business/Financial Operations, Architecture/Engineering

<sup>2</sup>Management, Life/Physical/Social Science, Arts/Design/Entertainment/Sports/Media,

<sup>3</sup>Office/Administrative, Sales/Related, Education/Training/Library

<sup>4</sup>Community/Social Services, Food Preparation/Serving Related, Healthcare Practitioners/Technical, Personal Care/Service

<sup>5</sup>Production, Farming/Fishing/Forestry, Construction/Extraction, Installation/Maintenance/Repair

<sup>6</sup>Healthcare Support, Building/Grounds Cleaning/Maintenance, Protective Service, Transportation/Material Moving

\*Sample sizes for Option 3 can be varied

# Summary Assessment

- Transforming from completed interviews to worker years
  - 2014 ACS distributions for weeks worked, usual hours worked

Population 16 to 64 years		
	Total	Workers
<b>WEEKS WORKED</b>		
Worked 50 to 52 weeks	55.1%	73.8%
Worked 40 to 49 weeks	5.6%	7.5%
Worked 27 to 39 weeks	4.7%	6.3%
Worked 14 to 26 weeks	4.0%	5.4%
Worked 1 to 13 weeks	5.3%	7.1%
Did not work	25.3%	
<b>USUAL HOURS WORKED</b>		
Usually worked 35 or more hours per week	56.7%	75.9%
40 or more weeks	50.6%	67.7%
50 to 52 weeks	47.1%	63.1%
Usually worked 15 to 34 hours per week	14.4%	19.3%
40 or more weeks	8.9%	11.9%
50 to 52 weeks	7.1%	9.5%
Usually worked 1 to 14 hours per week	3.6%	4.8%
40 or more weeks	1.3%	1.7%
50 to 52 weeks	1.0%	1.3%
Did not work	25.3%	

# Summary Assessment

- Transforming from completed interviews to worker years
  - Accounting for workers aged 65+ years
  - Average FTE across worker population =0.80

Workers			
	16-64	65+	Total
<b>WEEKS WORKED</b>			
Worked 50 to 52 weeks	73.8%	36.9%	71.5%
Worked 40 to 49 weeks	7.5%	16.7%	8.1%
Worked 27 to 39 weeks	6.3%	15.5%	6.9%
Worked 14 to 26 weeks	5.4%	14.6%	5.9%
Worked 1 to 13 weeks	7.1%	16.3%	7.7%
<b>USUAL HOURS WORKED</b>			
Usually worked 35 or more hours per week	75.9%	38.0%	73.6%
40 or more weeks	67.7%	26.2%	65.2%
50 to 52 weeks	63.1%	15.7%	60.1%
Usually worked 15 to 34 hours per week	19.3%	38.3%	20.5%
40 or more weeks	11.9%	18.0%	12.3%
50 to 52 weeks	9.5%	12.6%	9.7%
Usually worked 1 to 14 hours per week	4.8%	23.8%	6.0%
40 or more weeks	1.7%	9.4%	2.2%
50 to 52 weeks	1.3%	8.5%	1.8%

# Summary Assessment

- Estimated Required selected sample sizes for Option 3
  - To achieve 5,100 effective worker years
  - Based on response rate, workers per HU, FTE rate, design effect

Selected HU Sample	13,661	18,214	12,857	17,143	11,953	15,938	11,250	15,000	9,107	12,143	8,571	11,429	7,969	10,625	7,500	10,000
Response Rate	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
HU Interviews	6,830	9,107	6,429	8,571	5,977	7,969	5,625	7,500	6,830	9,107	6,429	8,571	5,977	7,969	5,625	7,500
Workers per HU	1.4	1.4	1.4	1.4	1.6	1.6	1.6	1.6	1.4	1.4	1.4	1.4	1.6	1.6	1.6	1.6
Worker Interviews	9,563	12,750	9,000	12,000	9,563	12,750	9,000	12,000	9,563	12,750	9,000	12,000	9,563	12,750	9,000	12,000
FTE Rate	0.8	0.8	0.85	0.85	0.8	0.8	0.85	0.85	0.8	0.8	0.85	0.85	0.8	0.8	0.85	0.85
FTE Interviews	7,650	10,200	7,650	10,200	7,650	10,200	7,650	10,200	7,650	10,200	7,650	10,200	7,650	10,200	7,650	10,200
Design Effect	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0
Effective Sample	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100

# Summary Assessment

- Estimated incidence rates, relative standard errors from ESOII

<b>Industry Group</b>	<b>Estimated Injury/ Illness Incidence Rate 2014 ESOII</b>	<b>Relative Standard Error for Incident Rate 2014 ESOII</b>
Natural Resources & Mining	3.8	2.9
Construction	3.6	2.4
Manufacturing	4.0	0.8
Trade, Transportation & Utilities	3.6	0.9
Information	1.4	4.4
Finance, Insurance & Real Estate	1.2	4.2
Professional & Business Services	1.5	2.6
Educational & Health Services	4.2	0.8
Leisure, Entertainment & Hospitality	3.6	1.4
Other Services	2.5	4.1
State & Local Government	5.0	1.6
Total	3.4	0.5

# Summary Assessment

- Expected sample worker years, incidence rate, relative standard errors for Options 1 and 2

➤ Industry grouping

Industry Group	Expected HSOII Worker Years		Estimated Injury/Illness Incidence Rate		Expected Standard Error for Incident Rate		Expected Relative Standard Error for Incident Rate	
	Option 1	Option 2	2014 ESOII	HSOII	Option 1	Option 2	Option 1	Option 2
Agriculture & Goods-producing <sup>1</sup>	6,392	7,102	3.8	4.8	0.27	0.25	7.0	5.3
Trade & Transportation <sup>2</sup>	6,000	6,667	~3.9	4.9	0.28	0.26	7.1	5.4
Professional & Business Services	5,791	6,435	1.5	1.9	0.18	0.17	11.9	9.0
Health Care and Social Assistance	5,490	6,100	4.5	5.6	0.31	0.30	6.9	5.2
Leisure & Hospitality	4,465	4,961	3.6	4.5	0.31	0.29	8.6	6.5
Other Service-producing <sup>3</sup>	7,710	8,567	~1.8	2.3	0.17	0.16	9.4	7.1
State & Local Government	5,575	6,195	5.0	6.3	0.32	0.31	6.5	4.9
<b>Total</b>	<b>41,425</b>	<b>46,027</b>	<b>3.4</b>	<b>4.3</b>	<b>0.10</b>	<b>0.09</b>	<b>2.9</b>	<b>2.2</b>

<sup>1</sup>Agriculture & Related Industries (employment from CPS), Mining/Logging, Construction, Manufacturing

<sup>2</sup>Wholesale Trade, Retail Trade, Transportation

<sup>3</sup>Utilities, Information, FIRE, Education, Other Services

# Summary Assessment

- Expected sample worker years, incidence rate, relative standard errors for Options 1 and 2

## ➤ Occupation grouping

Occupation Group	Expected HSOII Worker Years		Estimated Injury/Illness Incidence Rate <sup>7</sup>		Expected Standard Error for Incident Rate		Expected Relative Standard Error for Incident Rate	
	Option 1	Option 2	2014 ESOII	HSOII	Option 1	Option 2	Option 1	Option 2
Technical <sup>1</sup>	4,333	4,814	0.4	0.6	0.11	0.11	25.4	19.3
Management, Science & Arts <sup>2</sup>	2,967	3,297	1.2	1.5	0.23	0.21	18.4	14.0
Office, Sales & Education <sup>3</sup>	13,587	15,097	1.6	2.1	0.12	0.12	7.4	5.6
Healthcare & Services <sup>4</sup>	8,037	8,930	3.2	4.0	0.22	0.21	6.9	5.2
Production, Construction & Installation <sup>5</sup>	6,105	6,784	5.3	6.6	0.32	0.30	6.0	4.6
Support, Maintenance, Protection & Transportation <sup>6</sup>	6,394	7,105	8.6	10.8	0.39	0.37	4.5	3.4
Total	41,425	46,027	3.4	4.3	0.10	0.09	2.9	2.2

<sup>1</sup>Computer/Mathematical, Legal, Business/Financial Operations, Architecture/Engineering

<sup>2</sup>Management, Life/Physical/Social Science, Arts/Design/Entertainment/Sports/Media

<sup>3</sup>Office/Administrative, Sales/Related, Education/Training/Library

<sup>4</sup>Community/Social Services, Food Preparation/Serving Related, Healthcare Practitioners/Technical, Personal Care/Service

<sup>5</sup>Production, Farming/Fishing/Forestry, Construction/Extraction, Installation/Maintenance/Repair

<sup>6</sup>Healthcare Support, Building/Grounds Cleaning/Maintenance, Protective Service, Transportation/Material Moving

<sup>7</sup>Incidence Rates derived using ratio of injury/illness incidence rates to days away from work incidence rates (3.13) for industry

# Summary Assessment

## • Comparison of Options 1, 2, and 3

Component	CPS-based		ACS-based
	Option 1	Option 2	Option 3
Max completed interviews	51,781 (could add ~20,000 if utilize ASEC supplemental sample)	57,534	up to ~1.5MM
Ability to stratify by I/O	No	No	Yes
Incur cost for sample unit locating, contact, participation	No	No	Yes
Need for HSOII eligibility screening	No	Yes-some	Yes-all
Reference Period	Calendar year	Recent 12 months	Recent 12 months
Need to reorient respondent to reference period	No - already done with ASEC	Yes	No
Number of years HU in HSOII	2	2	1*
Average respondent burden	~1.8 min	~2.2 min	~7.4 min
Breakout of burden			
Obtain cooperation	100% (ASEC completes) @ 1 min	100% (CPS completes) @ 1 min	100% (sample HUs) @ 2 min
Roster 16+ in HU	none	none	100% (participating HUs) @ 2 min
Demographics	none	none	100% @ 2 min
HSOII eligibility screener	none	36% @ 1 min	100% @ 1 min
HSOII injury/illness screener	65% @ 1 min	65% @ 1 min	80% @ 1 min
HSOII injury/illness questions	3% @ 12.5 min	3% @ 12.5 min	4% @ 12.5 min
Estimated data collection cost per complete	\$5.70-\$6.75	\$5.70-\$6.75	\$15-\$25

\*Sample design could have year-to-year overlap

# Assumptions

- Listed in illustrative interview process flowcharts
- Additional interviewer time
  - Review/administrative: 5 min per interview
  - Training: 4 hrs per interviewer
- Interviewer costs:
  - Options 1, 2: \$30-\$35/hr
  - Option 3: \$15-\$25/ interview (mail/web)

# Comments

- Option 1
  - Adds burden to March ASEC
  - Lowest expected data collection costs (~\$300k-\$350k) and respondent burden (average ~1.8 min)
  - Calendar year reference period
- Option 2
  - Avoids annual supplements
  - Requires screening persons not identified by CPS as HSOII-eligible
  - Expected data collection costs (~\$350k-\$400k), respondent burden (~2.2 min)
  - 12 month reference period (ending May or June)
- Option 3
  - Greatest sample design flexibility
  - Expected data collection costs (~1MM with 40k-60k completed interviews), respondent burden (~7.4 min)
  - 12 month reference period, timing determined by BLS

# Summary

- Option 1 best meets multiple aims of sample representation, data quality, timeliness, cost
  - Adds burden to March ASEC
  - Lowest expected data collection costs (~\$300k-\$350k) and respondent burden (average ~1.8 min)
  - Calendar year reference period
- Option 2 avoids conflict with annual supplements
  - Requires screening persons not identified by CPS as HSOII-eligible
  - Expected data collection costs (~\$350k-\$400k), respondent burden (~2.2 min)
  - 12 month reference period (ending May or June)
- Option 3
  - Greatest sample design flexibility
  - Expected data collection costs (~1MM with 40k-60k completed interviews), respondent burden (~7.4 min)
  - 12 month reference period, timing determined by BLS

Kennon R. Copeland  
Senior Vice President and Director  
Statistics and Methodology  
copeland-kennon@norc.org  
301-634-9432

Thank You!

**NORC**  
*at the UNIVERSITY of CHICAGO*

 insight for informed decisions™

## Appendix B: Cognitive Interview Round 1 Memo

**To:** Elizabeth Rogers & Karen Shahpoori

**From:** NORC

**Re:** Household SOII Round 1 Cognitive Interviews

**Date:** 6/8/2016

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**Introduction**

NORC is conducting cognitive testing on behalf of the Bureau of Labor Statistics (BLS) to inform the design of a Household Survey of Occupational Injuries and Illnesses (HSOII). The cognitive interviews will provide data to evaluate the HSOII survey questions for correct interpretation and to assess the ability of respondents to accurately answer the survey questions. The results of the interviews will be used to refine the HSOII questionnaire items and item order.

*Recruitment Strategy.* The cognitive interview sample was recruited via advertisements placed in Craigslist and the on-site posting of flyers in locations in the Chicago and Northern Indiana areas. Three Craigslist ads were posted (May 10, May 19, and May 31). Flyers were posted in nearly 30 venues, including supermarkets, laundromats, grocery stores, and gas stations. The recruiter frequently returned to these venues to make sure the flyers were still showing. The recruiter also provided flyers to receptionists and managers at One Stops (such as Work One and Work Force Center), unions (including, for example, Electrical workers Local 134 and Sheet Metal Workers Union 73), employment centers (such as the Martin Luther King Services Center, Illinois Department of Employment Services, and Chicago Women in the Trades), and local junior colleges. The recruiter also followed-up with some of these managers and receptionists and asked them to email an electronic version of the flyer to people using their services; NORC was unable to determine whether any managers did email the flyer to their clients.

*Sample Characteristics.* Eighteen people were screened for the survey; including two proxy pairs. That is, 20 people in total. Of the 18 (excluding proxy partners), 16 were recruited through Craigslist ads. Fourteen were eligible for the study and 13 appointments were made. Ten interviews were completed (a few did not show up or reschedule), including 2 proxy pairs. There were 12 total completed interviews

(including 2 proxy interviews). Of the completed interviews, only one respondent was recruited through flyers and on-site recruitment. See Exhibit 1 for respondent characteristics.

Two of the twelve recruited respondents (R) were proxies who were invited for an interview primarily to discuss the work-related injuries and illnesses of another person recruited from their household. In the respondent numbering presented in the discussion of findings, respondent pairs are given the same number, the letter “A” was assigned to the respondent who was recruited due to experience with a work-related injury or illness. The letter “B” was assigned to the proxy who was recruited from the same household. During the cognitive interview, both the main respondent and the proxy participated in a self-interview about their own experiences with workplace injuries and illnesses, and then participated in a proxy interview about the other member of the pair. Exhibit 1 displays demographic characteristics of the 12 respondents who participated in an interview.

**Exhibit 1: Respondent Characteristics**

<b>Characteristic</b>	<b>Category</b>	<b>Number of Respondents</b>
Q41 – Ethnicity (Spanish, Hispanic or Latino?)	Yes	2
	No	10
	Do not know	0
	Refuse	0
Q42 - Race	White	6
	Black or African American	4
	American Indian or Alaska Native	0
	Asian	1
	Native Hawaiian or Other Pacific Islander	0
	Other (specify)	1
	Do not know	0
	Refuse	0
Q43-44 – Age categories	Under 25	1
	25-39	5
	40-54	3
	55-70	3
	70 or older	0

**Exhibit 1 continued: Respondent Characteristics**

Characteristic	Category	Number of Respondents
Q45 - Marital Status	Married – Spouse present	2
	Married – Spouse absent	0
	Widowed	0
	Divorced	1
	Separated	0
	Never married	9
	Do not know	0
	Refuse	0
Q46 - Sex	Male	5
	Female	7
Q47 – Education level	High school diploma or less	0
	Some college but no degree	3
	Associate’s degree (any type)	3
	Bachelor’s degree	5
	Master’s, Professional, or Doctoral degree	1
Q48 – Current Employment Status	Full-Time	4
	Part-Time	4
	Not currently employed	4
	Do not know	0
	Refuse	0
Q52-Q59 – Description of occupation at the time of injury	Stocking/inventory	3
	Commodity trader	1
	NA (Respondent was a proxy)	2
	Bank assistant manager	1
	Shipping/loading	2
	Museum assistant	1
	Administration	1
Accounting	1	

*Interview.* All respondents were interviewed in person at NORC’s downtown Chicago office. The interviews were conducted by three methodologists who were experienced in cognitive interviewing. Respondents participated in a cognitive interview lasting approximately one hour and were paid \$40. Interviews in which respondents reported for themselves and by proxy for another household member

lasted slightly longer interviews not involving respondent pairs, but the difference was minimal because not all probes were repeated for each incident of injury or illness.

*Organization of this memo.* The discussion of findings from the cognitive interviews focuses on the questionnaire items in which issues were observed during the cognitive interviews, although some data on items that worked well is included for context. Based on our observations in Round 1 interviews we provide a number of recommendations for revisions to the instrument and issues for further discussion. We welcome BLS feedback on the suggested revisions. Based on discussion with BLS, NORC will revise the instrument for the next round of cognitive testing.

### Survey Introduction

The survey introduction was read to all respondents prior to presenting the first survey question. Respondents did not display any issues understanding the introduction and had no questions about it or about the survey they were participating in. It should be noted that the participants had already learned about the purpose of the survey at the time they were recruited. As a consequence, they had a general understanding of the survey before they heard the introduction.

### Screener

#### Questions 1 through 5: Screener

1. Since [CURRENT MONTH, ONE YEAR AGO], did you do ANY work for pay or profit?
  - a. Yes → ELIGIBLE, CONTINUE
  - b. No → NOT ELIGIBLE, END INTERVIEW
  - c. DK
  - d. REF

2. Since [CURRENT MONTH, ONE YEAR AGO], have you experienced any injuries or illnesses related to any job you had?

- Yes → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- No → SKIP TO Q4
- DK
- REF

3. Did that injury/illness cause you to...

	Yes	No	DK	REF
Lose consciousness?				
Be unable to work for a day or more?				
Restrict your work activities?				
Transfer jobs?				
Get medical treatment other than first aid?				

4. [Other than the injury/illness you just mentioned], since [CURRENT MONTH, ONE YEAR AGO], have you experienced any of the following injuries related to any job you had? I'm going to read a list of examples...

5. [Other than what you have already mentioned], since [CURRENT MONTH, ONE YEAR AGO], have you experienced any of the following illnesses, related to any job you had? I'm going to read a list of examples...

8. [FOR EACH INJURY/ILLNESS] In what month and year did this injury/illness occur?

MONTH/YEAR  
ENTER MM/YYYY  
DK  
REF

Questions 1 through 5 ask respondents whether they worked in the past year and whether they experienced any injuries or illnesses related to any job they had. These questions must accomplish several goals:

- ascertain that R worked during the reference period
- determine whether R experienced injury or illness related to a job
- gather some characteristics of the first injury/illness (lose consciousness, unable to work for day, restrict work activities, transfer jobs, get medical treatment)

*Confirming that respondent worked in past year*

Most respondents answered Q1 with no issue. Two respondents initially answered “no” but then reconsidered and changed their answers to “yes.”

- R11: R answered “no” to Q1. The interviewer asked when R last worked, and the R said 2 ½ months. Further probing to this and following questions showed that it had been 2 ½ months since the injury and the R had indeed worked since May of 2015. R later said he thought the interviewer had asked about working since May of 2016. However, even in this case he should have responded yes, since he had worked that month. R thought it would be clearer say “in the last year” rather than to say the month and year.
- R12A (self-interview): R at first said “no” but then corrected herself (“Wait a minute, you said since May?”). The interviewer repeated the question and the R answered “yes.”

*Understanding of injury/illness*

As will be detailed below, respondents displayed a good understanding of the kinds of injuries and illnesses of relevance to the HSOII. While screener question Q2 appears to function well, it is important to keep in mind that respondents were screened prior to participation in the study and that this screening process may have facilitated response to Q2. Even so, Q4 and Q5 did successfully elicit a few more incidents of injury and illness that appeared relevant to the HSOII, further suggesting that the screener questions were working well.

Respondents had a good idea of the kinds of conditions that would count as an injury or illness. Conditions or incidents such as the following were reported in Q2 by the respondents and proxy respondents. The descriptions below are derived from answer to Q2 with some additional detail from succeeding questions regarding the injury or illness:

- R1: Foot injury, tripped and fell wrong on foot
- R2: Hand crushed by box
- R4: Back injury, foot got caught and fell
- R5: Tripped in staircase, tore shoulder
- R6A: Stress/anxiety due to job
- R6B: Trouble breathing while working with cardboard
- R7: Assault during office break-in, also carpal tunnel mentioned in response to cue (but not last year). R also mentioned anxiety because of the attack.

- R8: Arm gave out while loading truck
- R9: Shoulder pain due to repetitive motion
- R11: Fell off step ladder and hurt back, pain in write mentioned in response to carpal tunnel cue
- R12A: Hurt knee in slip and fall, also mentioned carpal tunnel in response to cue, as proxy for husband mentioned his cut to finger in response to cue
- R12B: Cut finger with knife while cutting food; as proxy for wife, R mentioned her falling in the produce section at work.

R6A (self) and R6B (as proxy for R6A) mentioned an injury/illness that is not clearly physical. R6A experienced stress and anxiety due to her job. R7, who experienced an assault at work, reported physical injuries but also noted that the list of injury/illness cues was missing emotional issues. The remaining respondents reported physical injuries such as sprains and broken bones.

The lists of injuries and illnesses presented as cues in Q4 and Q5 were generally well understood by respondents. A few respondents were unclear about the meaning of carpal tunnel syndrome (R1, R2, R11). The term “laceration” was also questioned by one respondent (R5). The lists of cues were intended to aid recall of injuries and illnesses and did elicit some additional recall:

- R12A (as proxy for R12B): In serving as proxy respondent for her spouse (who was not known to have had an injury/illness prior to the interview), R12A remembered that her husband had suffered a cut finger at work, while cutting food. The husband worked in food preparation at a college.
- R7: This R recalled experiencing carpal tunnel syndrome due to computer work. The injury recurred during the past year but first occurred more than a year ago, and so was out of scope.
- R6B (self-interview): This R was interviewed primarily as a proxy respondent for R6A. However, during the presentation of illness cues, R6B was reminded of breathing problems she recently experienced while working with cardboard.

#### *Understanding of work-relatedness of the injury/illness*

Respondent explanations of the injury or illness that occurred revealed that most reported incidents that were clearly related to their jobs. Many of the incidents reported occurred during the performance of tasks at their jobs. There were two instances in which the relation between work and the incident was less clear:

- R9: R qualified to participate in the survey, since he had worked within the last year. However, the injury he reported occurred at an unpaid internship he held in the last year. This internship involved physical work and the R suffered shoulder pain. R was not sure if the work at the internship hurt his shoulder as it was at the same time as a move to new housing. R said that the pain came on slowly, so there was not specific event that cause the injury. Consequently, he thought it was tied to work, but could not say for sure.
- R5: R fell in the stairwell while leaving work (not clear whether for break or leaving for the day). Would this injury count as work-related?

Respondents were probed regarding what would count and not count as a work-related injury or illness. Example responses are summarized below. These responses suggest a good general understanding of what counts as a work-related injury or illness although the examples provided raise some questions about what should count as work-related. It was unclear to at least one respondent that an illness such as asthma or cancer could be work-related (R8); however, this misimpression may be common in those who have not experienced these illnesses related to work. Another respondent thought that an injury would not count if one were doing something, presumably during work, that shouldn't be done at work (e.g., racing golf carts) (R9).

- What counts: Something that occurs during normal work or work hours (R1, R2, R9, R7, R8, R6B); a fall, broken bones, chemicals causing sickness (R2, R4, R11); something that would prevent you from working (R1).
- What does not count: Getting a cold, normal sickness (R2); asthma or cancer might not count (R8); a minor cut or paper cut, stub finger, anything small (R1, R11); something that you are not supposed to be doing at work (such as racing golf carts) (R9).

#### *Understanding of reference period and recall of date of incidents*

Most respondents seemed to correctly understand the relevant reference period of the survey. However, two respondents as noted above misunderstood the time frame of presented in Q1.

Respondents felt they were able to recall in Q8 the dates when incidents occurred. Some cited landmarks (such as Christmas, an anniversary) that allowed them to date the incident. Recent timing of the incident also helped recall.

- R1: R knew that she was injured during the Christmas season so it was not hard to determine month and year of her injury.

- R4: R mentioned that it was a major event, still suffers ill effects, and there were witnesses as well.
- R5: R felt he/she could remember because he/she had been asked often about when the accident happened because of filling of insurance claims.
- R8: R said it was easy to remember because of the pain.
- R2: R mentioned it was painful, and happened during the Christmas season.
- R12A/R12B regarding 12A's injury: Injury happened on their anniversary. They were going to meet for lunch to celebrate.
- R12A regarding 12B's injury: R was not sure when her husband's injury happened.

For the respondents who suffered injury/illness that developed over time, pinpointing an exact date was more difficult (R6A, R9). Respondents who provided the date for a gradual onset injury/illness gave a range of months rather than a single month.

- R6A: It was difficult for R to say an exact date as the anxiety came on slowly. R says "It hit its peak probably in November of 2015. I mean it was coming on for a while, with conditions getting worse and worse..."
- R6B (as proxy for R6A): In reporting on R6A, R6B gave a range of dates (November or December). R6B indicates she noticed change in R6A's mood at this time, and indicated it was stress, not a specific incident. R felt it was easy to remember date, since R hears about it all the time from 6A.
- R9: R said it came on slowly, indicated it was around May/early June.

### **Recommendations**

- NORC notes that Q3 is asked only of injuries/illnesses elicited by Q2. If the information gathered in this question is useful to know regarding other injuries and illnesses, the question should be added as a follow-up to Q4, Q5, and Q6 as well.
- R6A experienced anxiety related to her job. NORC requests clarification from BLS on whether anxiety counts as an injury or illness. The current set of questions on the injury/illness is geared toward physical illness and revision may be needed to accommodate non-physical conditions.
- R9 experienced an injury at a position for which he was not paid. R5 was not technically working at the time of the accident (leaving the office). NORC requests clarification on whether injuries/illnesses related to unpaid positions should be included.
- We recommend that we continue to observe the Screener questions in subsequent interviews.

**Injury or Illness: Description**

**Questions 10-13 – Illness or Injury: Description**

10. **[WORKER ACTIVITY + some EVENT and SOURCE]** [FOR EACH LOOP] What happened? How did the injury or illness occur? [For example: “When ladder slipped on wet floor, I fell 20 feet”; “I was sprayed with chlorine when gasket broke during replacement”; “I developed soreness in wrist over time.”] [OPEN ENDED]

11. **[EVENT and SOURCE]** [FOR EACH LOOP] What were you doing just before the incident occurred? Describe the activity as well as the tools, equipment, or material you were using. Be specific. [Examples: “climbing a ladder while carrying roofing materials”; “spraying chlorine from hand sprayer”; “daily computer key-entry.”]

a. DESCRIBE THE ACTIVITY.

b. DESCRIBE THE TOOLS, EQUIPMENT, OR MATERIAL THAT YOU WERE USING.] [OPEN ENDED]

12. **[SOURCE]** [FOR EACH LOOP] What object or substance directly harmed you? [Examples: “concrete floor”; “chlorine”; “radial arm saw.”]

Body part/type of injury

13. **[NATURE and PART]** [FOR EACH LOOP] [INTERVIEWER NOTE: R should be more specific than “hurt,” “pain,” or “sore.” For example: “strained back”; “chemical burn, hand”; “carpal tunnel syndrome.”]

a. How did this injury or illness happen?

b. What part of your body was affected?

c. How was it affected? What type of injury or illness affected your [PART OF BODY]?

Questions Q10 through Q13 are intended to capture the characteristics of the work-related injury or illness that the respondent experienced. The information to be gathered in each question (activity, event, source, nature, and part of body) is indicated in each question in the box above. Though each question has a different intended focus, it was common for respondents to provide the required information after the initial question when they described the incident. The rest of the questions tended to add marginal

additional levels of detail. Further, we noted that there was some inconsistency within and across interviewers in presenting the examples in Q10 (that is, reading of the text that begins, “For example: When ladder slipped on wet floor...”).

*Reporting of activity and event*

Q10 is generally effective in eliciting descriptions of the activity the respondent was engaged in and the actual event in which the injury/illness occurred. Respondents also reported information on the injury/illness as part of the screener questions. As noted, some responses to Q10 were more abbreviated because the respondent had already provided a description in response to the screener. Q11 is also effective in collecting additional detail surrounding the incident and what the respondent was doing just before it occurred. However, as will be further discussed below, these questions are geared toward injuries and illnesses that result from events that are discrete in time (e.g., falling off a ladder, getting cut) and not injuries or illnesses that may develop over time (e.g., asthma, carpal tunnel syndrome). Further, the questions are geared toward physical injuries and illnesses; these questions are odd when asked of non-physical conditions such as anxiety and stress.

Some examples of the information gathered with these two questions:

- R1: R was stocking, carrying something heavy, tripped and fell “wrong” on his foot. Q11 and probing elicited more detail regarding carrying something heavy, Christmas stuff.
- R4: R He was a new employee and should not have gone on the forklift. He was told to stand on it to reach a box, his foot got caught and he fell on his side. Q11 yielded a report that R was writing down numbers for tracking packages.
- R5: R tripped while walking down the stairs, reached out with right arm and heard a tear. Doctor did MRI, which revealed a labrum tear in the shoulder. Q11 revealed that just before, R was working at a computer for 3-4 hours. R5 was in the stairwell because he was leaving work.
- R8: R was loading trucks, kept loading and her arm gave out. She couldn’t lift anything with it. Q11 revealed that R was stacking boxes just before incident, only using hands (no equipment).
- R2: R was in a truck loading boxes coming down a conveyer belt. She had her hand on one box, another box slammed into her hand. Q11 elicited detail that the box was too heavy and she didn’t move it fast enough and the other box came down on her hand.
- R7: R described a man entering office and demanding money. When she said she had none the man pushed her and she hit her knee on a low table and twisted her ankle. Q11 revealed that just prior, the R was answering the door—the man was ringing the bell.

- R12A: R12A, who worked at a grocery store, was getting food ready for lunch (that is, setting up lunch buffet). R was taking something to the back to dispose of and slipped and fell. Q11 elicited repetitive information, that R was preparing the hot table for lunch. By Q11, R had already provided detailed description in response to screener questions and Q10. The proxy for this R, R12B, indicated that there was something wet on the floor and his wife slipped. Q11 elicited that the proxy did not know what R12A was doing just before. He said probably something with boxes and box cutters.
- R11: R said he fell on his back. A box came apart and pushed him. In response to prior screener questions, this R already described that he was on a step stool pulling out a box of records and that the box came apart. Q11 elicited the detail that he needed to look up some charges and was trying to pull out invoices from last year.
- R12B: This R was interviewed as the proxy for R12A. Both he and R12A reported the cut that R12B sustained when he worked as a cook at a college. R12A described in screener questions that R12B was working on a college campus, cutting carrots in the kitchen and cut his finger “kind of bad.” In response to Q10, R12A gave abbreviated account.

For a number of respondents, Q10 and Q11 did not fit the non-physical nature of the injury/illness or its gradual onset.

- R6A: This R’s proxy, R6B, mentioned the pressure R6A is under, sleepless nights. Q11 did not make sense for this R, since she was experiencing stress and anxiety from her job, not tied to a specific incident.
- R9: R described scrubbing dishes at an aquarium, repetitive motion. Injury came on slowly. R indicated it could have been reinjured from a few years ago or unpacking boxes after a move. Q11 yielded information that R was scrubbing dishes.

*Reporting of source of injury or illness*

Along with Q11, Q12 is intended to discover the source of the injury or illness. Some respondents appeared able to identify the source of their injury or illness. A couple of these still expressed lack of certainty (guesses) as to the source:

- R1: When reading the question, the interviewer read the “concrete floor” example. R1 immediately said “floor.” The example in the question appeared to be a helpful cue for this respondents.

- R2: R easily identified that a box was the source of the injury (the box coming off the conveyer belt slammed into her hand).
- R11: R said that he “guessed” it was the floor. He thought at first it was the box, but that didn’t make sense. The box pushed him to the floor.
- R12A: This R repeated part of the question, suggesting confusion with the question. The interviewer repeated the question and the R said, “I guess the wet floor.”
- R12B: This R’s wife (R12A) correctly identified a knife as the source of the cut that her husband sustained while working in a kitchen.

Other respondents had difficulty correctly identifying the source of their injury or illness. In some of these cases, the identified object was involved and was a cause (such as the fork lifter or person who shoved the R). In other cases, there seemed to be no object or substance to cite (such as when the condition was anxiety).

- R4: This R said the fork lifter was the source. However, the interviewer noted that the ground or floor seems to be the source, since the R fell off the forklift when his foot got caught. The forklift did not impact the R’s body, the floor did.
- R5: R said the stairs was the source. This R reached out and broke his fall with his arm. The interviewer noted that the floor could have been the source.
- R6A: R experienced anxiety from new owners at the bank where she worked. The reference to objects or substances that harmed the R was odd as the stress was brought about by people. R6B said it was “more about personnel than anything.” There is no response option for “other people.”
- R8: R8 said there was no object or substance, but constant lifting and stacking. For this R, would the objects being lifted and stacked be the source?
- R9: R’s identification of scrubbing/moving stuff as the source of injury seems correct. In this case, it was an action, however, and not a specific object or substance. Clarification is needed as to whether this is correct.
- R7: R7 was pushed by a person. Due to the push, R hit her knee on a table and twisted her ankle. R identified the source as the man who pushed her. When the interviewer probed for an object, the R indicated the table. NORC is unsure as to whether the person or the table is the source.
- R12B: R did not know what was on the floor that his wife slipped on. After probing, R identified the floor as the object. R mentioned that he thought “substance” referred to drugs.

*Reporting how the injury or illness happened*

Q13 is a three-part question intended to ascertain the nature of the injury or illness, the part of body and how it was affected. The first part of the question (Q13a: How did this injury or illness happen?) is perceived by most as a redundant question. Although understood well, Q13a does not seem to add new information beyond what has been collected in the prior questions.

A couple of respondents noted the repetitive nature of the questions (R1, R4). Other respondents prefaced their answer with “like I said,” suggesting that they felt they had already answered the question (R5, R8, R11). R2 laughed (the interviewer interpreted it as laughing at the question). R12A also laughed when reporting on her fall. When reporting as proxy on her husband’s injury, R12A expressed with her intonation that she had already provided the requested information.

Q13b and Q13c, which collect information on the part of body affected and how it was affected, are generally understood well and answered without issue. Most respondents repeat the body part they had already mentioned in describing the injury or illness.

- R1: right foot
- R5: shoulder
- R2: fingers
- R12B: finger (reported by 12A, not clear what R12B’s self report was)

Non-physical types of injury or illness do not fit Q13b and Q13c:

- R4: R indicated the “whole upper body” then clarified to state it was the back and hips. Q13b and Q13c are currently phrased in the singular, to refer to a single body part, making it unclear whether it is acceptable to report more than one.
- R6B, in reporting on R6A’s anxiety, indicated the body part to be the head. However, this R is referring to mental pressure and stress, not a physical injury to the head.

The following R’s also indicated more than one body part. However, the question does not indicate that the respondent can select more than one answer:

- R8: Shoulder and arm
- R9: Shoulders, neck

- R7: Knee and ankle
- R12B (regarding R12A): Knee and ankle.
- R12A: Right ankle and right knee.
- R11: R said “mainly back” but when asked anything else mentioned headache from the fall

**Recommendations:**

- Consider adding separate questions that are phrased appropriately for non-physical injuries and illnesses, such as anxiety, if these are in scope for the HSOII.
- Is a specific date required for injuries and illnesses of gradual onset? Instructions on how to provide a date of injury or illness may be helpful for interviewers and respondents.
- Clarify for interviewers whether the examples in Q10, Q11, Q12, and Q13 are to be read to all respondents or read only if necessary. If this text is to be presented to all respondents, removing the brackets around it would make it clearer that it is to be read. If this text is to be read only if the respondent requires further explanation to understand how to answer the question, then a note of “read if necessary” should be inserted.
- Consider making Q13b and Q13c a “choose all that apply” format so that respondent can report more than one body part and how each was affected.
- Q13a is perceived as redundant and could be deleted.
- Given the very specific nature of the information that is required about each injury/illness, it may be difficult to craft questions that can effectively elicit the needed injury/illness characteristics without interviewer intervention. Interviewer knowledge of the typology may be necessary to ensure that the injury/illness is fully described. It would be helpful to discuss approaches to Q10-Q13. Should there be added focus on crafting guidance and instruction to interviewers on how to probe on and code the characteristics of each injury/illness?

**Injury or Illness: Medical Attention**

**Questions 14-17 – Medical Attention**

Medical attention

14. [FOR EACH LOOP] Was the injury/illness serious enough that a medical professional was consulted?
- a. Yes → What type of medical professional did you see? (specify) \_\_\_\_\_
  - b. No
  - c. DK
  - d. REF

15. [FOR EACH LOOP] Did you get medical advice, treatment, or follow-up care for this injury/illness from...?

	Yes	No	Not needed	DK/REF
An emergency vehicle, such as an ambulance or fire truck				
An emergency room				
A doctor's office or other health clinic <i>Please include on-site offices or clinics at your place of employment</i>				
A phone call to a doctor, nurse, or other health care professional				
Any place else? Specify				

16. [FOR EACH LOOP] Were you in the hospital?
- a. YES → How many nights were you in the hospital? \_\_\_\_\_ nights
  - b. NO
  - c. DK
  - d. REF
17. Did you receive a medical diagnosis from your healthcare professional?
- a. YES → What was your medical diagnosis?
  - b. NO
  - c. DK
  - d. REF

This series of questions ascertains the extent of medical advice and treatment that was received after the injury or illness.

*Understanding of reference period of questions*

For the most part, respondents did not report any confusion about the time period being referred to in these questions. However, there were two respondents who expressed confusion about this topic.

- R4: In response to Q17, R4 said “no, not at the moment, because they (the doctors) didn’t know what it was.” This respondent clarified afterwards that he did get a diagnosis later on, after an MRI and an X-ray were performed.
- R2: When asked the follow up question on type of medical professional she saw in Q14, the respondent asked whether this referred to immediately, when the ambulance was called, or later on.

*Understanding of the phrase “medical diagnosis from your health care professional.”*

Respondents reported understanding the terms ‘medical diagnosis’ and ‘health care professional.’ Those probed on the topic all agreed that a medical diagnosis would have to come from a health care professional. All were in agreement that a doctor would count as a medical professional. Respondents who were probed on the topic were evenly divided on whether a nurse or medical technician would count as a medical professional. R12B stated that only doctors counted as nurses would have to check with doctors in any case. Only one of the six respondents probed on the issue thought a chiropractor would qualify as a medical professional. It is somewhat surprising that some said they do not count nurses as health care professionals. However, in the context of Q17 (receiving a medical diagnosis from a healthcare professional) it is possible that respondents were focused on those providers whom they feel would provide diagnoses.

*Understanding of Q16*

Nearly all respondents understood this question to be asking about whether they stayed overnight in the hospital. There was one who misunderstood this question:

- R2: R answered “yes” to the question. However, the follow-up question asked how many nights. R2 said she was there just that one day. So answer to this question should have been “no”. That is, the respondent went to the hospital for treatment but appeared not to have been admitted for an overnight stay.

**Recommendations:**

- In order to clarify the intent of Q16, we recommend changing this question to the following:  
 “Did you stay overnight in a hospital?”

This would distinguish overnight stays from emergency room and doctor’s visits that did not result in an overnight stay. Without this change, the question could appear redundant, as the grid immediately preceding it contains a question about whether they went to a doctor’s office or health clinic, and a question about receiving treatment at an emergency room.

The other issues encountered were minor and do not require a change at this time. Respondents seem to be aware of and generally correct about the meanings of the terms “medical diagnosis” and “health care professional.”

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**Injury or Illness: Effect on Work**

**Questions 20 – Effect on Work**

20. [FOR EACH LOOP] Did the injury/illness cause you to...?

	YES	NO	NOT NEEDED	DK/REF
a. Be unable to work the next day, whether or not you were actually scheduled to work? <b>[BE SURE TO ASK Q21]</b>				
b. Work at your regular job less than your usual number of hours?				
c. Work at your regular job, but be unable to perform all of the normal duties of the job?				
d. Be assigned to another job on a temporary basis?				
e. Be transferred?				
f. Receive temporary disability benefits?				
g. Quit your job?				
h. Be laid off?				
i. Be fired?				
j. Change occupations?				
k. Lose any wages?				
l. OTHER (SPECIFY)				

This grid of questions evaluates the effect the injury or illness had on the respondent’s work status.

*Issues with overlapping categories and ambiguity of questions*

Most of those surveyed in Round 1 did report the injury to their employer. The series of questions in the grid in Q20 were generally well understood, but some problems did arise due to respondents' misinterpretation of some of the questions.

- For Q20b, R1 asked if this referred to when he took time off, or when he returned. This respondent said he was fine after he returned to work, and also didn't have a typical number of hours. This respondent answered "yes." It is not clear that this would be the intended answer, since after the respondent returned, he claims that his hours didn't change from what they were before the injury.
- R4: This respondent interpreted Q20e as referring to a transfer of duties, saying that he did different things after he returned from the injury. Upon probing, this respondent clarified that he was not transferred to a different geographic location.

The same respondent, R4, in answering the previous question Q20d, said "yes" and clarified upon probing that he was thinking of the job he changed to after he quit his job (where he got injured). This was probably due to the fact that the respondent had not yet been asked Q20g, which asks more directly whether the injury caused the respondent to quit their job. This respondent answered "yes" to that question as well.

- R8, when asked Q20f about disability benefits, at first answered "yes" but then changed this to "no." This respondent elaborated that she was getting worker's compensation but not disability benefits, which she thought of as being due to an illness not related to the specific job. This respondent may have been confusing general disability benefits with work-related temporary disability benefits.
- R7 answered "yes" to both Q20d and Q20e, giving the same explanation for both, which was that she now voluntarily works from home. This respondent was also self-employed, and noted that it was her own choice to do this. Since these questions reference "being assigned" and being "transferred," they are not phrased in ways that account for situations where the worker is self-employed. The fact that this respondent answered "yes" to both indicates that she was considering a change in geography or physical location (working from home) to count.

*Ambiguity about what is usual number of hours*

We observed that many respondents could be in part-time or work situations where hours vary from week to week. These types of respondents may find it difficult to answer Q20b, which refers to a ‘usual number of hours.’

**Recommendations:**

There is some ambiguity about whether Q20d and Q20e refer to changes in physical location of the job, a change in duties of the job, or a change of job entirely, such as to another company or branch. The intent of these questions needs to be clarified and then they should be rephrased accordingly to more fully specify their intended content. It is possible Q20d could be merged with either Q20e or Q20c depending on whether it refers to a change in duties of the job or a change in physical location.

**Question 21 and 22**

21. [FOR EACH LOOP] IF YES ON MISSING DAYS OF WORK Q20a: How many calendar days, or days in a row, were you not able to work? *This may include both the days you were scheduled to work and days you were not scheduled.*

\_\_\_\_ DAYS

DK

REF

22. [FOR EACH LOOP] How many days after the injury/illness were you able to start work again?

a. \_\_\_\_ DAYS AFTER THE INJURY/ILLNESS

b. STILL OFF PAID WORK

c. EXPECTS NEVER TO DO PAID WORK AGAIN

d. BACK TO WORK SAME DAY

e. DK

f. REF

These questions attempt to ascertain the time it took for a respondent to return to work after the injury or illness, and if they have yet returned from work. Respondent comments suggested that they were evenly split on whether they regarded these two questions as asking about the same information or different information.

The difficulty of determining any difference between these questions led some respondents to treat the second question as an opportunity to provide additional information about their scheduling. Many of these respondents work on a part-time or ad hoc basis, with irregular schedules or schedules that are only confirmed a week in advance, which both complicates the description and encourages them to provide details about this schedule in response to these questions, even if it is not necessarily what the questions are asking about:

- For Q21, R1 responded “2 months.” After probing, R said he understood this to mean "when you were able/cleared to work, even if you didn't actually come back [at that time]." So, when one *would be able* to work. However, this same respondent answered ‘the next week’ in response to Q22. Probing on this indicated that the respondent meant that once R was ready to return, he told his employer, and they scheduled him to start 'the next week.'
- R8: This respondent initially said, “after the injury...about 5 or 6” after being asked Q21, and then added that if you can walk, they make you come in (to work). R wanted to continue getting paid so she kept going in to work, but was not able to do the kind of work she did before. “If I voluntarily leave, I won’t get paid...a lot of days, I would come in a few hours and then leave, just to get some type of money.” After probing, the respondent clarified that she went in the next day after her injury. After probing on the meaning of the question, R responded that it was asking how many days before R was able to go in and perform her normal duties. In response to Q22, R says she never really was able to work a full day after the injury. After probing on the meaning of this question, R said “How soon were you able to go back to work, to your normal duties.” The respondent was able to do something (“sweep a floor”) but was never able to do her normal duties – however she had to keep going in to work to get some type of pay.

Another respondent viewed Q22 as an opportunity to describe how his schedule changed once he did return to work:

- R4 responded ‘6 weeks’ to Q21. When probed on timeline, R4 says he was out 40 days. When he came back, he was working just a few days out of the week. In response to Q22, R4 said "It was part time when I came back, so I'd say 25 hours, tops, when I came back." The respondent seemed to think the question was asking how many hours per week he worked when he came back. After clarifying/asking again, R4 says it was about 60 days. This is close to, but more than his response of 6 weeks to Q21 After probing on the meaning of the question, R4 responded,

"How long did it take me to recover." R4 said he understood what was asked but initially responded with a different answer.

One respondent answered the second question with a different time period than the first, afterwards explaining that he returned to work but did something other than what he was doing before:

- R5 responded "4-5 months" to Q21. R5 thinks the question is clear but it takes some time to think of it. For the phrase "calendar days," R5 thinks it includes every day, as opposed to business days. In response to Q22, R5 says "3 months." R5 added that he's been given some money to train people, but this is not the same as what he was doing before, and that happened 3 months ago. So the 3 months refers to the time when he went in to do some training for employees – not his normal duties, which he had not yet resumed. It was not clear that the respondent thought the second question was asking something different. Instead it is more likely that he viewed it as an opportunity to supply more information about his situation.

A similar situation, involving an altered form of work, occurred with R7:

- R7: In response to Q21, R said they did not go into office for first 3 days after the burglary, but answered phones from home. For Q22, R reported 4 days.

Reports on chronic conditions are problematic in the entire instrument, and this series of questions is no exception. A respondent who was reporting as a proxy for someone who had anxiety due to work reported a couple of different instances where she took time off due to this anxiety. Because there were multiple instances, this respondent was not sure how to answer Q21 initially:

- R6B (as proxy for R6A): R6B, was answering as a proxy for someone else who had anxiety at work and who had taken multiple instances of days off due to this anxiety. For Q21, this R asked if we were asking about "each time." This respondent thought the meaning of the question as "How many days off she's had." The meaning of calendar day: "1 day, 1 day out of the month." In response to Q22, R6B said, "She (6A) went back to work right away after taking time off."

The term "calendar days" was interpreted differently within the same question by R2, who defined it as both a work day and any day in response to probing:

- R2: when asked to explain what calendar days are, R2 said, “My working days... Calendar days are all the days.” [What are work days?] The days you work, I only worked 5 days In the course or probing, the Interviewer confirmed that R2’s answer to Q21 was 20 days, because she worked 5 days a week, and was counting 4 weeks. Note that R said calendar days are all the days, but when asked how many calendar days she missed, she only counted work days.

**Recommendation:**

- Q21 and Q22 appear to be asking the same thing. If this is the case, then only one of the two questions needs to be asked. If they questions were intended to measure different things, then the measurement goals of the questions should be clarified and the questions revised to better reflect the intent.

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**Injury or Illness: Workers’ Compensation**

**Question 26 - Grid of questions about what kinds of compensation the respondent received after their injury or illness**

26. IF R MISSED DAYS OF WORK FOLLOWING THE INJURY/ILLNESS: MARK YES OR NO FOR EACH QUESTION

	YES	NO	NOT NEEDED	DK/REF
Did you receive workers’ compensation?				
Being <i>kept on salary</i> means that, after an injury or illness, your employer continued to pay the wages and other compensation you were receiving when the injury or illness occurred. Were you kept on salary?				
<i>Short-term or temporary disability</i> benefits provide you with a portion of your income if you are temporarily unable to work due to a medical condition. Did you receive short term (temporary) disability?				
Did you use sick leave, annual leave, or personal time off?				
Did you take leave without pay?				
Other-specify _____				

This grid of questions evaluates how and if workers were paid when they missed time at work due to their injury or illness.

*Uncertainty about meaning of terms*

Some respondents expressed confusion about some of the terms in the questions. Some examples:

- R11 said they were not aware that worker’s compensation covered wages lost. He knew it covered the doctor, back brace, and medicine. R11 also had not heard of the phrase “kept on salary.”
- R12A also had not heard of the term “kept on salary.”

*Uncertainty about whether different types of payment overlap*

One respondent also expressed some confusion about whether certain types of payment overlapped.

- R8 asked for clarification on the topic of being kept on salary. This respondent asked if this meant their salary or worker's compensation. If she had to choose, she thought it was asking if she was kept on the job's salary, meaning her seniority and benefits, so the respondent said "yes" but added she's not getting full pay because she's getting worker's compensation. The respondent thought this was confusing because she wasn't sure if her worker's compensation counted (as her salary): “the money is coming from the insurance company, not the employer.”

*Uncertainty about what category a payment is in*

A respondent reported receiving payments, but reported uncertainty at each question in the grid about what these payments were or which category they should be in.

- R2 replied “I don’t think so” in response to the question about being kept on salary. When asked about short term disability benefits, this respondent replied, “Yes,” adding that in her case, “while I am not able to work they are paying for the bills and little payments to me.”

*Uncertainty about whether sick leave, annual leave, or personal time off is paid*

Respondents expressed some confusion about whether sick leave, annual leave, or personal time off supplied payment during time missed from work. Examples of R comments on these items:

- R2 said after probing that personal time off would not be paid.
- R11 defined personal time off as “when you take days off, paid or unpaid” and sick leave as “when you take time off when you are sick” and was not sure if you get paid or not.
- R12A said “no” to this question and supplied definitions for the terms. For sick leave, part-time employees don't get full-time benefits. If full-time, if you get sick or hurt, employer must pay you for those days. For personal time off, you acquire days. If you've been with a company/business for x amount of time you earn these days, you can apply them and still get paid.

**Recommendations:**

- Although respondents expressed some confusion about terms, there is not a single change that seems likely to alleviate this generalized confusion. The inclusion of definitions of terms in this section is beneficial and the interviewer reading these definitions when necessary is the best solution at the moment. A set of definitions for “sick leave, annual leave, and personal time off” could be included as well after the questions to be read if necessary.
- The last question, ‘other-specify’ does not make sense if asked simply as written. Respondents are not sure what kind of ‘other’ option is being asked about. The question needs to be made more specific (such as, “Was there any other kind of compensation you received?”) or removed.

**Question 27 - Was there a claim filed for worker's compensation?**

27. [FOR EACH LOOP] IF FILED A WORKERS' COMPENSATION CLAIM: Is there an open claim pending for this injury/illness?
- a. YES
  - b. NO
  - c. DK
  - d. REF

Because this question occurs after a grid of several questions, respondents may have forgotten that the question refers to workers' compensation by the time it is asked.

- R8 asked what kind of claim this was about when it was asked. It had to be clarified that it was a worker's compensation claim.

**Recommendations:**

- Change the wording of the question to “Is there an open worker’s compensation claim pending for this injury/illness?” This will eliminate any possible confusion about what kind of claim the question involves.

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**Occupation and Industry at Time of Injury or Illness**

**Q28: Employed Full Time or Part Time**

28. Were you employed full-time or part-time?
- Full-time
  - Part-time
  - DK
  - REF

These questions are geared to solicit employment status. In general, respondents did not have difficulty determining full-time or part-time status. However, below are summaries of a few issues that arose. First, some employees may have difficulty deciding if their schedule counts as full-time or part-time. Those working irregular hours each week were not sure how to answer. In addition, for some, full-time was confused with the presence or absence of benefits, and not only number of hours.

- R1: R was on the border between picking full-time or part-time status. He thought he was not full-time so that the employer would not have to pay benefits. R reported that some weeks he was full-time, while other weeks he was only part-time. However, when asked for hours worked in a typical week, R1 reported 30-35 hours, which would generally not be considered full-time.
- R2: R said full-time but reported 33-35 hours in a typical week. This number of hours may be just below what is considered full-time employment.
- R9: In response to the Q, R said he had an internship. He also only worked 30-33 hours each week.
- R7: In response to this Q, R said she was not paid. R co-owns the company and gets profit shares. Since R does report 30-ish hours worked in a typical week, it seems that she should be able to report herself as part-time.
- R5: R considered himself to be full-time because it’s over 30 hours (he reported 32 hours in a typical week). R said that he heard the technical definition of full-time was 30 hours.

- Of the respondents reporting a full-time status, most reported working at least 40 hours. One respondent reported 33-35 and said it depends on the workload.

**Q29: Hours worked in typical week**

29. In a typical week, how many hours did you work? \_\_\_\_\_ hours  
 IF NECESSARY: Was it greater than or equal to 35 hours per week?  
 DK  
 REF

This question captures the number of hours that respondents work in a typical week. Many respondents give a range of hours worked, or qualified the answer in some way, such as “depending on workload.” In addition, it could be difficult for workers to provide exact number of hours. Some of the workers who gave ranges or qualified answers stated they were full-time (R4, R8, R2, R11). Respondents with variable schedules would certainly have difficulty providing a single estimate of hours; doing so could require them to average across a number of unspecified weeks, or to be clear on what a “typical” week would be.

- R1 (30-35 hours)
- R8 (40+ hours, up to 43)
- R2 (33-35 hours)
- R7 said 30-ish, “depends on assignments”
- R4 said about 40
- R11 said around 45
- R9 (30-33 hours)
- R6b as proxy for R6A (45-50 hours)
- R12Aself (30-32 hours, but R12B proxy for R12A said 40).

**Recommendations**

- This question on full or part-time status alone provided an inadequate measure of employment status. This question should be asked in tandem with number of hours worked in a typical week. Consequently, it could be dropped from the survey. The real value of employment status comes from the questions on number of hours each week.

- Guidance should also be provided for those who work without pay, such as interns and owners working for profit-share only.
- It may be helpful to include a preamble that clarifies for respondents the number of hours that would be required to be considered employed full time.
- For number of hours, R could be prompted to provide a single estimate instead of a range. Alternatively the question could capture a range of hours and the middle-point determined during data processing.

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**Type of Employer**

**Q30: Type of employer**

30. (Were/Was) (name/you) employed by government, by A private company, a nonprofit organization, or (was/were) (you/he/she) self-employed or working in the family business?
- a. Government
  - b. Private-for-profit company
  - c. Non-profit organization including tax exempt and charitable organizations
  - d. Self-employed
  - e. Working in the family business
31. Would that be the federal, state, or local government?
- a. Federal
  - b. State
  - c. Local

These questions ask about the type of employer the respondent works for. These questions generally worked well, but there was one issue that was observed with some frequency.

*Difficulty of classifying respondent workplace*

Though respondents did not report confusion about the answer categories, some respondents had difficulty knowing how to classify their workplace and place it within these categories.

- R1 asked what a grocery store would be, chose private for profit.

- R2 asked if the company would be private (it was a major shipping company).
- R7: it is private company she co-owns, so self-employed.
- R12B, proxy for 12A: R had difficulty picking an option. R hesitated before picking for private-for-profit.
- R12A seems to have answered correctly, but slight hesitation was noted. R12A (for self) said private.
- R12B initially said that he worked for NWU, cooking at fraternity houses. However, after other questions it became clear that R actually worked for a private company that was subcontracted by NWU.
- R4 asked for Q to be repeated. This respondent commented that the question was “wordy.”

### Recommendations

In order to make the question easier to read and reduce cognitive burden for respondents, we propose a slight change to the question stem:

Current question stem:

(Were/Was) (name/you) employed by government, by A private company, a nonprofit organization, or (was/were) ( you/he/she) self –employed or working in the family business?

- a. Government
- b. Private-for-profit company
- c. Non-profit organization including tax exempt and charitable organizations
- d. Self-employed
- e. Working in the family business

Proposed question stem:

(Were/Was) (name/you) employed by government, by a private, *for-profit* company, a nonprofit organization, ~~or (was/were) ( you/he/she)~~ self-employed or working in the family business?

- a. Government
- b. Private-for-profit company
- c. Non-profit organization including tax exempt and charitable organizations
- d. Self-employed
- e. Working in the family business

This proposed change eliminates a needless repetition of the subject of the question (respondent or proxy) and alters one of the choices to match exactly what it is labeled as in the response options. This change

also serves to accentuate the difference between this option (for-profit company) and the other response options.

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**Employer Details**

**Q32: For whom did R work?**

32. For whom did you work? [OPEN ENDED]

DK  
REF

The purpose of this question is to capture the name of the place where respondent is employed. Some respondents showed hesitation about providing the actual name of the company for which they worked. For others, it seemed that providing a generic name, such as “construction company” or “grocery store” was sufficient. It was not clear that the actual company name, such as “UPS”, was being requested.

- When speaking about the injuries to R12A, both R12A and R12B refused to provide the actual name. They are currently in a lawsuit with the employer (a major food chain) over the injury and did not want to provide that information.
- R12b (on self) did not answer these questions correctly. Initially he said that he worked for NWU. However, later it came out that R worked for a private company that caters to NWU (cooking at fraternity houses). After probing it became clear. However, R kept going back and forth between NWU and the catering company. The private company is “Quality Frozen Food”.
- R4 preferred not to say but described the type of company (stocking/UPS/shipping type company).
- R7 said “construction company,” but it was not clear if she did not want to provide the name or did not understand the question.
- Reporting on her own injuries, R6A said “bank” and did not want to say the name of the bank. However, R6B as proxy for R6A reported that the bank changed names a few times and provided the most recent name.

**Recommendations**

- The question was not clear in terms of soliciting the actual employer name. Text could be added to the question that asks for the company name, “What is the name of the company where you were employed?”
- Respondents were not able to distinguish between their own employer and sub-contractors. Preamble language could be added to note the distinction, “Not including sub-contractors and hiring agents, for whom did you work?”

- As for sensitivity of the question, the interviewer could remind respondents about the confidentiality of the data.

**Questions 33 and 34: Kind of business/industry and manufacturing/retail trade/wholesale trade/something else.**

33. What kind of business or industry was this? [OPEN ENDED]

DK  
REF

34. Was this business or organization mainly manufacturing, retail trade, wholesale trade, or something else?

- Manufacturing
- Retail trade
- Wholesale trade
- Other (agriculture, construction, service, government, etc.)
- DK
- REF

The purpose of these questions is to capture the nature of respondents' employers. While some respondents were confident in their answers, a few respondents were uncertain how to respond. When asked about the kind of business (Q33, open-ended), responses included "grocery store" or "food service" (R1, R12A, R12B), "commodity trading" (R5), "shipping" (R4, R8, R2), "bank" (R6A, R6B), "insurance" (R11), and "construction" (R7). R9 was an intern at an aquarium and responded "not sure, research?" For Q34, some respondents had trouble deciding between answers.

- R4: A respondent, who does "stock and inventory" for a stock/shipping company said it was half manufacturing and half retail. The company offers shipping services (if this counts as retail) but it is not clear what the company manufactures.
- R2: R worked for shipping company, but said she didn't know and guessed manufacturing.
- R9: An intern at an aquarium indicated he was unsure and said "research" and then chose "other" (service).
- R6B: was not sure and asked, "What would you call a bank?" R went with an "other" response.
- R5: A commodities trader indicated chose "other" (trader).
- R7: Respondent worked for a construction company that does remodeling and rehab. She said that they provide a service, but in the retail trade, so was unsure how to answer.
- R11: R's company services mortgages (although he does accounting). He chose something else (but did not specify).

- R12B (on self): He worked for a private company that provided food service to NWU. However, he answered “other, government” because “it is a school.” However, R should have been answering for the private retail company.
- R12B (on R12A): As proxy for R12A (who worked in a grocery store) seemed to have some difficulty deciding. He finally chose retail trade, which appears to be the correct category for grocery stores.

**Recommendations**

Some respondents may benefit from hearing explanations for each term. The questions need clarification of what counts as manufacturing, retail trade, and wholesale trade. It would be helpful to confirm whether Round 1 respondents answered correctly.

**Q39: Union or CBA**

39. At this job, were you a member of a union or covered by a collective bargaining agreement?
- a. YES
  - b. NO
  - c. DK
  - REF

Q39 asks respondents whether they are members of a union or covered by a collective bargaining agreement. Two of the respondents answered affirmatively (R7, R8). One proxy respondent (6B, reporting on 6A) thought that R6A was part of a union, but R6A indicated that she was not. Many respondents had heard of unions but collective bargaining agreements were not familiar to most respondents. Nevertheless, respondents seemed fairly certain of whether they themselves were union members or covered by a collective bargaining agreement.

**Q40: Number of workers**

40. About how many workers were employed by [TEXT FILL EMPLOYER NAME]?
- a. 1 to 10 workers
  - b. 11 to 49 workers
  - c. 50 to 249 workers
  - d. 250 to 999 workers
  - e. 1000 or more workers
  - f. DK
  - g. REF

This question is about the relative size of the place where the respondent works. There were two major issues encountered with this question.

*Cases where subcontractors or contractors are employed*

Some respondents worked at places that employed contractors or subcontractors, and were unsure whether these should be included in the count. Additionally, employees themselves could be contractors.

- R7 said 1-10 or higher if subcontractors are included. Do subcontractors count? How many are there?
- R9 said his intern group included 10-14 people. They wondered whether it was correct to include only interns and not others at the site.
- R12B (on self) worked for a private company that provided catering services at NWU. R went back and forth between speaking about working for NWU and working for the catering service. Interviewer had to probe about which one to include. Initially R was starting to give a count for the university workers, but was probed on the question and then gave the amount for the private company (8).

*Cases where the employee works at a branch of a larger organization or an employer with multiple shifts*

Respondents were unsure in certain situations whether to answer for their local branch or the entire company, or their particular shift vs. the total of all shifts.

- R1 did not know whether to include all locations or just the one where they worked (the store was part of a larger chain). R estimated 200, just for the location he worked at.
- 6A provided the local total for her branch of the bank of 20 and a total of 1500 for all branches.
- R8 wanted to know whether to count per shift or total. 1500 per shift, 6500 total

Some respondents seemed certain of the number of workers were employed by their company:

- R4: estimated 20 to 30 from looking around. This respondent said he thought of his “day to day” when coming up with the number.
- R5 said 1 to 10 workers, noting that it was a small place so he was certain.
- R11: 30. R is in accounting and just knows.

Proxy respondents were less certain about their answers:

- R12A said 250. R12B (as proxy for R12A) said don’t know... a lot.
- 6B as proxy for 6A guessed 8 but then said “not sure.”

**Recommendations:**

Because respondents expressed some confusion in cases where there is an employer with multiple branches, we recommend adding a clarifying note after the question:

(If your employer has multiple locations, please answer [only for the location where you worked/for all locations.] )

If contractors and subcontractors are intended to count towards the total, an additional clarifying note could be added after the 1<sup>st</sup>:

(Please include contractors and subcontractors in you count.)

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**Proxy Respondents**

For two of the recruited respondents, R6A and R12A, another adult member of the respondent’s household was also invited to take part in an interview. We collected data on each member of these two pairs, four individuals in total, in both self-interviews and proxy interviews. We examined self- and proxy-reported answers to selected questions to assess the accuracy of proxy response. The data are presented in Exhibit 2. In this exhibit, the focal respondent is the person about whom the data are being collected. For each focal respondent, we compare the data from selected questions from the respondent’s self-interview and proxy interview (conducted with the respondent’s household member).

As Exhibit 2 shows, there is overall agreement between respondents and proxies on the injury or illness that occurred and approximately when it happened. Reports on how the injury or illness affected work were less consistent.

**Exhibit 2: Proxy Reporting**

Question	Focal Respondent	Self vs. Proxy Comparison
Screener (Q1 - Q8)	6A	<ul style="list-style-type: none"> <li>• Self (6A) and proxy (6B) both noted the R’s condition, anxiety attacks and stress. Self (6A) also noted “soreness or pain” and “skin disorders” in response to Q4 and Q5, which proxy (6B) did not mention (both may have been related to the anxiety, not different incidents).</li> <li>• Dates matched.</li> </ul>
	6B	<ul style="list-style-type: none"> <li>• Self (6B) and proxy (6A) did not initially report injury/illness at Q1. However, at Q5, both mentioned that 6B had respiratory issues, likely related to working with cardboard.</li> <li>• Due to time constraints and interruption by call, interview was abbreviated. Not all Qs available for comparison.</li> </ul>
	12A	<ul style="list-style-type: none"> <li>• Self (12A) and proxy (12B) agreement that injury occurred, fall at grocery store where R worked.</li> <li>• Agreed on date of fall (anniversary).</li> <li>• Self mentioned carpal tunnel, which proxy did not mention.</li> </ul>
	12B	<ul style="list-style-type: none"> <li>• Both reported 12B’s injury. At Q4, proxy (12A) reported that 12B had cut finger when cutting carrots at work. The R (12B) reported this injury in response to Q on “ever” experienced injury or illness.</li> <li>• Self (12B) and proxy (12A) generally agreed on date, about a year ago. Self thought it was more than a year ago so only reported it in response to “ever” Q. Proxy thought injury was within the reference period.</li> </ul>

Injury or Illness (Q10 – Q13)	6A	<ul style="list-style-type: none"> <li>• Agreement about respondent 6A being “pushed beyond limit” (6A), and “all the pressure she’s under” (6B).</li> <li>• 6A self-reported additional effects of stress (bodily reaction skin condition, headaches, etc.), that the proxy (6B) did not mention.</li> </ul>
	6B	<ul style="list-style-type: none"> <li>• Missing data.</li> </ul>
	12A	<ul style="list-style-type: none"> <li>• Self (12A) and proxy (12B) agreed on the event (slipped on wet floor and fell), source (floor), body part (knee and ankle) and nature (sprain).</li> <li>• Self (12A) reported more detail than proxy (right knee and ankle, torn tendons, ligaments, etc.).</li> </ul>
	12B	<ul style="list-style-type: none"> <li>• Self and proxy agreed on event (cutting carrots), source (knife), body part (finger), and nature (cut)</li> </ul>
Medical Attention (Q14)	6A	<ul style="list-style-type: none"> <li>• Self (6A) and proxy (6B) agreed that the R consulted a medical professional.</li> <li>• Both reported doctor and therapist.</li> </ul>
	6B	<ul style="list-style-type: none"> <li>• Missing data.</li> </ul>
	12A	<ul style="list-style-type: none"> <li>• Self (12A) and proxy (12B) agreed that medical professional consulted.</li> <li>• Both reported trip to emergency room.</li> </ul>
	12B	<ul style="list-style-type: none"> <li>• Self and proxy reported that R saw doctor. From proxy’s explanation, this happened the day after the cut.</li> </ul>
Effect on Work— Report to Employer (Q18)	6A	<ul style="list-style-type: none"> <li>• Self said reported “not right away.” Proxy was not sure but thought R reported.</li> </ul>
	6B	<ul style="list-style-type: none"> <li>• Missing data</li> </ul>
	12A	<ul style="list-style-type: none"> <li>• Both said the incident was reported to the employer.</li> </ul>
	12B	<ul style="list-style-type: none"> <li>• Both said the incident was reported to the employer.</li> </ul>
Effect on Work— Injury/Illness Caused... (Q20)	6A	<ul style="list-style-type: none"> <li>• Self and proxy agreed on all parts of Q20 except receipt of temporary disability benefits. R said “yes” but proxy said “no.”</li> </ul>
	6B	<ul style="list-style-type: none"> <li>• Missing data</li> </ul>
	12A	<ul style="list-style-type: none"> <li>• Self and proxy agreed on many items, except temporary disability benefits (self=yes, proxy=no), quit job (self=yes,</li> </ul>

		proxy=no), laid off (self=yes but not sure, proxy=no), change occupations (self=somewhat yes, proxy=no). Self-report yielded more “yes” responses than proxy report.
	12B	<ul style="list-style-type: none"> <li>Self (12B) and proxy (12A) agreed on most items. They did not agree on unable to work next day (self=yes, proxy=no, although 12B was confused by the question), unable to perform normal duties (self=yes, proxy=no), quit your job (self=yes, proxy=no).</li> </ul>
Effect on Work—Days Missed (Q21 – Q22)	6A	<ul style="list-style-type: none"> <li>Self and proxy reports appeared to be in conflict, but the lack of consistency could be due to different interpretations of the questions. 6A self-reported that the doctor advised a break but in answer to the question (days not able to work) she said she could work. Proxy (6B) reported a few instances in which 6A had taken days off here and there (but was not talking about immediately after anxiety episode).</li> <li>R reported she went back the day after for a few days and then took time off. Proxy report agrees.</li> </ul>
	6B	<ul style="list-style-type: none"> <li>Missing data</li> </ul>
	12A	<ul style="list-style-type: none"> <li>Self and proxy reports conflict. R self-reported 22 days off for Q21 and 25 for Q22. However, proxy said the R did not return to work. The R’s report is based on doctor advice that she take 3 weeks off. R said she did return to work but not full hours and the hours kept getting reduced and she quit.</li> </ul>
	12B	<ul style="list-style-type: none"> <li>R12B did not understand questions well and could not provide a number of days for Q21 and Q22. The proxy said R12B did not miss days of work.</li> </ul>
	Effect on Work—Workers’ Comp (Q23)	6A
	6B	<ul style="list-style-type: none"> <li>Missing data</li> </ul>
	12A	<ul style="list-style-type: none"> <li>R12A said no claim was filed but proxy said yes.</li> </ul>
	12B	<ul style="list-style-type: none"> <li>Both R and proxy agreed that no claim was filed.</li> </ul>

**Additional Recommendations and Issues for Discussion**

In addition to the recommendations presented by questionnaire section or item above, we present the following additional recommendations and items for discussion:

- Guidelines are needed for when and how often to repeat the question stem for questions in grids.
  - In intro to Q10 there is a typo that we will correct...”Now I going to ask you more about..” should be “Now I am going to ask you more about..”
  - We are not certain why there are separate response options for “spouse present” and “spouse absent” in the marital status question (Q45). Should R be probed to determine whether spouse is present or absent?
  - Do we read the education categories in Q47 or not?
  - We noticed that the consent form refers to the Privacy Act notice on the back of the consent form. Can BLS provide this so we can include it with the consent form?
-

**HOUSEHOLD SURVEY OF OCCUPATIONAL INJURIES AND ILLNESSES**  
**DRAFT cognitive interview protocol**

***MATERIALS NEEDED FOR INTERVIEW***

- |  |
|--|
| <input type="checkbox"/> INTERVIEWER PROTOCOL BOOKLET (THIS BOOKLET) AND SHOWCARDS<br><input type="checkbox"/> CONSENT FORM (TWO COPIES)<br><input type="checkbox"/> \$40 CASH IN ENVELOPE<br><input type="checkbox"/> PAYMENT RECEIPT<br><input type="checkbox"/> FULLY CHARGED DIGITAL RECORDER AND EXTRA BATTERIES<br><input type="checkbox"/> NOTE PAPER, PENS AND PENCILS |
|--|

***STEP 1: INFORMED CONSENT***

PROVIDE RESPONDENT WITH A COPY OF THE INFORMED CONSENT FORM. ASK THE RESPONDENT TO READ THE FORM, ANSWER ANY QUESTIONS, AND HAVE THE RESPONDENT SIGN THE FORM. LEAVE A SEPARATE COPY OF THE FORM WITH THE RESPONDENT.

- |   |
|---|
| <input type="checkbox"/> SIGNED CONSENT FORM COLLECTED<br><input type="checkbox"/> COPY OF CONSENT FORM GIVEN TO RESPONDENT |
|---|

- |  |
|--|
| <input type="checkbox"/> IF THE RESPONDENT HAS CONSENTED TO RECORDING, START THE RECORDER. |
|--|

***STEP 2: COMPLETION OF THE QUESTIONNAIRE***

BEGIN QUESTIONNAIRE.

**Interviewer probe bank (use as appropriate):**

- “How did you come up with that answer?”
- “Can you tell me in your own words what you think the question is asking?”
- “Can you tell me more about that?”

If you pick up on a visual cue that suggests an issue or confusion:

- “Tell me what you are thinking.”
- What does the word [term] in this question mean to you?
- You said [answer]. Can you tell me more about that?

If R is uncertain and asking for confirmation:

- There is not a right or wrong answer for this question. I am interested in hearing your thoughts on what the question is asking.

**INTERVIEWER:** If this interview is with a proxy respondent, please modify language accordingly. For example, instead of asking “Did you do ANY work for pay or profit?” ask “Did [your husband/wife/brother/he/she] do ANY work for pay or profit?”

**Survey Introduction**

This survey is about work-related injuries and illnesses that you may have experienced. I would like to ask you questions about your work history and about the injuries and illnesses you may have had that are related to your job. The information that you provide in this survey is confidential. Your name and your answers to the questions will not be

shared with anyone outside of NORC, the survey organization conducting this survey. I would be happy to answer any questions you may have about the survey. [ANSWER RESPONDENT QUESTIONS.] Let's begin.

**Screenener**

1. Since [CURRENT MONTH, ONE YEAR AGO], did you do ANY work for pay or profit?
  - a. Yes → ELIGIBLE, CONTINUE
  - b. No → NOT ELIGIBLE, END INTERVIEW
  - c. DK
  - d. REF

Any injury

2. Since [CURRENT MONTH, ONE YEAR AGO], have you experienced any injuries or illnesses related to any job you had?
  - a. Yes → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
  - b. No → SKIP TO Q4
  - c. DK
  - d. REF

3. Did that injury/illness cause you to...

	Yes	No	DK	REF
Lose consciousness?				
Be unable to work for a day or more?				
Restrict your work activities?				
Transfer jobs?				
Get medical treatment other than first aid?				

IF YES, COLLECT BRIEF DESCRIPTION AND CONFIRM WORK-RELATED.

4. [Other than the injury/illness you just mentioned], since [CURRENT MONTH, ONE YEAR AGO], have you experienced any of the following injuries related to any job you had? I'm going to read a list of examples...

CUES

- a. Sprains, strains or tears
- b. Soreness or pain
- c. Bruises or contusions
- d. Cuts, lacerations or punctures
- e. Broken bones
- f. Injury to muscles or joints
- g. Open wounds
- h. Burns
- i. Carpal tunnel syndrome
- j. Any other injury?

- 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- 2) NO
- 3) DK
- 4) REF

5. [Other than what you have already mentioned], since [CURRENT MONTH, ONE YEAR AGO], have you experienced any of the following illnesses, related to any job you had? I'm going to read a list of examples...

CUES:

- a. Skin disorders

- b. Respiratory conditions
- c. Poisonings,
- d. Hearing loss
- e. A disease or infection
- f. Cancer
- g. Any other illness?

- 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- 2) NO
- 3) DK
- 4) REF

IF R HAS NOT REPORTED ANY INJURIES OR ILLNESSES ASK ABOUT INJURIES/ILLNESSES **EVER** EXPERIENCED. ELSE GO TO Q7.]

6. Have you **EVER** experienced any injuries or illnesses related to any job you had?

- a. YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- b. NO → GO TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS
- c. DK → GO TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS
- d. REF → GO TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS

7. [IF YES TO ANY INJURIES OR ILLNESSES] How many total times [since CURRENT MONTH, ONE YEAR AGO-], did you experience/have you ever experienced] an injury or illness related to any job you had? [THIS WILL CREATE THE LOOPS.] \_\_\_\_\_TIMES

8. [FOR EACH INJURY/ILLNESS] In what month and year did this injury/illness occur?

MONTH/YEAR  
 ENTER MM/YYYY  
 DK  
 REF

INTERVIEWER: CONFIRM NUMBER OF INCIDENTS AND BRIEF DESCRIPTION OF EACH. IF INJURY/ILLNESS EXPERIENCED WITHIN PAST YEAR, RESPONDENT WILL REPORT ON THOSE. OTHERWISE, IF NO INJURY/ILLNESS WITHIN PAST YEAR, RESPONDENT WILL REPORT ON INJURIES/ILLNESSES EVER EXPERIENCED.

***Probes:***

*Screeener*

- I asked you this question: “Since [CURRENT MONTH, ONE YEAR AGO], have you experienced any injuries or illnesses related to any job you had?” In your own words, what is this question asking?
- In your own words, what would be a work-related injury or illness? Can you give me some examples of some things that would count as work-related injuries and illnesses? What would not count?
- Tell me about the kind of work you do. Tell me about other times when you got hurt or sick because of the work you do.
- [I asked you about whether you ever experienced any injury or illness, related to any job you had, that caused you to get medical treatment other than first aid]. What does “first aid” mean to you? What kind of treatment counts as first aid? What kind of treatment doesn’t count?

- The questions gave some examples of injuries and illnesses [CHOOSE FEW FOR EACH PERSON SHOWCARD FROM LIST FROM Q4 AND Q5]. Are you familiar with [LIST]? Which ones have you heard of? Which ones had you not heard of?
- How easy or hard was it to remember when the injury/illness happened? Can you tell me more about that? How did you figure out when the injury/illness happened?

***Notes to interviewer:***

The goal of the screener section is to enumerate all instances of work-related injuries and illnesses that occurred during the reference period. What issues do respondents have in reporting these incidents? Do they understand the types of injuries and illnesses to report? Can they accurately report only those that are work-related? How do they determine the boundary of the reference period and determine whether an incident occurred within the RP?

IF NO INCIDENTS OF WORK-RELATED INJURIES AND ILLNESSES, GO TO DEMOGRAPHICS SECTION.

**Injury or Illness**

[FOR FIRST INJURY/ILLNESS START AT Q10]

[FOR SECOND AND FOLLOWING INJURY/ILLNESS START AT Q9]

9. [FOR SECOND/THIRD/ETC. LOOPS] How is this injury/illness related to the other injury/illness you mentioned? Is this related to [the other/another] injury/illness you already mentioned or is it a different injury/illness?
  - a. RELATED TO THE OTHER/ANOTHER INJURY/ILLNESS [GO TO NEXT LOOP]
  - b. THIS IS A DIFFERENT INJURY/ILLNESS [CONTINUE]
  - c. DK
  - d. REF

“Now I going to ask you more about [INJURY/ILLNESS #....].”

10. **[WORKER ACTIVITY + some EVENT and SOURCE]** [FOR EACH LOOP] What happened? How did the injury or illness occur? [For example: “When ladder slipped on wet floor, I fell 20 feet”; “I was sprayed with chlorine when gasket broke during replacement”; “I developed soreness in wrist over time.”] [OPEN ENDED]

11. **[EVENT and SOURCE]** [FOR EACH LOOP] What were you doing just before the incident occurred? Describe the activity as well as the tools, equipment, or material you were using. Be specific. [Examples: “climbing a ladder while carrying roofing materials”; “spraying chlorine from hand sprayer”; “daily computer key-entry.”]

a. DESCRIBE THE ACTIVITY.

DK  
REF

b. DESCRIBE THE TOOLS, EQUIPMENT, OR MATERIAL THAT YOU WERE USING.] [OPEN ENDED]

DK  
REF

12. **[SOURCE]** [FOR EACH LOOP] What object or substance directly harmed you? [Examples: “concrete floor”; “chlorine”; “radial arm saw.”]

- a. FLOORS, WALKWAYS, GROUND SURFACES
- b. VEHICLES
- c. WORKER MOTION OR POSITION
- d. CONTAINERS
- e. PARTS AND MATERIALS
- f. OTHER \_\_\_\_\_
- g. NOT APPLICABLE
- h. DK
- i. REF

Body part/type of injury

13. **[NATURE and PART]** [FOR EACH LOOP] [INTERVIEWER NOTE: R should be more specific than “hurt,” “pain,” or “sore.” For example: “strained back”; “chemical burn, hand”; “carpal tunnel syndrome.”]

a. How did this injury or illness happen?

- a. OVEREXERTION AND BODILY REACTION WHILE LIFTING, PULLING, ETC., OR PERFORMING A REPETITIVE MOTION
- b. FALLS, SLIPS OR TRIPS, FALLS ON THE SAME LEVEL
- c. CONTACT WITH OBJECTS OR EQUIPMENT, STRUCK BY OBJECT OR EQUIPMENT
- d. INJURY CAUSED BY ANOTHER PERSON OR AN ANIMAL
- e. INCIDENT RELATED TO A CAR, TRAIN, AIRPLANE OR OTHER FORM OF TRANSPORTATION
- f. EXPOSURE TO SOMETHING HARMFUL, SUCH AS ELECTRICITY, RADIATION, HEAT OR COLD, A NEEDLE OR SHARP OBJECT
- g. OTHER \_\_\_\_\_

CHECKLIST
1. Description or diagnosis for injury/illness (this is the OIICS <b>nature</b> )
2. Part or parts of body affected, including body systems (OIICS <b>part</b> , obviously)
3. How the injury/illness/exposure happened (OIICS <b>event</b> )
4. Vehicles, tools, chemicals, surfaces, or any other objects involved; this can be multiple objects; this can also just be the person’s body moved incorrectly (OIICS <b>sources</b> )

- h. DK
  - i. REF
- b. What part of your body was affected?
- a. ARM
  - b. WRIST
  - c. SHOULDER
  - d. FINGERS
  - e. HANDS
  - f. HEAD
  - g. KNEE
  - h. ANKLE
  - i. FOOT
  - j. TOE
  - k. BACK LOCATIONS (THORACIC, LUMBAR, SACRAL, COCCYGEAL)
  - l. ENTIRE BODY
  - m. LUNGS
  - n. OTHER ORGANS
  - o. OTHER \_\_\_\_\_
  - p. DK
  - q. REF
- c. How was it affected? What type of injury or illness affected your [PART OF BODY]?
- a. SPRAINS, STRAINS, TEARS
  - b. SORENESS, PAIN
  - c. BRUISES, CONTUSIONS
  - d. FRACTURES
  - e. CUTS, LACERATIONS, PUNCTURES
  - f. BROKEN BONE
  - g. INJURY TO MUSCLES OR JOINTS
  - h. STRAINS OR SPRAINS
  - i. OPEN WOUNDS, CUTS, BRUISES OR BURNS
  - j. PAIN
  - k. CARPAL TUNNEL SYNDROME
  - l. SKIN DISORDERS
  - m. RESPIRATORY CONDITIONS
  - n. POISONINGS
  - o. HEARING LOSS
  - p. A DISEASE OR INFECTION
  - q. AN ILLNESS SUCH AS CANCER
  - r. ANY OTHER INJURY OR ILLNESS?
  - s. DK
  - t. REF

**Probes:**

*Characteristics of incident*

- [READ QUESTION] Can you tell me in your own words what you think this question is asking?
- [IF R DOES NOT INDICATE HOW INJURY/ILLNESS IS WORK-RELATED] Tell me more about how this injury/illness was related to your job. Where were you when this happened? What were you doing? What caused the injury/illness? Tell me more about the injury/illness.

**Notes to interviewer:**

Questions 10 through 13 are intended to capture (event or exposure, source of the injury/illness, part of body affected, and nature of the injury/illness). Do the questions elicit the information needed? Are the response options adequate to capture the information Rs give? Use general probing to elicit more information about the incident. (For example, if R says “I cut myself” ask: What part of your body was injured? What did you get cut with? What were you doing at the time?)

Medical attention

14. [FOR EACH LOOP] Was the injury/illness serious enough that a medical professional was consulted?
- a. Yes → What type of medical professional did you see? (specify) \_\_\_\_\_
  - b. No
  - c. DK
  - d. REF

15. [FOR EACH LOOP] Did you get medical advice, treatment, or follow-up care for this injury/illness from...?

	Yes	No	Not needed	DK/REF
An emergency vehicle, such as an ambulance or fire truck				
An emergency room				
A doctor’s office or other health clinic <i>Please include on-site offices or clinics at your place of employment</i>				
A phone call to a doctor, nurse, or other health care professional				
Any place else? Specify				

16. [FOR EACH LOOP] Were you in the hospital?
- a. YES → How many nights were you in the hospital? \_\_\_\_\_ nights
  - b. NO
  - c. DK
  - d. REF

17. Did you receive a medical diagnosis from your healthcare professional?
- a. YES → What was your medical diagnosis?
  - b. NO
  - c. DK
  - d. REF

**Probes:**

*Medical attention (tailor probes based on whether R reported receiving medical attention)*

- Tell me more about the medical care you received after the injury/illness happened.
- Can you tell me in your own words what you think this question is asking?
- Who do you think of as a medical professional? Who would you include or not include? [IF NEEDED ASK IF THESE WOULD COUNT: medical doctor, nurse, physician’s assistant, chiropractor, paramedic]
- I asked you about whether you received a medical diagnosis. What does the term “medical diagnosis” mean to you? How do you get a medical diagnosis? Who gives you a medical diagnosis? Does a medical diagnosis have to come from a doctor or other health care professional?
- IF NEEDED] Did you go to a doctor, nurse, or other health care provider after [INCIDENT]? Did you go to the hospital or did paramedics come?
- Is/Was there a medical clinic at your place of employment? Did you see anyone at that clinic?
- Did you speak to a doctor, nurse, or another health care provider by phone after the incident?

**Notes to interviewer:**

Effect on work

18. [FOR EACH LOOP] Did you report this injury/illness to your employer?
- YES [SKIP TO Q20]
  - NO
  - DK
  - REF

19. [FOR EACH LOOP] IF NO TO REPORTING TO EMPLOYER: Why did you not report this injury/illness to your employer?

- |   |     |    |    |     |
|---|-----|----|----|-----|
| a. Avoid being laid off   | YES | NO | DK | REF |
| b. Avoid loss of wages  | YES | NO | DK | REF |
| c. Avoid loss of promotion or advancement                             | YES | NO | DK | REF |
| d. Avoid job transfer or restriction                                  | YES | NO | DK | REF |
| e. Employer would not recognize the injury/illness as work-related    | YES | NO | DK | REF |
| f. Employer wants to keep injury and illness rates low                | YES | NO | DK | REF |
| g. Realized the injury/illness was work-related after leaving the job | YES | NO | DK | REF |
| h. Other (specify)  | YES | NO | DK | REF |

**Probes:**

*Effect on work*

- [IF YES TO Q19] Tell me more about the reasons why you did not tell your employer about this injury/illness. Which was the main reason for not telling your employer? Tell me more about that.

**Notes to interviewer:**

Observe for signs of acquiescence bias in Q19. Are Rs saying “yes” because a reason sounds plausible or because it was a reason why R did not report an injury/illness? Ask for more detail and main reasons. How did R determine an answer to each item in Q19? Probe to explore understanding of terms, ability to accurately report on consequences of the injury/illness.

20. [FOR EACH LOOP] Did the injury/illness cause you to...?

	YES	NO	NOT NEEDED	DK/REF
a. Be unable to work the next day, whether or not you were actually scheduled to work? [BE SURE TO ASK Q21]				
b. Work at your regular job less than your usual number of hours?				
c. Work at your regular job, but be unable to perform all of the normal duties of the job?				
d. Be assigned to another job on a temporary basis?				
e. Be transferred?				
f. Receive temporary disability benefits?				
g. Quit your job?				
h. Be laid off?				
i. Be fired?				
j. Change occupations?				
k. Lose any wages?				
l. OTHER (SPECIFY)				

IF NO WORK DAYS MISSED, GO THROUGH PROBES THEN SKIP TO INTRO AT Q23.

**Probes:**

*Effect on work*

- IF YES TO ANY ITEM IN Q20: Tell me more about [TEXT FILL]. [E.g., Tell me more about your normal job duties. What duties were you unable to perform? OR Tell me more about why you quit your job? When did you quit? How was that related to your injury/illness?]
- What does the term [TEXT FILL] mean to you? Can you give me an example? [E.g., What does it mean to you to be assigned to another job on a temporary basis? What does it mean to you to be transferred?]
- What kind of effect did the injury/illness have on your work schedule? Job duties? Ability to work? Ability to keep your job? The pay you received?

*Temporary disability*

- I asked about whether you received temporary disability benefits. Have you heard of temporary disability benefits? Can you tell me what this term means?

21. [FOR EACH LOOP] IF YES ON MISSING DAYS OF WORK Q20a: How many calendar days, or days in a row, were you not able to work? *This may include both the days you were scheduled to work and days you were not scheduled.*

\_\_\_\_ DAYS

DK

REF

22. [FOR EACH LOOP] How many days after the injury/illness were you able to start work again?

- a. \_\_\_\_ DAYS AFTER THE INJURY/ILLNESS
- b. STILL OFF PAID WORK
- c. EXPECTS NEVER TO DO PAID WORK AGAIN
- d. BACK TO WORK SAME DAY
- e. DK
- f. REF

**Probes:**

*Calendar days missed*

- You said you missed XX calendar days of work. How did you figure that out?
- Walk me through the timeline of when you were injured and when you got back to work.
- Did your doctor or another medical professional recommend that you take days off from work? How many days off did they recommend?
- I asked you [REPEAT QUESTION AND ITALICIZED INSTRUCTION ON CALENDAR DAYS NOT ABLE TO WORK]. Can you tell me in your own words what you think this question is asking? Can you think of a simpler way to ask this question? What does the term “calendar day” mean to you?

**Notes to interviewer:**

Is R able to distinguish between work shifts vs. calendar days of work missed? Does R correctly report calendar days missed? How does R determine the days missed?

If reported no days missed in Q20a, confirm that R is thinking of calendar days, not work shifts.

Workers' compensation

Workers' compensation is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job. The next questions are about income you may have received from workers' compensation.

23. [FOR EACH LOOP] Has anyone filed a workers' compensation claim for this injury/illness?

- a. YES
- b. NO [SKIP TO Q25]
- c. DK
- d. REF

24. Who filed the workers' compensation claim?

- a. EMPLOYER
- b. EMPLOYEE
- c. FAMILY MEMBER OF EMPLOYEE
- d. OTHER SPECIFY
- e. DK
- f. REF

GO TO SKIP INSTRUCTION BEFORE Q26.

25. [FOR EACH LOOP] IF NO ON QUESTION ABOUT WORKERS' COMPENSATION: What was the main reason you or your employer did not file a workers' compensation claim for this injury/illness?

- a. Not eligible (did not meet waiting period)
- b. Employer refused
- c. Did not inform employer
- d. Worker unaware of workers' compensation coverage
- e. Other reason, please specify
- f. DK
- g. REF

SKIP INSTRUCTION:

#1: IF YES TO Q20a—MISSED DAYS OF WORK, GO TO Q26.

#2: ELSE IF WORKERS' COMPENSATION CLAIM FILED (i.e., Q23=YES) SKIP TO Q27.

#3: ELSE GO TO PROBES AT END OF SECTION THEN SKIP TO INTRO BEFORE Q28.

26. IF R MISSED DAYS OF WORK FOLLOWING THE INJURY/ILLNESS: *MARK YES OR NO FOR EACH QUESTION*

	YES	NO	NOT NEEDED	DK/REF
Did you receive workers' compensation?				
Being <i>kept on salary</i> means that, after an injury or illness, your employer continued to pay the wages and other compensation you were receiving when the injury or illness occurred. Were you kept on salary?				
<i>Short-term or temporary disability</i> benefits provide you with a portion of your income if you are temporarily unable to work due to a medical condition. Did you receive short term (temporary) disability?				
Did you use sick leave, annual leave, or personal time off?				
Did you take leave without pay?				
Other-specify _____				

Definitions:

Workers compensation is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job.

Being kept on salary means that, after an injury or illness, your employer continued to pay the wages and other compensation you were receiving when the injury or illness occurred.

Short-term or temporary disability benefits provide you with a portion of your income if you are temporarily unable to work due to a medical condition.

27. [FOR EACH LOOP] IF FILED A WORKERS' COMPENSATION CLAIM: Is there an open claim pending for this injury/illness?
- a. YES
  - b. NO
  - c. DK
  - d. REF

**Probes:**

*Workers' compensation*

- ASK PROBES TAILORED TO THE REASONS R REPORTS ON WHY NO WC CLAIM WAS FILED BY EMPLOYER. EXAMPLES: Tell me more about the reasons why your employer did not file a workers' compensation claim for this injury/illness? What did your employer say? Why did the employer refuse? How sure are you about whether or not your employer filed a claim?
- Can you tell me what it means to file a workers' compensation claim? Tell me what you know about that process.
- Have you heard of [TEXT FILL]? Please tell me in your own words what you think [TEXT FILL] means: workers' compensation, kept on salary, short-term or temporary disability, sick leave/annual leave/personal time off, leave without pay.

**Notes to interviewer:**

Do Rs know what workers' compensation is? Do they know whether a WC form was filed? Are the terms in Q26 familiar to Rs and are the definitions helpful?

### Occupation and Industry at Time of Injury or Illness

[FOR EACH LOOP] Thinking about the time of the injury/illness [TEXT FILL DESCRIPTION].

28. Were you employed full-time or part-time?
- a. Full-time
  - b. Part-time
  - c. DK
  - d. REF
29. In a typical week, how many hours did you work? \_\_\_\_\_ hours  
IF NECESSARY: Was it greater than or equal to 35 hours per week?  
DK  
REF

**Probes:**

*Hours worked*

- Do you work the same number of hours per week, or not? How did you determine how many hours per week you typically work?

**Notes to interviewer:**

Does R have any difficulty recalling FT vs. PT work? How do Rs with irregular work schedules, seasonal employment, etc., answer the question? Does the number of hours per week typically worked accord with report of FT/PT status?

30. (Were/Was) (name/you) employed by government, by A private company, a nonprofit organization, or (was/were) ( you/he/she) self –employed or working in the family business?
- Government
  - Private-for-profit company
  - Non-profit organization including tax exempt and charitable organizations
  - Self-employed
  - Working in the family business
31. Would that be the federal, state, or local government?
- Federal
  - State
  - Local
32. For whom did you work? [OPEN ENDED]
- DK  
REF
33. What kind of business or industry was this? [OPEN ENDED]
- DK  
REF
34. Was this business or organization mainly manufacturing, retail trade, wholesale trade, or something else?
- Manufacturing
  - Retail trade
  - Wholesale trade
  - Other (agriculture, construction, service, government, etc.)
  - DK
  - REF
35. What did they make or do where you worked? [OPEN ENDED]
- DK  
REF
36. In what state were you employed at this job?
- DK  
REF
37. What kind of work did you do? (For example: registered nurse, personnel manager, supervisor of order department, secretary, accountant) [OPEN ENDED]
- DK  
REF

38. What were your most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, typing and filing, reconciling financial records) [OPEN ENDED]  
 DK  
 REF
39. At this job, were you a member of a union or covered by a collective bargaining agreement?  
 a. YES  
 b. NO  
 c. DK  
 REF
40. About how many workers were employed by [TEXT FILL EMPLOYER NAME]?  
 a. 1 to 10 workers  
 b. 11 to 49 workers  
 c. 50 to 249 workers  
 d. 250 to 999 workers  
 e. 1000 or more workers  
 f. DK  
 g. REF

**Probes:**

*Employment characteristics for job at time of injury/illness*

- Q39 (union): Have you heard of unions? Have you heard of a collective bargaining agreement? Tell me what those words mean to you.
- Q39: Tell me how you decided on your answer. Tell me about the collective bargaining agreement. What union do/did you belong to?
- Q40 ON HOW MANY WORKERS: Tell me how you figured out your answer to this question. Walk me through how you figured out that answer. How certain are you of your answer?

**Notes to interviewer:**

Observe respondent ability to understand and respond to questions about employment at time of the injury/illness. Probe as needed to explore an issues with response. Are respondents able to accurately report answers for Q39 and Q40?

IF R HAS ADDITIONAL INJURIES/ILLNESSES TO REPORT, GO BACK TO Q9. ELSE GO TO Q41.

**Demographic Characteristics**

Race/ethnicity

41. Are you Spanish, Hispanic, or Latino?  
 a. YES  
 b. NO  
 c. DK  
 d. REF
42. [I am going to read you a list of five race categories.] Please choose one or more races that you consider yourself to be:  
 a. White  
 b. Black or African American  
 c. American Indian or Alaska Native

- d. Asian
- e. Native Hawaiian or Other Pacific Islander
- f. Other \_\_\_\_\_
- g. DK
- h. REF

Age

43. What is your date of birth? Enter MM/DD/YYYY

- DK
- REF

44. As of last week, that would make you approximately (AGE) years old. Is that correct?

[IF NECESSARY] Even though you don't know your exact birthdate, what is your best guess as to how old you were on your last birthday?

\_\_\_\_\_ years

- DK
- REF

Marital Type

45. Are you now married, widowed, divorced, separated or never married?

- a. MARRIED - SPOUSE PRESENT
- b. MARRIED - SPOUSE ABSENT
- c. WIDOWED
- d. DIVORCED
- e. SEPARATED
- f. NEVER MARRIED
- g. DK
- h. REF

Gender

46. Are you male or female?

- a. MALE
- b. FEMALE

Education

47. What is the highest level of school you have completed or the highest degree you have received?

- a. Less than 1st grade
- b. 1st, 2nd, 3rd or 4th grade
- c. 5th or 6th grade
- d. 7th or 8th grade
- e. 9th grade or 10th grade
- f. 11th grade
- g. 12th grade NO DIPLOMA
- h. High school graduate - high school diploma or the equivalent (For example: GED)
- i. Some college but no degree
- j. Associate degree in college - Occupational/vocational program
- k. Associate degree in college -- Academic program
- l. Bachelor's degree (For example: BA, AB, BS)
- m. Master's degree (For example: MA, MS, MEng, MEd, MSW, MBA)
- n. Professional School Degree (For example: MD, DDS, DVM, LLB, JD)
- o. Doctorate degree (For example: PhD, EdD)

## Current Industry and Occupation

The next questions are about your **current job**. *If you have more than one job, please tell me about the job at which you usually work the most hours. If you work the same number of hours at two jobs, please tell me about the job where you were employed the longest.*

48. What is your current employment status? Are you currently employed full-time, part-time, or are you not employed?
- FULL-TIME
  - PART-TIME
  - NOT CURRENTLY EMPLOYED [SKIP TO END OF SURVEY]
  - DK
  - REF
49. [IF CURRENTLY EMPLOYED] Is this job the same job with the same employer that you have already told me about?
- Same job with same employer [FOLLOW SKIP BELOW at Q50]
  - Different job, same employer [SKIP TO Q48]
  - Different employer [SKIP TO Q48]
  - DK
  - REF
50. [IF YES AND ONLY ONE LOOP FOR INJURY/ILLNESS THEN SKIP TO END OF SURVEY. ELSE IF YES AND MORE THAN ONE REPORTED INJURY/ILLNESS AND EMPLOYER ASK:] Which job and employer is that?
51. Currently, in a typical week, how many hours do you work? \_\_\_\_\_ hours  
IF NECESSARY: Was it greater than or equal to 35 hours per week?  
DK  
REF
52. (Were/Was) (name/you) employed by government, by A private company, a nonprofit organization, or (was/were) ( you/he/she) self -(or working in the family business?)
- Government
  - Private-for-profit company
  - Non-profit organization including tax exempt and charitable organizations
  - Self-employed
  - Working in the family business
53. Would that be the federal, state, or local government?
- Federal
  - State
  - Local
54. For whom do you work? [OPEN ENDED]  
DK  
REF
55. What kind of business or industry is this? [OPEN ENDED]  
DK  
REF
56. Is this business or organization mainly manufacturing, retail trade, wholesale trade, or something else?
- Manufacturing

- b. Retail trade
- c. Wholesale trade
- d. Other (agriculture, construction, service, government, etc.)
- e. DK
- f. REF

57. What do they make or do where you work? [OPEN ENDED]

DK  
REF

58. What kind of work do you do? (For example: registered nurse, personnel manager, supervisor of order department, secretary, accountant) [OPEN ENDED]

DK  
REF

59. What are your most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, typing and filing, reconciling financial records) [OPEN ENDED]

DK  
REF

***Probes:***

*Employment characteristics for current job*

- Use general probes as needed to investigate issues with these questions.
- Is the job you reported your only job or do you have more than one job?
- [REREAD THE ITALICIZED INSTRUCTION ON WHICH JOB TO REPORT ON]. In your own words, what do you think this instruction means?

***Notes to interviewer:***

These questions are the same as for the job at time of the incident. Continue to observe for issues to explore.

Does R notice that this set of questions is about the current job? If R has more than one job, did R report on the correct one?

How do Q48 and Q49 function for determining that the current and former job are the same?

***Debriefing questions for self-interview:***

*Recall and reference period*

- How easy or difficult was it for you to answer questions about injuries/illnesses that occurred over the last year?
- How sure are you that the injury/illness you told me about happened in the last year?
- Were there any questions that were particularly difficult to answer? Tell me more about that?
- If I asked you about injuries/illnesses that happened during the past year, how easy or hard would it be to answer the questions I asked you?
- When you signed up to do the survey, you may have seen a flyer or someone from NORC ask you about injuries and illnesses related to work that you may have had. Did you think about those injuries/illnesses you had, or did you do anything to get ready for the interview before you came? Tell me about that.
- Imagine that you didn't know ahead of time that this survey was going to be about work-related injuries and illnesses. If someone called you or came to your door, and asked you whether you had ever had a work-related injury or illness, do you think you would have remembered? How hard would these questions in the survey be, if you didn't know in advance what the survey was about?

*Sensitivity*

- Were you worried/Would you be worried about telling your employer about an injury/illness? Was it/Would it be hard for you to tell your employer? Tell me more about that.
- Were you worried/Would you be worried about telling the government about an injury/illness? Why? Tell me more about that.
- Were you worried/Would you be worried about telling anyone else about a work-related injury/illness? Tell me more about that.

*Review of selected items*

- I'd like to ask you a little more about [QUESTION]. You said [FILL]. In your own words, what do you think that question was asking? How did you decide on your answer?

*General debriefing*

- What are your suggestions on how to improve the survey?
- What questions were the most difficult for you to answer?
- What questions were the easiest to answer?

**Notes to interviewer:**

Is reporting work-related injuries and illnesses to the employer a sensitive issue? Why or why not? Is telling others outside the workplace about these incidents sensitive? Why or why not?

What questions are the most and least difficult for Rs to answer? What answers are they uncertain about? Do they have suggestions for improving the survey?

Return to any questions that need further exploration.

**Debriefing questions for proxy respondents:**

*Proxy*

- What is your relationship to [RESPONDENT NAME]?
- How much would you say you know about R's job?
- How familiar would you say you are with R's work-related injury/illness? Are you aware of the medical treatment he/she received when the injury/illness occurred? Are you aware of how this affected R's job? How did you learn about R's injury/illness? Who in your household besides R would be the best person to answer the kinds of questions I asked?
- What questions were the hardest for you to answer for R? Why? How much would you say you know about [QUESTION TOPIC]? How easy/hard is it to remember the information the question asked about? Tell me more.
- What questions were the easiest for you to answer for R? Why? How much would you say you know about [QUESTION TOPIC]? How easy/hard is it to remember the information the question asked about? Tell me more.

*Sensitivity*

- Were you worried/Would you be worried about telling anyone else about R's work-related injury/illness? Tell me more about that.

*Review of selected items*

- I'd like to ask you a little more about [QUESTION]. You said [FILL]. In your own words, what do you think that question was asking? How did you decide on your answer?

*General debriefing*

- What are your suggestions on how to improve the survey?

- What questions were the most difficult for you to answer?
- What questions were the easiest to answer?

***Notes to interviewer:***

Is proxy reporting of work-related injuries and illnesses a sensitive issue? Why or why not?

What questions are the most and least difficult for Rs to answer? What answers are they uncertain about? Do they have suggestions for improving the survey?

Return to any questions that need further exploration.

***Debriefing questions for those with no injury/illness to report:***

*Terms*

How familiar are you with the following terms? Please tell in your own words what these terms mean to you?

*Workers' compensation, etc.*

- Worker's compensation
- Temporary disability
- Short-term disability
- Being kept on salary
- Sick leave
- Annual leave
- Personal time off

*Medical professional/calendar days/work shifts*

ASK R: In the last year, have you had any injury or illness that was serious enough that a medical professional was consulted? Please include any injury whether or not it was work-related.

- Who do you think of as a medical professional? Who would you include or not include? [IF NEEDED ASK IF THESE WOULD COUNT: medical doctor, nurse, physician's assistant, chiropractor, paramedic]
- When you became injured or ill, how many calendar days were you unable to do your usual activities?
- Did you miss any work shifts? How many?
- You said you were not able to do your usual activities for XX calendar days. How did you figure that out?
- You said you missed XX work shifts. How did you figure that out?

*Unions/collective bargaining agreement*

- Have you heard of unions? Have you heard of a collective bargaining agreement? Tell me what those words mean to you.
- Q39 (how many workers): Tell me how you figured out your answer to this question. Walk me through how you figured out that answer. How certain are you of your answer?

*Understanding of terms*

- Have you heard of the term "calendar days"? What does that term mean to you? What about the term "work shift"? What does that term mean to you? How are these terms the same? Different?
- Who do you think of as a medical professional? Who would you include or not include? [IF NEEDED ASK IF THESE WOULD COUNT: medical doctor, nurse, physician's assistant, chiropractor, paramedic]
- Now I'd like to ask you about the term "medical diagnosis." What does the term "medical diagnosis" mean to you? How do you get a medical diagnosis? Who gives you a medical diagnosis? Does a medical diagnosis have to come from a doctor or other health care professional?

***STEP 3: END OF INTERVIEW***

Thank you for taking part in this survey.

STOP THE RECORDER.

*RECRUITMENT QUESTION:*

We are looking for additional respondents like you who would be interested in helping with the study. Do you know anyone who had a work-related injury or illness who might be interested in participating? If yes, would you mind if we gave you a flyer about the study and send you an email about the study that you could forward to them?

INTERVIEWER: ANSWER ANY RESPONDENT QUESTIONS.

This concludes the interview. I would be happy to answer any questions that you have. Thank you for your help with this study.

PAY THE RESPONDENT AND OBTAIN SIGNATURE ON RECEIPT.

*MATERIALS TO TAKE AWAY FROM INTERVIEW*

- INTERVIEWER PROTOCOL BOOKLET (THIS BOOKLET)
- SIGNED CONSENT FORM
- SIGNED PAYMENT RECEIPT
- DIGITAL RECORDER AND BATTERIES
- NOTE PAPER, PENS, PENCILS

**Appendix C: Cognitive Interview Round 2 Memo**

**To:** Elizabeth Rogers & Karen Shahpoori

**From:** NORC

**Re:** Household SOII Round 2 Cognitive Interviews

**Date:** 8/25/2016

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**Introduction**

NORC is conducting cognitive testing on behalf of the Bureau of Labor Statistics (BLS) to inform the design of a Household Survey of Occupational Injuries and Illnesses (HSOII). The cognitive interviews will provide data to evaluate the HSOII survey questions for correct interpretation and to assess the ability of respondents to accurately answer the survey questions. The results of the interviews will be used to refine the HSOII questionnaire items and item order.

*Recruitment Strategy.* The cognitive interview sample for Round 2 interviews was recruited via advertisements placed in Craigslist, Facebook, and on-site posting of flyers in locations in the Chicago and Northern Indiana areas. At the start of recruiting for Round 1, flyers were posted in nearly 30 venues. The recruiter followed up with contacts at the sites she visited. In Round 2, only 5 potential participants in total were recruited through flyers, with one of these completing an interview. Approximately 26 were recruited through Craigslist, with 18 of those completing an interview.

*Sample Characteristics.* We attempted to recruit a total of 45 persons for Round 2. Some of these recruits were initially approached in Round 1 and recontacted in Round 2. Of those we attempted to recruit, 22 completed interviews (21 main respondents and 1 proxy). Another four had scheduled interviews but did not keep their interview appointments and could not be rescheduled.

One of the 22 recruited respondents (R) was a proxy who was invited for an interview primarily to discuss the work-related injuries and illnesses of another person recruited from his household. Another of the 22 recruited respondents had also indicated that a proxy respondent was available, but repeated attempts to recruit that proxy were unsuccessful. An additional recruited respondent provided leads to other respondents who could serve as a respondent-proxy pair, but that pair ultimately declined to participate.

In the respondent numbering presented in the discussion of findings, respondent pairs are given the same number. The letter “A” was assigned to the respondent who was recruited due to experience with a work-related injury or illness. The letter “B” was assigned to the proxy who was recruited from the same household. During the cognitive interview, both the main respondent and the proxy participated in a self-interview about their own experiences with workplace injuries and illnesses, and then participated in a proxy interview about the other member of the pair. Exhibit 1 displays demographic characteristics of the 22 respondents who participated in an interview.

**Exhibit 1: Respondent Characteristics**

Characteristic	Category	Number of Respondents
Q41 – Ethnicity (Spanish, Hispanic or Latino?)	Yes	1
	No	21
	Do not know	0
	Refuse	0
Q42 - Race	White	6
	Black or African American	15
	American Indian or Alaska Native	2
	Asian	0
	Native Hawaiian or Other Pacific Islander	0
	Other (specify)	1
	Do not know	0
Q43-44 – Age categories	Refuse	0
	Under 25	1
	25-39	7
	40-54	10
	55-70	4
	70 or older	0

**Exhibit 1 continued: Respondent Characteristics**

Characteristic	Category	Number of Respondents
Q45 - Marital Status	Married – Spouse present	3
	Married – Spouse absent	1
	Widowed	0
	Divorced	6
	Separated	0
	Never married	12
	Do not know	0
	Refuse	0
Q46 - Sex	Male	10
	Female	12
Q47 – Education level	High school diploma or less	8
	Some college but no degree	4
	Associate’s degree (any type)	5
	Bachelor’s degree	5
	Master’s, Professional, or Doctoral degree	0
Q48 – Current Employment Status	Full-Time	10
	Part-Time	5
	Not currently employed	7
	Do not know	0
	Refuse	0
Q52-Q59 – Description of occupation at the time of injury	Medical waste disposal driver	1
	Maintenance	2
	Personal care aide	2
	Construction worker	3
	Retail worker	3
	Warehouse worker	1
	Restaurant food service	4
	Merchandiser	1
	Office manager	1
	Mail carrier	1
	NA because proxy (no injury)	1
	Security services	1
Cake decorator	1	

*Interview.* Of the 22 respondents, 15 were interviewed in person at NORC's offices in Chicago, Illinois and Bethesda, Maryland and seven respondents were interviewed by phone. The interviews were conducted by four methodologists who are experienced in cognitive interviewing. Respondents participated in a cognitive interview lasting approximately one hour and were paid \$40.

*Organization of this memo.* The discussion of findings from the cognitive interviews focuses on the questionnaire items in which issues were observed during the cognitive interviews. Several revisions were made to the instrument based on findings in Round 1. In the course of Round 2 interviews, some changes to the Screener have already been incorporated in the Round 2B version of the instrument. NORC has presented additional suggestions in a document sent August 19<sup>th</sup> (*HSOII Cognitive Protocol Round 2 v3 mockup 8-19-2016.docx*). Upon feedback from BLS on the mock-up and the recommendations we present in this memo, we will incorporate additional improvements to the questionnaire.

**Screener**

**Questions 1 through 8: Screener**

1. In the past year, that is, since [CURRENT MONTH] of [LAST YEAR], did you do ANY work for pay or profit?
  - a. Yes → ELIGIBLE, CONTINUE
  - b. No → NOT ELIGIBLE, END INTERVIEW
  - c. DK
  - d. REF

Any injury

2. In the past year, that is, since [CURRENT MONTH] of [LAST YEAR], have you experienced any injuries or illnesses related to any job you had?
  - a. Yes → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
  - b. No → **SKIP TO Q4**
  - c. DK
  - d. REF

3. Did that injury/illness cause you to...

	Yes	No	DK	REF
Lose consciousness?				
Be unable to work for a day or more?				
Restrict your work activities?				
Transfer jobs?				
Get medical treatment other than first aid?				

IF YES, COLLECT BRIEF DESCRIPTION AND CONFIRM WORK-RELATED.

4. [Other than the injury/illness you just mentioned], in the past year, that is, since [CURRENT MONTH] of [LAST YEAR], have you experienced any of the following injuries related to any job you had? I'm going to read a list of examples... CUES

- a. Sprains, strains or tears
- b. Soreness or pain
- c. Bruises or contusions
- d. Cuts, lacerations or punctures
- e. Broken bones
- f. Injury to muscles or joints
- g. Open wounds
- h. Burns
- i. Carpal tunnel syndrome
- j. Any other injury?

- 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- 2) NO →SKIP TO Q5
- 3) DK →SKIP TO Q5
- 4) REF →SKIP TO Q5

4.1 Did that injury/illness cause you to...

	Yes	No	DK	REF
Lose consciousness?				
Be unable to work for a day or more?				
Restrict your work activities?				
Transfer jobs?				
Get medical treatment other than first aid?				

5. [Other than what you have already mentioned], in the past year, that is, since [CURRENT MONTH] of [LAST YEAR], have you experienced any of the following illnesses, related to any job you had? I'm going to read a list of examples... CUES:

- a. Skin disorders
- b. Respiratory conditions
- c. Poisonings,
- d. Hearing loss
- e. A disease or infection
- f. Cancer
- g. Anxiety or depression
- h. Any other illness?

- 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- 2) NO →SKIP TO Q6
- 3) DK →SKIP TO Q6
- 4) REF →SKIP TO Q6

5.1 Did that injury/illness cause you to...

	Yes	No	DK	REF
Lose consciousness?				
Be unable to work for a day or more?				
Restrict your work activities?				
Transfer jobs?				
Get medical treatment other than first aid?				

IF R HAS NOT REPORTED ANY INJURIES OR ILLNESSES ASK ABOUT INJURIES/ILLNESSES EVER EXPERIENCED. **ELSE GO TO Q7.**

6. Have you EVER experienced any injuries or illnesses related to any job you had?
- a. YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
  - b. NO → GO TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS
  - c. DK → GO TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS
  - d. REF → GO TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS

6.1 Did that injury/illness cause you to...

	Yes	No	DK	REF
Lose consciousness?				
Be unable to work for a day or more?				
Restrict your work activities?				
Transfer jobs?				
Get medical treatment other than first aid?				

7. [IF YES TO ANY INJURIES OR ILLNESSES] How many total times [since CURRENT MONTH, ONE YEAR AGO], did you experience/have you ever experienced] an injury or illness related to any job you had? [THIS WILL CREATE THE LOOPS.] \_\_\_\_\_TIMES
8. [FOR EACH INJURY/ILLNESS] In what month and year did this injury/illness occur?

MONTH/YEAR  
 ENTER MM/YYYY  
 DK  
 REF

The screener questions ask respondents whether they worked in the past year and whether they experienced any injuries or illnesses related to any job they had. As discussed in the Round 1 memo, respondents were able to understand the questions on whether they had worked in the last year (Q1), the injury/illness terms (Q4, Q5), and could discern the work-relatedness of their injuries/illnesses. The reference period of the survey was also generally understood by respondents.

For Round 2, several changes were made to the Screener questions:

- Added phrasing “in the past year” at the beginning of several items. This change was suggested by BLS (Kaplan, BLS comments to Round 1 memo) to further emphasize for respondents the reference period of interest.
- Added the follow-up question on recordability criteria for every injury/illness reported (Q3, Q4.1, Q5.1, and Q6.1). In Round 2, respondents were asked whether each injury/illness resulted in loss of consciousness, being unable to work for a day or more, etc.
- The cue “anxiety or depression” was added to the list of illnesses for Q5 to signal that this type of condition should be reported.

These changes worked well. Overall, in Round 2 few issues were observed with the Screener questions. A couple of issues that arose are noted below:

- R19: This R had not worked since a work-related injury in 2011. Based on his comprehension difficulties throughout the survey, the interviewer speculated that this respondent may have misunderstood the screener questions when screened for eligibility over the phone.
- R17A (self-interview): R participated in a phone interview. He at first appeared not to understand the question. He thought the interviewer had said “worked for pain” when asking about working for pay. Once the misunderstanding was cleared up, R understood the question. This issue appears related to poor cell phone reception.

*Understanding of screener questions on whether work-related injury/illness occurred*

We observed no issues with respondent understanding that the injuries/illnesses of interest are those related to a job they held. Respondents reported injuries that, based on their descriptions, appeared to be related to their work.

*Transition from Q2/Q3 to Q4*

We observed that many respondents miss the instruction “Other than the injury/illness you just mentioned” in Q4. After reporting an injury/illness in Q2, they interpreted Q4 as asking about the same incident and reported whether, during the incident they just reported in Q2, they *also* sustained any of the types of injury being cued in Q4. To address this issue, Q4 and Q5 were revised during Round 2 to further emphasize that the respondent should report injuries/illnesses other than those he/she has already reported.

Initial findings from the Round 2B versions of these questions suggest that the revised wording is helping respondents understand that Q4 and Q5 concern any additional injuries/illnesses they may have experienced.

*Conditions that develop over time*

As noted in Round 1 interviews, some of the HSOII questions did not function well for conditions such as anxiety and stress, which may not be associated with an observable physical injury and, unlike physical injuries, are difficult to tie to a specific date. No conditions of this type were reported in Round 2 interviews. We will continue to observe to determine how the questions are working for those with conditions that may not have a discrete starting point.

**Recommendations**

- NORC presented several revisions to the Screener questions in the HSOII instrument in a mock-up sent August 19th. Upon receiving feedback from BLS, we will revise and finalize revisions to the Screener section. Although the full set of recommendations is reflected in the mock-up, the key recommendations for this section include:
  - Revise language to assure that for each succeeding question in the Screener section, respondents know that they are to report *other* injuries/illnesses, in addition to any previously reported.
  - Collect month and year immediately after respondent report of each incident of injury/illness, instead of in Q8 after all incidents reported.
  - Use the recordability criteria as cues to recall. Collect information on each recordability criteria when collecting characteristics of each injury/illness.

**Injury or Illness: Description**

**Questions 10-13 – Illness or Injury: Description**

“Now I am going to ask you more about [INJURY/ILLNESS #\_\_\_\_\_].”

10. **[WORKER ACTIVITY + some EVENT and SOURCE]** [FOR EACH LOOP] Please describe how the injury, illness, or condition occurred, and what caused it. For example: “When ladder slipped on wet floor, I fell 20 feet”; “I was sprayed with chlorine when gasket broke during replacement”; “I developed soreness in wrist over time.” [OPEN ENDED]
  
11. **[SOURCE]** Were there any other objects, substances, or persons involved in the injury or illness that you didn’t mention? Please include equipment, chemicals, vehicles, or anything else.
  
12. **[NATURE AND BODY PART]** Please describe the injury, illness, or condition. How was [BODY PART, ORGAN] affected? You can use medical terms if you know them, or just talk about the symptoms you experienced. For example: “strained back”; “chemical burn on hand”; “carpal tunnel syndrome.”
  
13. **[NATURE AND BODY PART]** Were there any other parts of your body or organs affected by the injury or illness that you may not have included in your description? How was [BODY PART, ORGAN] affected?

CHECKLIST
1. Description or diagnosis for injury/illness (this is the OIICS <b>nature</b> )
2. Part or parts of body affected, including body systems (OIICS <b>part</b> , obviously)
3. How the injury/illness/exposure happened (OIICS <b>event</b> )
4. Vehicles, tools, chemicals, surfaces, or any other objects involved; this can be multiple objects; this can also just be the person’s body moved incorrectly (OIICS <b>sources</b> )

Questions Q10 through Q13 are intended to capture the characteristics of the work-related injury or illness that the respondent experienced. For Round 2, these questions were revised to be more appropriately phrased for non-physical injuries, to improve question wording, and to clarify that the examples in the questions are to be read to all respondents.

The Round 1 versions of these questions were presented again in Round 2 during follow-up probing for Q10 through Q13 (see Q10a-Q13a). Interviewers noted that Q10a-Q13a proved to be redundant and yielded little information of value. The additional loop through the questions during probing was frustrating for some respondents; Q10a-Q13a was subsequently dropped from the interview protocol.

Based on respondent narrative in response to the survey questions, we present a summary in Exhibit 2 of the nature, part of body, event, and source(s) for each injury/illness.

**Exhibit 2: Characteristics of Reported Injury/Illness**

R#	Coding of nature, part of body, event, source(s)
18A	<ul style="list-style-type: none"> <li>• Nature: Strained back</li> <li>• Part of body: Back (R did not mention “back” in response to questions 10-13 but did state that this body part was affected when asked the screener question and 10a-13a.).</li> <li>• Event: R was moving a heavy storage pod while going down a ramp and ended up pinned against the wall of the loading dock. (Further detail captured in 10a and 11a clarified that R that the storage pod had wheels and due to its heavy weight, R slid down the ramp and into the wall).</li> <li>• Source: Pod, wall, ramp.</li> </ul>
19	<ul style="list-style-type: none"> <li>• Nature: Respondent unable to describe nature. He mentioned the arm had pain and was swollen.</li> <li>• Part of body: Arm and wrist.</li> <li>• Event: Shelf with wax on it fell on R’s arm. Supervisor had hand on shelf just before shelf fell.</li> <li>• Source: Wax, supervisor.</li> </ul>
25	<ul style="list-style-type: none"> <li>• Nature: Wrist has nerve damage, shooting pain in arm.</li> <li>• Part of body: Wrist.</li> <li>• Event: R walking up behind patient, patient was going up stairs and lost footing. R fell downstairs. Broke her fall with her arm.</li> <li>• Source: Patient and stairs.</li> </ul>
26	<ul style="list-style-type: none"> <li>• Nature: Pulled back.</li> <li>• Part of body: Back.</li> <li>• Event: R was lifting a steel pillar off of a truck and collapsed.</li> <li>• Source: Steel pillar.</li> </ul>

22	<ul style="list-style-type: none"> <li>• Nature: Torn ligament, dislocated knee.</li> <li>• Part of body: Leg, especially knee.</li> <li>• Event: R reached up to grab a box of hangers on a shelf in a cabinet. The cabinet was tilted and fell on R's left leg, especially her knee. [R provided further detail in 10a that she fell after the cabinet fell her on her leg and her knee twisted].</li> <li>• Source: Metal cabinet [because it fell on R's leg] and floor [because R said she twisted her knee after she fell].</li> </ul>
28	<ul style="list-style-type: none"> <li>• Nature: Cut on thumb.</li> <li>• Part of body: Thumb.</li> <li>• Event: R was using a slicing machine (for lettuce) and it cut her thumb</li> <li>• Source: Slicing machine.</li> </ul>
50	<ul style="list-style-type: none"> <li>• Nature: 1) contusion and swelling of toe; 2) asthma, COPD in lungs</li> <li>• Part of body: 1) toe; 2) lungs</li> <li>• Event: 1) R was working in warehouse stacking boxes on skid (pallet), then something or someone pushed box and it fell and hit his foot; 2) R breathing dust, fumes and exhaust from the warehouse and trucks.</li> <li>• Source: 1) Box, possibly person pushing box; 2) Dust, fumes, exhaust.</li> </ul>
41	<ul style="list-style-type: none"> <li>• Nature: 1) Twisted ankle; 2) Tore fingernail back (nail fell off)</li> <li>• Part of body: 1) Ankle; 2) finger (nail area)</li> <li>• Event: 1) R slipped and fell on a water spot; 2) R was adding a key to a key chain and her finger got caught between the rings and tore back all the way.</li> <li>• Source: 1) Water and floor; 2) key chain and key.</li> </ul>
55	<ul style="list-style-type: none"> <li>• Nature: Broken toe</li> <li>• Part of body: Toe</li> <li>• Event: R was moving a rolling cart filled with flats of plants. One of the wheels on the cart broke and the cart landed on his toe.</li> <li>• Source: Rolling cart.</li> </ul>
49	<ul style="list-style-type: none"> <li>• Nature: Sprain, bruising, and fractures in back and lumbar stenosis. (R's response to screener question provided further detail – pelvis fractures and spinal cord fractures in L3 and L4 vertebrae).</li> <li>• Part of body: Back (possibly pelvis).</li> <li>• Event: R was working with 14 ton steel concrete posts while standing on a flatbed semi-trailer. A jack went through the floor of the trailer and R slipped off and landed pinned between two concrete posts.</li> </ul>

	<ul style="list-style-type: none"> <li>• Source: Trailer truck, jack, concrete posts.</li> </ul>
45	<ul style="list-style-type: none"> <li>• Nature: Swollen ankle, slight fracture.</li> <li>• Part of body: Ankle.</li> <li>• Event: R was unloading boxes coming off a roller belt from a truck and had his foot positioned at the end of the truck belt when a box came down the belt and hit his ankle.</li> <li>• Source: Box.</li> </ul>
40	<ul style="list-style-type: none"> <li>• Nature: Sprained ankle and bruised back.</li> <li>• Part of body: Ankle and back.</li> <li>• Event: R was on an unsteady ladder, took a wrong step, and fell about 5ft backwards onto a palette with steel beams on it.</li> <li>• Source: Palette and ladder.</li> </ul>
52	<ul style="list-style-type: none"> <li>• Nature: R lost consciousness, woke up in ER with terrible headache, stitches in head, swollen neck, shoulder and elbow.</li> <li>• Part of body: Head, neck, shoulder, and arm on left side of body.</li> <li>• Event: R slipped on a wet spot (or something slippery), fell back and hit head on floor.</li> <li>• Source: Slippery spot on floor (not sure if it was water or packaging from boxes he was unloading).</li> </ul>
42	<ul style="list-style-type: none"> <li>• Nature: R mentioned lingering soreness in arm/elbow area, swollen ankle, and muscle spasms in back. (R responded to medical diagnosis question by stating contusion on her left side, bruised bones of back and arm, and sprained ankle).</li> <li>• Part of body: Back, arms, ankle.</li> <li>• Event: R was using a step ladder to reach a box and fell off step ladder (about 15-20 ft.), landing on her side.</li> <li>• Source: Step ladder and floor.</li> </ul>
47	<ul style="list-style-type: none"> <li>• Nature: Sprain/strain of right ankle.</li> <li>• Part of body: Right ankle.</li> <li>• Event: R was loading heavy baskets of mail onto the back of her mail truck. She stepped onto the platform of the truck, twisted her foot in the process, then dropped the basket and fell.</li> <li>• Source: Platform of truck, baskets of mail.</li> </ul>
44	<ul style="list-style-type: none"> <li>• Nature: Respondent unable to describe nature. She mentioned feeling tingly pain in her hand, sharp pain in elbow, and that her knee felt disconnected. (R's response to 13a was that she sprained her hand/wrist and leg and also felt sharp pain in her elbow).</li> </ul>

	<ul style="list-style-type: none"> <li>• Part of body: Hand/wrist, elbow, and leg.</li> <li>• Event: R slipped and fell down on a wet floor.</li> <li>• Source: Wet floor.</li> </ul>
54	<ul style="list-style-type: none"> <li>• Nature: 1) Cut to hand requiring stitches; 2) 2<sup>nd</sup> degree burn on arm.</li> <li>• Part of body: 1) Hand; 2) Arm</li> <li>• Event: 1) R sliced the bottom of her hand with a sharp knife while cutting up an onion; 2) R was changing oil in deep fryer, removing fryer basket, and oil splattered and burned her arm.</li> <li>• Source: 1) Knife, onion; 2) Oil, deep fryer, basket.</li> </ul>
51	<ul style="list-style-type: none"> <li>• Nature: Bulged disk in back.</li> <li>• Part of body: Back.</li> <li>• Event: R was carrying a heavy piece of wood and her back gave out and she fell.</li> <li>• Source: Wood, ground.</li> </ul>
57	<ul style="list-style-type: none"> <li>• Nature: Strained back.</li> <li>• Part of body: Back.</li> <li>• Event: R slipped on wet floor and twisted his back (but did not actually fall down).</li> <li>• Source: Water, floor.</li> </ul>
43	<ul style="list-style-type: none"> <li>• Nature: Slipped disc in back</li> <li>• Part of body: Back</li> <li>• Event: R slipped and fell on a wet floor.</li> <li>• Source: Water, floor</li> </ul>
17A	<ul style="list-style-type: none"> <li>• Nature: Broken bone – wrist</li> <li>• Part of body: Right wrist</li> <li>• Event: R slipped and fell on a wet floor</li> <li>• Source: Water, floor</li> </ul>

**Recommendations:**

We did not observe that respondents had issues with Q10-Q13 and the questions appear to provide sufficient information to determine the nature, part of body, event, and source(s) for each injury/illness. NORC will continue to observe whether these questions are working as intended in Round 3.

**Injury or Illness: Medical Attention**

**Questions 14 - 17 – Medical Attention**

Medical attention

14. [FOR EACH LOOP] Was the injury/illness serious enough that a doctor, nurse, or other health care professional was consulted?

- a. Yes → What type of health care professional did you see? (specify) \_\_\_\_\_
- b. No
- c. DK
- d. REF

15. [FOR EACH LOOP] Did you get medical advice, treatment, or follow-up care for this injury/illness from...?

	Yes	No	Not needed	DK/REF
An emergency vehicle, such as an ambulance or fire truck				
An emergency room				
A doctor's office or other health clinic <i>Please include on-site offices or clinics at your place of employment</i>				
A phone call to a doctor, nurse, or other health care professional				
Any place else? Specify				

16. [FOR EACH LOOP] Were you admitted to the hospital?

- a. YES → How many nights were you in the hospital? \_\_\_\_\_ nights
- b. NO
- c. DK
- d. REF

17. Did you receive a medical diagnosis from a health care professional?

- a. YES → What was your medical diagnosis?
- b. NO
- c. DK
- d. REF

This series of questions on medical attention asks respondents about the medical advice and treatment they received for their injury/illness. In collaboration with BLS, we implemented two changes to this section for Round 2:

- Incorporated the phrase “health care professional” to refer to the professionals who may provide medical attention to the respondent.
- Rephrased the question on being in the hospital to clarify that being “admitted” to the hospital is the focus of the question.

*Series of questions on medical attention (Q15)*

No issues were observed with the use of the term “health care professional.” However, for Q15, the series of questions on where the respondent got medical advice, treatment or follow-up care, there were a few instances in which respondent answers signaled misunderstanding of a question:

- R28: Although this respondent appeared to have been transported in an ambulance, she answered “no” to this question. The respondent had difficulty explaining what she thought the question was asking. The interviewer’s best guess is that the R thought the question was asking whether someone else not involved in the incident called the ambulance. This was a rare misunderstanding of this item and likely not indicative of a problem with the item.
- R45: R went for a follow-up visit at the hospital. He responded “yes” to the question on whether he sought care at a doctor’s office but was unsure of his answer because it was the hospital, and technically not a doctor’s office.
- R40: R counted a phone call to make a doctor’s appointment as getting care through a phone call to a health professional.

*Understanding of question on being admitted to the hospital (Q16)*

Respondents generally understood what it meant to be admitted to the hospital. Examples of some respondent statements on what it means to be admitted to the hospital include:

- R47: It means that you are assigned to a room - have phone, privacy, TV, meals served.
- R51: So severe, major injury that requires being checked in and staying in the hospital a day or two or more.
- R50: To stay there overnight.
- R22: ER visit is where they treat you, give you medicine to go and tell you to follow up with your main doctor. If it's serious they'll just keep you in the ER and transfer you to a hospital room.

However, a couple of respondents provided answers that suggested they did not fully understand what being admitted to the hospital means:

- R45: R was treated in the emergency room and was there for three hours. However, he stated he had been admitted to the hospital. He did indicate that he stayed zero nights.
- R54: R described sustaining a burn. She was in the ER and stayed there all night and did not consider herself to be admitted to the hospital. R understands hospital visit to “require more than one overnight stay and put in your own hospital room.” R seems to be correct that her being in the ER overnight does not count as being admitted to the hospital. However, her definition that a hospital stay requires more than one overnight stay seems incorrect.

*Understanding of medical diagnosis (Q17)*

In response to Q17, many respondents provide a lay description of the injury/illness they experienced. For example:

- R25: R said she had a sprain. She had described a sprained wrist due to fall down the stairs while helping a patients.
- R22: R had a torn ligament. R had described an accident in which she pulled a box from a cabinet; the cabinet tilted and fell on her left leg/knee.
- R45: R said his ankle was swollen, had slight fracture. He had his foot too close to the end of a roller coming off a truck. When a box came down the roller it hit his ankle at a high rate of speed.
- R40: R said injured disc in back. R had fallen off a ladder.

A couple of respondents provided answers that suggested they were unclear what a medical diagnosis was:

- R28: This R, who sustained a cut, indicated that he had not received a medical diagnosis. He answered “no” initially, thinking that getting a diagnosis means that something was wrong, “other than the cut, an infection or something that could be more serious.”
- R52: R thought he did not have a medical diagnosis because everything came back good; test results did not require him to stay longer at the hospital for treatment. However, this R did get stitches and had blacked out. It seems that the injury and blackout would have warranted a diagnosis.

In examining the content and flow of the entire series of questions on medical attention (Q14 through Q17), NORC interviewers observed that the question order and wording could be improved. For example, the questions on being treated at the emergency room and being admitted to the hospital are asked in two separate questions with other items intervening. These items may be best grouped together. Further, Q14

asks whether a health care professional was consulted; however, the Q15 series addresses similar issues, suggesting that the questions should be combined into one series. Q15 also asks about emergency medical treatment but in an oddly phrased manner; respondents are asked about receiving care from an emergency vehicle rather than from emergency personnel.

**Recommendations:**

As presented in the August 19<sup>th</sup> mock-up, we suggest revisions to the series of questions on medical attention. The mock-up presents a revised set of questions in which Q14-Q17 are reordered and revised to improve flow and clarity. Upon receiving feedback from BLS, we will revise and finalize revisions to the Screener section. Although the full set of recommendations is reflected in the mock-up, the key recommendations for this section include:

- Combining Q14, Q15, Q16 and Q17 into one series of questions, with intent of improving question flow and removing redundancy.
- Clarifying meaning of being admitted to the hospital (with language referencing hospital stay and placing this question immediately after one on receiving treatment at the emergency room).
- Adding simplified language for medical diagnosis.
- Expanding on the information collected, to include recommended days off from work and whether the injury/illness caused the respondent to faint or pass out.

**Injury or Illness: Effect on Work**

**Question 20 – Effect on Work**

20. [FOR EACH LOOP] Did the injury/illness cause you to...?

	YES	NO	NA	DK/REF
a. Be unable to work the next day, whether or not you were actually scheduled to work? <b>[BE SURE TO ASK Q21]</b>				
b. Work at your regular job less than your usual number of hours?				
c. Work at your regular job, but be unable to perform all of the normal duties of the job?				
d. Be assigned to another job on a temporary basis?				
e. (DELETED)				
f. (DELETED)				
g. Quit your job?				
h. Be laid off?				
i. Be fired?				
j. Change occupations?				
k. Lose any wages?				
l. OTHER (SPECIFY)				

This series questions evaluates the effect the injury or illness had on the respondent’s work status. Relatively few changes were made to the questions in this section for Round 2. Items 20e and 20f were deleted.

The question series worked well for respondents working full time who stayed with the same employer and did go back to work. For example:

- R18A: This R returned to the same employer after the injury. She got someone else to help with some duties (carrying bins) and also worked as dispatcher for a month before returning to work in the field. Her responses to the questions seemed accurate for her situation.

- R44: R seemed to correctly report that she did take time off, and then returned to work on a reduced schedule but could not do her normal duties.

However, some respondents displayed difficulties in answering Q20. A number of the items in Q20 do not apply to respondents who did not go back to work with the same employer or did not go back to work at all. Questions 20b, 20c, and 20d are particularly problematic as they presuppose that the R is working at their regular job. In other cases, respondents misinterpret the meaning of a question.

- R19: R did not return to the job. He said he was fired. Questions 20a through 20d in particular appear irrelevant since he was no longer at the job.
- R28: R ended up quitting her job right after her injury. Some of the questions in the question series would not apply given that she no was no longer employed.
- R45: R was unable to work the next day and was off for 3 days. He responded “yes” to 20a (unable to work next day) and 20b (worked at regular job less than usual hours). However, after taking 3 days off, he did work his usual hours once he returned to work; it seems he should have answered “no” to 20b. Q20b make be confusing for those who take time off, since they may interpret taking days off to mean that they worked at their regular job less than their usual hours.
- R40: R did not return to work. However, she answered “yes” to 20b because she is volunteering some hours from home to help transition an employee who is replacing her. Interviewer noted that Q20b, c and d seemed not to apply to this R, who did not officially return to work. Since it is unusual for an employee to volunteer to train his or her replacement, situations such as this one are unlikely to be a concern for the HSOII.

The question series also can be problematic for part-time workers:

- R25: This R had already indicated she had to take a couple of days off and was unable to work the next day, yet she said she did not lose wages. She did not answer yes/no to 20b but instead said took a day or two off. She was a part-time employee and did have to take days off due to the injury. Yet because she was able to schedule her work hours for later in the week, she did not lose wages.

Interpretation of some terms (occupations, laid off, wages) was also problematic for some respondents:

- R52: R switched to a different assignment with the same employer (switched from stocking to cashiering for 10 months). R said “yes” to 20j (changed occupations) however, he did not permanently take on a new line of work.

- R17A: R thought he had been laid off, since he took time off from work while he healed from his broken wrist. However, it is not clear to the interviewer that taking time off due to injury counts as being laid off.
- R55 was confused by the term “wages” in 20k. He was compensated for the time he was off due to his injury, but it was not “wages” in the sense of “pay for work.” He responded “yes” that he lost wages but it appears he did receive full compensation, just from other sources rather than pay for work.

**Question 21 and 22**

21. Were you able to work again after the injury/illness?
- a. YES
  - b. NO →SKIP TO INTRO BEFORE Q23
  - c. DK →SKIP TO INTRO BEFORE Q23
  - d. REF →SKIP TO INTRO BEFORE Q23
22. [FOR EACH LOOP] How many days after the injury/illness were you able to start work again?
- a. \_\_\_\_\_ DAYS AFTER THE INJURY/ILLNESS
  - b. STILL OFF PAID WORK
  - c. EXPECTS NEVER TO DO PAID WORK AGAIN
  - d. BACK TO WORK SAME DAY
  - e. DK
  - f. REF

These questions determine whether the respondent went back to work after the injury/illness and, if so, how many days after the injury/illness they began work again. Q21 is new to Round 2. Respondents generally did not have difficulty answering this new question but a couple of issues were noted during the interviews:

- R49: R answered “no” to Q21 but after probing about whether he could work again in any capacity, he said “yes.”
- R17A: R said “yes” but then qualified his answer to indicate that he could work again after his injury healed. He appeared to convey that “yes” he would work again, but “no” not immediately after his injury.

The issues noted suggest that Q21 could be interpreted in more than one way. It could be interpreted as asking whether the respondent was capable of working at all in any capacity, or to mean whether the respondent was able to perform normal job duties anymore.

**Recommendation:**

In the August 19<sup>th</sup> mock-up we presented suggested revisions for the section on Effect on Work. Key revisions that were made are summarized below:

- Two questions, Q18 and Q19, which ask about the employer’s knowledge of the injury/illness, are more closely tied to the questions on Workers’ Compensation and were moved to that section.
- Questions 20 through Q22, addressing effects of in injury/illness on work and whether the respondent was able to work again, were reordered and revised. The questions should work better for those who did not return to work.
- Since some of the items in Q20 rely on knowing whether the respondent returned to work, Q21 was moved up to improve question flow and clarity.
- Some items were revised to simplify language. For example, “change occupations” was revised to “change the kind of work you do...”

**Injury or Illness: Workers' Compensation**

**Question 26 - Grid of questions about what kinds of compensation the respondent received after their injury or illness**

26. IF R MISSED DAYS OF WORK FOLLOWING THE INJURY/ILLNESS: *MARK YES OR NO FOR EACH QUESTION*

	YES	NO	NA	DK/REF
Did you receive workers' compensation? READ IF NECESSARY: <i>Workers compensation</i> is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job.				
Did your employer continue to pay your wages and other compensation in full during the period you were unable to work?				
<i>Short-term or temporary disability</i> benefits provide you with a portion of your income if you are temporarily unable to work due to a medical condition. Did you receive short term (temporary) disability?				
Did you use paid sick leave, paid annual leave, or paid time off?				
Did you take leave without pay?				
Other-specify				

This grid of questions evaluates how and if workers were paid when they missed time at work due to their injury or illness. Based on findings from Round 1, the item on being “kept on salary” was revised (“Did your employer continue to pay your wages...”). In addition, revisions to the terms on sick leave, annual leave, and time off were revised to refer to “paid” leave or time off. As the responses below indicate, respondents are aware of whether they received pay while away from work recovering from their injury/illness. However, they can be unclear as to the source of the compensation.

- R18A: R paused and said “yes” to the question on whether the employer continue to pay your wages. However, she said the employer paid her a full two-week vacation, not wages. It seems that providing vacation pay could count as employer continuing to pay wages, but NORC is unsure.

- R55: R answered questions on workers' compensation without issue. He received workers' compensation for the days he missed and to cover his medical expenses. His employer made up the difference in pay that workers' compensation did not cover. However, when asked if he used paid sick leave/annual leave/time off, he said "yes." Probing revealed that he probably did not use paid time off. He was paid during his time off, but it appears it was not through paid days off that employees get; he got workers' compensation and his employer compensated him for the difference in pay that was not covered by workers' compensation.
- R52: When asked about taking paid sick leave/annual leave/time off, R indicated yes and explained that he gets "injury time out" through his employer. He said this type of leave covers 2 weeks to 8 months, so R is receiving pay while waiting for workers' compensation. NORC is unclear as to whether this type of paid leave counts as paid sick leave/annual leave/time off or whether this is being kept on salary, with employer continuing to pay wages. R also answered "yes" to the question on employer continuing to pay wages. It is possible the R "double-counted" by answering "yes" to both types of paid time away from work.
- R47: R said "yes" that employer continued to pay her wages, but she called it sick leave. It is not clear whether she used sick leave, her employer paid her wages, or both occurred.

With two respondents, it became clear that Q26 does not apply when the respondent has left the employer:

- R19: R said he was let go from his job. Interviewer noted that some of the items in Q26 would not apply if the R was let go.
- R28: R quit immediately after the injury. Interviewer noted that some of the items in Q26 should be skipped in this case.

Further, a part-time employee found it difficult to determine whether she took leave without pay. One respondent seemed to simply misunderstand the question or the term "leave without pay":

- R25: R had difficulty with the item on taking leave without pay. As a part-time employee, she took some days off but then reschedule her work days for later in the week. She did take leave and did not get paid, but made up her hours later in the week.

- R50: R said “no” to the question on taking leave without pay. However, in probing he indicated he did not get paid while away from work. He should have answered “yes” on taking leaving without pay.

**Recommendations:**

In the August 19<sup>th</sup> mock-up, several revisions that have been implemented should improve Q26:

- The skip patterns leading up to Q26 have been corrected and revised.
- Skip patterns have been added to some items in Q26 to assure questions are directed at the appropriate group (such as those who filed for workers’ compensation or those who had not yet received workers’ compensation).
- Per BLS suggestion, the item on receiving wages and other compensation while unable to work was moved to the end of Q26.

Respondent comments indicate that some do not know the source of the compensation they are receiving, whether it is employer paid, their own paid leave that they have accrued, or something else. NORC continues to consider how to revise the questions to yield the most accurate answers. However, data quality is likely to be an issue when respondents themselves are unsure of the sources of compensation they receive.

**Question 27 - Was there a claim filed for worker’s compensation?**

27. [FOR EACH LOOP] IF FILED A WORKERS’ COMPENSATION CLAIM: Is there an open claim pending for this injury/illness?
- YES
  - NO
  - DK
  - REF

Because this question occurs after a grid of several questions, respondents may have forgotten that the question refers to workers’ compensation by the time it is asked. One respondent expressed confusion;

however, most seemed able to answer accurately as to whether there was an open workers' compensation claim.

- R8 asked what kind of claim this was about when it was asked. It had to be clarified that it was a worker's compensation claim.

**Recommendations:**

As detailed above, Q27 was incorporated into the Q26 series of questions. Since this question concerns whether there is an open workers' compensation claim, it will now be asked as a follow-up to the question if the respondent indicates in Q26 that workers' compensation was not received.

**Occupation and Industry at Time of Injury or Illness**

**Q28 and Q29: Employed Full Time or Part Time and Hours Worked**

28. Were you considered by your employer to be a full time or part time employee?

- a. Full-time
- b. Part-time
- c. DK
- d. REF

29. In a typical week, how many hours did you work? \_\_\_\_\_ hours

IF NECESSARY: Was it greater than or equal to 35 hours per week?

- DK
- REF

These questions collect full-time vs. part-time employment status and hours worked in a typical week. Q28 was revised after Round 1 to clarify that it is the employer's designation of the respondent as full- or part-time that is of interest. Respondents did not have difficulty answering these questions. No revisions are suggested for these items.

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**Type of Employer**

**Q30: Type of employer**

30. (Were/Was) (name/you) employed by government, by a private for-profit company, a nonprofit organization, self-employed, or working in the family business?
- a. Government
  - b. Private-for-profit company
  - c. Non-profit organization including tax exempt and charitable organizations
  - d. Self-employed
  - e. Working in the family business
31. Would that be the federal, state, or local government?
- a. Federal
  - b. State
  - c. Local

These questions ask about the type of employer the respondent works for. As a result of Round 1 testing, Q30 was simplified slightly to improve comprehension. Many answered the questions without issue. However, as the comments below indicate, respondents often have difficulty deciding the type of company they work for:

- R25: R worked for a home aide company and indicate it was private-for-profit. She seemed to give correct answer but said she really didn't know.
- R22: R worked at a retail store but did not know which category to pick. R did not think it was any of the options listed.
- R28: R said "corporate" and works for a fast food company. How should such a response be coded? Should the R be prompted to pick a category or can "corporate" be coded as private-for-profit?
- R41: R selected self-employed but said she was not sure. R works as a personal assistant for someone else, so this response appears correct.

- R42: R worked for a major fast food chain, which is clearly for profit. However, R said not sure and picked government.
- R44: R works for a dollar store but did not know what to pick.
- R51: R works for her cousin's business (cousin owns the business) but did not know what to pick. R picked family business but wasn't sure if this was correct.

**Recommendations:**

Respondents are sometimes unsure of the type of employer for whom they work. Although it may be possible to provide definitions of each type of employer to assist respondents in selecting the correct answer, it is possible that such definitions could be complex enough to be of little use. Since most respondents are willing to provide the name of the company they work for, it may be possible to code the type of company for those respondents who are not sure.

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**Employer Details**

**Q32: Name of respondent's employer**

32. What is the name of the (company, organization or agency) for whom you worked? [OPEN ENDED]

DK  
REF

NOTE: IF GOVERNMENT EMPLOYER, TEXT FILL=AGENCY; IF NON-PROFIT, TEXT FILL=ORGANIZATION;  
ELSE TEXT FILL=COMPANY.

This question was revised after Round 1 interviews to clarify that it is the name of the employer that is being requested. Respondents in Round 2 generally understood that Q32 was asking for the name of their employer. Most respondents had no concerns about providing that information. One set of respondents in which we interviewed both an injured respondent and a proxy (R17A and R17B) did not want to give the name of their employers. R17A felt that employer name was sensitive information and also indicated that the terms of the settlement require that he not disclose the name of the employer.

**Q40: Number of workers**

40. How many people work at your work location?

- a. 1 to 10 workers
- b. 11 to 49 workers
- c. 50 to 249 workers
- d. 250 to 999 workers
- e. 1000 or more workers
- f. DK
- g. REF

This question is about the relative size of the place where the respondent works. The question was revised based on the Round 1 finding that respondents who worked for larger employers with multiple locations sometimes thought the question referred to the number of employees across all employer locations. This particular issue did not arise, suggesting that the question revision successfully clarified that the employee should report on the number of employees at their work location. However, for some employees who are assigned to alternate work locations, it is still not clear how to respond:

- R18A: R drives a truck. She was not sure if the question referred to the people in the truck, two at most, or to the office. She decided the question referred to the entire office.
- R25: R is employed by a home health aide company. She works in client homes. When probed, she said she was unsure whether the question meant the number of people who work for the company in total. She stated she works in client homes and there is one client. Although respondent did not mention it explicitly, her comments suggest that she was the only aide in the client's home.
- R55: R works for a contractor that supplies and maintains nursery products to large stores like Home Depot. R wasn't sure whether to report a) how many people in total work at his particular job site (Home Depot) or how many people from his contracting company are placed at his particular job site. He reported a number based on the latter – how many people from the nursery contractor are assigned to work at his job site.
- R49: R worked for a large job placement company which connects thousands of people to work in a wide variety of industries. R wasn't sure how many people work for the company but provided a rough estimate of 2000.

Below we provide examples of how respondents arrived at answers. Although some respondents simply provide a guess and do not appear to have spent time constructing an answer, others explained how they provided their estimates:

- R50: R accounted for workers across various shifts.
- R26: R added up three different work crews.

**Recommendations:**

For subcontractors and those assigned to different work locations, instructions should clarify for which work location they should be reporting number of employees. Is it for the entire office or for the specific location to which they are assigned? If R is a contractor, do both the contract and non-contract employees at the location get included in the count?

**Proxy Respondents**

For one of the recruited respondents, another adult member of the respondent’s household was also invited to take part in an interview. We collected data on each member of the pair. We examined self- and proxy-reported answers to selected questions to assess the accuracy of proxy response. The data are presented in Exhibit 3. In this exhibit, the focal respondent is the person about whom the data are being collected. For each focal respondent, we compare the data from selected questions from the respondent’s self-interview and proxy interview (conducted with the respondent’s household member).

Respondent 17A had slipped and fell at work, breaking his wrist. He worked in a bakery department and slipped on liquid on the floor. He was out of work for nearly three months and received workers’ compensation during his time away from work. Respondent 17B, serving as proxy for 17A, did not report any workplace injuries or illnesses (17A also concurred that 17B did not have any injuries/illnesses to report). As Exhibit 2 shows, there is overall agreement between the respondent and the proxy on the injury that that 17A, details of the incident, effects on work, workers’ compensation received, as well as demographic information.

**Exhibit 3: Proxy Reporting**

Question	Focal Respondent	Self vs. Proxy Comparison
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Screener (Q1 - Q8)	17A	<ul style="list-style-type: none"> <li>• Self (17A) and proxy (17B) both reported that the R had worked in the bakery department of a store, and had slipped and fallen. Both reported that R suffered a broken wrist.</li> <li>• Both self and proxy agreed on the recordability characteristics (R did not lose consciousness, was unable to work for day or more, restricted work activities, did not transfer jobs, and got treatment beyond first aid).</li> <li>• Both self and proxy reported injury occurred in December of 2015, around Christmas.</li> </ul>
	17B	<ul style="list-style-type: none"> <li>• Self (17B) and proxy (17A) both reported that the R did not experience any work-related injuries or illnesses.</li> </ul>
Injury or Illness (Q10 – Q13)	17A	<ul style="list-style-type: none"> <li>• Both self and proxy described the event similarly, indicating that R slipped on floor and broke right wrist. Both mentioned liquid on the floor that caused the slip.</li> <li>• In reporting other body parts or organs affected by the injury, 17A reported not that he could remember, but bruising, swelling, abrasion on arms and legs. Proxy 17B thought 17A had scrapes on his face. This report of other associated injuries reflects a discrepancy between 17A and 17B.</li> </ul>
	17B	<ul style="list-style-type: none"> <li>• NA</li> </ul>
Medical Attention (Q14)	17A	<ul style="list-style-type: none"> <li>• Both self and proxy agreed that 17A consulted a health care professional (both mentioned orthopedic surgeon), and that 17A was treated by an emergency vehicle and went to the emergency room.</li> <li>• Regarding getting care through a phone call, 17A indicated he did not. 17B was not sure.</li> <li>• Both agreed that 17A was not admitted to the hospital and that the medical diagnosis was a broken wrist.</li> </ul>
	17B	<ul style="list-style-type: none"> <li>• NA</li> </ul>
Effect on Work— Report to	17A	<ul style="list-style-type: none"> <li>• Both 17A and 17B reported that the injury had been reported to the employer.</li> </ul>
	17B	<ul style="list-style-type: none"> <li>• NA</li> </ul>

Employer (Q18)		
Effect on Work—Injury/Illness Caused... (Q20)	17A	<ul style="list-style-type: none"> <li>Both 17A and 17B agreed in general on the effects of the injury on work. The main difference was that 17A said he was laid off, referring to the months he was unable to work. 17B indicated that 17A had not been laid off and that 17A had gotten workers' compensation. Further, in discussing the effects of the injury on losing wages, 17A said he did not lose wages. However, 17B thought that 17A may not make as much as he used to.</li> </ul>
	17B	<ul style="list-style-type: none"> <li>NA</li> </ul>
Effect on Work—Days Missed (Q21 – Q22)	17A	<ul style="list-style-type: none"> <li>Both 17A and 17B indicated that 17A was able to work again after the injury.</li> <li>17A indicated he took 2 ½ to 3 months off, indicating 75 days when probed. 17B indicated it was 3 months off.</li> </ul>
	17B	<ul style="list-style-type: none"> <li>NA</li> </ul>
Effect on Work—Workers' Comp (Q23)	17A	<ul style="list-style-type: none"> <li>Both 17A and 17B reported that 17A's employer had filed for workers' compensation and that it had been received. Except as noted below, they generally agreed on the details of the compensation received.</li> <li>17A reported that he got paid his compensation in full, but 17B was not sure.</li> <li>Both agreed that 17A got short-term/temporary disability (but 17A suggested he was unsure, "Got workers' compensation, I guess, will say yes").</li> <li>17A said he got injury leave and time off (in response to Q on getting paid sick leaven, paid annual leave, or paid time off). 17B thought that 17A had not gotten this paid leave.</li> </ul>
	17B	<ul style="list-style-type: none"> <li>NA</li> </ul>
Employment at Time of	17A	<ul style="list-style-type: none"> <li>Both 17A and 17B agreed that 17A was a full-time employee working 40 hours per week. They agreed on the type of</li> </ul>

Injury/Illness (Q28 – Q40)		company, job duties, that it was not a union job, and size of company, but refused to name the employer.
	17B	<ul style="list-style-type: none"> <li>• NA</li> </ul>
Demographics (Q41 – Q47)	17A	<ul style="list-style-type: none"> <li>• Both 17A and 17B answered the demographics questions about 17A similarly. 17B had to think for a while to recall 17A’s birthdate.</li> </ul>
	17B	<ul style="list-style-type: none"> <li>• For most questions, 17B and 17A provided the same demographic information for 17B. 17A paused to think about 17B’s birthdate. Also, 17A thought 17B had some college but no degree, expressing uncertainty about 17B’s educational history. 17B self-reported that he has a BS degree.</li> </ul>

**Next Steps**

In a memo delivered to BLS on July 28<sup>th</sup> (*Round 2 preliminary findings.docx*), NORC outlined key issues to address in the design of the HSOII questionnaire based on preliminary Round 2 findings. The present memo has presented data concerning the issues that were observed in Round 2. Further, the August 19<sup>th</sup> mock-up that NORC delivered to BLS presents a number of suggested item revisions and reordering of items, both of which should improve clarity and flow. Upon receiving feedback from BLS, NORC is prepared to conduct additional phone interviews to test the revised instrument and incorporate further updates to the HSOII instrument prior to launching Round 3.

**HOUSEHOLD SURVEY OF OCCUPATIONAL INJURIES AND ILLNESSES**  
**Cognitive interview protocol R2**

***MATERIALS NEEDED FOR INTERVIEW***

- |  |
|--|
| <input type="checkbox"/> INTERVIEWER PROTOCOL BOOKLET (THIS BOOKLET) AND SHOWCARDS<br><input type="checkbox"/> CONSENT FORM (TWO COPIES)<br><input type="checkbox"/> \$40 CASH IN ENVELOPE<br><input type="checkbox"/> PAYMENT RECEIPT<br><input type="checkbox"/> FULLY CHARGED DIGITAL RECORDER AND EXTRA BATTERIES<br><input type="checkbox"/> NOTE PAPER, PENS AND PENCILS |
|--|

***STEP 1: INFORMED CONSENT***

PROVIDE RESPONDENT WITH A COPY OF THE INFORMED CONSENT FORM. ASK THE RESPONDENT TO READ THE FORM, ANSWER ANY QUESTIONS, AND HAVE THE RESPONDENT SIGN THE FORM. LEAVE A SEPARATE COPY OF THE FORM WITH THE RESPONDENT.

- |   |
|---|
| <input type="checkbox"/> SIGNED CONSENT FORM COLLECTED<br><input type="checkbox"/> COPY OF CONSENT FORM GIVEN TO RESPONDENT |
|---|

- |  |
|--|
| <input type="checkbox"/> IF THE RESPONDENT HAS CONSENTED TO RECORDING, START THE RECORDER. |
|--|

***STEP 2: COMPLETION OF THE QUESTIONNAIRE***

BEGIN QUESTIONNAIRE.

**Interviewer probe bank (use as appropriate):**

- “How did you come up with that answer?”
- “Can you tell me in your own words what you think the question is asking?”
- “Can you tell me more about that?”

If you pick up on a visual cue that suggests an issue or confusion:

- “Tell me what you are thinking.”
- What does the word [term] in this question mean to you?
- You said [answer]. Can you tell me more about that?

If R is uncertain and asking for confirmation:

- There is not a right or wrong answer for this question. I am interested in hearing your thoughts on what the question is asking.

**INTERVIEWER:** If this interview is with a proxy respondent, please modify language accordingly. For example, instead of asking “Did you do ANY work for pay or profit?” ask “Did [your husband/wife/brother/he/she] do ANY work for pay or profit?”

## Survey Introduction

This survey is about work-related injuries and illnesses that you may have experienced. I would like to ask you questions about your work history and about the injuries and illnesses you may have had that are related to your job. The information that you provide in this survey is confidential. Your name and your answers to the questions will not be shared with anyone outside of NORC, the survey organization conducting this survey. I would be happy to answer any questions you may have about the survey. [ANSWER RESPONDENT QUESTIONS.] Let's begin.

## Screener

1. In the past year, that is, since [CURRENT MONTH] of [LAST YEAR], did you do ANY work for pay or profit?
  - a. Yes → ELIGIBLE, CONTINUE
  - b. No → NOT ELIGIBLE, END INTERVIEW
  - c. DK
  - d. REF

Any injury

2. In the past year, that is, since [CURRENT MONTH] of [LAST YEAR], have you experienced any injuries or illnesses related to any job you had?
  - a. Yes → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
  - b. No → SKIP TO Q4
  - c. DK
  - d. REF

3. Did that injury/illness cause you to...

	Yes	No	DK	REF
Lose consciousness?				
Be unable to work for a day or more?				
Restrict your work activities?				
Transfer jobs?				
Get medical treatment other than first aid?				

IF YES, COLLECT BRIEF DESCRIPTION AND CONFIRM WORK-RELATED.

4. [Other than the injury/illness you just mentioned], in the past year, that is, since [CURRENT MONTH] of [LAST YEAR], have you experienced any of the following injuries related to any job you had? I'm going to read a list of examples... CUES
  - a. Sprains, strains or tears
  - b. Soreness or pain
  - c. Bruises or contusions
  - d. Cuts, lacerations or punctures
  - e. Broken bones
  - f. Injury to muscles or joints
  - g. Open wounds
  - h. Burns
  - i. Carpal tunnel syndrome
  - j. Any other injury?
  - 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
  - 2) NO → SKIP TO Q5
  - 3) DK → SKIP TO Q5
  - 4) REF → SKIP TO Q5

4.1 Did that injury/illness cause you to...

	Yes	No	DK	REF
Lose consciousness?				
Be unable to work for a day or more?				
Restrict your work activities?				
Transfer jobs?				
Get medical treatment other than first aid?				

5. [Other than what you have already mentioned], in the past year, that is, since [CURRENT MONTH] of [LAST YEAR], have you experienced any of the following illnesses, related to any job you had? I'm going to read a list of examples... CUES:

- a. Skin disorders
- b. Respiratory conditions
- c. Poisonings,
- d. Hearing loss
- e. A disease or infection
- f. Cancer
- g. Anxiety or depression
- h. Any other illness?

- 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- 2) NO →SKIP TO Q6
- 3) DK →SKIP TO Q6
- 4) REF →SKIP TO Q6

5.1 Did that injury/illness cause you to...

	Yes	No	DK	REF
Lose consciousness?				
Be unable to work for a day or more?				
Restrict your work activities?				
Transfer jobs?				
Get medical treatment other than first aid?				

IF R HAS NOT REPORTED ANY INJURIES OR ILLNESSES ASK ABOUT INJURIES/ILLNESSES **EVER** EXPERIENCED. **ELSE GO TO Q7.**

6. Have you EVER experienced any injuries or illnesses related to any job you had?

- a. YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- b. NO → GO TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS
- c. DK → GO TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS
- d. REF → GO TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS

6.1 Did that injury/illness cause you to...

	Yes	No	DK	REF
Lose consciousness?				
Be unable to work for a day or more?				
Restrict your work activities?				
Transfer jobs?				
Get medical treatment other than first aid?				

7. [IF YES TO ANY INJURIES OR ILLNESSES] How many total times [since CURRENT MONTH, ONE YEAR AGO], did you experience/have you ever experienced] an injury or illness related to any job you had? [THIS WILL CREATE THE LOOPS.] \_\_\_\_\_TIMES

8. [FOR EACH INJURY/ILLNESS] In what month and year did this injury/illness occur?

MONTH/YEAR

ENTER MM/YYYY

DK

REF

INTERVIEWER: CONFIRM NUMBER OF INCIDENTS AND BRIEF DESCRIPTION OF EACH. IF INJURY/ILLNESS EXPERIENCED WITHIN PAST YEAR, RESPONDENT WILL REPORT ON THOSE. OTHERWISE, IF NO INJURY/ILLNESS WITHIN PAST YEAR, RESPONDENT WILL REPORT ON INJURIES/ILLNESSES EVER EXPERIENCED.

**Probes:**

*Screeener*

- I asked you this question: “In the past year, that is, since [CURRENT MONTH] of [LAST YEAR], have you experienced any injuries or illnesses related to any job you had?” In your own words, what is this question asking?
- In your own words, what would be a work-related injury or illness? Can you give me some examples of some things that would count as work-related injuries and illnesses? What would not count?
- Tell me about the kind of work you do. Tell me about other times when you got hurt or sick because of the work you do.
- [I asked you about whether you ever experienced any injury or illness, related to any job you had, that caused you to get medical treatment other than first aid]. What does “first aid” mean to you? What kind of treatment counts as first aid? What kind of treatment doesn’t count?
- The questions gave some examples of injuries and illnesses [SHOW R THE LISTS, READ THE LIST IF NECESSARY.] Are you familiar with [LIST]? Which ones have you heard of? Which ones had you not heard of?
- How easy or hard was it to remember when the injury/illness happened? Can you tell me more about that? How did you figure out when the injury/illness happened?

**Notes to interviewer:**

The goal of the screener section is to enumerate all instances of work-related injuries and illnesses that occurred during the reference period. What issues do respondents have in reporting these incidents? Do they understand the types of injuries and illnesses to report? Can they accurately report only those that are work-related? How do they determine the boundary of the reference period and determine whether an incident occurred within the RP?

IF NO INCIDENTS OF WORK-RELATED INJURIES AND ILLNESSES, GO TO DEMOGRAPHICS SECTION.

## Injury or Illness

[FOR FIRST INJURY/ILLNESS START AT Q10]

[FOR SECOND AND FOLLOWING INJURY/ILLNESS START AT Q9]

9. [FOR SECOND/THIRD/ETC. LOOPS] How is this injury/illness related to the other injury/illness you mentioned? Is this related to [the other/another] injury/illness you already mentioned or is it a different injury/illness?
- a. RELATED TO THE OTHER/ANOTHER INJURY/ILLNESS [GO TO NEXT LOOP]
  - b. THIS IS A DIFFERENT INJURY/ILLNESS [CONTINUE]
  - c. DK
  - d. REF

“Now I am going to ask you more about [INJURY/ILLNESS #....].”

10. **[WORKER ACTIVITY + some EVENT and SOURCE]** [FOR EACH LOOP] Please describe how the injury, illness, or condition occurred, and what caused it. For example: “When ladder slipped on wet floor, I fell 20 feet”; “I was sprayed with chlorine when gasket broke during replacement”; “I developed soreness in wrist over time.” [OPEN ENDED]
11. [SOURCE] Were there any other objects, substances, or persons involved in the injury or illness that you didn’t mention? Please include equipment, chemicals, vehicles, or anything else.
12. [NATURE AND BODY PART] Please describe the injury, illness, or condition. How was [BODY PART, ORGAN] affected? You can use medical terms if you know them, or just talk about the symptoms you experienced. For example: “strained back”; “chemical burn on hand”; “carpal tunnel syndrome.”
13. [NATURE AND BODY PART] Were there any other parts of your body or organs affected by the injury or illness that you may not have included in your description? How was [BODY PART, ORGAN] affected?

CHECKLIST
1. Description or diagnosis for injury/illness (this is the OIICS <b>nature</b> )
2. Part or parts of body affected, including body systems (OIICS <b>part</b> , obviously)
3. How the injury/illness/exposure happened (OIICS <b>event</b> )
4. Vehicles, tools, chemicals, surfaces, or any other objects involved; this can be multiple objects; this can also just be the person’s body moved incorrectly (OIICS <b>sources</b> )

### VERSION 2 OF Q10 THROUGH Q13:

Now I want to ask you a different set of questions about your injury/illness. These questions may sound similar to the ones I just asked you, but I am trying to find out which way of asking the questions works better. Please answer these questions as if we had not already talked about your injury/illness.

Now I am going to ask you more about (injury/illness):

**10a: [WORKER ACTIVITY + some EVENT and SOURCE]** [FOR EACH LOOP] What happened? How did the injury or illness occur? For example: “When ladder slipped on wet floor, I fell 20 feet”; “I was sprayed with chlorine when gasket broke during replacement”; “I developed soreness in wrist over time.” [OPEN ENDED]

**11a: [EVENT and SOURCE]** [FOR EACH LOOP] What were you doing just before the incident occurred? Describe the activity as well as the tools, equipment, or material you were using. Be specific. For example: “climbing a ladder while carrying roofing materials”; “spraying chlorine from hand sprayer”; “daily computer key-entry.”

a. DESCRIBE THE ACTIVITY.

DK  
REF

b. DESCRIBE THE TOOLS, EQUIPMENT, OR MATERIAL THAT YOU WERE USING.] [OPEN ENDED]

DK  
REF

**12a: [SOURCE]** [FOR EACH LOOP] What object or substance directly harmed you? For example: “concrete floor”; “chlorine”; “radial arm saw.”

RECORD VERBATIM RESPONSE:

a. DK  
b. REF

**13a: [NATURE and PART]** [FOR EACH LOOP] [INTERVIEWER NOTE: R should be more specific than “hurt,” “pain,” or “sore.” For example: “strained back”; “chemical burn, hand”; “carpal tunnel syndrome.”

a. How did this injury or illness happen?

RECORD VERBATIM RESPONSE:

a. DK  
b. REF

b. What part of your body was affected?

RECORD VERBATIM RESPONSE:

a. DK  
b. REF

c. How was it affected? What type of injury or illness affected your [PART OF BODY]?

RECORD VERBATIM RESPONSE:

a. DK  
b. REF

**Probes:**

*Characteristics of incident*

- [READ QUESTION] Can you tell me in your own words what you think this question is asking?
- [IF R DOES NOT INDICATE HOW INJURY/ILLNESS IS WORK-RELATED] Tell me more about how this injury/illness was related to your job. Where were you when this happened? What were you doing? What caused the injury/illness? Tell me more about the injury/illness.

**Notes to interviewer:**

Questions 10 through 13 are intended to capture (event or exposure, source of the injury/illness, part of body affected, and nature of the injury/illness). Do the questions elicit the information needed? Are the response options adequate to capture the information Rs give? Use general probing to elicit more information about the incident. (For example, if R says "I cut myself" ask: What part of your body was injured? What did you get cut with? What were you doing at the time?)

Medical attention

14. [FOR EACH LOOP] Was the injury/illness serious enough that a doctor, nurse, or other health care professional was consulted?
- Yes → What type of health care professional did you see? (specify) \_\_\_\_\_
  - No
  - DK
  - REF

15. [FOR EACH LOOP] Did you get medical advice, treatment, or follow-up care for this injury/illness from...?

	Yes	No	Not needed	DK/REF
An emergency vehicle, such as an ambulance or fire truck				
An emergency room				
A doctor's office or other health clinic <i>Please include on-site offices or clinics at your place of employment</i>				
A phone call to a doctor, nurse, or other health care professional				
Any place else? Specify				

16. [FOR EACH LOOP] Were you admitted to the hospital?
- YES → How many nights were you in the hospital? \_\_\_\_\_ nights
  - NO
  - DK
  - REF

17. Did you receive a medical diagnosis from a health care professional?
- YES → What was your medical diagnosis?
  - NO
  - DK
  - REF

**Probes:**

*Medical attention (tailor probes based on whether R reported receiving medical attention)*

- Tell me more about the medical care you received after the injury/illness happened.
- Can you tell me in your own words what you think this question is asking?
- Who do you think of as a health care professional? Who would you include or not include? [IF NEEDED ASK IF THESE WOULD COUNT: medical doctor, nurse, physician’s assistant, chiropractor, paramedic]
- I asked you about whether you received a medical diagnosis. What does the term “medical diagnosis” mean to you? How do you get a medical diagnosis? Who gives you a medical diagnosis? Does a medical diagnosis have to come from a doctor or other health care professional?
- IF NEEDED] Did you go to a doctor, nurse, or other health care provider after [INCIDENT]? Did you go to the hospital or did paramedics come?
- What does it mean to be admitted to the hospital? How is that different from an emergency room visit?
- Is/Was there a medical clinic at your place of employment? Did you see anyone at that clinic?
- Did you speak to a doctor, nurse, or another health care provider by phone after the incident?

Effect on work

18. [FOR EACH LOOP] Did you report this injury/illness to your employer?

- a. YES [SKIP TO Q20]
- b. NO
- c. DK
- d. REF

19. [FOR EACH LOOP] IF NO TO REPORTING TO EMPLOYER: Why did you not report this injury/illness to your employer?

- |   |     |    |    |     |
|---|-----|----|----|-----|
| a. Avoid being laid off   | YES | NO | DK | REF |
| b. Avoid loss of wages  | YES | NO | DK | REF |
| c. Avoid loss of promotion or advancement                             | YES | NO | DK | REF |
| d. Avoid job transfer or restriction                                  | YES | NO | DK | REF |
| e. Employer would not recognize the injury/illness as work-related    | YES | NO | DK | REF |
| f. Employer wants to keep injury and illness rates low                | YES | NO | DK | REF |
| g. Realized the injury/illness was work-related after leaving the job | YES | NO | DK | REF |
| h. Other (specify)  | YES | NO | DK | REF |

**Probes:**

*Effect on work*

- [IF YES TO Q19] Tell me more about the reasons why you did not tell your employer about this injury/illness. Which was the main reason for not telling your employer? Tell me more about that.

**Notes to interviewer:**

Observe for signs of acquiescence bias in Q19. Are Rs saying “yes” because a reason sounds plausible or because it was a reason why R did not report an injury/illness? Ask for more detail and main reasons. How did R determine an answer to each item in Q19? Probe to explore understanding of terms, ability to accurately report on consequences of the injury/illness.

20. [FOR EACH LOOP] Did the injury/illness cause you to...?

	YES	NO	NA	DK/REF
a. Be unable to work the next day, whether or not you were actually scheduled to work? [BE SURE TO ASK Q21]				
b. Work at your regular job less than your usual number of hours?				
c. Work at your regular job, but be unable to perform all of the normal duties of the job?				
d. Be assigned to another job on a temporary basis?				
e. (DELETED)				
f. (DELETED)				
g. Quit your job?				
h. Be laid off?				
i. Be fired?				
j. Change occupations?				
k. Lose any wages?				
l. OTHER (SPECIFY)				

IF NO WORK DAYS MISSED, GO THROUGH PROBES THEN SKIP TO INTRO AT Q23.

**Probes:**

*Effect on work*

- IF YES TO ANY ITEM IN Q20: Tell me more about [TEXT FILL]. [E.g., Tell me more about your normal job duties. What duties were you unable to perform? OR Tell me more about why you quit your job? When did you quit? How was that related to your injury/illness?]
- What does the term [TEXT FILL] mean to you? Can you give me an example? [E.g., What does it mean to you to be assigned to another job on a temporary basis? What does it mean to be laid off? Fired?]
- What kind of effect did the injury/illness have on your work schedule? Job duties? Ability to work? Ability to keep your job? The pay you received?

21. Were you able to work again after the injury/illness?

- YES
- NO →SKIP TO INTRO BEFORE Q23
- DK →SKIP TO INTRO BEFORE Q23
- REF →SKIP TO INTRO BEFORE Q23

22. [FOR EACH LOOP] How many days after the injury/illness were you able to start work again?

- \_\_\_\_\_ DAYS AFTER THE INJURY/ILLNESS
- STILL OFF PAID WORK
- EXPECTS NEVER TO DO PAID WORK AGAIN
- BACK TO WORK SAME DAY
- DK
- REF

**Probes:**

*Days after injury/illness able to start work again*

- You said you were able to start work again XX days after the injury/illness. How did you figure that out?
- Walk me through the timeline of when you were injured and when you got back to work.
- When you started work again were you able to resume all the duties you had before, or not?
- Did your doctor or another health care professional recommend that you take days off from work? How many days off did they recommend?

**Notes to interviewer:**

How does R determine days after injury/illness able to start work again?

Workers' compensation

Workers' compensation is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job. The next questions are about income you may have received from workers' compensation.

23. [FOR EACH LOOP] Has anyone filed a workers' compensation claim for this injury/illness?

- a. YES
- b. NO [SKIP TO Q25]
- c. DK
- d. REF

24. Who filed the workers' compensation claim?

- a. EMPLOYER
- b. EMPLOYEE
- c. FAMILY MEMBER OF EMPLOYEE
- d. OTHER SPECIFY
- e. DK
- f. REF

GO TO SKIP INSTRUCTION BEFORE Q26.

25. [FOR EACH LOOP] IF NO ON QUESTION ABOUT WORKERS' COMPENSATION: What was the main reason you or your employer did not file a workers' compensation claim for this injury/illness?

- a. Not eligible (did not meet waiting period)
- b. Employer refused
- c. Did not inform employer
- d. Worker unaware of workers' compensation coverage
- e. Other reason, please specify
- f. DK
- g. REF

SKIP INSTRUCTION:

#1: IF YES TO Q20a—MISSED DAYS OF WORK, GO TO Q26.

#2: ELSE IF WORKERS' COMPENSATION CLAIM FILED (i.e., Q23=YES) SKIP TO Q27.

#3: ELSE GO TO PROBES AT END OF SECTION THEN SKIP TO INTRO BEFORE Q28.

26. IF R MISSED DAYS OF WORK FOLLOWING THE INJURY/ILLNESS: *MARK YES OR NO FOR EACH QUESTION*

	YES	NO	NA	DK/REF
Did you receive workers' compensation? READ IF NECESSARY: <i>Workers compensation</i> is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job.				
Did your employer continue to pay your wages and other compensation in full during the period you were unable to work?				
<i>Short-term or temporary disability</i> benefits provide you with a portion of your income if you are temporarily unable to work due to a medical condition. Did you receive short term (temporary) disability?				
Did you use paid sick leave, paid annual leave, or paid time off?				
Did you take leave without pay?				
Other-specify _____				

Definitions:

*Workers compensation* is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job.

*Short-term or temporary disability* benefits provide you with a portion of your income if you are temporarily unable to work due to a medical condition.

27. [FOR EACH LOOP] IF FILED A WORKERS' COMPENSATION CLAIM: Is there an open claim pending for this injury/illness?

- a. YES
- b. NO
- c. DK
- d. REF

**Probes:**

*Workers' compensation*

- ASK PROBES TAILORED TO THE REASONS R REPORTS ON WHY NO WC CLAIM WAS FILED BY EMPLOYER. EXAMPLES: Tell me more about the reasons why your employer did not file a workers' compensation claim for this injury/illness? What did your employer say? Why did the employer refuse? How sure are you about whether or not your employer filed a claim?
- Can you tell me what it means to file a workers' compensation claim? Tell me what you know about that process.
- Have you heard of [TEXT FILL]? Please tell me in your own words what you think [TEXT FILL] means: workers' compensation, short-term or temporary disability, paid sick leave/paid annual leave/paid time off, leave without pay.

**Notes to interviewer:**

Do Rs know what workers' compensation is? Do they know whether a WC form was filed? Are the terms in Q26 familiar to Rs and are the definitions helpful?

## Occupation and Industry at Time of Injury or Illness

[FOR EACH LOOP] Thinking about the time of the injury/illness [TEXT FILL DESCRIPTION].

28. Were you considered by your employer to be a full time or part time employee?

- a. Full-time
- b. Part-time
- c. DK
- d. REF

29. In a typical week, how many hours did you work? \_\_\_\_\_ hours

IF NECESSARY: Was it greater than or equal to 35 hours per week?

- DK
- REF

### **Probes:**

#### *Hours worked*

- Do you work the same number of hours per week, or not? How did you determine how many hours per week you typically work?
- How many hours a week would you consider to be full time employment? What does your employer consider to be full time employment?

#### **Notes to interviewer:**

Does R have any difficulty recalling FT vs. PT work? How do Rs with irregular work schedules, seasonal employment, etc., answer the question? Does the number of hours per week typically worked accord with report of FT/PT status?

30. (Were/Was) (name/you) employed by government, by a private for-profit company, a nonprofit organization, self-employed, or working in the family business?

- a. Government
- b. Private-for-profit company
- c. Non-profit organization including tax exempt and charitable organizations
- d. Self-employed
- e. Working in the family business

31. Would that be the federal, state, or local government?

- a. Federal
- b. State
- c. Local

32. What is the name of the (company, organization or agency) for whom you worked? [OPEN ENDED]

- DK
- REF

NOTE: IF GOVERNMENT EMPLOYER, TEXT FILL=AGENCY; IF NON-PROFIT, TEXT FILL=ORGANIZATION; ELSE TEXT FILL=COMPANY.

33. What kind of business or industry was this? [OPEN ENDED]

- DK
- REF

34. DELETE

35. What did they make or do where you worked? [OPEN ENDED]

DK  
REF

36. In what state were you employed at this job?

DK  
REF

37. What kind of work did you do? (For example: registered nurse, personnel manager, supervisor of order department, secretary, accountant) [OPEN ENDED]

DK  
REF

38. What were your most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, typing and filing, reconciling financial records) [OPEN ENDED]

DK  
REF

39. At this job, were you a member of a union or covered by a collective bargaining agreement?

- a. YES
  - b. NO
  - c. DK
- REF

40. How many people work at your work location]?

- a. 1 to 10 workers
- b. 11 to 49 workers
- c. 50 to 249 workers
- d. 250 to 999 workers
- e. 1000 or more workers
- f. DK
- g. REF

**Probes:**

*Employment characteristics for job at time of injury/illness*

- **Q39** (union): Have you heard of unions? Have you heard of a collective bargaining agreement? Tell me what those words mean to you.
- **Q39**: Tell me how you decided on your answer. Tell me about the collective bargaining agreement. What union do/did you belong to?
- **Q40** ON HOW MANY WORKERS: Tell me how you figured out your answer to this question. Walk me through how you figured out that answer. How certain are you of your answer?

**Notes to interviewer:**

Observe respondent ability to understand and respond to questions about employment at time of the injury/illness. Probe as needed to explore an issues with response. Are respondents able to accurately report answers for **Q39 and Q40**? Q40 should include total for R's work location only, not the whole company/organization.

IF R HAS ADDITIONAL INJURIES/ILLNESSES TO REPORT, GO BACK **TO Q9. ELSE GO TO Q41.**

## Demographic Characteristics

### Race/ethnicity

41. Are you Spanish, Hispanic, or Latino?
- YES
  - NO
  - DK
  - REF
42. [I am going to read you a list of five race categories.] Please choose one or more races that you consider yourself to be:
- White
  - Black or African American
  - American Indian or Alaska Native
  - Asian
  - Native Hawaiian or Other Pacific Islander
  - Other \_\_\_\_\_
  - DK
  - REF

### Age

43. What is your date of birth? Enter MM/DD/YYYY
- DK  
REF
44. As of last week, that would make you approximately (AGE) years old. Is that correct?
- [IF NECCESARY] Even though you don't know your exact birthdate, what is your best guess as to how old you were on your last birthday?
- \_\_\_\_\_ years
- DK  
REF

### Marital Type

45. Are you now married, widowed, divorced, separated or never married?
- MARRIED - SPOUSE PRESENT
  - MARRIED - SPOUSE ABSENT
  - WIDOWED
  - DIVORCED
  - SEPARATED
  - NEVER MARRIED
  - DK
  - REF

### Gender

46. Are you male or female?
- MALE
  - FEMALE

## Education

47. What is the highest level of school you have completed or the highest degree you have received?
- Less than 1st grade
  - 1st, 2nd, 3rd or 4th grade
  - 5th or 6th grade
  - 7th or 8th grade
  - 9th grade or 10th grade
  - 11th grade
  - 12th grade NO DIPLOMA
  - High school graduate - high school diploma or the equivalent (For example: GED)
  - Some college but no degree
  - Associate degree in college - Occupational/vocational program
  - Associate degree in college -- Academic program
  - Bachelor's degree (For example: BA, AB, BS)
  - Master's degree (For example: MA, MS, MEng, MEd, MSW, MBA)
  - Professional School Degree (For example: MD, DDS, DVM, LLB, JD)
  - Doctorate degree (For example: PhD, EdD)

47.1. In what country were you born?

\_\_\_\_\_ [OPEN-ENDED]

## Current Industry and Occupation

The next questions are about your **current job**. *If you have more than one job, please tell me about the job at which you usually work the most hours. If you work the same number of hours at two jobs, please tell me about the job where you were employed the longest.*

48. What is your current employment status? Are you currently employed full-time, part-time, or are you not employed?
- FULL-TIME
  - PART-TIME
  - NOT CURRENTLY EMPLOYED [SKIP TO END OF SURVEY]
  - DK
  - REF
49. [IF CURRENTLY EMPLOYED] Is this job the same job with the same employer that you have already told me about?
- Same job with same employer [FOLLOW SKIP BELOW at Q50]
  - Different job, same employer [SKIP TO Q51]
  - Different employer [SKIP TO Q51]
  - DK
  - REF
50. [IF YES AND ONLY ONE LOOP FOR INJURY/ILLNESS THEN SKIP TO END OF SURVEY. ELSE IF YES AND MORE THAN ONE REPORTED INJURY/ILLNESS AND EMPLOYER ASK:] Which job and employer is that?
51. Currently, in a typical week, how many hours do you work? \_\_\_\_\_ hours  
IF NECESSARY: Was it greater than or equal to 35 hours per week?  
DK  
REF

52. (Were/Was) (name/you) employed by government, by a private for-profit company, a nonprofit organization, self-employed, or working in the family business?
- Government
  - Private-for-profit company
  - Non-profit organization including tax exempt and charitable organizations
  - Self-employed
  - Working in the family business
53. Would that be the federal, state, or local government?
- Federal
  - State
  - Local
54. What is the name of the (company, organization or agency) for whom you work? [OPEN ENDED]
- DK  
REF
55. What kind of business or industry is this? [OPEN ENDED]
- DK  
REF
56. DELETE
57. What do they make or do where you work? [OPEN ENDED]
- DK  
REF
58. What kind of work do you do? (For example: registered nurse, personnel manager, supervisor of order department, secretary, accountant) [OPEN ENDED]
- DK  
REF
59. What are your most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, typing and filing, reconciling financial records) [OPEN ENDED]
- DK  
REF

***Probes:***

*Employment characteristics for current job*

- Use general probes as needed to investigate issues with these questions.
- Is the job you reported your only job or do you have more than one job?
- [REREAD THE ITALICIZED INSTRUCTION ON WHICH JOB TO REPORT ON]. In your own words, what do you think this instruction means?

***Notes to interviewer:***

These questions are the same as for the job at time of the incident. Continue to observe for issues to explore.

Does R notice that this set of questions is about the current job? If R has more than one job, did R report on the correct one?

How do Q48 and Q49 function for determining that the current and former job are the same?

### ***Debriefing questions for self-interview:***

#### *Recall and reference period*

- How easy or difficult was it for you to answer questions about injuries/illnesses that occurred over the last year?
- How sure are you that the injury/illness you told me about happened in the last year?
- Were there any questions that were particularly difficult to answer? Tell me more about that?
- If I asked you about injuries/illnesses that happened during the past year, how easy or hard would it be to answer the questions I asked you?
- When you signed up to do the survey, you may have seen a flyer or someone from NORC ask you about injuries and illnesses related to work that you may have had. Did you think about those injuries/illnesses you had, or did you do anything to get ready for the interview before you came? Tell me about that.
- Imagine that you didn't know ahead of time that this survey was going to be about work-related injuries and illnesses. If someone called you or came to your door, and asked you whether you had ever had a work-related injury or illness, do you think you would have remembered? How hard would these questions in the survey be, if you didn't know in advance what the survey was about?

#### *Sensitivity*

- Were you worried/Would you be worried about telling your employer about an injury/illness? Was it/Would it be hard for you to tell your employer? Tell me more about that.
- Were you worried/Would you be worried about telling the government about an injury/illness? Why? Tell me more about that.
- Were you worried/Would you be worried about telling anyone else about a work-related injury/illness? Tell me more about that.

#### *Review of selected items*

- I'd like to ask you a little more about [QUESTION]. You said [FILL]. In your own words, what do you think that question was asking? How did you decide on your answer?

#### *General debriefing*

- What are your suggestions on how to improve the survey?
- What questions were the most difficult for you to answer?
- What questions were the easiest to answer?

#### ***Notes to interviewer:***

Is reporting work-related injuries and illnesses to the employer a sensitive issue? Why or why not? Is telling others outside the workplace about these incidents sensitive? Why or why not?

What questions are the most and least difficult for Rs to answer? What answers are they uncertain about? Do they have suggestions for improving the survey?

Return to any questions that need further exploration.

***Debriefing questions for proxy respondents:***

*Proxy*

- What is your relationship to [RESPONDENT NAME]?
- How much would you say you know about R's job?
- How familiar would you say you are with R's work-related injury/illness? Are you aware of the medical treatment he/she received when the injury/illness occurred? Are you aware of how this affected R's job? How did you learn about R's injury/illness? Who in your household besides R would be the best person to answer the kinds of questions I asked?
- What questions were the hardest for you to answer for R? Why? How much would you say you know about [QUESTION TOPIC]? How easy/hard is it to remember the information the question asked about? Tell me more.
- What questions were the easiest for you to answer for R? Why? How much would you say you know about [QUESTION TOPIC]? How easy/hard is it to remember the information the question asked about? Tell me more.

*Sensitivity*

- Were you worried/Would you be worried about telling anyone else about R's work-related injury/illness? Tell me more about that.

*Review of selected items*

- I'd like to ask you a little more about [QUESTION]. You said [FILL]. In your own words, what do you think that question was asking? How did you decide on your answer?

*General debriefing*

- What are your suggestions on how to improve the survey?
- What questions were the most difficult for you to answer?
- What questions were the easiest to answer?

***Notes to interviewer:***

Is proxy reporting of work-related injuries and illnesses a sensitive issue? Why or why not?

What questions are the most and least difficult for Rs to answer? What answers are they uncertain about? Do they have suggestions for improving the survey?

Return to any questions that need further exploration.

***Debriefing questions for those with no injury/illness to report:***

*Terms*

How familiar are you with the following terms? Please tell in your own words what these terms mean to you?

*Workers' compensation, etc.*

- Worker's compensation
- Temporary disability
- Short-term disability
- Paid sick leave

- Paid annual leave
- Paid time off

*Health care professional/calendar days/work shifts*

ASK R: In the last year, have you had any injury or illness that was serious enough that a health care professional was consulted? Please include any injury whether or not it was work-related.

- Who do you think of as a health care professional? Who would you include or not include? [IF NEEDED ASK IF THESE WOULD COUNT: medical doctor, nurse, physician’s assistant, chiropractor, paramedic]
- When you became injured or ill, how many days after the injury/illness were you able to start work again? How did you figure that out?
- You said you were not able to do your usual activities for XX calendar days. How did you figure that out?

*Unions/collective bargaining agreement*

- Have you heard of unions? Have you heard of a collective bargaining agreement? Tell me what those words mean to you.
- Q39 (how many workers): Tell me how you figured out your answer to this question. Walk me through how you figured out that answer. How certain are you of your answer?

*Understanding of terms*

- Who do you think of as a health care professional? Who would you include or not include? [IF NEEDED ASK IF THESE WOULD COUNT: medical doctor, nurse, physician’s assistant, chiropractor, paramedic]
- Now I’d like to ask you about the term “medical diagnosis.” What does the term “medical diagnosis” mean to you? How do you get a medical diagnosis? Who gives you a medical diagnosis? Does a medical diagnosis have to come from a doctor or other health care professional?

**STEP 3: END OF INTERVIEW**

Thank you for taking part in this survey.

STOP THE RECORDER.

*RECRUITMENT QUESTION:*

We are looking for additional respondents like you who would be interested in helping with the study. Do you know anyone who had a work-related injury or illness who might be interested in participating? If yes, would you mind if we gave you a flyer about the study and send you an email about the study that you could forward to them?

INTERVIEWER: ANSWER ANY RESPONDENT QUESTIONS.

This concludes the interview. I would be happy to answer any questions that you have. Thank you for your help with this study.

PAY THE RESPONDENT AND OBTAIN SIGNATURE ON RECEIPT.

*MATERIALS TO TAKE AWAY FROM INTERVIEW*

- INTERVIEWER PROTOCOL BOOKLET (THIS BOOKLET)
- SIGNED CONSENT FORM
- SIGNED PAYMENT RECEIPT
- DIGITAL RECORDER AND BATTERIES
- NOTE PAPER, PENS, PENCILS

## Appendix D: Cognitive Interview Round 3 Memo



at the UNIVERSITY of CHICAGO

## Memorandum

**To:** Elizabeth Rogers & Karen Shahpoori

**From:** NORC

**Re:** Household SOII Round 3 Cognitive Interviews

**Date:** 9/30/2016

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### Introduction

NORC is conducting cognitive testing on behalf of the Bureau of Labor Statistics (BLS) to inform the design of a Household Survey of Occupational Injuries and Illnesses (HSOII). The cognitive interviews will provide data to evaluate the HSOII survey questions for correct interpretation and to assess the ability of respondents to accurately answer the survey questions. The results of the interviews will be used to refine the HSOII questionnaire items and item order.

*Recruitment Strategy.* The cognitive interview sample for Round 3 interviews was recruited via advertisements placed in Craigslist, and on-site posting of flyers in locations in the Chicago and Northern Indiana areas, and via NORC's AmeriSpeak panel.

NORC paid to have two screening questions placed in the August Amerispeak Omnibus survey. A total of 115 participants in this panel said they had a household member who had experienced an injury or illness in the last 12 months and were interested in participating. NORC followed up with all of these respondents and was able to secure and complete 19 interviews as a result of this recruitment strategy, including three proxy interviews with other household members. The rest of the interviews for Round 3 were recruited through Craigslist postings. Since the mode for Round 3 was that of a phone interview, NORC was able to post in different locations and recruitment through this method was quite effective.

NORC posted Craigslist ads in the following cities:

Tucson, AZ

Houston, TX

Louisville, KY

San Francisco, CA

Oklahoma City, OK

One respondent who was recruited in Round 2 but had not yet been scheduled was included in the pool for Round 3.

*Sample Characteristics.* We recruited a total of 30 persons for Round 3 (27 main respondents and 3 proxy). Another two had scheduled interviews but did not keep their interview appointments and could not be rescheduled.

Three of the 30 recruited respondents (R) were proxies who were invited for an interview primarily to discuss the work-related injuries and illnesses of another person recruited from his household.

In the respondent numbering presented in the discussion of findings, respondent pairs are given the same number. The letter “A” was assigned to the respondent who was recruited due to experience with a work-related injury or illness. The letter “B” was assigned to the proxy who was recruited from the same household. During the cognitive interview, both the main respondent and the proxy participated in a self-interview about their own experiences with workplace injuries and illnesses, and then participated in a proxy interview about the other member of the pair. Exhibit 1 displays demographic characteristics of the 30 respondents who participated in an interview; data are missing from one respondent for whom demographic data was not collected.

**Exhibit 1: Respondent Characteristics**

Characteristic	Category	Number of Respondents
Q41 – Ethnicity (Spanish, Hispanic or Latino?)	Yes	5
	No	22
	Do not know	2
	Refuse	0
Q42 - Race	White	14
	Black or African American	10
	American Indian or Alaska Native	3
	Asian	3
	Native Hawaiian or Other Pacific Islander	0
	Other (specify)	4
	Do not know	0
Refuse	0	

Q43-44 – Age categories	Under 25	1
	25-39	14
	40-54	8
	55-70	6
	70 or older	0
<b>Exhibit 1 continued: Respondent Characteristics</b>		
<b>Characteristic</b>	<b>Category</b>	<b>Number of Respondents</b>
Q45 - Marital Status	Married	13
	Widowed	0
	Divorced	3
	Separated	0
	Never married	13
	Do not know	0
	Refuse	0
Q46 - Sex	Male	16
	Female	13
Q47 – Education level	High school diploma or less	7
	Some college but no degree	1
	Associate’s degree (any type)	10
	Bachelor’s degree or above	11
Q48 – Current Employment Status	Full-Time	17
	Part-Time	6
	Not currently employed	6
	Do not know	0
	Refuse	0
Q52-Q59 – Description of occupation at the time of injury	Oil field equipment operator	1
	Firefighter	1
	Mechanic	2
	Casino tournament manager	1
	Retail worker	3
	Warehouse worker	3
	Legal clerk	1
	Maintenance	1
	Landscaping	2

	Drain equipment production	1
	Nursing	2
	Data entry	2
	Civil engineering	1
	Medical staff associate	1
	Electrical equipment installation	1
	NA because proxy (no injury)	3
	Projection equipment specialist	1
	Welding	1
	Quality control in oil refinery	1
	Teaching	1

*Interview.* All interviews were conducted by phone. The interviews were conducted by three methodologists who are experienced in cognitive interviewing. Respondents participated in a cognitive interview lasting up to one hour and were paid \$40.

*Timing of interviews:* For the last 13 interviews in Round 3, cognitive interview protocols were modified so that all probing occurred at the end of the interviews. This was done in order to estimate the time of completion of the interviews. Based on the recordings of these interviews, the average completion time for an interview with one loop for an injury or illness was 27:51. The average additional time taken to complete each loop for each additional injury beyond this amount was 10:29.

*Organization of this memo.* The discussion of findings from the cognitive interviews focuses on the questionnaire items in which issues were observed during the cognitive interviews.

**Screener**

**Questions A1 through A12: Screener**

A1. In the last 12 months, did you do ANY work for pay or profit?

- a. Yes → ELIGIBLE, CONTINUE
- b. No → NOT ELIGIBLE, END INTERVIEW
- c. DK
- d. REF

A2. In the last 12 months, have you experienced any injuries or illnesses related to any job you held?

- a. Yes → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- b. No → SKIP TO A4
- c. DK
- d. REF

A3. In what month and year did this injury/illness occur?

MONTH/YEAR

ENTER MM/YYYY

DK

REF

A4. [Now I want to find out if you experienced any other work-related injuries other than the TEXT FILL INJURY RESPONDENT REPORTED (e.g., concussion) you just told me about.] In the last 12 months, have you experienced any [other] injuries, such as the following, related to any job you held?

- a. Sprains, strains or tears
- b. Soreness or pain
- c. Bruises
- d. Cuts or punctures
- e. Broken bones
- f. Injury to muscles or joints
- g. Open wounds
- h. Burns
- i. Carpal tunnel syndrome
- j. Any other injury?

- 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- 2) NO →SKIP TO A6
- 3) DK →SKIP TO A6
- 4) REF →SKIP TO A6

A5. In what month and year did this injury occur?

MONTH/YEAR  
 ENTER MM/YYYY  
 DK  
 REF

A6. [Other than the TEXT FILL ILLNESS RESPONDENT REPORTED (e.g., asthma) you have already mentioned], in the last 12 months, have you experienced any [other] illnesses, such as the following, related to any job you held?

- a. Skin disorders
- b. Respiratory conditions
- c. Poisonings
- d. Hearing loss
- e. A disease or infection
- f. Cancer
- g. Anxiety or depression
- h. Any other illness?

- 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- 2) NO →SKIP TO A8
- 3) DK →SKIP TO A8
- 4) REF →SKIP TO A8

A7. In what month and year did this injury/illness occur?

MONTH/YEAR  
 ENTER MM/YYYY  
 DK  
 REF

A8. [Other than the TEXT FILL INJURY/ILLNESS RESPONDENT REPORTED (e.g., concussion, asthma) you have already mentioned], in the last 12 months, have you experienced any [other] work-related injuries or illnesses that caused you to...

	Yes	No	DK	REF
a. Faint, pass out, or lose consciousness?				
b. Be unable to work for a day or more?				
c. Do less than your normal work activities?				
d. Be assigned to a different job or tasks at your place of work?				
e. Get medical treatment other than what can be treated with a first aid kit?				

A9. In what month and year did this injury/illness occur?

MONTH/YEAR  
 ENTER MM/YYYY  
 DK  
 REF

A10. Have you EVER experienced any injuries or illnesses related to any job you held?

- a. YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- b. NO → SKIP TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS
- c. DK → SKIP TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS
- d. REF → SKIP TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS

A11. In what month and year did this injury/illness occur?

MONTH/YEAR  
 ENTER MM/YYYY  
 DK  
 REF

A12. [IF YES TO ANY INJURIES OR ILLNESSES] How many total times in the last 12 months [did you experience/have you ever experienced] an injury or illness related to any job you held? [THIS WILL CREATE THE LOOPS.] \_\_\_\_\_TIMES

The screener questions ask respondents whether they worked in the past year and whether they experienced any injuries or illnesses related to any job they had. As discussed in the Round 1 memo, respondents were able to understand the questions on whether they had worked in the last year (Q1), the injury/illness terms (Q4, Q5), and could discern the work-relatedness of their injuries/illnesses. The reference period of the survey was also generally understood by respondents.

For Round 3 (Version 1), several changes were made to the Screener questions:

- Revised language about the reference period. Consistent with other national surveys (such as the Current Population Survey and the National Crime Victimization Survey), we revised to present the dates of the reference period in an introductory statement. In the questions that follow, the reference period is then referred to as the “last 12 months.” Further, alternative language was scripted for respondents whose injuries/illnesses were chronic or were of gradual onset, making it difficult to tie the condition to a specific date.
- Moved question on dates of each injury/illness from end of screener. Previously, dates of all incidents were collected at the end of the screener. Respondents are now asked to provide month/year of the injury/illness immediately after the screener question in which they report it.
- The recordability criteria are no longer asked separately for each injury/illness reported. The information needed about each injury/illness is now collected later in the instrument. The recordability criteria are now used as additional cues to recall of incidents of injury and illness.

During Round 3, some additional modifications were made to the screener questions:

- The question on the total number of injuries/illnesses experienced has been revised. Instead of asking respondents to count up the incidents, the interviewer will enumerate them for respondent confirmation. This change will ease respondent burden.

A12. [IF YES TO ANY INJURIES OR ILLNESSES] You have told me about X work-related injuries and illnesses you have experienced in the last 12 months.

BRIEFLY LIST EACH INJURY/ILLNESS: TEXT FILL #1, TEXT FILL #2, TEXT FILL #3, ETC.  
Is that correct?

\_\_\_\_\_ TIMES

- In consultation with BLS, it was determined that when an injury/illness is chronic or gradual onset, respondents do not need to name the specific month/year in which they first noticed symptoms. In consultation with BLS (9/13 project meeting), NORC revised the questions on when the injury/illness occurred to indicate that when an injury or illness is chronic or of gradual onset, month and year does not need to be collected. Respondents with chronic or gradual onset injuries and illnesses will receive an alternate version of some of the questions on Effect on Work (Section D). These alternative questions are discussed in greater detail later in this memo.

The questions collecting month and year were revised to include guidance to interviewers and clarifying questions that can be asked to determine whether an injury or illness is chronic/gradual onset.

[IF ILLNESS/INJURY IS A CHRONIC/GRADUAL ONSET CONDITION, ASK ALTERNATIVE QUESTIONS AS NEEDED: Did this injury/illness occur on a specific day or did it develop over time? Did you experience symptoms related to this injury/illness in the last 12 months?

*Understanding of screener questions on whether work-related injury/illness occurred*

We observed no major issues with respondent understanding that the injuries/illnesses of interest are those related to a job they held. When reporting discrete events that led to injury/illness, respondent descriptions were clear that the incident was related to their work. With some injuries/illnesses that are chronic/gradual onset, such as carpal tunnel syndrome and back strain, it can be clear that the work activities they described, such as typing or heavy lifting, could result in the injury/illness they reported. With other chronic/gradual onset conditions, such as anxiety or depression, the link to work seems more difficult to determine.

*Transition from Q2/Q3 to Q4*

We observed in prior rounds of testing that many respondents miss the instruction “Other than the injury/illness you just mentioned” in Q4. After reporting an injury/illness in Q2, they interpreted Q4 as asking about the same incident and reported whether, during the incident they just reported in Q2, they *also* sustained any of the types of injury being cued in Q4. To address this issue, Q4 and Q5 were revised during Round 2 to further emphasize that the respondent should report injuries/illnesses other than those he/she has already reported.

Initial findings from the Round 2B versions of these questions suggest that the revised wording is helping respondents understand that Q4 and Q5 concern any additional injuries/illnesses they may have experienced. Further observation of this transition in Round 3 interviews confirmed that the revisions improved respondents' understanding that subsequent screener questions are asking for reports of any additional injuries/illnesses experienced. However, a few respondents still interpreted these questions as asking about the same incident they already reported.

*Conditions that develop over time*

As noted prior interviews, some of the HSOII questions did not function well for conditions such as anxiety and stress, which may not be associated with an observable physical injury and, unlike physical injuries, are difficult to tie to a specific date.

*Question A8—Recordability criteria as cues to injury and illness*

This question is generally well understood but does not produce many additional reports of injury/illness. Some of the reports are related to injuries/illnesses already reported in response to a previous screener question. Other reports do not appear to qualify. Some examples:

- R82: R reported that an injury to shoulder caused him to do less than his normal duties, but added that it was the same injury he already described.
- R158A: R said she felt like fainting but did not, reported being unable to work for a day or more but it was not a separate incident. Overall, R missed for this item that incidents “other” than those already reported were of interest.
- R158B: This R, who reported as a proxy for R158A, also made the mistake of reporting incidents that had already been mentioned in prior screener questions.
- R165: R works long hours and mentioned falling asleep at stop lights. Although the fatigue may be related to long work hours, falling asleep at a stop light did not result in injury/illness and was not directly tied to work duties.

Since A8 does not appear to be adding much new information, to reduce respondent burden, this question series could be removed from the screener.

**Recommendations**

Overall the screener questions are working well. We provide a suggestion for reducing burden:

- Consider removing A8, the screener question that uses recordability criteria to cue injuries/illnesses. It is lengthy and may not add much. It takes a couple of minutes to administer the question.

Further, A10 and A11 (questions on whether the respondent ever experienced an injury or illness) can be deleted. These questions were originally meant for cognitive interview respondents who may not have experienced injuries or illnesses in the last year and so are not needed for the next stage of pilot testing.

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**Injury or Illness: Description**

**Questions B1 through B5: Illness or Injury: Description**

- B1. [FOR SECOND/THIRD/ETC. LOOPS] How is this injury/illness related to the other injury/illness you mentioned? Is this related to [the other/another] injury/illness you already mentioned or is it a different injury/illness?
- RELATED TO THE OTHER/ANOTHER INJURY/ILLNESS [GO TO NEXT LOOP]
  - THIS IS A DIFFERENT INJURY/ILLNESS [CONTINUE]
  - DK
  - REF

“Now I am going to ask you more about [INJURY/ILLNESS #....].”

- B2. [**WORKER ACTIVITY + some EVENT and SOURCE**] [FOR EACH LOOP] Please describe how the injury, illness, or condition occurred, and what caused it. For example: “When ladder slipped on wet floor, I fell 20 feet”; “I developed soreness in wrist over time.” [OPEN ENDED]

- B3. [SOURCE] Were there any other objects, substances, or persons involved in the injury or illness that you didn’t mention? Please include equipment, chemicals, vehicles, or anything else.

B4. [NATURE AND BODY PART] Please describe the injury, illness, or condition. How was [BODY PART, ORGAN] affected? You can use medical terms if you know them, or just talk about the symptoms you experienced. For example: “strained back”; “chemical burn on hand”; “fainted or passed out.”

B5. [NATURE AND BODY PART] Were there any other parts of your body or organs affected by the injury or illness that you may not have included in your description? How was [BODY PART, ORGAN] affected?

Questions B1 through B5 are intended to capture the characteristics of the work-related injury or illness that the respondent experienced. In Round 2, these questions worked well to capture the characteristics of each injury/illness.

B1 is intended to be asked when the respondent reports more than one injury/illness and has not made it clear that the injuries/illnesses are separate events. However, during the screener the interviewer works with the respondent to clarify the number of distinct events. For this reason, B1 should be integrated into the screener. Interviewers will ask these questions as needed to determine the relatedness of and the total number of injuries/illnesses the R experienced.

Exhibit 2 presents the characteristics of the injuries and illnesses that respondents reported.

**Exhibit 2: Characteristics of Reported Injury/Illness**

R#	Coding of nature, part of body, event, source(s)
R64A	<ul style="list-style-type: none"> <li>• Nature: Hematoma bruise on shin. Some associated swelling of the foot on that leg also occurred afterwards.</li> <li>• Part of body: 1) Shin 2) foot</li> <li>• Event: R was swinging a sledgehammer and missed the intended target and hit himself in the shin.</li> <li>• Source: Sledgehammer, R’s own swing.</li> </ul>
R136A	<ul style="list-style-type: none"> <li>• Nature: Broke small bone in front part of ankle joint (bottom surface bone) and damaged inside joint.</li> </ul>

	<ul style="list-style-type: none"> <li>• Part of body: Ankle</li> <li>• Event: R was walking to a table and as he approached the table, someone stuck out their leg/foot so to avoid the person’s foot, R side stepped on his right leg and injured his ankle.</li> <li>• Source: Someone else’s leg/foot, the floor, and possibly poker table</li> </ul>
<b>R126</b>	<ul style="list-style-type: none"> <li>• Nature: Sprain or strain of muscle in back, pulled muscle.</li> <li>• Part of body: 1) Back</li> <li>• Event: R slipped down the stairs in an apartment after extinguishing a fire there.</li> <li>• Source: Stairs, the R’s body.</li> </ul>
<b>R168</b>	<p>Injury/Illness 1:</p> <ul style="list-style-type: none"> <li>• Nature: Excruciating pain in left knee, R heard knee “pop and break” and knee was swollen, hurting, torn lateral meniscus</li> <li>• Part of body: Left knee</li> <li>• Event: R was working by himself and going too fast, walking around his truck looking for fluid leak, stumbled and fell on knee.</li> <li>• Source: Ground (R did not explicitly state this.)</li> </ul> <p>Injury/Illness 2:</p> <ul style="list-style-type: none"> <li>• Nature: damaged, shattered, torn meniscus; fragmented knee</li> <li>• Part of body: Right knee</li> <li>• Event: R was climbing up on truck, working on a pump, the previously injured left knee locked up and R fell off truck. His knee hit steering box and shattered.</li> <li>• Source: Steering box</li> </ul>
<b>R82</b>	<ul style="list-style-type: none"> <li>• Nature: R described being in excruciating pain and that he wrenched his shoulder. R did not mention a diagnosis but that it was his rotator cuff.</li> <li>• Part of body: Left shoulder (rotator cuff)</li> <li>• Event: R was on a ladder to reach some doors that were stored on a top shelf for a customer. As he reached for one of the doors, it came out suddenly and R grabbed it and wrenched his shoulder.</li> <li>• Source: Doors, ladder, shelf, customer</li> </ul>
<b>158A</b>	<ul style="list-style-type: none"> <li>• Nature: Allergies (caused headaches, runny eyes, runny nose, sore throat, painful rashes, fatigue, difficulty waking up, and clogged nostrils).</li> <li>• Part of body: Head, including nose and throat, and skin since she reported rashes.</li> </ul>

	<ul style="list-style-type: none"> <li>• Event: N/A – no specific incident, R did not specify a particular event that brought on the allergies. When probed about what caused the allergies, R stated “working in a law firm and handing old files.”</li> <li>• Source: R’s direct response to the screener and to Section B questions did not indicate source. Based on probing about what caused the allergies, R said it was due to handling boxes filled with old documents and working in an old building. R said she was allergic to multiple allergens.</li> </ul>
<b>R153</b>	<ul style="list-style-type: none"> <li>• Nature: Allergic reaction to outdoor work environment, including equipment and objects used for work</li> <li>• Part of body: Everywhere b/c it was his skin but particularly skin on back and arms</li> <li>• Event: N/A – no specific incident, just allergic reaction to things R touches or exposed to.</li> <li>• Source: R said he is allergic to everything</li> </ul>
<b>R135</b>	<ul style="list-style-type: none"> <li>• Nature: Broken coccyx and two herniated discs in her lower back that required surgery</li> <li>• Part of body: Coccyx/tailbone and back</li> <li>• Event: R was walking from in her employer’s parking lot and slipped on a patch of ice which caused her to fall on her tailbone. R noted that she was carrying a drink and a bag of food.</li> <li>• Source: Ice on parking lot, drink, bag of food</li> </ul>
<b>R170</b>	<ul style="list-style-type: none"> <li>• Nature: Cut on finger that required stitches</li> <li>• Part of body: Finger</li> <li>• Event: R was using a blade to cut a template for a drain and the template slipped and the blade cut his finger.</li> <li>• Source: Blade, template, drain.</li> </ul>
<b>R174</b>	<ul style="list-style-type: none"> <li>• Nature: Mild concussion syndrome</li> <li>• Part of body: head</li> <li>• Event: R was at work and went to sit on a chair but the chair legs were on an uneven surface so the chair flipped over and caused R to hit her head on the ground.</li> <li>• Source: Chair, floor.</li> </ul>
<b>R60</b>	<ul style="list-style-type: none"> <li>• Nature: Tears in knee cartilage</li> <li>• Part of body: 1) knee 2) back</li> <li>• Event: R was lifting and twisting part of a car for his job, strained back and tore cartilage in knee.</li> <li>• Source: Lifting, movement of R’s own body.</li> </ul>

<p><b>R61</b></p>	<ul style="list-style-type: none"> <li>• Nature: Achilles Tendonitis</li> <li>• Part of body: calves</li> <li>• Event: Standing too long in bad shoes at job, gradual onset.</li> <li>• Source: Standing, poor shoes.</li> </ul>
<p><b>R121</b></p>	<ul style="list-style-type: none"> <li>• Nature: Anxiety or depression with symptoms of insomnia and an irregular heartbeat (R isn't sure if the heartbeat issue was linked to the anxiety/depression).</li> <li>• Part of body: N/A</li> <li>• Event: N/A – not a specific event but stressful work environment in which R was working too many hours under demanding supervisors/bosses and it was unacceptable to take days off.</li> <li>• Source: R's bosses/supervisors and demanding work culture/environment</li> </ul>
<p><b>R165</b></p>	<p>Injury/Illness 1:</p> <ul style="list-style-type: none"> <li>• Nature: Strained back, painful</li> <li>• Part of body: Back</li> <li>• Event: R was lifting 100lb bag of concrete and “hurt her back”</li> <li>• Source: Bag of concrete</li> </ul> <p>Injury/Illness 2:</p> <ul style="list-style-type: none"> <li>• Nature: Burn to both hands</li> <li>• Part of body: Hands</li> <li>• Event: R grabbed pans that were supposed to be on the hot rack but someone had mistakenly put them on the cold rack and the pans burned her hands.</li> <li>• Source: Pans, racks used to store pans, coworkers</li> </ul>
<p><b>R200 (Lisa)</b></p>	<p>Injury/Illness 1:</p> <ul style="list-style-type: none"> <li>• Nature: Anxiety or depression, headaches.</li> <li>• Part of body: N/A</li> <li>• Event: N/A – Not a specific event but stressful work environment with long hours where R felt caught in the middle between the school administration and students she taught. Working in bridge program with GED students; felt that the program was designed to fail and she would have no job.</li> </ul> <p>Source: R's bosses/supervisors in administration and students she taught.</p> <p>Injury/Illness 2:</p> <ul style="list-style-type: none"> <li>• Nature: Neck, back and shoulder pain, strained neck</li> <li>• Part of body: Neck, back, shoulders</li> </ul>

	<ul style="list-style-type: none"> <li>• Event: NA – Developed over time due to carrying heavy books, use of computer</li> <li>• Source: Books, computer</li> </ul>
<b>R202</b>	<ul style="list-style-type: none"> <li>• Nature: 3<sup>rd</sup> degree burn</li> <li>• Part of body: 1) leg, hip</li> <li>• Event: Machine press caught R’s leg, after it had been activated or turned on without anyone’s knowledge. R thinks someone else accidentally turned it on.</li> <li>• Source: Machinery.</li> </ul>
<b>R137</b>	<p>Injury/Illness 1:</p> <ul style="list-style-type: none"> <li>• Nature: Sprained knee (swollen and bruised)</li> <li>• Part of body: Knee</li> <li>• Event: R tripped on a pothole in employer’s parking lot and she fell on her knee.</li> <li>• Source: Pothole, parking lot</li> </ul> <p>Injury/Illness 2:</p> <ul style="list-style-type: none"> <li>• Nature: Anxiety due to stressful work environment. Caused her to experience dizziness, high blood pressure, and trouble breathing on one occasion.</li> <li>• Part of body: N/A</li> <li>• Event: N/A – not a specific event but stressful work environment due to demanding supervisor/boss and being overworked.</li> <li>• Source: R’s boss/supervisor and demanding work culture/environment</li> </ul>
<b>R204</b>	<ul style="list-style-type: none"> <li>• Nature: Swollen eye</li> <li>• Part of body: Eye</li> <li>• Event: R was walking at her job site (a refinery) and someone was driving by her in a go-cart. The go-cart caused some particle to fly up and hit R in the eye. R had safety glasses on but it got in under them.</li> <li>• Source: Coworker, go-cart, particle/material</li> </ul>
<b>R164</b>	<p>Injury/Illness 1:</p> <ul style="list-style-type: none"> <li>• Nature: Sore back, abrasions on elbows and shoulders. R said he did not experience any issues related to hitting his head.</li> <li>• Part of body: Head, back, shoulder, elbows</li> <li>• Event: R fell 4 ft from a ladder when he overreached for a light fixture on the wall. Fell back and hit head (with helmet on) and back against the wall and then slid down the wall and landed on a fan.</li> <li>• Source: ladder, light fixture, wall, fan</li> </ul>

	<p>Injury/Illness 2:</p> <ul style="list-style-type: none"> <li>• Nature: Chipped a filling/crown</li> <li>• Part of body: Mouth</li> <li>• Event: Drilling a hole through concrete wall, drill bit jammed and the drill reversed back and hit R in the jaw.</li> <li>• Source: Drill, concrete wall</li> </ul>
<p><b>R163</b> <b>(Lisa)</b></p>	<p>Injury/Illness 1:</p> <ul style="list-style-type: none"> <li>• Nature: Arthritic collarbone, felt popping, grinding, pain</li> <li>• Part of body: right collarbone, right shoulder, right hand</li> <li>• Event: repetitive motion injury, reaching from right hand to left hand side of keyboard</li> <li>• Source: keyboard, typing</li> </ul> <p>Injury/Illness 2:</p> <ul style="list-style-type: none"> <li>• Nature: Carpal tunnel syndrome, sharp pain, soreness in forearm, numbness in fingers</li> <li>• Part of body: forearm, ring and pinky fingers (R did not mention side of body)</li> <li>• Event: typing</li> <li>• Source: typing (R mentioned activity but did not mention keyboard or other source in description)</li> </ul> <p>Injury/Illness 3:</p> <ul style="list-style-type: none"> <li>• Nature: back strain, with pain and spasms</li> <li>• Part of body: back</li> <li>• Event: sitting in chairs 8-10 hours per day</li> <li>• Source: chairs with no support</li> </ul>
<p><b>R208</b> <b>(David)</b></p>	<p>Injury/Illness 1:</p> <ul style="list-style-type: none"> <li>• Nature: Broken foot and sprained ankle</li> <li>• Part of body: Foot</li> <li>• Event: R was at work and was moving boxes when a "tote" (type of forklift) ran over his foot.</li> <li>• Source: Tote (forklift), person driving the tote, boxes</li> </ul> <p>Injury/Illness 2:</p> <ul style="list-style-type: none"> <li>• Nature: R described injury as strained back, sharp pain in lower back, and felt like pins and needles.</li> <li>• Part of body: Lower back</li> </ul>

	<ul style="list-style-type: none"> <li>• Event: R was lifting packages and hurt his back</li> <li>• Source: Packages</li> </ul> <p>Injury/Illness 3:</p> <ul style="list-style-type: none"> <li>• Nature: Cuts and bruises on arms and lower legs</li> <li>• Part of body: Arms and lower legs (knees to toes).</li> <li>• Event: R handles boxes coming off conveyer belt and sometimes the boxes hit R's hands or legs and sometimes the boxes scrape him when he picks them up.</li> <li>• Source: Packages, conveyer belt</li> </ul>
<b>R207</b>	<ul style="list-style-type: none"> <li>• Nature: Spider bite, fractured finger, and sprained tendon</li> <li>• Part of body: Hand</li> <li>• Event: R was at his job site taking down a plant basket and he was bit by a spider. The bite caused his hand to twitch which resulted in a fractured finger and sprained tendon.</li> <li>• Source: spider, plant basket,</li> </ul>
<b>R209</b>	<p>Injury/Illness 1:</p> <ul style="list-style-type: none"> <li>• Nature: Twisted lower back – inflamed and sore</li> <li>• Part of body: Back</li> <li>• Event: Construction at R's work site during work hours and R twisted back while trying to avoid debris that was on the ground.</li> <li>• Source: Debris (wall material) on the ground, construction work</li> </ul> <p>Injury/Illness 2:</p> <ul style="list-style-type: none"> <li>• Nature: Difficulty breathing</li> <li>• Part of body: Lungs</li> <li>• Event: Construction at R's work site during work hours which caused dust and other materials in the air</li> <li>• Source: Dust in the air, construction work</li> </ul>
<b>R212</b>	<ul style="list-style-type: none"> <li>• Nature: Eczema</li> <li>• Part of body: Skin on hands and face</li> <li>• Event: N/A – Developed over time due to allergens at work site and stress from R's boss</li> <li>• Source: Dust/allergens in the air at job site and stress caused by R's boss</li> </ul>
<b>R210</b>	<ul style="list-style-type: none"> <li>• Nature: Broken bone on left leg near ankle</li> <li>• Part of body: Left leg</li> </ul>

	<ul style="list-style-type: none"> <li>• Event: R was standing in line to clock in for work and someone was operating a fork lift and backed it up and hit him and another coworker.</li> <li>• Source: Fork lift, person operating the fork lift</li> </ul>
<b>R201</b>	<ul style="list-style-type: none"> <li>• Nature: Leg was bleeding and bruised and some skin had come off</li> <li>• Part of body: Leg</li> <li>• Event: R was on a riding lawnmower and went forward into a pole causing his leg to hit against the pole.</li> <li>• Source: Riding lawnmower, pole</li> </ul>
<b>R216</b>	<p>Injury/Illness 1:</p> <ul style="list-style-type: none"> <li>• Nature: 2<sup>nd</sup> degree burn to right arm</li> <li>• Part of body: Right arm</li> <li>• Event: R works in a chemical plant and a coworker mixed chemicals together that started a fire and burned R's right arm.</li> <li>• Source: Coworker, chemicals, fire</li> </ul> <p>Injury/Illness 2:</p> <ul style="list-style-type: none"> <li>• Nature: Bruises</li> <li>• Part of body: Arm</li> <li>• Event: Lifting too much due to other people in his shift not showing up</li> <li>• Source: Heavy packages, R's own body</li> </ul>

**Recommendations:**

We did not observe that respondents had issues with the questions on the characteristics of the injury/illness. In most cases, the questions appear to provide sufficient information to determine the nature, part of body, event, and source(s) for each injury/illness.

We did note that on occasion, a respondent would comment that the examples in the questions did not apply to them. However, they could still report their own experience in response to the questions.

The presentation of B2 through B5 could be streamlined for those reporting more than one injury/illness. The full questions can be presented when collecting information on the first injury/illness. The examples could be omitted when collecting information on the second and additional injuries/illnesses. The

examples will have already cued respondents to the type of response needed and repetition of the examples is not likely to be useful.

**Injury or Illness: Medical Attention**

**Questions C1 – C4: Medical Attention**

C1. Did you get medical advice or treatment for this injury/illness from...

a. A doctor, nurse, or other healthcare professional? [IF YES]: What type of health care professional did you see?	YES	NO	NA	DK/REF
b. [UNLESS MENTIONED ABOVE] A paramedic, firefighter, or other emergency medical personnel?				

C2. Did you get medical advice or treatment for this injury/illness at...

a. A hospital?	YES	NO	NA	DK/REF
A1. [IF YES TO HOSPITAL] Did you receive treatment at the hospital emergency room (ER)?				
A2. [IF YES TO HOSPITAL] Were you admitted for an overnight stay?				
A3. [IF YES TO ADMITTED] How many nights were you in the hospital? _____ NIGHTS				
b. A health clinic at your place of employment?				
c. Any place else? Please specify.				

C3. [IF YES TO C1 OR C2]. Did you receive a medical diagnosis from a health care professional? ...

READ IF NECESSARY: Did a health care professional tell you the medical term for your injury/illness?

- a. YES → What was your medical diagnosis? INTERVIEWER READ IF NECESSARY: What is the medical term the health care professional used to describe your injury/illness?
- b. NO
- c. DK
- d. REF

- C4. [IF YES TO C1 OR C2]. Did your health care professional recommend that you take any days off from work due to your injury/illness?
- a. YES → How many days off did the health care professional recommend? \_\_\_\_\_ DAYS OFF
  - b. NO
  - c. DK
  - d. REF

This series of questions on medical attention asks respondents about the medical advice and treatment they received for their injury/illness. These questions were substantially revised for Round 3:

- Reordered questions and revised skip patterns to improve flow.
- Revised the question on being in the hospital to reduce error in reporting admission to the hospital.
- Added questions on whether the health care professional recommended that the respondent take days off from work.
- Adding simplified language for the term “medical diagnosis” to be read by the interviewer if necessary.

The revised questions on medical attention worked well. However, in considering what we observed in prior rounds and this round of interviews, it has become clear that people do not realize that getting treatment from an outpatient office in a hospital is not the same as getting treatment at the hospital (that is, from the emergency room or as an admitted patient).

- R168: This R received care from the urgent care clinic and offered this information in response to the question on whether he received care from a hospital.
- R136A: R received care at a doctor’s office at a VA medical center/hospital. This R had already mentioned receiving care from medical professionals.
- R200: R did not respond “yes” or “no” on whether she received care at a hospital, but mentioned she saw a doctor at the health center at the hospital.

The evidence from the interviews suggests that respondents are not always precise about reporting the type of care they received. They often consider receiving outpatient care at the hospital to be the same as getting care at the hospital. However, the follow-up questions on hospital care can help clarify the type of care received and allow for post-processing of the data to edit any incorrect responses. If respondents who report hospital care indicate that they did not receive care from the emergency room and were not

admitted to the hospital, it would be possible to code them as having received care from a health care professional, but not from a hospital.

At times in response to the question on whether the R saw a health care professional, respondents answer with the type of professional they saw instead of providing a yes/no answer. They provide answers such as “PT” (physical therapy) or “urgent care.” These were taken as responses of “yes” to the question. If the respondent names a type of care that is not clearly relevant (which did not occur in the cognitive interviews), the interviewer would need to probe to determine whether the R did seek care from a health care professional.

We observed that some respondents (R165, R163) reported in C3 that the doctor recommended days off. However, the Rs volunteered that they did not take the days off. If it is necessary to capture that the R did not take days off as recommended, a response option should be added to C4 to capture this.

**Recommendations:**

The questions on medical attention worked well. We have no recommended revisions to these questions.

**Injury or Illness: Effect on Work**

**Question D1 – D11: Effect on Work**

D1. Were you scheduled to work the day after the injury/illness?

- a. YES
- b. NO → SKIP TO D3
- c. DK → SKIP TO D3
- d. REF → SKIP TO D3

D2. [IF SCHEDULED TO WORK NEXT DAY] Were you able to work the next day?

- a. YES → SKIP TO D4
- b. NO → SKIP TO D4
- c. DK → SKIP TO D4
- d. REF → SKIP TO D4

D3. [IF WAS NOT SCHEDULED TO WORK NEXT DAY] If you had been scheduled to work, would you have been able to work the next day?

- a. YES
- b. NO
- c. DK
- d. REF

D4. Did you return to work after the injury/illness?

- a. YES
- b. YES, BACK TO WORK SAME DAY → SKIP TO D6
- c. NO → SKIP TO D10
- d. NO, STILL OFF PAID WORK BUT EXPECTS TO RETURN → SKIP TO D10
- e. NO, EXPECTS NEVER TO DO PAID WORK AGAIN → SKIP TO D10
- f. DK → SKIP TO D10
- g. REF → SKIP TO D10

D5. [IF RETURNED TO WORK] How many days after the injury/illness did you start work again?

- a. \_\_\_\_\_ DAYS AFTER THE INJURY/ILLNESS
- b. BACK TO WORK SAME DAY
- c. BACK TO WORK NEXT DAY
- d. DK
- e. REF

D6. When you went back to work, did you work your usual number of hours or not?

- a. YES
- b. NO
- c. DK
- d. REF

D7. When you went back to work, were you able to perform all of the normal duties of your job or not?

- a. YES
- b. NO
- c. DK
- d. REF

D8. When you went back to work, were you assigned a different job or tasks than what you did prior to the injury/illness?

- a. YES
- b. NO →SKIP TO D10
- c. DK →SKIP TO D10
- d. REF →SKIP TO D10

D9. [IF DIFFERENT, D8=YES] Was your assignment to a different job or tasks permanent or temporary?

- a. PERMANENT
- b. TEMPORARY
- c. DK
- d. REF

D10. Did the injury/illness cause you to:

	YES	NO	NA	DK/REF
a. Quit your job?				
b. Be laid off?				
c. Be fired?				
d. Change the kind of work you do, that is, change your occupation?				

D11. Did the injury/illness affect your ability to work in any other way?

- a. YES → Please specify.
- b. NO
- c. DK
- d. REF

This series of questions evaluates the effect the injury or illness had on the respondent’s work status. Key revisions that were made for Round 3 (Version 1) include:

- Moving questions about the employer’s knowledge of the injury/illness to the section on Workers’ Compensation, since they are more closely related to that series of questions.
- Reordering and revising the questions on whether the respondent returned to work, effects of an injury/illness on work, and whether the respondent was able to work again. The revisions are expected to improve flow, particularly for those who did not return to work.
- Revisions to simplify language. For example, “change occupations” was revised to include the phrase “change the kind of work you do...”

Cognitive testing revealed that in some cases, respondents may not receive medical care or take time off for their injury/illness until well after it occurs. R168 received knee injuries for which he received care at an urgent care center immediately after the incidents. He did not take time off at that time but weeks later required surgery and took time off to recover. To accommodate situations in which medical care and effects on work do not occur until much later, we added two questions to Round 3, Version 3:

At any time after you went back to work, did you miss any (additional) days of work due to your injury/illness?

- a. YES
- b. NO →SKIP TO D19
- c. DK →SKIP TO D19
- d. REF →SKIP TO D19

About how many (additional) days of work did you miss?

\_\_\_\_\_ DAYS

Please explain what happened.

During Round 3, additional changes were made to this series of questions to accommodate respondents with chronic/gradual onset conditions. These questions were revised in both Versions 3 and 4 of the Round 3 protocol. Since respondents with these kinds of injuries/illnesses do not have a discrete reference point in time for answering the questions, questions on ability to work the next day, days off from work, and so on, needed to be revised.

- Questions on whether the respondent was scheduled or able to work the next day were replaced by questions on whether symptoms of the injury/illness caused the respondent to miss work during the reference period.

Versions 3 and 4:

In the last 12 months, after you began experiencing symptoms due to TEXT FILL, did you miss any days of work, or not?

- a. YES, MISSED DAYS OF WORK

- b. NO, DID NOT MISS DAYS OF WORK
- c. DK
- d. REF

About how many days of work did you miss?

\_\_\_\_\_ DAYS

- The questions on working the usual number of hours, performing normal duties, and being assigned to a different job or tasks were revised slightly to remove reference to “when you went back to work.” References to the time point at which the respondent went back to work make sense for those who have a discrete start point that marks the beginning of the injury/illness. For those with gradual onset injuries/illnesses, there is often no discrete start point that they can identify.

Version 3:

When you worked...

Did you work your usual number of hours or not?

Were you able to perform all of the normal duties of your job or not?

Were you assigned to a different job or tasks than what you did prior to the onset of symptoms?

[IF YES] Was your assignment to a different job or tasks permanent or temporary?

Version 4:

In the last 12 months, did you ever work less than your usual number of hours because of symptoms of [TEXT FILL]?

In the last 12 months, were you ever unable to perform all the normal duties of your job because of symptoms of [TEXT FILL]?

In the last 12 months, were you ever assigned to a different job or tasks than what you did prior to the onset of symptoms of [TEXT FILL]?

[IF YES] Was your assignment to a different job or tasks permanent or temporary?

Further, based on cognitive testing, it became apparent that D4, which asks whether the respondent returned to work after the injury/illness, was not necessary for those who had reported in previous questions that they were able to work the next day. We corrected the skip instructions to only ask D4 and D5 (which asks for number of days after injury/illness that respondent started work again) of those who were not able to work the next day.

**Recommendations:**

D6, D7 and D13 (Version 4 numbering) ask respondents if they worked usual hours, performed normal duties, or missed days of work. Although they worked well as written, we offer the following suggestion for minor revisions:

- Section D (D6, D7, D13): Consider removing the phrase “or not” that appears at the end of these questions on effect on work. Although the intent was to reduce acquiescence bias, for these items this is less of a concern. These questions on working usual hours, performing normal duties, and missing days of work ask for reports of behavior and may be less subject to acquiescence bias than questions, for example, on reasons for not wanting employer to know about injury/illness.

Further, for the question that asks respondents to explain what happened if they missed (additional) days of work (D12 in Version 4), we suggest a minor rewording to make the question more specific:

- What caused you to miss these (additional) days of work?

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**Injury or Illness: Effect on Pay**

**Questions E1 – E11: Effect on Pay**

E1. Did your employer know about this injury/illness?

- a. YES → SKIP TO E3
- b. NO
- c. DK
- d. REF

E2. [IF NO TO EMPLOYER KNOWING]: For what reasons did your employer *not* know about this injury/illness?

Did you not want your employer to know about your injury/illness....

	YES	NO	NA	DK/REF
a. To avoid being laid off?				
b. To avoid loss of wages?				
c. To avoid loss of promotion of advancement?				
d. To avoid job transfer or restriction?				
e. Because you did not realize that the injury/illness was work-related until after leaving the job?				
f. Because you felt your employer would not recognize the injury/illness as work-related?				
g. Because your employer wants to keep injury and illness rates low?				
h. Other (specify)?				

E3. Has anyone filed a workers' compensation claim for this injury/illness?

- a. YES
- b. NO → SKIP TO E5
- c. DK
- d. REF

E4. Who filed the workers' compensation claim?

- a. EMPLOYER
- b. EMPLOYEE
- c. FAMILY MEMBER OF EMPLOYEE
- d. OTHER SPECIFY
- e. DK
- f. REF

E5. IF NO ON QUESTION ABOUT FILING WORKERS' COMPENSATION: What was the main reason you or your employer did not file a workers' compensation claim for this injury/illness?

- a. You were not eligible because you did not meet waiting period
- b. Your employer did not want to file a claim
- c. You did not inform employer
- d. You were unaware of workers' compensation coverage
- e. You chose not to pursue a claim even though you were eligible
- f. Other reason, please specify
- g. DK
- h. REF

E6. IF R REPORTS WORKERS' COMPENSATION CLAIM FILED: Did you receive workers' compensation for this injury/illness?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

READ IF NECESSARY: *Workers compensation* is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job.

E7. IF R REPORTS WORKERS' COMPENSATION NOT RECEIVED: Is there an open claim pending for this injury/illness?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

E8. Short-term or temporary disability benefits provide you with a portion of your income if you are temporarily unable to work due to a medical condition. Did you receive short-term (temporary) disability for this injury/illness?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

E9. Did this injury/illness cause you to use paid sick leave, paid annual leave, or paid time off?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

E10. Did this injury/illness cause you to take leave without pay?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

E11. Did your employer continue to pay your wages and other compensation in full during the period you were unable to work because of this injury/illness?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

This series of questions evaluates how and if workers were paid when they missed time at work due to their injury or illness. In prior interviews, we found that respondents are aware of whether they received pay or compensation for time off of work due to their injury/illness. However, they can be unsure of the source of the compensation.

Several revisions were implemented for Round 3 (Version 1):

- Skip patterns have been corrected and revised to assure questions are directed at the appropriate group (such as those who filed for workers' compensation or those who had not yet received workers' compensation).
- Per BLS suggestion, the item on receiving wages and other compensation while unable to work was moved to the end of Q26.

Although the questions on effect on pay generally worked well, we noted that for E2 respondents sometimes offered comments instead of responding to the specific options presented:

- R200: R answered the series of questions on why the employer did not know about the injury (E2). When reporting on the first injury (stress), she endorsed a number of items, such as avoiding loss of wages, loss of promotion and advancement, avoiding job transfer, etc. However, she interrupted at the beginning of E2 during reporting on the second injury (back strain). She said at that point that it did not occur to her to tell the employer. This R may have been demonstrating acquiescence bias in her responses.
- R163: During second pass through E2 for the second injury/illness (back strain), R interrupted and said she wanted to avoid being treated differently and she did not think it was reportable.

We observed that responses to E2 generally do not demonstrate acquiescence bias. We found that a number of respondents (such as R208, R137, R163, R201) who said they did not inform their employers declined to endorse many of the offered options in E2. A comment by R163 illustrates this point.

- R163: R said in E2g that the employer wants to keep injury rates low, but that this was not the reason why her employer did not know about her injury.

We found that the formatting of E5 in the protocol resulted in an interviewer administering it on a few occasions as an open-ended question and from there coding the open-ended response to the one of the pre-determined categories, rather than reading the question along with the response categories to capture a response. Respondents' open-ended answers to E5 were somewhat difficult to code, given that they did not always align well with the available categories. When the response options were read, the question worked well. However, some offered their own explanations, sometimes interrupting the presentation of the response category list:

- R136B did not wait for the interviewer to read the options in E5. This R was asked by his supervisor several times to file but the R did not think it was necessary and did not want to miss any days of work.
- R200: For both the stress and back strain she experienced, R endorsed c (did not inform employer). R added a "couple reasons" to explain—she didn't feel she would win, stress with any position.
- R137: For the fall she experienced, she picked c. R added she assumed that if she told her boss about the fall (in conversation) then she would look into it. But her boss never did anything with that information. For her anxiety, R also picked c (did not inform employer). She did not want her employer to know something was wrong related to anxiety and also because she thought worker's comp was for injury related issues and not things like anxiety.

As in prior rounds of interviewing, it is difficult to determine the accuracy of respondent reports on the sources of compensation for their wages and medical care received. Respondent situations vary widely. Some respondents seem fairly sure of their answers but others some seem uncertain about the source of their compensation or misinterpreted the compensation source.

- R170: R received medical care for a cut he sustained. He was sent to a particular urgent care facility for care, which the employer covered. The employer also provided pay for the hours he missed after the cut occurred. R returned to work the next day. He did not think it was workers' compensation but was not sure. This R was clear that his medical expenses and wages were covered, but not sure whether to count it as workers' compensation.
- R126: R is a firefighter. His city of employment has the policy to pay people who are injured while they take time off to recover. He said it was through the city, not officially workers' compensation.
- R207: R said he got workers' compensation. For E10 (taking leave without pay) and E11 (employer continued to pay wages), the R said that he did not know how to answer. He said he received workers' compensation. In particular, in answering E11, he did not know if workers' compensation he received is paid by the employer.
- R208: In reporting whether he took leave without pay (E10) R said "I guess so." He was not getting paid by his employer but was receiving disability payments.

- R158A: R reported yes to E9 stating that she received paid time off. Upon probing, R was referring to “paid time off” as the bonus pay that she received twice a year because she considered her bonus pay to cover her pay for the days she missed work. R158B (proxy) indicated that R158A did not have any paid time off through her employer.

**Recommendations:**

Some respondents may be uncertain about sources of compensation; for such respondents it is difficult to improve the accuracy of their data. However, the set of questions on effects on pay otherwise worked well.

For respondents who have more than one injury or illness to report, E2 and E5 may seem especially lengthy. We have one suggestion to consider:

- Consider changing E2 to have respondents select the main reason for not wanting the employer to know about the injury/illness.

Finally, we have a suggestion for correcting what we believe is a typographical error in E2c:

- E2e: This option in the question on reasons for not informing the employer of the injury/illness reads: “Because you did not realize that the injury/illness was work-related until after leaving the job?” However, at this point in the instrument we have not asked whether the respondent is still at the job in question. We assume this is a typographical error and that “until after leaving the job” should be removed.

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**Occupation and Industry at Time of Injury or Illness**

In prior interviews it was observed that respondents who worked for a temporary agency and were contractors at the employment location were sometimes uncertain as to which company to report on. For Round 3, revisions were implemented to direct this group of respondents on how to answer questions on their employment. These revisions include:

- A new question asking whether the R worked for a temporary help agency or a temporary staffing agency.
- Instruction for those working for temporary agencies that they should answer the questions based on the place where they work on a day-to-day basis.

F5. Did you work for a temporary help agency or a temporary staffing agency?

- a. YES
- b. NO
- c. DK
- d. REF

INTERVIEWER NOTE: IF R IS A FARM LABOR CONTRACTOR, R IS NOT CONSIDERED TEMPORARY HELP/STAFFING AND RESPONSE TO THIS Q IS NO.

[IF F5 (TEMP HELP OR TEMP STAFFING AGENCY) =YES]: For the next questions, please answer based on the place where you were working on a day-to-day basis when the injury/illness occurred, not the temporary agency you worked for.

In addition, the question on type of employer the respondent works for (government, private-for-profit, etc.) was revised slightly. The question was revised to ask respondents which of the following groups best describes their employer. This new question structure helped to alert respondents prior to hearing the response options that the task was to select the best fitting category. Note that there is a minor typographical error that requires correction; the word “group” should have been plural (“groups”).

F3. Which of the following group best describes your employer at the time of the injury/illness?

- a. Government
- b. Private-for-profit company → SKIP TO F5
- c. Non-profit organization including tax exempt and charitable organizations → SKIP TO F5
- d. Self-employed → SKIP TO F5
- e. Working in the family business → SKIP TO F5

Respondents understood the question on working for a temporary help agency without issue. R61 was the only respondent who indicated she worked for a temporary agency.

- R61: This R was a nursing assistant who was employed through an agency and assigned to work at client homes. Although the respondent was instructed to report on the number of employees at the work location to which she was assigned, she worked in multiple client homes and as a consequence this question did not work well for her situation. In reporting the number of employees at her work location, she reported the number of nurses at her employment agency.

However, one respondent worked for a company that contracts to a hospital and is not a temporary help agency. He did experience some confusion in determining whether to answer the questions based on his actual employer or the hospital.

- R210: R provided the name of the hospital as the name of his employer. However, he is actually employed by a different company. He was not sure whether to describe his company, where he is responsible for shipping and receiving, or to describe the hospital for the series of questions on kind of employer and what the employer makes or does.

Respondents did not have issues with the new structure of the question on the type of employer they work for. As in past rounds, many answered the question without issue but a few answered incorrectly or were unsure of how to arrive at the correct answer:

- R35: R answered “Family business.” R mistakenly thought this referred to working for a family owned business. R is not related to the employer so should not have picked this response.
- R64A: R goes out in the field to various sites, so the number of people depends on how many are at the site that day. R considered the specific locations he went to, not the company as a whole.
- R126: R noted a difference between the total number of people assigned to his fire house (50) and the number there on any given day (around 13). R wasn’t sure which it was asking for.
- R209: R was not sure whether to include part-time or only full-time staff in her count. She included part time and I classified the answer based on that response.

**Recommendations:**

Respondents who report more than one injury or illness may be employed with the same employer and in the same position for the multiple injuries/illnesses reported. In Section H, which collects information on the respondent’s current employment, a set of questions is asked to determine whether the respondent’s current employment is the same as at the time of the injury/illness. These questions, shown below, should be added to Section F to reduce respondent burden:

H2. [IF CURRENTLY EMPLOYED] Is this job with the same employer you have already told me about?

- a. YES, SAME EMPLOYER → CONTINUE TO H3
- b. NO, DIFFERENT EMPLOYER → SKIP TO H5

INTERVIEWER NOTE:

- IF R HAS ONLY ONE INJURY/ILLNESS AND SAME EMPLOYER OR MULTIPLE INJURIES UNDER SAME EMPLOYER, SKIP TO H4
- IF R HAS MULTIPLE INJURIES UNDER DIFFERENT EMPLOYERS, BUT CURRENT EMPLOYMENT IS WITH SAME EMPLOYER, CONTINUE TO H3

H3. [IF MULTIPLE INJURIES UNDER DIFFERENT EMPLOYERS BUT SAME AS CURRENT EMPLOYMENT] Which job and employer are you referring to?

\_\_\_\_\_

H4. [IF SAME EMPLOYER] Are you in the same position you were in at the time the injury/illness [TEXT FILL]?

- a. YES → SKIP TO PROBES AT END OF SECTION
- b. NO
- c. DK
- d. REF

INTERVIEWER NOTE: IF SAME EMPLOYER BUT DIFFERENT JOB, ASK H5 (HOW MANY HOURS WORKED), H11 (WHAT KIND OF WORK DO YOU DO), AND H12 (MOST IMPORTANT ACTIVITIES OR DUTIES).

We also recommend that the question on whether the R worked for a temporary agency from Section F (F5) be added to the set of questions on current employment, after H7. Further, clarification should be provided for respondents who work for contractors on how to answer the questions on employment, that is, whether to report for the actual employer or for the work location where they are assigned.

Further, two minor typographical errors in Section F and in a related question in Section H should be fixed. F13 (“How many people work at your work location?”) should be phrased in past tense (“worked”) to be consistent the rest of the questions in this section. Further, in F3 and H6 (“Which of the following group best describes your CURRENT employer?”), the word “group” should be “groups.”

**Proxy Respondents**

For three of the recruited respondents, another adult member of the respondent’s household was also invited to take part in an interview. We collected data on each member of the pair. We examined self- and proxy-reported answers to selected questions to assess the accuracy of proxy response. The data are presented in Exhibit 3. In this exhibit, the focal respondent is the person about whom the data are being collected. For each focal respondent, we compare the data from selected questions from the respondent’s self-interview and proxy interview (conducted with the respondent’s household member).

**Exhibit 3: Proxy Reporting**

Question	Focal Respondent	Self vs. Proxy Comparison
Screener (Section A)	64A	<ul style="list-style-type: none"> <li>• Self (R64A) and proxy (R64B) both reported that R64A had hit himself in the shin with a hammer and that this occurred in July of 2016.</li> <li>• Self and proxy both reported that R64A also suffered hearing loss but they provided different accounts of when the hearing issue started. R64A reported two years ago and R64B reported that it was in 2015 but was not sure what month.</li> <li>• R64B reported that R64A also had anxiety/depression that started in 2015 which was not included in R64A’s response to any of the screener questions.</li> </ul>
	136A	<ul style="list-style-type: none"> <li>• Self (R136A) and proxy (R136B) reported that R136A had only one injury in the last 12 months which they described similarly as R injured his right ankle while working a poker tournament.</li> <li>• Both self and proxy reported that the injury occurred in July 2016 during the World Series of Poker event.</li> </ul>
	158A	<ul style="list-style-type: none"> <li>• Self (R158A) and proxy (R158B) reported that R158A had allergies and back pain/spasms related to work. R158A also reported “cuts and bruises due to lifting heavy boxes at work” which was not reported by R158B.</li> </ul>

		<ul style="list-style-type: none"> <li>• Self and proxy had different responses when asked about month/year the injuries occurred. R158A said her allergies started 4 years ago (2012) and worsened in Aug/Sept 2015. R158B did respond with month/year but reported that the back and allergy issues started up when his R158A started a new job. Based on probing, R158B said R158A’s job started in 2011.</li> <li>• Self and proxy had relatively similar responses for A12 (total times experienced an injury/illness in last 12 months). R158A could not remember specific counts because she had chronic pain conditions. R158B did not provide a numeric response but stated that R had constant pain due to back and allergies.</li> </ul>
<p>Injury or Illness (Section B)</p>	<p>64A</p>	<ul style="list-style-type: none"> <li>• Both R64A and R64B described the event similarly, indicating that R was using a sledgehammer and missed what he was trying to hit [which was a connector, according to R64A) and hit his shin instead.</li> <li>• In reporting how the shin was affected, self and proxy provided similar reports. R64A stated bruising and swelling and 64B stated bruising, but also provided a more technical term (hematoma) to describe the injury. As for other body parts that were affected, both self and proxy reported that R64A’s foot was bruised and swollen.</li> </ul>
	<p>136A</p>	<ul style="list-style-type: none"> <li>• Self (R136A) and proxy (R136B) provided similar accounts of the injury. Both described that R136A was supervising a poker tournament and injured his right ankle (broke small bone) because as R136A was approaching one of the poker tables, he was forced to sidestep on his right foot to avoid someone else’s leg/foot. Both described the injury as a small broken bone at the front of the ankle and that a piece of the bone was still in R136A’s ankle.</li> <li>• R136A provided more specific detail and context regarding the event which was that the person who caused him to side step on his ankle was one of the masseuses who was giving a poker player a massage at the table.</li> </ul>

	158A	<ul style="list-style-type: none"> <li>Both R158A and R158B provided a similar description of the allergy condition; however, R158B provided more specific details about the source – stating that R158A was allergic to paper mites. R158A was less descriptive and just reported that the allergies were due to handling old documents and working in an old building.</li> </ul>
Medical Attention (Section C)	64A	<ul style="list-style-type: none"> <li>Both R64A and R64B agreed that R64A consulted a health care professional; however, R64A reported seeing a doctor and R64B stated that R64A saw a physician’s assistant.</li> <li>Both agreed that R64A was not admitted to the hospital but received treatment at a physician’s clinic (according to R64A) / physician assistant’s office (according to R64B) and that the medical diagnosis was a hematoma. R64B added that the diagnosis included deep tissue bruising.</li> <li>Both agreed that the healthcare professional recommended that R64A take 2 days off of work.</li> </ul>
	136A	<ul style="list-style-type: none"> <li>R136A and R136B agreed on the medical attention R136A received for the injury. R136A was treated by a doctor at a health clinic as well as doctors at a hospital (Veterans hospital).</li> <li>Both R136A and R136B were not sure the exact medical diagnosis. R136A reported that it was “damage to ankle bone” and R136B reported “a small bone in ankle broke off and is still there and possibly a strained ligament.”</li> <li>R136A provided more detail than the proxy on the various treatment options for the injury.</li> </ul>
	158A	<ul style="list-style-type: none"> <li>Both R158A and R158B agreed that R158A consulted a doctor (an allergy specialist according to R158B), and that R158A was treated in a hospital. Upon probing, both confirmed that the treatment occurred in a health clinic that is located in a hospital</li> <li>R158A and R158B provided a similar response for medical diagnosis although R158B was more specific. R158A said she was allergic to multiple allergens and R158B said that an allergy prick test revealed that R158A was allergic to paper mites. Both agreed</li> </ul>

		that the doctor did not recommend taking days off of work because of the condition.
Effect on Work (Section D)	64A	<ul style="list-style-type: none"> <li>Both R64A and R64B agreed in general on the effects of the injury on work. The main difference was that R64A reported that he went back to work 2 days after the injury whereas R64B reported it was 3 days after the injury.</li> </ul>
	136A	<ul style="list-style-type: none"> <li>R136A and R136B reported that the injury did not have a direct effect on R's work. Both reported that 136A continued to work the same day the injury happened, did not miss any days of work, was able to work usual hours and perform usual duties and did not cause R136A to quit, be laid off, be fired, or change occupations.</li> </ul>
	158A	<ul style="list-style-type: none"> <li>R158A and R158B reported that the allergy condition caused R158A to quit her job.</li> <li>Interview probed about how many days R158A missed work due to the allergy condition. R158A reported that it was about 15 days in the last 5 years and 10 days were in the past 12 months. R158B did not know how many days R158A had missed but knows it was multiple days. [At the time of the interview, the protocol had not been revised to include alternate wording for chronic conditions but the interviewer modified the questions for Section D to better fit the chronic nature of the respondent's condition.]</li> </ul>
Effect on Pay and Workers Compensation (Section E)	64A	<ul style="list-style-type: none"> <li>Both R64A and R64B reported that the injury had been reported to the employer and no one had filed a WC claim.</li> <li>Both R64A and R64B, in general, provided similar reports for why WC was not filed. R64A said the injury was not too serious and added that people get fired for filing WC. R64B stated that R64A would have gotten fired if he had filed WC and that he wanted to keep working.</li> <li>Both R64A and R64B agreed that R did not receive short-term disability, did not use paid sick leave/annual leave/time off, and was not compensated by employer for period unable to work.</li> </ul>

		<ul style="list-style-type: none"> <li>• There was a discrepancy between R64A and R64B in regards to whether R64A took leave without pay as R64A said yes to this and R64B said no. The discrepancy appears to be explained by R64B’s response as he stated that R64A had worked so much overtime that he wasn’t eligible for paid leave, any time not at work beyond 40 hours would just be time not spent at work not getting paid, therefore she did not consider it “leave without pay” since it was the equivalent of R working less overtime.</li> </ul>
	136A	<ul style="list-style-type: none"> <li>• No differences in responses between self and proxy on whether R136A’s employer knew about the injury and questions on WC. Both reported that R’s employer knew about the injury and asked R136A if he wanted to file for WC.</li> <li>• Both indicated that the reason a WC claim was not filed was because R136A did not feel it was necessary and wanted to continue working.</li> </ul>
	158A	<ul style="list-style-type: none"> <li>• R158A and R158B reported that R158A’s employer knew about the injury and that no WC claim had been filed. Both reported that the reason for not filing a WC was because R158A was unaware of whether she qualified for WC.</li> <li>• When asked if R158A used paid sick leave, paid annual leave, or paid time off, R158A reported yes whereas R158B reported no. It appears R158A misinterpreted paid time off and considered the holiday bonus she received as paying for the time she took off of work.</li> </ul>
Employment at Time of Injury/Illness (Section F)	64A	<ul style="list-style-type: none"> <li>• Both R64A and R64B agreed that R64A was a full-time employee; however, the main discrepancy is with the number of hours per week. R64A reported that he worked 140-168 hours per week (interviewer confirmed that this was his intended response) and R64B reported that R64A worked 80-90 hours per week.</li> <li>• They agreed on the type of company, job duties, that it was not a union job, and size of company, but refused to name the employer.</li> </ul>

	136A	<ul style="list-style-type: none"> <li>R136A initially did not report full or part-time employee but explained that he's an "on call employee" where he works year round but on a varied schedule. When probed about whether he considers his work full or part-time, R136A said "basically part-time but not technically. R136B reported that R136A was a part-time employee, adding that he is an "on call employee."</li> <li>When asked how many hours worked in a typical week, self and proxy reported the same range of hours (60-70 hours).</li> </ul>
	158A	<ul style="list-style-type: none"> <li>Self and proxy disagreed on full vs part-time status. R158A reported full-time employment whereas R158B reported part-time. However, both agreed that R worked 32 hours a week.</li> <li>R158B could not recall the exact name of the law firm that R was employed.</li> </ul>
Demographics (Section G)	64A	<ul style="list-style-type: none"> <li>Interviewer did not ask proxy demographic questions about R64A.</li> </ul>
	136A	<ul style="list-style-type: none"> <li>No differences in responses between self and proxy.</li> </ul>
	158A	<ul style="list-style-type: none"> <li>No differences in responses between self and proxy.</li> </ul>

Respondents and proxies were fairly consistent in their reports. As the exhibit shows, the level of agreement in their reports was high. Minor issues were observed; some examples:

- Mismatch in reporting when a chronic condition occurred (R158A and R158B), and disagreement about full-time vs. part-time status occurred. They also did not agree on the use of paid sick leave, paid annual leave, or paid time off; R158A reported yes whereas R158B reported no.
- R64A and R64B disagreed about the number of hours worked, although both agreed it was full time work. They also disagreed about leave without pay. R64A said yes to this and R64B said no.
- R136A said he was an "on call employee" but R136B said it was part-time work. When employed, the R works 60-70 hours a week.

The overall good match between respondents and proxies suggests that in a household administration of the SOII, the use of proxy respondents for the collection of data is a promising option.

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**Conclusion**

In the discussion above, we have presented our recommendations for final recommendations for revising and finalizing the HSOII questionnaire. In separate documents we present the questionnaire, which is the last version of the instrument that was tested in Round 3 (*HSOII Questionnaire 9-30-2016.docx*), and guidance for conducting the SOII Pilot (*Recommendations for Pilot Test Procedures 9-30-2016.docx*). Note that since the suggested revisions to the instrument discussed above have not yet been approved by BLS, they are not reflected in the final questionnaire document that accompanies this memo.

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**HOUSEHOLD SURVEY OF OCCUPATIONAL INJURIES AND ILLNESSES**  
**Cognitive interview protocol R3 Version 1**  
**8-31-2016**

***MATERIALS NEEDED FOR INTERVIEW***

- |   |
|---|
| <input type="checkbox"/> INTERVIEWER PROTOCOL BOOKLET (THIS BOOKLET) AND SHOWCARDS<br><input type="checkbox"/> CONSENT FORM<br><input type="checkbox"/> RESPONDENT PHONE NUMBER<br><input type="checkbox"/> FULLY CHARGED DIGITAL RECORDER AND EXTRA BATTERIES<br><input type="checkbox"/> NOTE PAPER, PENS AND PENCILS |
|---|

***STEP 1: INFORMED CONSENT***

PROVIDE RESPONDENT WITH A COPY OF THE INFORMED CONSENT FORM. ASK THE RESPONDENT TO READ THE FORM, ANSWER ANY QUESTIONS, AND HAVE THE RESPONDENT SIGN THE FORM. LEAVE A SEPARATE COPY OF THE FORM WITH THE RESPONDENT.

- |   |
|---|
| <input type="checkbox"/> COLLECT VERBAL CONSENT FROM RESPONDENT |
|---|

- |  |
|--|
| <input type="checkbox"/> IF THE RESPONDENT HAS CONSENTED TO RECORDING, START THE RECORDER. |
|--|

***STEP 2: COMPLETION OF THE QUESTIONNAIRE***

BEGIN QUESTIONNAIRE.

**Interviewer probe bank (use as appropriate):**

- “How did you come up with that answer?”
- “Can you tell me in your own words what you think the question is asking?”
- “Can you tell me more about that?”

If you pick up on a visual cue that suggests an issue or confusion:

- “Tell me what you are thinking.”
- What does the word [term] in this question mean to you?
- You said [answer]. Can you tell me more about that?

If R is uncertain and asking for confirmation:

- There is not a right or wrong answer for this question. I am interested in hearing your thoughts on what the question is asking.

**INTERVIEWER:** If this interview is with a proxy respondent, please modify language accordingly. For example, instead of asking “Did you do ANY work for pay or profit?” ask “Did [your husband/wife/brother/he/she] do ANY work for pay or profit?”

## Survey Introduction

The information that you provide in this survey is confidential. Your name and your answers to the questions will not be shared with anyone outside of NORC, the survey organization conducting this survey. I would be happy to answer any questions you may have about the survey. [ANSWER RESPONDENT QUESTIONS.] Let's begin.

### Screener

This survey is about work-related injuries and illnesses that you may have experienced. I will ask you questions about the injuries and illnesses you may have had that are related to any job you held in the last 12 months. By the last 12 months, I mean since [CURRENT MONTH] of [LAST YEAR].

A1. In the last 12 months, did you do ANY work for pay or profit?

- a. Yes → ELIGIBLE, CONTINUE
- b. No → NOT ELIGIBLE, END INTERVIEW
- c. DK
- d. REF

Any injury

A2. In the last 12 months, have you experienced any injuries or illnesses related to any job you held?

- a. Yes → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- b. No → SKIP TO A4
- c. DK
- d. REF

A3. In what month and year did this injury/illness occur?

MONTH/YEAR  
ENTER MM/YYYY  
DK  
REF

INTERVIEWER NOTE: ASK ALTERNATIVE QUESTION IF NECESSARY FOR ILLNESS/INJURY WITH GRADUAL ONSET. "In what month and year did you first notice symptoms related to this injury/illness?"

A4. [Now I want to find out if you experienced any other work-related injuries other than the TEXT FILL INJURY RESPONDENT REPORTED (e.g., concussion) you just told me about.] In the last 12 months, have you experienced any [other] injuries, such as the following, related to any job you held?

- a. Sprains, strains or tears
- b. Soreness or pain
- c. Bruises
- d. Cuts or punctures
- e. Broken bones
- f. Injury to muscles or joints
- g. Open wounds
- h. Burns
- i. Carpal tunnel syndrome
- j. Any other injury?

1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED

- 2) NO →SKIP TO A6
- 3) DK →SKIP TO A6
- 4) REF →SKIP TO A6

INTERVIEWER NOTE: READ DEFINITION IF NECESSARY. Carpal tunnel syndrome is a hand and arm condition that causes numbness, tingling and other symptoms. Carpal tunnel syndrome is caused by a pinched nerve in your wrist. [<http://www.mayoclinic.org/diseases-conditions/carpal-tunnel-syndrome/basics/definition/con-20030332>]

A5. In what month and year did this injury occur?

MONTH/YEAR  
ENTER MM/YYYY  
DK  
REF

INTERVIEWER NOTE: ASK ALTERNATIVE QUESTION IF NECESSARY FOR ILLNESS/INJURY WITH GRADUAL ONSET. “In what month and year did you first notice symptoms related to this injury/illness?”

A6. [Other than the TEXT FILL ILLNESS RESPONDENT REPORTED (e.g., asthma) you have already mentioned], in the last 12 months, have you experienced any [other] illnesses, such as the following, related to any job you held?

- a. Skin disorders
- b. Respiratory conditions
- c. Poisonings
- d. Hearing loss
- e. A disease or infection
- f. Cancer
- g. Anxiety or depression
- h. Any other illness?

- 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- 2) NO →SKIP TO A8
- 3) DK →SKIP TO A8
- 4) REF →SKIP TO A8

A7. In what month and year did this injury/illness occur?

MONTH/YEAR  
ENTER MM/YYYY  
DK  
REF

INTERVIEWER NOTE: ASK ALTERNATIVE QUESTION IF NECESSARY FOR ILLNESS/INJURY WITH GRADUAL ONSET. "In what month and year did you first notice symptoms related to this injury/illness?"

A8. [Other than the TEXT FILL INJURY/ILLNESS RESPONDENT REPORTED (e.g, concussion, asthma) you have already mentioned], in the last 12 months, have you experienced any [other] work-related injuries or illnesses that caused you to...

	Yes	No	DK	REF
a. Faint, pass out, or lose consciousness?				
b. Be unable to work for a day or more?				
c. Do less than your normal work activities?				
d. Be assigned to a different job or tasks at your place of work?				
e. Get medical treatment other than what can be treated with a first aid kit?				

IF YES, COLLECT BRIEF DESCRIPTION AND CONFIRM WORK-RELATED.

IF NO TO ALL ITEMS IN A8, SKIP TO A10.

READ IF NECESSARY: First aid refers to medical attention that is usually administered immediately after the injury occurs and at the location where it occurred. It often consists of a one-time, short-term treatment and requires little technology or training to administer. First aid can include cleaning minor cuts, scrapes, or scratches; treating a minor burn; applying bandages and dressings; the use of non-prescription medicine...

<https://www.osha.gov/SLTC/medicalfirstaid/recognition.html>

A9. In what month and year did this injury/illness occur?

MONTH/YEAR  
 ENTER MM/YYYY  
 DK  
 REF

INTERVIEWER NOTE: ASK ALTERNATIVE QUESTION IF NECESSARY FOR ILLNESS/INJURY WITH GRADUAL ONSET. "In what month and year did you first notice symptoms related to this injury/illness?"

IF R HAS NOT REPORTED ANY INJURIES OR ILLNESSES ASK ABOUT INJURIES/ILLNESSES **EVER** EXPERIENCED. ELSE GO TO DEMOGRAPHICS.]

A10. Have you EVER experienced any injuries or illnesses related to any job you held?

- a. YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- b. NO → SKIP TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS
- c. DK → SKIP TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS
- d. REF → SKIP TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS

A11. In what month and year did this injury/illness occur?

MONTH/YEAR  
 ENTER MM/YYYY  
 DK  
 REF

A12. [IF YES TO ANY INJURIES OR ILLNESSES] How many total times in the last 12 months [did you experience/have you ever experienced] an injury or illness related to any job you held? [THIS WILL CREATE THE LOOPS.] \_\_\_\_\_ TIMES

INTERVIEWER: CONFIRM NUMBER OF INCIDENTS AND BRIEF DESCRIPTION OF EACH. IF INJURY/ILLNESS EXPERIENCED WITHIN LAST YEAR, RESPONDENT WILL REPORT ON THOSE. OTHERWISE, IF NO INJURY/ILLNESS WITHIN LAST YEAR, RESPONDENT WILL REPORT ON INJURIES/ILLNESSES EVER EXPERIENCED.

**Probes:**

*Screener*

- I asked you this question: “In the last 12 months, have you experienced any injuries or illnesses related to any job you had?” In your own words, what is this question asking?
- In your own words, what would be a work-related injury or illness? Can you give me some examples of some things that would count as work-related injuries and illnesses? What would not count?
- Tell me about the kind of work you do. Tell me about other times when you got hurt or sick because of the work you do.
- [I asked you about whether you ever experienced any injury or illness, related to any job you had, that caused you to get medical treatment other than what could be treated with a first aid kit]. What does “first aid” mean to you? What kind of treatment counts as first aid? What kind of treatment doesn’t count?
- The questions gave some examples of injuries and illnesses [SHOW R THE LISTS, READ THE LIST IF NECESSARY.] Are you familiar with [LIST]? Which ones have you heard of? Which ones had you not heard of?
- How easy or hard was it to remember when the injury/illness happened? Can you tell me more about that? How did you figure out when the injury/illness happened?

**Notes to interviewer:**

The goal of the screener section is to enumerate all instances of work-related injuries and illnesses that occurred during the reference period. What issues do respondents have in reporting these incidents? Do they understand the types of injuries and illnesses to report? Can they accurately report only those that are work-related? How do they determine the boundary of the reference period and determine whether an incident occurred within the RP?

IF NO INCIDENTS OF WORK-RELATED INJURIES AND ILLNESSES, GO TO DEMOGRAPHICS SECTION.

**Injury or Illness**

[FOR FIRST INJURY/ILLNESS START AT B2]

[FOR SECOND AND FOLLOWING INJURY/ILLNESS START AT B1]

- B1. [FOR SECOND/THIRD/ETC. LOOPS] How is this injury/illness related to the other injury/illness you mentioned? Is this related to [the other/another] injury/illness you already mentioned or is it a different injury/illness?
- a. RELATED TO THE OTHER/ANOTHER INJURY/ILLNESS [GO TO NEXT LOOP]
  - b. THIS IS A DIFFERENT INJURY/ILLNESS [CONTINUE]
  - c. DK
  - d. REF

“Now I am going to ask you more about [INJURY/ILLNESS #....].”

- B2. **[WORKER ACTIVITY + some EVENT and SOURCE]** [FOR EACH LOOP] Please describe how the injury, illness, or condition occurred, and what caused it. For example: “When ladder slipped on wet floor, I fell 20 feet”; “I developed soreness in wrist over time.” [OPEN ENDED]
- B3. [SOURCE] Were there any other objects, substances, or persons involved in the injury or illness that you didn’t mention? Please include equipment, chemicals, vehicles, or anything else.
- B4. [NATURE AND BODY PART] Please describe the injury, illness, or condition. How was [BODY PART, ORGAN] affected? You can use medical terms if you know them, or just talk about the symptoms you experienced. For example: “strained back”; “chemical burn on hand”; “fainted or passed out.”
- B5. [NATURE AND BODY PART] Were there any other parts of your body or organs affected by the injury or illness that you may not have included in your description? How was [BODY PART, ORGAN] affected?

CHECKLIST
1. Description or diagnosis for injury/illness (this is the OIICS <b>nature</b> )
2. Part or parts of body affected, including body systems (OIICS <b>part</b> , obviously)
3. How the injury/illness/exposure happened (OIICS <b>event</b> )
4. Vehicles, tools, chemicals, surfaces, or any other objects involved; this can be multiple objects; this can also just be the person’s body moved incorrectly (OIICS <b>sources</b> )

**Probes:**

*Characteristics of incident*

- [READ QUESTION] Can you tell me in your own words what you think this question is asking?
- [IF R DOES NOT INDICATE HOW INJURY/ILLNESS IS WORK-RELATED] Tell me more about how this injury/illness was related to your job. Where were you when this happened? What were you doing? What caused the injury/illness? Tell me more about the injury/illness.

**Notes to interviewer:**

Questions B2 through B5 are intended to capture (event or exposure, source of the injury/illness, part of body affected, and nature of the injury/illness). Do the questions elicit the information needed? Are the response options adequate to capture the information Rs give? Use general probing to elicit more information about the incident. (For example, if R says “I cut myself” ask: What part of your body was injured? What did you get cut with? What were you doing at the time?)

Medical attention

C1. Did you get medical advice or treatment for this injury/illness from...

a. A doctor, nurse, or other healthcare professional? [IF YES]: What type of health care professional did you see?	YES	NO	NA	DK/REF
b. [UNLESS MENTIONED ABOVE] A paramedic, firefighter, or other emergency medical personnel?				

C2. Did you get medical advice or treatment for this injury/illness at...

a. A hospital?	YES	NO	NA	DK/REF
A1. [IF YES TO HOSPITAL] Did you receive treatment at the hospital emergency room (ER)?				
A2.[IF YES TO HOSPITAL] Were you admitted for an overnight stay?				
A3. [IF YES TO ADMITTED] How many nights were you in the hospital? _____ NIGHTS				
b. A health clinic at your place of employment?				
c. Any place else? Please specify.				

[IF YES TO C1 OR C2, CONTINUE TO C3.]  
[OTHERWISE SKIP TO C5]

C3. [IF YES TO C1 OR C2]. Did you receive a medical diagnosis from a health care professional? ...

READ IF NECESSARY: Did a health care professional tell you the medical term for your injury/illness?

- a. YES → What was your medical diagnosis? INTERVIEWER READ IF NECESSARY: What is the medical term the health care professional used to describe your injury/illness?
- b. NO
- c. DK
- d. REF

C4. [IF YES TO C1 OR C2]. Did your health care professional recommend that you take any days off from work due to your injury/illness?

- a. YES → How many days off did the health care professional recommend? \_\_\_\_\_ DAYS OFF
- b. NO
- c. DK
- d. REF

**Probes:**

*Medical attention (tailor probes based on whether R reported receiving medical attention)*

- Tell me more about the medical care you received after the injury/illness happened.
- Can you tell me in your own words what you think this question is asking?
- Who do you think of as a health care professional? Who would you include or not include? [IF NEEDED ASK IF THESE WOULD COUNT: medical doctor, nurse, physician's assistant, chiropractor, paramedic]
- I asked you about whether you received a medical diagnosis. What does the term "medical diagnosis" mean to you? How do you get a medical diagnosis? Who gives you a medical diagnosis? Does a medical diagnosis have to come from a doctor or other health care professional? (if asked) What did you think of when I asked you about the medical term the doctor/health care professional used to describe your injury/illness? What does "medical term" mean to you?
- IF NEEDED] Did you go to a doctor, nurse, or other health care provider after [INCIDENT]? Did you go to the hospital or did paramedics come?
- What does it mean to be admitted for an overnight stay in the hospital? How is that different from an emergency room visit?
- Is/Was there a medical clinic at your place of employment? Did you see anyone at that clinic?
- Did your doctor or another health care professional recommend that you take days off from work? How many days off did they recommend?

Effect on work

The next questions are about how the injury/illness affected your ability to work.

D1. Were you scheduled to work the day after the injury/illness?

- a. YES
- b. NO → SKIP TO D3
- c. DK → SKIP TO D3
- d. REF → SKIP TO D3

D2. [IF SCHEDULED TO WORK NEXT DAY] Were you able to work the next day?

- a. YES → SKIP TO D4
- b. NO → SKIP TO D4
- c. DK → SKIP TO D4
- d. REF → SKIP TO D4

D3. [IF WAS NOT SCHEDULED TO WORK NEXT DAY] If you had been scheduled to work, would you have been able to work the next day?

- a. YES
- b. NO
- c. DK
- d. REF

D4. Did you return to work after the injury/illness?

- a. YES
- b. YES, BACK TO WORK SAME DAY → SKIP TO D6
- c. NO → SKIP TO D10
- d. NO, STILL OFF PAID WORK BUT EXPECTS TO RETURN → SKIP TO D10
- e. NO, EXPECTS NEVER TO DO PAID WORK AGAIN → SKIP TO D10
- f. DK → SKIP TO D10
- g. REF → SKIP TO D10

D5. [IF RETURNED TO WORK] How many days after the injury/illness did you start work again?

- a. \_\_\_\_\_ DAYS AFTER THE INJURY/ILLNESS
- b. BACK TO WORK SAME DAY
- c. BACK TO WORK NEXT DAY
- d. DK
- e. REF

INTERVIEWER NOTE: IF R INDICATES WENT BACK TO WORK ONE DAY AFTER INJURY/ILLNESS, CONFIRM THAT R MEANS THAT R WENT BACK TO WORK THE NEXT DAY, THAT IS, THE DAY AFTER INJURY/ILLNESS OCCURRED.

[IF R WENT BACK TO WORK (D4=YES), CONTINUE. ELSE IF R IS NOT WORKING, GO TO D10.]

D6. When you went back to work, did you work your usual number of hours or not?

- a. YES
- b. NO
- c. DK
- d. REF

D7. When you went back to work, were you able to perform all of the normal duties of your job or not?

- a. YES
- b. NO
- c. DK
- d. REF

D8. When you went back to work, were you assigned a different job or tasks than what you did prior to the injury/illness?

- a. YES
- b. NO →SKIP TO D10
- c. DK →SKIP TO D10
- d. REF →SKIP TO D10

D9. [IF DIFFERENT, D8=YES] Was your assignment to a different job or tasks permanent or temporary?

- a. PERMANENT
- b. TEMPORARY
- c. DK
- d. REF

[TRANSITION STATEMENT FOR THOSE WHO RETURNED TO WORK: At any point after you returned to work, did the injury/illness affect your job in any of the following ways?]

D10. Did the injury/illness cause you to:

	YES	NO	NA	DK/REF
a. Quit your job?				
b. Be laid off?				
c. Be fired?				
d. Change the kind of work you do, that is, change your occupation?				

D11. Did the injury/illness affect your ability to work in any other way?

- a. YES → Please specify.
- b. NO
- c. DK
- d. REF

**Probes:**

*Effect on work*

- IF YES TO ANY ITEM D6-D11: Tell me more about [TEXT FILL]. [E.g., Tell me more about your normal job duties. What duties were you unable to perform? OR Tell me more about why you quit your job? When did you quit? How was that related to your injury/illness?]
- What does the term [TEXT FILL] mean to you? Can you give me an example? [E.g., What does it mean to you to be assigned to another job on a permanent or temporary basis? What does it mean to be laid off? Fired?]
- What kind of effect did the injury/illness have on your work schedule? Job duties? Ability to work? Ability to keep your job? The pay you received?

**Probes:**

*Days after injury/illness able to start work again*

- You said you were able to start work again XX days after the injury/illness. How did you figure that out?
- Walk me through the timeline of when you were injured and when you got back to work.
- When you started work again were you able to resume all the duties you had before, or not?

**Notes to interviewer:**

How does R determine days after injury/illness able to start work again?

Effect on Pay

The next questions are about how the injury/illness affected your income or pay.

E1. Did your employer know about this injury/illness?

- a. YES → SKIP TO E3
- b. NO
- c. DK
- d. REF

E2. [IF NO TO EMPLOYER KNOWING]: For what reasons did your employer *not* know about this injury/illness?

Did you not want your employer to know about your injury/illness...

	YES	NO	NA	DK/REF
a. To avoid being laid off?				
b. To avoid loss of wages?				
c. To avoid loss of promotion of advancement?				
d. To avoid job transfer or restriction?				

e. Because you did not realize that the injury/illness was work-related until after leaving the job?				
f. Because you felt your employer would not recognize the injury/illness as work-related?				
g. Because your employer wants to keep injury and illness rates low?				
h. Other (specify)?				

The next questions are about workers' compensation. Workers' compensation is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job.

E3. Has anyone filed a workers' compensation claim for this injury/illness?

- a. YES
- b. NO → SKIP TO E5
- c. DK
- d. REF

E4. Who filed the workers' compensation claim?

- a. EMPLOYER
- b. EMPLOYEE
- c. FAMILY MEMBER OF EMPLOYEE
- d. OTHER SPECIFY
- e. DK
- f. REF

ALL RESPONSES TO E4 GO TO SKIP INSTRUCTION BEFORE E6.

E5. IF NO ON QUESTION ABOUT FILING WORKERS' COMPENSATION: What was the main reason you or your employer did not file a workers' compensation claim for this injury/illness?

- a. You were not eligible because you did not meet waiting period
- b. Your employer did not want to file a claim
- c. You did not inform employer
- d. You were unaware of workers' compensation coverage
- e. You chose not to pursue a claim even though you were eligible
- f. Other reason, please specify
- g. DK
- h. REF

SKIP INSTRUCTION:

#1: WC FILED, CONTINUE TO E6.

#2: ELSE IF NO WC FILED BUT MISSED DAYS OF WORK, SKIP TO E8.

#3: ELSE [NO WC FILED AND DID NOT MISS DAYS OF WORK] SKIP TO PROBES AT END OF SECTION.

E6. IF R REPORTS WORKERS' COMPENSATION CLAIM FILED: Did you receive workers' compensation for this injury/illness?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

READ IF NECESSARY: *Workers compensation* is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job.

- E7. IF R REPORTS WORKERS' COMPENSATION NOT RECEIVED: Is there an open claim pending for this injury/illness?
- a. YES
  - b. NO
  - c. NA
  - d. DK
  - e. REF
- E8. Short-term or temporary disability benefits provide you with a portion of your income if you are temporarily unable to work due to a medical condition. Did you receive short-term (temporary) disability for this injury/illness?
- a. YES
  - b. NO
  - c. NA
  - d. DK
  - e. REF
- E9. Did this injury/illness cause you to use paid sick leave, paid annual leave, or paid time off?
- a. YES
  - b. NO
  - c. NA
  - d. DK
  - e. REF
- E10. Did this injury/illness cause you to take leave without pay?
- a. YES
  - b. NO
  - c. NA
  - d. DK
  - e. REF
- E11. Did your employer continue to pay your wages and other compensation in full during the period you were unable to work because of this injury/illness?
- a. YES
  - b. NO
  - c. NA
  - d. DK
  - e. REF

**Probes:**

*Effect on work*

- [IF YES TO E1] How did your employer know about the injury/illness?
- [IF NO TO E1] Tell me more about the reasons why your employer did not know about this injury/illness. What was the main reason your employer did not know? Tell me more about that.
- [IF DK TO E1] For what reasons are you not sure whether your employer knew about the injury/illness?

**Notes to interviewer:**

Observe for signs of acquiescence bias in E1. Are Rs saying “yes” because a reason sounds plausible or because it was a reason why R’s employer did not the injury/illness? Ask for more detail and main reasons. Probe to explore understanding of terms, ability to accurately report on consequences of the injury/illness.

**Probes:**

*Workers’ compensation*

- ASK PROBES TAILORED TO THE REASONS R REPORTS ON WHY NO WC CLAIM WAS FILED BY EMPLOYER. EXAMPLES: Tell me more about the reasons why your employer did not file a workers’ compensation claim for this injury/illness? What did your employer say? Why did the employer refuse? How sure are you about whether or not your employer filed a claim?
- Can you tell me what it means to file a workers’ compensation claim? Tell me what you know about that process.
- Have you heard of [TEXT FILL]? Please tell me in your own words what you think [TEXT FILL] means: workers’ compensation, short-term or temporary disability, paid sick leave/paid annual leave/paid time off, leave without pay.

**Notes to interviewer:**

Do Rs know what workers’ compensation is? Do they know whether a WC form was filed? Are the terms in E6-E11 familiar to Rs? Are the definitions helpful?

### Occupation and Industry at Time of Injury or Illness

The next questions are about your occupation and industry at the time of the injury/illness. Please think about the job you held at the time of the injury/illness [TEXT FILL DESCRIPTION].

F1. Were you considered by your employer to be a full time or part time employee?

- FULL-TIME
- PART-TIME
- DK
- REF

F2. In a typical week, how many hours did you work? \_\_\_\_\_ hours

IF NECESSARY: Was it greater than or equal to 35 hours per week?

- DK
- REF

**Probes:**

*Hours worked*

- Do you work the same number of hours per week, or not? How did you determine how many hours per week you typically work?
- How many hours a week would you consider to be full time employment? What does your employer consider to be full time employment?

**Notes to interviewer:**

Does R have any difficulty recalling FT vs. PT work? How do Rs with irregular work schedules, seasonal employment, etc., answer the question? Does the number of hours per week typically worked accord with report of FT/PT status?

F3. Which of the following group best describes your employer at the time of the injury/illness?

- a. Government
- b. Private-for-profit company → SKIP TO F5
- c. Non-profit organization including tax exempt and charitable organizations → SKIP TO F5
- d. Self-employed → SKIP TO F5
- e. Working in the family business → SKIP TO F5

F4. Would that be the federal, state, or local government?

- a. FEDERAL
- b. STATE
- c. LOCAL

F5. Did you work for a temporary help agency or a temporary staffing agency?

- a. YES
- b. NO
- c. DK
- d. REF

INTERVIEWER NOTE: IF R IS A FARM LABOR CONTRACTOR, R IS NOT CONSIDERED TEMPORARY HELP/STAFFING AND RESPONSE TO THIS Q IS NO.

[IF F5 (TEMP HELP OR TEMP STAFFING AGENCY) =YES]: For the next questions, please answer based on the place where you were working on a day-to-day basis when the injury/illness occurred, not the temporary agency you worked for.

F6. What is the name of the (company, organization or agency) for whom you worked? [OPEN ENDED]

- DK
- REF

NOTE: IF GOVERNMENT EMPLOYER, TEXT FILL=AGENCY; IF NON-PROFIT, TEXT FILL=ORGANIZATION; ELSE TEXT FILL=COMPANY.

F7. What kind of business or industry was this? [OPEN ENDED]

- DK
- REF

F8. What did they make or do where you worked? [OPEN ENDED]

- DK
- REF

F9. In what state were you employed at this job? [OPEN ENDED]

- DK
- REF

F10. What kind of work did you do? (For example: registered nurse, personnel manager, supervisor of order department, secretary, accountant) [OPEN ENDED]

- DK
- REF

F11. What were your most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, typing and filing, reconciling financial records) [OPEN ENDED]

- DK
- REF

F12. At this job, were you a member of a union or covered by a collective bargaining agreement?

- a. YES
- b. NO
- c. DK
- d. REF

F13. How many people work at your work location?

- e. 1 to 10 workers
- a. 11 to 49 workers
- b. 50 to 249 workers
- c. 250 to 999 workers
- d. 1000 or more workers
- e. DK
- f. REF

**Probes:**

*Employment characteristics for job at time of injury/illness*

- F12 (union): Have you heard of unions? Have you heard of a collective bargaining agreement? Tell me what those words mean to you.
- F12: Tell me how you decided on your answer. Tell me about the collective bargaining agreement. What union do/did you belong to?
- F13 (how many workers): Tell me how you figured out your answer to this question. Walk me through how you figured out that answer. How certain are you of your answer?

**Notes to interviewer:**

Observe respondent ability to understand and respond to questions about employment at time of the injury/illness. Probe as needed to explore an issues with response. Are respondents able to accurately report answers for F12 and F13? F13 should include total for R's work location only, not the whole company/organization.

IF R HAS ADDITIONAL INJURIES/ILLNESSES TO REPORT, GO BACK TO SECTION B. ELSE GO TO G1.

### Demographic Characteristics

Race/ethnicity

G1. Are you Spanish, Hispanic, or Latino?

- a. YES
- b. NO
- c. DK
- d. REF

G2. [I am going to read you a list of five race categories.] Please choose one or more races that you consider yourself to be:

- a. White
- b. Black or African American
- c. American Indian or Alaska Native
- d. Asian
- e. Native Hawaiian or Other Pacific Islander
- f. Other \_\_\_\_\_
- g. DK
- h. REF

Age

G3. What is your date of birth? Enter MM/DD/YYYY

- DK
- REF

G4. As of last week, that would make you approximately (AGE) years old. Is that correct?

[IF NECESSARY] Even though you don't know your exact birthdate, what is your best guess as to how old you were on your last birthday?

\_\_\_\_\_ YEARS

- DK
- REF

Marital Type

G5. Are you now married, widowed, divorced, separated or never married?

- a. MARRIED
- b. WIDOWED
- c. DIVORCED
- d. SEPARATED
- e. NEVER MARRIED
- f. DK
- g. REF

Gender

G6. Are you male or female?

- a. MALE
- b. FEMALE

Education

G7. What is the highest level of school you have completed or the highest degree you have received?

- a. Less than high school
- b. High school or GED
- c. Associate degree or some college
- d. Bachelor's degree or above

G8. In what country were you born?

\_\_\_\_\_ [OPEN-ENDED]

Current Industry and Occupation

The next questions are about your **current job**. *If you have more than one job, please tell me about the job at which you usually work the most hours. If you work the same number of hours at two jobs, please tell me about the job where you were employed the longest.*

H1. What is your current employment status? Are you currently employed full-time, part-time, or are you not employed?

- a. FULL-TIME
- b. PART-TIME
- c. NOT CURRENTLY EMPLOYED → SKIP TO END OF SURVEY
- d. DK
- e. REF

H2. [IF CURRENTLY EMPLOYED] Is this job with the same employer you have already told me about?

- a. YES, SAME EMPLOYER → CONTINUE TO H3
- b. NO, DIFFERENT EMPLOYER → SKIP TO H5

INTERVIEWER NOTE:

- IF R HAS ONLY ONE INJURY/ILLNESS AND SAME EMPLOYER OR MULTIPLE INJURIES UNDER SAME EMPLOYER, SKIP TO H4
- IF R HAS MULTIPLE INJURIES UNDER DIFFERENT EMPLOYERS, BUT CURRENT EMPLOYMENT IS WITH SAME EMPLOYER, CONTINUE TO H3

H3. [IF MULTIPLE INJURIES UNDER DIFFERENT EMPLOYERS BUT SAME AS CURRENT EMPLOYMENT] Which job and employer are you referring to?

\_\_\_\_\_

H4. [IF SAME EMPLOYER] Are you in the same position you were in at the time the injury/illness [TEXT FILL]?

- a. YES → SKIP TO PROBES AT END OF SECTION
- b. NO
- c. DK
- d. REF

INTERVIEWER NOTE: IF SAME EMPLOYER BUT DIFFERENT JOB, ASK H5 (HOW MANY HOURS WORKED), H11 (WHAT KIND OF WORK DO YOU DO), AND H12 (MOST IMPORTANT ACTIVITIES OR DUTIES).

H5. [IF SAME EMPLOYER BUT DIFFERENT JOB OR DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] Currently, in a typical week, how many hours do you work?

\_\_\_\_\_ hours

IF NECESSARY: Was it greater than or equal to 35 hours per week?

- DK  
REF

INTERVIEWER NOTE: IF SAME EMPLOYER BUT DIFFERENT JOB, SKIP TO H11.

H6. [IF DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] Which of the following group best describes your CURRENT employer?

- a. Government
- b. Private-for-profit company → SKIP TO H8
- c. Non-profit organization including tax exempt and charitable organizations → SKIP TO H8
- d. Self-employed → SKIP TO H8
- e. Working in the family business → SKIP TO H8

H7. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] Would that be the federal, state, or local government?

- a. FEDERAL
- b. STATE
- c. LOCAL

H8. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] What is the name of the (company, organization or agency) for whom you work? [OPEN ENDED]

- DK  
REF

H9. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] What kind of business or industry is this? [OPEN ENDED]

DK  
REF

H10. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] What do they make or do where you work? [OPEN ENDED]

DK  
REF

H11. [IF SAME EMPLOYER BUT DIFFERENT JOB OR DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] What kind of work do you do? (For example: registered nurse, personnel manager, supervisor of order department, secretary, accountant) [OPEN ENDED]

DK  
REF

H12. [IF SAME EMPLOYER BUT DIFFERENT JOB OR DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] What are your most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, typing and filing, reconciling financial records) [OPEN ENDED]

DK  
REF

**Probes:**

*Employment characteristics for current job*

- Use general probes as needed to investigate issues with these questions.
- Is the job you reported your only job or do you have more than one job?
- [REREAD THE ITALICIZED INSTRUCTION ON WHICH JOB TO REPORT ON]. In your own words, what do you think this instruction means?

**Notes to interviewer:**

These questions are the same as for the job at time of the incident. Continue to observe for issues to explore.

Does R notice that this set of questions is about the current job? If R has more than one job, did R report on the correct one?

How do H2 and H3 function for determining that the current and former job are the same?

**Debriefing questions for self-interview:**

*Recall and reference period*

- How easy or difficult was it for you to answer questions about injuries/illnesses that occurred over the last year?
- How sure are you that the injury/illness you told me about happened in the last year?
- Were there any questions that were particularly difficult to answer? Tell me more about that?
- If I asked you about injuries/illnesses that happened during the last 12 months, how easy or hard would it be to answer the questions I asked you?
- When you signed up to do the survey, you may have seen a flyer or someone from NORC ask you about injuries and illnesses related to work that you may have had. Did you think about those injuries/illnesses you had, or did you do anything to get ready for the interview before you came? Tell me about that.
- Imagine that you didn't know ahead of time that this survey was going to be about work-related injuries and illnesses. If someone called you or came to your door, and asked you whether you had ever had a work-related injury or illness, do you think you would have remembered? How hard would these questions in the survey be, if you didn't know in advance what the survey was about?

### *Sensitivity*

- Were you worried/Would you be worried about telling your employer about an injury/illness? Was it/Would it be hard for you to tell your employer? Tell me more about that.
- Were you worried/Would you be worried about telling the government about an injury/illness? Why? Tell me more about that.
- Were you worried/Would you be worried about telling anyone else about a work-related injury/illness? Tell me more about that.

### *Review of selected items*

- I'd like to ask you a little more about [QUESTION]. You said [FILL]. In your own words, what do you think that question was asking? How did you decide on your answer?

### *General debriefing*

- What are your suggestions on how to improve the survey?
- What questions were the most difficult for you to answer?
- What questions were the easiest to answer?

### ***Notes to interviewer:***

Is reporting work-related injuries and illnesses to the employer a sensitive issue? Why or why not? Is telling others outside the workplace about these incidents sensitive? Why or why not?

What questions are the most and least difficult for Rs to answer? What answers are they uncertain about? Do they have suggestions for improving the survey?

Return to any questions that need further exploration.

***Debriefing questions for proxy respondents:***

*Proxy*

- What is your relationship to [RESPONDENT NAME]?
- How much would you say you know about R's job?
- How familiar would you say you are with R's work-related injury/illness? Are you aware of the medical treatment he/she received when the injury/illness occurred? Are you aware of how this affected R's job? How did you learn about R's injury/illness? Who in your household besides R would be the best person to answer the kinds of questions I asked?
- What questions were the hardest for you to answer for R? Why? How much would you say you know about [QUESTION TOPIC]? How easy/hard is it to remember the information the question asked about? Tell me more.
- What questions were the easiest for you to answer for R? Why? How much would you say you know about [QUESTION TOPIC]? How easy/hard is it to remember the information the question asked about? Tell me more.

*Sensitivity*

- Were you worried/Would you be worried about telling anyone else about R's work-related injury/illness? Tell me more about that.

*Review of selected items*

- I'd like to ask you a little more about [QUESTION]. You said [FILL]. In your own words, what do you think that question was asking? How did you decide on your answer?

*General debriefing*

- What are your suggestions on how to improve the survey?
- What questions were the most difficult for you to answer?
- What questions were the easiest to answer?

***Notes to interviewer:***

Is proxy reporting of work-related injuries and illnesses a sensitive issue? Why or why not?

What questions are the most and least difficult for Rs to answer? What answers are they uncertain about? Do they have suggestions for improving the survey?

Return to any questions that need further exploration.

***Debriefing questions for those with no injury/illness to report:***

*Terms*

How familiar are you with the following terms? Please tell in your own words what these terms mean to you?

*Workers' compensation, etc.*

- Worker's compensation
- Temporary disability
- Short-term disability
- Paid sick leave
- Paid annual leave
- Paid time off

*Health care professional/calendar days/work shifts*

ASK R: In the last year, have you had any injury or illness that was serious enough that a health care professional was consulted? Please include any injury whether or not it was work-related.

- Who do you think of as a health care professional? Who would you include or not include? [IF NEEDED ASK IF THESE WOULD COUNT: medical doctor, nurse, physician's assistant, chiropractor, paramedic]
- When you became injured or ill, how many days after the injury/illness were you able to start work again? How did you figure that out?
- You said you were not able to do your usual activities for XX calendar days. How did you figure that out?

*Unions/collective bargaining agreement*

- Have you heard of unions? Have you heard of a collective bargaining agreement? Tell me what those words mean to you.
- Q39 (how many workers): Tell me how you figured out your answer to this question. Walk me through how you figured out that answer. How certain are you of your answer?

*Understanding of terms*

- Who do you think of as a health care professional? Who would you include or not include? [IF NEEDED ASK IF THESE WOULD COUNT: medical doctor, nurse, physician's assistant, chiropractor, paramedic]
- Now I'd like to ask you about the term "medical diagnosis." What does the term "medical diagnosis" mean to you? How do you get a medical diagnosis? Who gives you a medical diagnosis? Does a medical diagnosis have to come from a doctor or other health care professional?

***STEP 3: END OF INTERVIEW***

Thank you for taking part in this survey.

STOP THE RECORDER.

***RECRUITMENT QUESTION:***

We are looking for additional respondents like you who would be interested in helping with the study. Do you know anyone who had a work-related injury or illness who might be interested in participating? If yes, would you mind if we gave you a flyer about the study and send you an email about the study that you could forward to them?

INTERVIEWER: ANSWER ANY RESPONDENT QUESTIONS.

This concludes the interview. I would be happy to answer any questions that you have. Thank you for your help with this study.

MARK CASE AS COMPLETE IN RECRUITMENT DATABASE.

***MATERIALS TO TAKE AWAY FROM INTERVIEW***

- INTERVIEWER PROTOCOL BOOKLET (THIS BOOKLET)
- DIGITAL RECORDER AND BATTERIES
- NOTE PAPER, PENS, PENCILS

**HOUSEHOLD SURVEY OF OCCUPATIONAL INJURIES AND ILLNESSES**  
**Cognitive interview protocol R3 Version 2**  
**9-13-2016**

***MATERIALS NEEDED FOR INTERVIEW***

- |   |
|---|
| <input type="checkbox"/> INTERVIEWER PROTOCOL BOOKLET (THIS BOOKLET) AND SHOWCARDS<br><input type="checkbox"/> CONSENT FORM<br><input type="checkbox"/> RESPONDENT PHONE NUMBER<br><input type="checkbox"/> FULLY CHARGED DIGITAL RECORDER AND EXTRA BATTERIES<br><input type="checkbox"/> NOTE PAPER, PENS AND PENCILS |
|---|

***STEP 1: INFORMED CONSENT***

PROVIDE RESPONDENT WITH A COPY OF THE INFORMED CONSENT FORM. ASK THE RESPONDENT TO READ THE FORM, ANSWER ANY QUESTIONS, AND HAVE THE RESPONDENT SIGN THE FORM. LEAVE A SEPARATE COPY OF THE FORM WITH THE RESPONDENT.

- |   |
|---|
| <input type="checkbox"/> COLLECT VERBAL CONSENT FROM RESPONDENT |
|---|

- |  |
|--|
| <input type="checkbox"/> IF THE RESPONDENT HAS CONSENTED TO RECORDING, START THE RECORDER. |
|--|

***STEP 2: COMPLETION OF THE QUESTIONNAIRE***

BEGIN QUESTIONNAIRE.

**Interviewer probe bank (use as appropriate):**

- “How did you come up with that answer?”
- “Can you tell me in your own words what you think the question is asking?”
- “Can you tell me more about that?”

If you pick up on a visual cue that suggests an issue or confusion:

- “Tell me what you are thinking.”
- What does the word [term] in this question mean to you?
- You said [answer]. Can you tell me more about that?

If R is uncertain and asking for confirmation:

- There is not a right or wrong answer for this question. I am interested in hearing your thoughts on what the question is asking.

**INTERVIEWER:** If this interview is with a proxy respondent, please modify language accordingly. For example, instead of asking “Did you do ANY work for pay or profit?” ask “Did [your husband/wife/brother/he/she] do ANY work for pay or profit?”

## Survey Introduction

The information that you provide in this survey is confidential. Your name and your answers to the questions will not be shared with anyone outside of NORC, the survey organization conducting this survey. I would be happy to answer any questions you may have about the survey. [ANSWER RESPONDENT QUESTIONS.] Let's begin.

### Screener

This survey is about work-related injuries and illnesses that you may have experienced. I will ask you questions about the injuries and illnesses you may have had that are related to any job you held in the last 12 months. By the last 12 months, I mean since [CURRENT MONTH] of [LAST YEAR].

A1. In the last 12 months, did you do ANY work for pay or profit?

- a. Yes → ELIGIBLE, CONTINUE
- b. No → NOT ELIGIBLE, END INTERVIEW
- c. DK
- d. REF

Any injury

A2. In the last 12 months, have you experienced any injuries or illnesses related to any job you held?

- a. Yes → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- b. No → SKIP TO A4
- c. DK
- d. REF

A3. In what month and year did this injury/illness occur?

MONTH/YEAR

ENTER MM/YYYY

NO SPECIFIC MONTH/YEAR DUE TO CHRONIC/GRADUAL ONSET CONDITION

DK

REF

INTERVIEWER NOTE: IF ILLNESS/INJURY IS A CHRONIC/GRADUAL ONSET CONDITION FOR WHICH RESPONDENT IS UNABLE TO SPECIFY MONTH/YEAR OF OCCURRENCE, MARK "NO SPECIFIC MONTH/YEAR"

A4. [Now I want to find out if you experienced any other work-related injuries other than the TEXT FILL INJURY RESPONDENT REPORTED (e.g., concussion) you just told me about.] In the last 12 months, have you experienced any [other] injuries, such as the following, related to any job you held?

- a. Sprains, strains or tears
- b. Soreness or pain
- c. Bruises
- d. Cuts or punctures
- e. Broken bones
- f. Injury to muscles or joints
- g. Open wounds
- h. Burns
- i. Carpal tunnel syndrome

j. Any other injury?

- 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- 2) NO →SKIP TO A6
- 3) DK →SKIP TO A6
- 4) REF →SKIP TO A6

INTERVIEWER NOTE: READ DEFINITION IF NECESSARY. Carpal tunnel syndrome is a hand and arm condition that causes numbness, tingling and other symptoms. Carpal tunnel syndrome is caused by a pinched nerve in your wrist. [<http://www.mayoclinic.org/diseases-conditions/carpal-tunnel-syndrome/basics/definition/con-20030332>]

A5. In what month and year did this injury occur?

MONTH/YEAR

ENTER MM/YYYY

NO SPECIFIC MONTH/YEAR DUE TO CHRONIC/GRADUAL ONSET CONDITION

DK

REF

A6. [Other than the TEXT FILL ILLNESS RESPONDENT REPORTED (e.g., asthma) you have already mentioned], in the last 12 months, have you experienced any [other] illnesses, such as the following, related to any job you held?

- a. Skin disorders
- b. Respiratory conditions
- c. Poisonings
- d. Hearing loss
- e. A disease or infection
- f. Cancer
- g. Anxiety or depression
- h. Any other illness?

- 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- 2) NO →SKIP TO A8
- 3) DK →SKIP TO A8
- 4) REF →SKIP TO A8

A7. In what month and year did this injury/illness occur?

MONTH/YEAR

ENTER MM/YYYY

NO SPECIFIC MONTH/YEAR DUE TO CHRONIC/GRADUAL ONSET CONDITION

DK

REF

A8. [Other than the TEXT FILL INJURY/ILLNESS RESPONDENT REPORTED (e.g, concussion, asthma) you have already mentioned], in the last 12 months, have you experienced any [other] work-related injuries or illnesses that caused you to...

	Yes	No	DK	REF
a. Faint, pass out, or lose consciousness?				
b. Be unable to work for a day or more?				
c. Do less than your normal work activities?				
d. Be assigned to a different job or tasks at your place of work?				
e. Get medical treatment other than what can be treated with a first aid kit?				

IF YES, COLLECT BRIEF DESCRIPTION AND CONFIRM WORK-RELATED.  
 IF NO TO ALL ITEMS IN A8, SKIP TO A10.

READ IF NECESSARY: First aid refers to medical attention that is usually administered immediately after the injury occurs and at the location where it occurred. It often consists of a one-time, short-term treatment and requires little technology or training to administer. First aid can include cleaning minor cuts, scrapes, or scratches; treating a minor burn; applying bandages and dressings; the use of non-prescription medicine...

<https://www.osha.gov/SLTC/medicalfirstaid/recognition.html>

A9. In what month and year did this injury/illness occur?

MONTH/YEAR  
 ENTER MM/YYYY  
 DK  
 REF

IF R HAS NOT REPORTED ANY INJURIES OR ILLNESSES ASK ABOUT INJURIES/ILLNESSES **EVER** EXPERIENCED. ELSE GO TO DEMOGRAPHICS.]

A10. Have you **EVER** experienced any injuries or illnesses related to any job you held?

- a. YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- b. NO → SKIP TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS
- c. DK → SKIP TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS
- d. REF → SKIP TO PROBES AT END OF SCREENER SECTION THEN SKIP TO DEMOGRAPHICS

A11. In what month and year did this injury/illness occur?

MONTH/YEAR  
 ENTER MM/YYYY  
 DK  
 REF

A12. [IF YES TO ANY INJURIES OR ILLNESSES] How many total times in the last 12 months [did you experience/have you ever experienced] an injury or illness related to any job you held? [THIS WILL CREATE THE LOOPS.] \_\_\_\_\_ TIMES

INTERVIEWER: CONFIRM NUMBER OF INCIDENTS AND BRIEF DESCRIPTION OF EACH. IF INJURY/ILLNESS EXPERIENCED WITHIN LAST YEAR, RESPONDENT WILL REPORT ON THOSE. OTHERWISE, IF NO INJURY/ILLNESS WITHIN LAST YEAR, RESPONDENT WILL REPORT ON INJURIES/ILLNESSES EVER EXPERIENCED.

**Probes:**

*Screener*

- I asked you this question: “In the last 12 months, have you experienced any injuries or illnesses related to any job you had?” In your own words, what is this question asking?
- In your own words, what would be a work-related injury or illness? Can you give me some examples of some things that would count as work-related injuries and illnesses? What would not count?
- Tell me about the kind of work you do. Tell me about other times when you got hurt or sick because of the work you do.
- [I asked you about whether you ever experienced any injury or illness, related to any job you had, that caused you to get medical treatment other than what could be treated with a first aid kit]. What does “first aid” mean to you? What kind of treatment counts as first aid? What kind of treatment doesn’t count?
- The questions gave some examples of injuries and illnesses [SHOW R THE LISTS, READ THE LIST IF NECESSARY.] Are you familiar with [LIST]? Which ones have you heard of? Which ones had you not heard of?
- How easy or hard was it to remember when the injury/illness happened? Can you tell me more about that? How did you figure out when the injury/illness happened?

**Notes to interviewer:**

The goal of the screener section is to enumerate all instances of work-related injuries and illnesses that occurred during the reference period. What issues do respondents have in reporting these incidents? Do they understand the types of injuries and illnesses to report? Can they accurately report only those that are work-related? How do they determine the boundary of the reference period and determine whether an incident occurred within the RP?

IF NO INCIDENTS OF WORK-RELATED INJURIES AND ILLNESSES, GO TO DEMOGRAPHICS SECTION.

**Injury or Illness**

[FOR FIRST INJURY/ILLNESS START AT B2]

[FOR SECOND AND FOLLOWING INJURY/ILLNESS START AT B1]

- B1. [FOR SECOND/THIRD/ETC. LOOPS] How is this injury/illness related to the other injury/illness you mentioned? Is this related to [the other/another] injury/illness you already mentioned or is it a different injury/illness?
- a. RELATED TO THE OTHER/ANOTHER INJURY/ILLNESS [GO TO NEXT LOOP]
  - b. THIS IS A DIFFERENT INJURY/ILLNESS [CONTINUE]
  - c. DK
  - d. REF

“Now I am going to ask you more about [INJURY/ILLNESS #....].”

B2. **[WORKER ACTIVITY + some EVENT and SOURCE]** [FOR EACH LOOP] Please describe how the injury, illness, or condition occurred, and what caused it. For example: “When ladder slipped on wet floor, I fell 20 feet”; “I developed soreness in wrist over time.” [OPEN ENDED]

B3. [SOURCE] Were there any other objects, substances, or persons involved in the injury or illness that you didn’t mention? Please include equipment, chemicals, vehicles, or anything else.

B4. [NATURE AND BODY PART] Please describe the injury, illness, or condition. How was [BODY PART, ORGAN] affected? You can use medical terms if you know them, or just talk about the symptoms you experienced. For example: “strained back”; “chemical burn on hand”; “fainted or passed out.”

B5. [NATURE AND BODY PART] Were there any other parts of your body or organs affected by the injury or illness that you may not have included in your description? How was [BODY PART, ORGAN] affected?

CHECKLIST
1. Description or diagnosis for injury/illness (this is the OIICS <b>nature</b> )
2. Part or parts of body affected, including body systems (OIICS <b>part</b> , obviously)
3. How the injury/illness/exposure happened (OIICS <b>event</b> )
4. Vehicles, tools, chemicals, surfaces, or any other objects involved; this can be multiple objects; this can also just be the person’s body moved incorrectly (OIICS <b>sources</b> )

**Probes:**

*Characteristics of incident*

- [READ QUESTION] Can you tell me in your own words what you think this question is asking?
- [IF R DOES NOT INDICATE HOW INJURY/ILLNESS IS WORK-RELATED] Tell me more about how this injury/illness was related to your job. Where were you when this happened? What were you doing? What caused the injury/illness? Tell me more about the injury/illness.

**Notes to interviewer:**

Questions B2 through B5 are intended to capture (event or exposure, source of the injury/illness, part of body affected, and nature of the injury/illness). Do the questions elicit the information needed? Are the response options adequate to capture the information Rs give? Use general probing to elicit more information about the incident. (For example, if R says “I cut myself” ask: What part of your body was injured? What did you get cut with? What were you doing at the time?)

Medical attention

C1. Did you get medical advice or treatment for this injury/illness from...

a. A doctor, nurse, or other healthcare professional? [IF YES]: What type of health care professional did you see?	YES	NO	NA	DK/REF
b. [UNLESS MENTIONED ABOVE] A paramedic, firefighter, or other emergency medical personnel?				

C2. Did you get medical advice or treatment for this injury/illness at...

a. A hospital?	YES	NO	NA	DK/REF
A1. [IF YES TO HOSPITAL] Did you receive treatment at the hospital emergency room (ER)?				
A2.[IF YES TO HOSPITAL] Were you admitted for an overnight stay?				
A3. [IF YES TO ADMITTED] How many nights were you in the hospital? _____ NIGHTS				
b. A health clinic at your place of employment?				
c. Any place else? Please specify.				

[IF YES TO C1 OR C2, CONTINUE TO C3.]  
[OTHERWISE SKIP TO C5]

C3. [IF YES TO C1 OR C2]. Did you receive a medical diagnosis from a health care professional? ...

READ IF NECESSARY: Did a health care professional tell you the medical term for your injury/illness?

- a. YES → What was your medical diagnosis? INTERVIEWER READ IF NECESSARY: What is the medical term the health care professional used to describe your injury/illness?
- b. NO
- c. DK
- d. REF

C4. [IF YES TO C1 OR C2]. Did your health care professional recommend that you take any days off from work due to your injury/illness?

- a. YES → How many days off did the health care professional recommend? \_\_\_\_\_ DAYS OFF
- b. NO
- c. DK
- d. REF

**Probes:**

*Medical attention (tailor probes based on whether R reported receiving medical attention)*

- Tell me more about the medical care you received after the injury/illness happened.
- Can you tell me in your own words what you think this question is asking?
- Who do you think of as a health care professional? Who would you include or not include? [IF NEEDED ASK IF THESE WOULD COUNT: medical doctor, nurse, physician's assistant, chiropractor, paramedic]
- I asked you about whether you received a medical diagnosis. What does the term "medical diagnosis" mean to you? How do you get a medical diagnosis? Who gives you a medical diagnosis? Does a medical diagnosis have to come from a doctor or other health care professional? (if asked) What did you think of when I asked you about the medical term the doctor/health care professional used to describe your injury/illness? What does "medical term" mean to you?
- IF NEEDED] Did you go to a doctor, nurse, or other health care provider after [INCIDENT]? Did you go to the hospital or did paramedics come?
- What does it mean to be admitted for an overnight stay in the hospital? How is that different from an emergency room visit?
- Is/Was there a medical clinic at your place of employment? Did you see anyone at that clinic?
- Did your doctor or another health care professional recommend that you take days off from work? How many days off did they recommend?

Effect on work

The next questions are about how the injury/illness affected your ability to work.

IF RESPONDENT HAS A CHRONIC/GRADUAL ONSET INJURY/ILLNESS, GO TO QUESTIONS AFTER D9.

D1. Were you scheduled to work the day after the injury/illness?

- a. YES
- b. NO → SKIP TO D3
- c. DK → SKIP TO D3
- d. REF → SKIP TO D3

D2. [IF SCHEDULED TO WORK NEXT DAY] Were you able to work the next day?

- a. YES → SKIP TO D6
- b. NO → SKIP TO D4
- c. DK → SKIP TO D4
- d. REF → SKIP TO D4

D3. [IF WAS NOT SCHEDULED TO WORK NEXT DAY] If you had been scheduled to work, would you have been able to work the next day?

- a. YES → SKIP TO D6
- b. NO
- c. DK
- d. REF

D4. Did you return to work after the injury/illness?

- a. YES
- b. YES, BACK TO WORK SAME DAY → SKIP TO D6
- c. NO → SKIP TO D10
- d. NO, STILL OFF PAID WORK BUT EXPECTS TO RETURN → SKIP TO D10
- e. NO, EXPECTS NEVER TO DO PAID WORK AGAIN → SKIP TO D10
- f. DK → SKIP TO D10
- g. REF → SKIP TO D10

- D5. [IF RETURNED TO WORK] How many days after the injury/illness did you start work again?
- a. \_\_\_\_\_ DAYS AFTER THE INJURY/ILLNESS
  - b. BACK TO WORK SAME DAY
  - c. BACK TO WORK NEXT DAY
  - d. DK
  - e. REF

INTERVIEWER NOTE: IF R INDICATES WENT BACK TO WORK ONE DAY AFTER INJURY/ILLNESS, CONFIRM THAT R MEANS THAT R WENT BACK TO WORK THE NEXT DAY, THAT IS, THE DAY AFTER INJURY/ILLNESS OCCURRED.

[IF R WENT BACK TO WORK (D4=YES), CONTINUE. ELSE IF R IS NOT WORKING, GO TO D10.]

- D6. When you went back to work, did you work your usual number of hours or not?
- a. YES
  - b. NO
  - c. DK
  - d. REF

- D7. When you went back to work, were you able to perform all of the normal duties of your job or not?
- a. YES
  - b. NO
  - c. DK
  - d. REF

- D8. When you went back to work, were you assigned a different job or tasks than what you did prior to the injury/illness?
- a. YES
  - b. NO →SKIP TO D10
  - c. DK →SKIP TO D10
  - d. REF →SKIP TO D10

- D9. [IF DIFFERENT, D8=YES] Was your assignment to a different job or tasks permanent or temporary?
- a. PERMANENT
  - b. TEMPORARY
  - c. DK
  - d. REF

GO TO D10.

#### QUESTIONS ON EFFECT ON WORK FOR RESPONDENTS WITH CHRONIC/GRADUAL ONSET CONDITIONS:

In the last 12 months, after you began experiencing symptoms due to TEXT FILL,

1. Did you miss any days of work, or not?
2. [IF YES TO 1] about how many days of work did you miss?

When you worked...

3. Did you work your usual number of hours or not?
4. Were you able to perform all of the normal duties of your job or not?

5. Were you assigned to a different job or tasks than what you did prior to the onset of symptoms?

6. [IF YES TO 5] Was your assignment to a different job or tasks permanent or temporary?

[TRANSITION STATEMENT FOR THOSE WHO RETURNED TO WORK: At any point after you returned to work, did the injury/illness affect your job in any of the following ways?]

D10. Did the injury/illness cause you to:

	YES	NO	NA	DK/REF
a. Quit your job?				
b. Be laid off?				
c. Be fired?				
d. Change the kind of work you do, that is, change your occupation?				

D11. Did the injury/illness affect your ability to work in any other way?

- a. YES → Please specify.
- b. NO
- c. DK
- d. REF

**Probes:**

*Effect on work*

- IF YES TO ANY ITEM D6-D11: Tell me more about [TEXT FILL]. [E.g., Tell me more about your normal job duties. What duties were you unable to perform? OR Tell me more about why you quit your job? When did you quit? How was that related to your injury/illness?]
- What does the term [TEXT FILL] mean to you? Can you give me an example? [E.g., What does it mean to you to be assigned to another job on a permanent or temporary basis? What does it mean to be laid off? Fired?]
- What kind of effect did the injury/illness have on your work schedule? Job duties? Ability to work? Ability to keep your job? The pay you received?

**Probes:**

*Days after injury/illness able to start work again*

- You said you were able to start work again XX days after the injury/illness. How did you figure that out?
- Walk me through the timeline of when you were injured and when you got back to work.
- When you started work again were you able to resume all the duties you had before, or not?

**Notes to interviewer:**

How does R determine days after injury/illness able to start work again?

Effect on Pay

The next questions are about how the injury/illness affected your income or pay.

E1. Did your employer know about this injury/illness?

- a. YES → SKIP TO E3
- b. NO
- c. DK
- d. REF

E2. [IF NO TO EMPLOYER KNOWING]: For what reasons did your employer *not* know about this injury/illness?

Did you not want your employer to know about your injury/illness...

	YES	NO	NA	DK/REF
a. To avoid being laid off?				
b. To avoid loss of wages?				
c. To avoid loss of promotion of advancement?				
d. To avoid job transfer or restriction?				
e. Because you did not realize that the injury/illness was work-related until after leaving the job?				
f. Because you felt your employer would not recognize the injury/illness as work-related?				
g. Because your employer wants to keep injury and illness rates low?				
h. Other (specify)?				

The next questions are about workers' compensation. Workers' compensation is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job.

E3. Has anyone filed a workers' compensation claim for this injury/illness?

- a. YES
- b. NO → SKIP TO E5
- c. DK
- d. REF

E4. Who filed the workers' compensation claim?

- a. EMPLOYER
- b. EMPLOYEE
- c. FAMILY MEMBER OF EMPLOYEE
- d. OTHER SPECIFY
- e. DK
- f. REF

ALL RESPONSES TO E4 GO TO SKIP INSTRUCTION BEFORE E6.

E5. IF NO ON QUESTION ABOUT FILING WORKERS' COMPENSATION: What was the main reason you or your employer did not file a workers' compensation claim for this injury/illness?

- a. You were not eligible because you did not meet waiting period
- b. Your employer did not want to file a claim
- c. You did not inform employer
- d. You were unaware of workers' compensation coverage
- e. You chose not to pursue a claim even though you were eligible

- f. Other reason, please specify
- g. DK
- h. REF

SKIP INSTRUCTION:

#1: WC FILED, CONTINUE TO E6.

#2: ELSE IF NO WC FILED BUT MISSED DAYS OF WORK, SKIP TO E8.

#3: ELSE [NO WC FILED AND DID NOT MISS DAYS OF WORK] SKIP TO PROBES AT END OF SECTION.

E6. IF R REPORTS WORKERS' COMPENSATION CLAIM FILED: Did you receive workers' compensation for this injury/illness?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

READ IF NECESSARY: Workers compensation is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job.

E7. IF R REPORTS WORKERS' COMPENSATION NOT RECEIVED: Is there an open claim pending for this injury/illness?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

E8. Short-term or temporary disability benefits provide you with a portion of your income if you are temporarily unable to work due to a medical condition. Did you receive short-term (temporary) disability for this injury/illness?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

E9. Did this injury/illness cause you to use paid sick leave, paid annual leave, or paid time off?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

E10. Did this injury/illness cause you to take leave without pay?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

E11. Did your employer continue to pay your wages and other compensation in full during the period you were unable to work because of this injury/illness?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

**Probes:**

*Effect on work*

- [IF YES TO E1] How did your employer know about the injury/illness?
- [IF NO TO E1] Tell me more about the reasons why your employer did not know about this injury/illness. What was the main reason your employer did not know? Tell me more about that.
- [IF DK TO E1] For what reasons are you not sure whether your employer knew about the injury/illness?

**Notes to interviewer:**

Observe for signs of acquiescence bias in E1. Are Rs saying “yes” because a reason sounds plausible or because it was a reason why R’s employer did not the injury/illness? Ask for more detail and main reasons. Probe to explore understanding of terms, ability to accurately report on consequences of the injury/illness.

**Probes:**

*Workers’ compensation*

- ASK PROBES TAILORED TO THE REASONS R REPORTS ON WHY NO WC CLAIM WAS FILED BY EMPLOYER. EXAMPLES: Tell me more about the reasons why your employer did not file a workers’ compensation claim for this injury/illness? What did your employer say? Why did the employer refuse? How sure are you about whether or not your employer filed a claim?
- Can you tell me what it means to file a workers’ compensation claim? Tell me what you know about that process.
- Have you heard of [TEXT FILL]? Please tell me in your own words what you think [TEXT FILL] means: workers’ compensation, short-term or temporary disability, paid sick leave/paid annual leave/paid time off, leave without pay.

**Notes to interviewer:**

Do Rs know what workers’ compensation is? Do they know whether a WC form was filed? Are the terms in E6-E11 familiar to Rs? Are the definitions helpful?

Occupation and Industry at Time of Injury or Illness

The next questions are about your occupation and industry at the time of the injury/illness. Please think about the job you held at the time of the injury/illness [TEXT FILL DESCRIPTION].

F1. Were you considered by your employer to be a full time or part time employee?

- a. FULL-TIME
- b. PART-TIME
- c. DK
- d. REF

F2. In a typical week, how many hours did you work? \_\_\_\_\_ hours

IF NECESSARY: Was it greater than or equal to 35 hours per week?

DK  
REF

**Probes:**

*Hours worked*

- Do you work the same number of hours per week, or not? How did you determine how many hours per week you typically work?
- How many hours a week would you consider to be full time employment? What does your employer consider to be full time employment?

**Notes to interviewer:**

Does R have any difficulty recalling FT vs. PT work? How do Rs with irregular work schedules, seasonal employment, etc., answer the question? Does the number of hours per week typically worked accord with report of FT/PT status?

F3. Which of the following group best describes your employer at the time of the injury/illness?

- Government
- Private-for-profit company → SKIP TO F5
- Non-profit organization including tax exempt and charitable organizations → SKIP TO F5
- Self-employed → SKIP TO F5
- Working in the family business → SKIP TO F5

F4. Would that be the federal, state, or local government?

- FEDERAL
- STATE
- LOCAL

F5. Did you work for a temporary help agency or a temporary staffing agency?

- YES
- NO
- DK
- REF

INTERVIEWER NOTE: IF R IS A FARM LABOR CONTRACTOR, R IS NOT CONSIDERED TEMPORARY HELP/STAFFING AND RESPONSE TO THIS Q IS NO.

[IF F5 (TEMP HELP OR TEMP STAFFING AGENCY) =YES]: For the next questions, please answer based on the place where you were working on a day-to-day basis when the injury/illness occurred, not the temporary agency you worked for.

F6. What is the name of the (company, organization or agency) for whom you worked? [OPEN ENDED]

DK  
REF

NOTE: IF GOVERNMENT EMPLOYER, TEXT FILL=AGENCY; IF NON-PROFIT, TEXT FILL=ORGANIZATION; ELSE TEXT FILL=COMPANY.

F7. What kind of business or industry was this? [OPEN ENDED]

DK  
REF

F8. What did they make or do where you worked? [OPEN ENDED]

DK

REF

F9. In what state were you employed at this job? [OPEN ENDED]

DK

REF

F10. What kind of work did you do? (For example: registered nurse, personnel manager, supervisor of order department, secretary, accountant) [OPEN ENDED]

DK

REF

F11. What were your most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, typing and filing, reconciling financial records) [OPEN ENDED]

DK

REF

F12. At this job, were you a member of a union or covered by a collective bargaining agreement?

a. YES

b. NO

c. DK

d. REF

F13. How many people work at your work location?

e. 1 to 10 workers

a. 11 to 49 workers

b. 50 to 249 workers

c. 250 to 999 workers

d. 1000 or more workers

e. DK

f. REF

***Probes:***

*Employment characteristics for job at time of injury/illness*

- F12 (union): Have you heard of unions? Have you heard of a collective bargaining agreement? Tell me what those words mean to you.
- F12: Tell me how you decided on your answer. Tell me about the collective bargaining agreement. What union do/did you belong to?
- F13 (how many workers): Tell me how you figured out your answer to this question. Walk me through how you figured out that answer. How certain are you of your answer?

***Notes to interviewer:***

Observe respondent ability to understand and respond to questions about employment at time of the injury/illness. Probe as needed to explore an issues with response. Are respondents able to accurately report answers for F12 and F13? F13 should include total for R's work location only, not the whole company/organization.

IF R HAS ADDITIONAL INJURIES/ILLNESSES TO REPORT, GO BACK TO SECTION B. ELSE GO TO G1.

## Demographic Characteristics

### Race/ethnicity

G1. Are you Spanish, Hispanic, or Latino?

- a. YES
- b. NO
- c. DK
- d. REF

G2. [I am going to read you a list of five race categories.] Please choose one or more races that you consider yourself to be:

- a. White
- b. Black or African American
- c. American Indian or Alaska Native
- d. Asian
- e. Native Hawaiian or Other Pacific Islander
- f. Other \_\_\_\_\_
- g. DK
- h. REF

### Age

G3. What is your date of birth? Enter MM/DD/YYYY

- DK
- REF

G4. As of last week, that would make you approximately (AGE) years old. Is that correct?

[IF NECESSARY] Even though you don't know your exact birthdate, what is your best guess as to how old you were on your last birthday?

- \_\_\_\_\_ YEARS
- DK
  - REF

### Marital Type

G5. Are you now married, widowed, divorced, separated or never married?

- a. MARRIED
- b. WIDOWED
- c. DIVORCED
- d. SEPARATED
- e. NEVER MARRIED
- f. DK
- g. REF

### Gender

G6. Are you male or female?

- a. MALE
- b. FEMALE

### Education

G7. What is the highest level of school you have completed or the highest degree you have received?

- a. Less than high school
- b. High school or GED
- c. Associate degree or some college
- d. Bachelor's degree or above

G8. In what country were you born?

## Current Industry and Occupation

The next questions are about your **current job**. *If you have more than one job, please tell me about the job at which you usually work the most hours. If you work the same number of hours at two jobs, please tell me about the job where you were employed the longest.*

H1. What is your current employment status? Are you currently employed full-time, part-time, or are you not employed?

- a. FULL-TIME
- b. PART-TIME
- c. NOT CURRENTLY EMPLOYED → SKIP TO END OF SURVEY
- d. DK
- e. REF

H2. [IF CURRENTLY EMPLOYED] Is this job with the same employer you have already told me about?

- a. YES, SAME EMPLOYER → CONTINUE TO H3
- b. NO, DIFFERENT EMPLOYER → SKIP TO H5

### INTERVIEWER NOTE:

- IF R HAS ONLY ONE INJURY/ILLNESS AND SAME EMPLOYER OR MULTIPLE INJURIES UNDER SAME EMPLOYER, SKIP TO H4
- IF R HAS MULTIPLE INJURIES UNDER DIFFERENT EMPLOYERS, BUT CURRENT EMPLOYMENT IS WITH SAME EMPLOYER, CONTINUE TO H3

H3. [IF MULTIPLE INJURIES UNDER DIFFERENT EMPLOYERS BUT SAME AS CURRENT EMPLOYMENT] Which job and employer are you referring to?

\_\_\_\_\_

H4. [IF SAME EMPLOYER] Are you in the same position you were in at the time the injury/illness [TEXT FILL]?

- a. YES → SKIP TO PROBES AT END OF SECTION
- b. NO
- c. DK
- d. REF

INTERVIEWER NOTE: IF SAME EMPLOYER BUT DIFFERENT JOB, ASK H5 (HOW MANY HOURS WORKED), H11 (WHAT KIND OF WORK DO YOU DO), AND H12 (MOST IMPORTANT ACTIVITIES OR DUTIES).

H5. [IF SAME EMPLOYER BUT DIFFERENT JOB OR DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] Currently, in a typical week, how many hours do you work?

\_\_\_\_\_ hours

IF NECESSARY: Was it greater than or equal to 35 hours per week?

- DK
- REF

INTERVIEWER NOTE: IF SAME EMPLOYER BUT DIFFERENT JOB, SKIP TO H11.

H6. [IF DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] Which of the following group best describes your CURRENT employer?

- a. Government

- b. Private-for-profit company → SKIP TO H8
- c. Non-profit organization including tax exempt and charitable organizations → SKIP TO H8
- d. Self-employed → SKIP TO H8
- e. Working in the family business → SKIP TO H8

H7. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] Would that be the federal, state, or local government?

- a. FEDERAL
- b. STATE
- c. LOCAL

H8. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] What is the name of the (company, organization or agency) for whom you work? [OPEN ENDED]

DK  
REF

H9. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] What kind of business or industry is this? [OPEN ENDED]

DK  
REF

H10. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] What do they make or do where you work? [OPEN ENDED]

DK  
REF

H11. [IF SAME EMPLOYER BUT DIFFERENT JOB OR DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] What kind of work do you do? (For example: registered nurse, personnel manager, supervisor of order department, secretary, accountant) [OPEN ENDED]

DK  
REF

H12. [IF SAME EMPLOYER BUT DIFFERENT JOB OR DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] What are your most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, typing and filing, reconciling financial records) [OPEN ENDED]

DK  
REF

**Probes:**

*Employment characteristics for current job*

- Use general probes as needed to investigate issues with these questions.
- Is the job you reported your only job or do you have more than one job?
- [REREAD THE ITALICIZED INSTRUCTION ON WHICH JOB TO REPORT ON]. In your own words, what do you think this instruction means?

**Notes to interviewer:**

These questions are the same as for the job at time of the incident. Continue to observe for issues to explore.

Does R notice that this set of questions is about the current job? If R has more than one job, did R report on the correct one?

How do H2 and H3 function for determining that the current and former job are the same?

### ***Debriefing questions for self-interview:***

#### *Recall and reference period*

- How easy or difficult was it for you to answer questions about injuries/illnesses that occurred over the last year?
- How sure are you that the injury/illness you told me about happened in the last year?
- Were there any questions that were particularly difficult to answer? Tell me more about that?
- If I asked you about injuries/illnesses that happened during the last 12 months, how easy or hard would it be to answer the questions I asked you?
- When you signed up to do the survey, you may have seen a flyer or someone from NORC ask you about injuries and illnesses related to work that you may have had. Did you think about those injuries/illnesses you had, or did you do anything to get ready for the interview before you came? Tell me about that.
- Imagine that you didn't know ahead of time that this survey was going to be about work-related injuries and illnesses. If someone called you or came to your door, and asked you whether you had ever had a work-related injury or illness, do you think you would have remembered? How hard would these questions in the survey be, if you didn't know in advance what the survey was about?

#### *Sensitivity*

- Were you worried/Would you be worried about telling your employer about an injury/illness? Was it/Would it be hard for you to tell your employer? Tell me more about that.
- Were you worried/Would you be worried about telling the government about an injury/illness? Why? Tell me more about that.
- Were you worried/Would you be worried about telling anyone else about a work-related injury/illness? Tell me more about that.

#### *Review of selected items*

- I'd like to ask you a little more about [QUESTION]. You said [FILL]. In your own words, what do you think that question was asking? How did you decide on your answer?

#### *General debriefing*

- What are your suggestions on how to improve the survey?
- What questions were the most difficult for you to answer?
- What questions were the easiest to answer?

#### ***Notes to interviewer:***

Is reporting work-related injuries and illnesses to the employer a sensitive issue? Why or why not? Is telling others outside the workplace about these incidents sensitive? Why or why not?

What questions are the most and least difficult for Rs to answer? What answers are they uncertain about? Do they have suggestions for improving the survey?

Return to any questions that need further exploration.

***Debriefing questions for proxy respondents:***

*Proxy*

- What is your relationship to [RESPONDENT NAME]?
- How much would you say you know about R's job?
- How familiar would you say you are with R's work-related injury/illness? Are you aware of the medical treatment he/she received when the injury/illness occurred? Are you aware of how this affected R's job? How did you learn about R's injury/illness? Who in your household besides R would be the best person to answer the kinds of questions I asked?
- What questions were the hardest for you to answer for R? Why? How much would you say you know about [QUESTION TOPIC]? How easy/hard is it to remember the information the question asked about? Tell me more.
- What questions were the easiest for you to answer for R? Why? How much would you say you know about [QUESTION TOPIC]? How easy/hard is it to remember the information the question asked about? Tell me more.

*Sensitivity*

- Were you worried/Would you be worried about telling anyone else about R's work-related injury/illness? Tell me more about that.

*Review of selected items*

- I'd like to ask you a little more about [QUESTION]. You said [FILL]. In your own words, what do you think that question was asking? How did you decide on your answer?

*General debriefing*

- What are your suggestions on how to improve the survey?
- What questions were the most difficult for you to answer?
- What questions were the easiest to answer?

***Notes to interviewer:***

Is proxy reporting of work-related injuries and illnesses a sensitive issue? Why or why not?

What questions are the most and least difficult for Rs to answer? What answers are they uncertain about? Do they have suggestions for improving the survey?

Return to any questions that need further exploration.

***Debriefing questions for those with no injury/illness to report:***

*Terms*

How familiar are you with the following terms? Please tell in your own words what these terms mean to you?

*Workers' compensation, etc.*

- Worker's compensation
- Temporary disability
- Short-term disability
- Paid sick leave
- Paid annual leave
- Paid time off

*Health care professional/calendar days/work shifts*

ASK R: In the last year, have you had any injury or illness that was serious enough that a health care professional was consulted? Please include any injury whether or not it was work-related.

- Who do you think of as a health care professional? Who would you include or not include? [IF NEEDED ASK IF THESE WOULD COUNT: medical doctor, nurse, physician's assistant, chiropractor, paramedic]
- When you became injured or ill, how many days after the injury/illness were you able to start work again? How did you figure that out?
- You said you were not able to do your usual activities for XX calendar days. How did you figure that out?

*Unions/collective bargaining agreement*

- Have you heard of unions? Have you heard of a collective bargaining agreement? Tell me what those words mean to you.
- Q39 (how many workers): Tell me how you figured out your answer to this question. Walk me through how you figured out that answer. How certain are you of your answer?

*Understanding of terms*

- Who do you think of as a health care professional? Who would you include or not include? [IF NEEDED ASK IF THESE WOULD COUNT: medical doctor, nurse, physician's assistant, chiropractor, paramedic]
- Now I'd like to ask you about the term "medical diagnosis." What does the term "medical diagnosis" mean to you? How do you get a medical diagnosis? Who gives you a medical diagnosis? Does a medical diagnosis have to come from a doctor or other health care professional?

***STEP 3: END OF INTERVIEW***

Thank you for taking part in this survey.

STOP THE RECORDER.

***RECRUITMENT QUESTION:***

We are looking for additional respondents like you who would be interested in helping with the study. Do you know anyone who had a work-related injury or illness who might be interested in participating? If yes, would you mind if we gave you a flyer about the study and send you an email about the study that you could forward to them?

INTERVIEWER: ANSWER ANY RESPONDENT QUESTIONS.

This concludes the interview. I would be happy to answer any questions that you have. Thank you for your help with this study.

MARK CASE AS COMPLETE IN RECRUITMENT DATABASE.

***MATERIALS TO TAKE AWAY FROM INTERVIEW***

- INTERVIEWER PROTOCOL BOOKLET (THIS BOOKLET)
- DIGITAL RECORDER AND BATTERIES
- NOTE PAPER, PENS, PENCILS

**HOUSEHOLD SURVEY OF OCCUPATIONAL INJURIES AND ILLNESSES**  
**Cognitive interview protocol R3 Version 3**  
**9-21-2016**

***MATERIALS NEEDED FOR INTERVIEW***

- |   |
|---|
| <input type="checkbox"/> INTERVIEWER PROTOCOL BOOKLET (THIS BOOKLET) AND SHOWCARDS<br><input type="checkbox"/> CONSENT FORM<br><input type="checkbox"/> RESPONDENT PHONE NUMBER<br><input type="checkbox"/> FULLY CHARGED DIGITAL RECORDER AND EXTRA BATTERIES<br><input type="checkbox"/> NOTE PAPER, PENS AND PENCILS |
|---|

***STEP 1: INFORMED CONSENT***

PROVIDE RESPONDENT WITH A COPY OF THE INFORMED CONSENT FORM. ASK THE RESPONDENT TO READ THE FORM, ANSWER ANY QUESTIONS, AND HAVE THE RESPONDENT SIGN THE FORM. LEAVE A SEPARATE COPY OF THE FORM WITH THE RESPONDENT.

- |   |
|---|
| <input type="checkbox"/> COLLECT VERBAL CONSENT FROM RESPONDENT |
|---|

- |  |
|--|
| <input type="checkbox"/> IF THE RESPONDENT HAS CONSENTED TO RECORDING, START THE RECORDER. |
|--|

***STEP 2: COMPLETION OF THE QUESTIONNAIRE***

BEGIN QUESTIONNAIRE.

**Interviewer probe bank (use as appropriate):**

- “How did you come up with that answer?”
- “Can you tell me in your own words what you think the question is asking?”
- “Can you tell me more about that?”

If you pick up on a visual cue that suggests an issue or confusion:

- “Tell me what you are thinking.”
- What does the word [term] in this question mean to you?
- You said [answer]. Can you tell me more about that?

If R is uncertain and asking for confirmation:

- There is not a right or wrong answer for this question. I am interested in hearing your thoughts on what the question is asking.

**INTERVIEWER:** If this interview is with a proxy respondent, please modify language accordingly. For example, instead of asking “Did you do ANY work for pay or profit?” ask “Did [your husband/wife/brother/he/she] do ANY work for pay or profit?”

## Survey Introduction

The information that you provide in this survey is confidential. Your name and your answers to the questions will not be shared with anyone outside of NORC, the survey organization conducting this survey. I would be happy to answer any questions you may have about the survey. [ANSWER RESPONDENT QUESTIONS.] Let's begin.

### Screener

This survey is about work-related injuries and illnesses that you may have experienced. I will ask you questions about the injuries and illnesses you may have had that are related to any job you held in the last 12 months. By the last 12 months, I mean since [CURRENT MONTH] of [LAST YEAR].

A1. In the last 12 months, did you do ANY work for pay or profit?

- a. Yes → ELIGIBLE, CONTINUE
- b. No → NOT ELIGIBLE, END INTERVIEW
- c. DK
- d. REF

Any injury

A2. In the last 12 months, have you experienced any injuries or illnesses related to any job you held?

- a. Yes → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- b. No → SKIP TO A4
- c. DK
- d. REF

A3. In what month and year did this injury/illness occur?

MONTH/YEAR

ENTER MM/YYYY

NO SPECIFIC MONTH/YEAR DUE TO CHRONIC/GRADUAL ONSET CONDITION

DK

REF

INTERVIEWER NOTE: IF ILLNESS/INJURY IS A CHRONIC/GRADUAL ONSET CONDITION FOR WHICH RESPONDENT IS UNABLE TO SPECIFY MONTH/YEAR OF OCCURRENCE, MARK "NO SPECIFIC MONTH/YEAR"

A4. [Now I want to find out if you experienced any other work-related injuries other than the TEXT FILL INJURY RESPONDENT REPORTED (e.g., concussion) you just told me about.] In the last 12 months, have you experienced any [other] injuries, such as the following, related to any job you held?

- a. Sprains, strains or tears
- b. Soreness or pain
- c. Bruises
- d. Cuts or punctures
- e. Broken bones
- f. Injury to muscles or joints
- g. Open wounds
- h. Burns
- i. Carpal tunnel syndrome

j. Any other injury?

- 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- 2) NO →SKIP TO A6
- 3) DK →SKIP TO A6
- 4) REF →SKIP TO A6

INTERVIEWER NOTE: READ DEFINITION IF NECESSARY. Carpal tunnel syndrome is a hand and arm condition that causes numbness, tingling and other symptoms. Carpal tunnel syndrome is caused by a pinched nerve in your wrist. [<http://www.mayoclinic.org/diseases-conditions/carpal-tunnel-syndrome/basics/definition/con-20030332>]

A5. In what month and year did this injury occur?

MONTH/YEAR

ENTER MM/YYYY

NO SPECIFIC MONTH/YEAR DUE TO CHRONIC/GRADUAL ONSET CONDITION

DK

REF

A6. [Other than the TEXT FILL ILLNESS RESPONDENT REPORTED (e.g., asthma) you have already mentioned], in the last 12 months, have you experienced any [other] illnesses, such as the following, related to any job you held?

- a. Skin disorders
- b. Respiratory conditions
- c. Poisonings
- d. Hearing loss
- e. A disease or infection
- f. Cancer
- g. Anxiety or depression
- h. Any other illness?

- 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- 2) NO →SKIP TO A8
- 3) DK →SKIP TO A8
- 4) REF →SKIP TO A8

A7. In what month and year did this injury/illness occur?

MONTH/YEAR

ENTER MM/YYYY

NO SPECIFIC MONTH/YEAR DUE TO CHRONIC/GRADUAL ONSET CONDITION

DK

REF

A8. [Other than the TEXT FILL INJURY/ILLNESS RESPONDENT REPORTED (e.g, concussion, asthma) you have already mentioned], in the last 12 months, have you experienced any [other] work-related injuries or illnesses that caused you to...

	Yes	No	DK	REF
a. Faint, pass out, or lose consciousness?				
b. Be unable to work for a day or more?				
c. Do less than your normal work activities?				
d. Be assigned to a different job or tasks at your place of work?				
e. Get medical treatment other than what can be treated with a first aid kit?				

IF YES, COLLECT BRIEF DESCRIPTION AND CONFIRM WORK-RELATED.  
 IF NO TO ALL ITEMS IN A8, SKIP TO A10.

READ IF NECESSARY: First aid refers to medical attention that is usually administered immediately after the injury occurs and at the location where it occurred. It often consists of a one-time, short-term treatment and requires little technology or training to administer. First aid can include cleaning minor cuts, scrapes, or scratches; treating a minor burn; applying bandages and dressings; the use of non-prescription medicine...

<https://www.osha.gov/SLTC/medicalfirstaid/recognition.html>

A9. In what month and year did this injury/illness occur?

MONTH/YEAR  
 ENTER MM/YYYY  
 DK  
 REF

IF R HAS NOT REPORTED ANY INJURIES OR ILLNESSES ASK ABOUT INJURIES/ILLNESSES **EVER** EXPERIENCED. ELSE GO TO DEMOGRAPHICS.]

A10. Have you **EVER** experienced any injuries or illnesses related to any job you held?

- a. YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- b. NO → SKIP TO DEMOGRAPHICS
- c. DK → SKIP TO DEMOGRAPHICS
- d. REF → SKIP TO DEMOGRAPHICS

A11. In what month and year did this injury/illness occur?

MONTH/YEAR  
 ENTER MM/YYYY  
 DK  
 REF

A12. [IF YES TO ANY INJURIES OR ILLNESSES] You have told me about X work-related injuries and illnesses you have experienced in the last 12 months.

BRIEFLY LIST EACH INJURY/ILLNESS: TEXT FILL #1, TEXT FILL #2, TEXT FILL #3, ETC.

Is that correct?

\_\_\_\_\_ TIMES

INTERVIEWER: CONFIRM NUMBER OF INCIDENTS AND BRIEF DESCRIPTION OF EACH. IF INJURY/ILLNESS EXPERIENCED WITHIN LAST YEAR, RESPONDENT WILL REPORT ON THOSE. OTHERWISE, IF NO INJURY/ILLNESS WITHIN LAST YEAR, RESPONDENT WILL REPORT ON INJURIES/ILLNESSES EVER EXPERIENCED.

IF NO INCIDENTS OF WORK-RELATED INJURIES AND ILLNESSES, GO TO DEMOGRAPHICS SECTION.

***Notes to interviewer:***

The goal of the screener section is to enumerate all instances of work-related injuries and illnesses that occurred during the reference period. What issues do respondents have in reporting these incidents? Do they understand the types of injuries and illnesses to report? Can they accurately report only those that are work-related? How do they determine the boundary of the reference period and determine whether an incident occurred within the RP?

**Injury or Illness**

[FOR FIRST INJURY/ILLNESS START AT B2]

[FOR SECOND AND FOLLOWING INJURY/ILLNESS START AT B1]

- B1. [FOR SECOND/THIRD/ETC. LOOPS] How is this injury/illness related to the other injury/illness you mentioned? Is this related to [the other/another] injury/illness you already mentioned or is it a different injury/illness?
- a. RELATED TO THE OTHER/ANOTHER INJURY/ILLNESS [GO TO NEXT LOOP]
  - b. THIS IS A DIFFERENT INJURY/ILLNESS [CONTINUE]
  - c. DK
  - d. REF

“Now I am going to ask you more about [INJURY/ILLNESS #....].”

- B2. **[WORKER ACTIVITY + some EVENT and SOURCE]** [FOR EACH LOOP] Please describe how the injury, illness, or condition occurred, and what caused it. For example: “When ladder slipped on wet floor, I fell 20 feet”; “I developed soreness in wrist over time.” [OPEN ENDED]
- B3. [SOURCE] Were there any other objects, substances, or persons involved in the injury or illness that you didn’t mention? Please include equipment, chemicals, vehicles, or anything else.
- B4. [NATURE AND BODY PART] Please describe the injury, illness, or condition. How was [BODY PART, ORGAN] affected? You can use medical terms if you know them, or just talk about the symptoms you experienced. For example: “strained back”; “chemical burn on hand”; “fainted or passed out.”
- B5. [NATURE AND BODY PART] Were there any other parts of your body or organs affected by the injury or illness that you may not have included in your description? How was [BODY PART, ORGAN] affected?

CHECKLIST
1. Description or diagnosis for injury/illness (this is the OIICS <b>nature</b> )
2. Part or parts of body affected, including body systems (OIICS <b>part</b> , obviously)
3. How the injury/illness/exposure happened (OIICS <b>event</b> )
4. Vehicles, tools, chemicals, surfaces, or any other objects involved; this can be multiple objects; this can also just be the person’s body moved incorrectly (OIICS <b>sources</b> )

**Notes to interviewer:**

Questions B2 through B5 are intended to capture (event or exposure, source of the injury/illness, part of body affected, and nature of the injury/illness). Do the questions elicit the information needed? Are the response options adequate to capture the information Rs give? Use general probing to elicit more information about the incident. (For example, if R says “I cut myself” ask: What part of your body was injured? What did you get cut with? What were you doing at the time?)

**Medical attention**

The next questions are about medical care you may have received for this injury/illness. Please think about the care you received immediately after the injury/illness occurred as well as follow-up care you received at a later time.

C1. Did you get medical advice or treatment for this injury/illness from...

a. A doctor, nurse, or other healthcare professional? [IF YES]: What type of health care professional did you see?	YES	NO	NA	DK/REF
b. [UNLESS MENTIONED ABOVE] A paramedic, firefighter, or other emergency medical personnel?				

C2. Did you get medical advice or treatment for this injury/illness at...

a. A hospital?	YES	NO	NA	DK/REF
A1. [IF YES TO HOSPITAL] Did you receive treatment at the hospital emergency room (ER)?				

A2.[IF YES TO HOSPITAL] Were you admitted for an overnight stay?				
A3. [IF YES TO ADMITTED] How many nights were you in the hospital? _____ NIGHTS				
b. A health clinic at your place of employment?				
c. Any place else? Please specify.				

[IF YES TO C1 OR C2, CONTINUE TO C3.]  
[OTHERWISE SKIP TO C5]

- C3. [IF YES TO C1 OR C2]. Did you receive a medical diagnosis from a health care professional? ...  
READ IF NECESSARY: Did a health care professional tell you the medical term for your injury/illness?
- YES → What was your medical diagnosis? INTERVIEWER READ IF NECESSARY: What is the medical term the health care professional used to describe your injury/illness?
  - NO
  - DK
  - REF

- C4. [IF YES TO C1 OR C2]. Did your health care professional recommend that you take any days off from work due to your injury/illness?
- YES → How many days off did the health care professional recommend? \_\_\_\_\_ DAYS OFF
  - NO
  - DK
  - REF

### Effect on work

The next questions are about how the injury/illness affected your ability to work.

IF RESPONDENT HAS A CHRONIC/GRADUAL ONSET INJURY/ILLNESS, GO TO D13.

- D1. Were you scheduled to work the day after the injury/illness?
- YES
  - NO → SKIP TO D3
  - DK → SKIP TO D3
  - REF → SKIP TO D3

- D2. [IF SCHEDULED TO WORK NEXT DAY] Were you able to work the next day?
- YES → SKIP TO D6
  - NO → SKIP TO D4
  - DK → SKIP TO D4
  - REF → SKIP TO D4

- D3. [IF WAS NOT SCHEDULED TO WORK NEXT DAY] If you had been scheduled to work, would you have been able to work the next day?
- YES → SKIP TO D6
  - NO
  - DK
  - REF

D4. Did you return to work after the injury/illness?

- a. YES
- b. ~~YES, BACK TO WORK SAME DAY → SKIP TO D6~~
- c. NO → SKIP TO D19
- d. NO, STILL OFF PAID WORK BUT EXPECTS TO RETURN → SKIP TO D19
- e. NO, EXPECTS NEVER TO DO PAID WORK AGAIN → SKIP TO D19
- f. DK → SKIP TO D19
- g. REF → SKIP TO D19

D5. [IF RETURNED TO WORK] How many days after the injury/illness did you start work again?

- a. \_\_\_\_\_ DAYS AFTER THE INJURY/ILLNESS
- b. BACK TO WORK SAME DAY
- c. BACK TO WORK NEXT DAY
- d. DK
- e. REF

INTERVIEWER NOTE: IF R INDICATES WENT BACK TO WORK ONE DAY AFTER INJURY/ILLNESS, CONFIRM THAT R MEANS THAT R WENT BACK TO WORK THE NEXT DAY, THAT IS, THE DAY AFTER INJURY/ILLNESS OCCURRED.

[IF R WENT BACK TO WORK, CONTINUE. ELSE IF R IS NOT WORKING, GO TO D19.]

D6. When you went back to work, did you work your usual number of hours or not?

- a. YES
- b. NO
- c. DK
- d. REF

D7. When you went back to work, were you able to perform all of the normal duties of your job or not?

- a. YES
- b. NO
- c. DK
- d. REF

D8. When you went back to work, were you assigned a different job or tasks than what you did prior to the injury/illness?

- a. YES
- b. NO → SKIP TO D10
- c. DK → SKIP TO D10
- d. REF → SKIP TO D10

D9. [IF DIFFERENT, D8=YES] Was your assignment to a different job or tasks permanent or temporary?

- a. PERMANENT
- b. TEMPORARY
- c. DK
- d. REF

- D10. At any time after you went back to work, did you miss any (additional) days of work due to your injury/illness?
- YES
  - NO →SKIP TO D19
  - DK →SKIP TO D19
  - REF →SKIP TO D19

D11. About how many (additional) days of work did you miss?

\_\_\_\_\_ DAYS

D12. Please explain what happened.

GO TO D19.

QUESTIONS ON EFFECT ON WORK FOR RESPONDENTS WITH CHRONIC/GRADUAL ONSET CONDITIONS:

- D13. In the last 12 months, after you began experiencing symptoms due to TEXT FILL, did you miss any days of work, or not?
- YES, MISSED DAYS OF WORK
  - NO, DID NOT MISS DAYS OF WORK
  - DK
  - REF

D14. About how many days of work did you miss?

\_\_\_\_\_ DAYS

When you worked...

D15. Did you work your usual number of hours or not?

D16. Were you able to perform all of the normal duties of your job or not?

D17. Were you assigned to a different job or tasks than what you did prior to the onset of symptoms?

D18. [IF YES TO D17] Was your assignment to a different job or tasks permanent or temporary?

[TRANSITION STATEMENT FOR THOSE WHO RETURNED TO WORK: At any point after you returned to work, did the injury/illness affect your job in any of the following ways?]

D19. Did the injury/illness cause you to:

	YES	NO	NA	DK/REF
a. Quit your job?				
b. Be laid off?				
c. Be fired?				
d. Change the kind of work you do, that is, change your occupation?				

D20. Did the injury/illness affect your ability to work in any other way?

- YES → Please specify.
- NO
- DK
- REF

Effect on Pay

The next questions are about how the injury/illness affected your income or pay.

E1. Did your employer know about this injury/illness?

- a. YES → SKIP TO E3
- b. NO
- c. DK
- d. REF

E2. [IF NO TO EMPLOYER KNOWING]: For what reasons did your employer *not* know about this injury/illness?

Did you not want your employer to know about your injury/illness...

	YES	NO	NA	DK/REF
a. To avoid being laid off?				
b. To avoid loss of wages?				
c. To avoid loss of promotion or advancement?				
d. To avoid job transfer or restriction?				
e. Because you did not realize that the injury/illness was work-related until after leaving the job?				
f. Because you felt your employer would not recognize the injury/illness as work-related?				
g. Because your employer wants to keep injury and illness rates low?				
h. Other (specify)?				

The next questions are about workers' compensation. Workers' compensation is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job.

E3. Has anyone filed a workers' compensation claim for this injury/illness?

- a. YES
- b. NO → SKIP TO E5
- c. DK
- d. REF

E4. Who filed the workers' compensation claim?

- a. EMPLOYER
- b. EMPLOYEE
- c. FAMILY MEMBER OF EMPLOYEE
- d. OTHER SPECIFY
- e. DK
- f. REF

ALL RESPONSES TO E4 GO TO SKIP INSTRUCTION BEFORE E6.

- E5. IF NO ON QUESTION ABOUT FILING WORKERS' COMPENSATION: What was the main reason you or your employer did not file a workers' compensation claim for this injury/illness?
- a. You were not eligible because you did not meet waiting period
  - b. Your employer did not want to file a claim
  - c. You did not inform employer
  - d. You were unaware of workers' compensation coverage
  - e. You chose not to pursue a claim even though you were eligible
  - f. Other reason, please specify
  - g. DK
  - h. REF

SKIP INSTRUCTION:

#1: WC FILED, CONTINUE TO E6.

#2: ELSE IF NO WC FILED BUT MISSED DAYS OF WORK, SKIP TO E8.

#3: ELSE [NO WC FILED AND DID NOT MISS DAYS OF WORK] SKIP TO SECTION F.

- E6. IF R REPORTS WORKERS' COMPENSATION CLAIM FILED: Did you receive workers' compensation for this injury/illness?
- a. YES
  - b. NO
  - c. NA
  - d. DK
  - e. REF

READ IF NECESSARY: *Workers compensation* is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job.

- E7. IF R REPORTS WORKERS' COMPENSATION NOT RECEIVED: Is there an open claim pending for this injury/illness?
- a. YES
  - b. NO
  - c. NA
  - d. DK
  - e. REF

- E8. Short-term or temporary disability benefits provide you with a portion of your income if you are temporarily unable to work due to a medical condition. Did you receive short-term (temporary) disability for this injury/illness?
- a. YES
  - b. NO
  - c. NA
  - d. DK
  - e. REF

- E9. Did this injury/illness cause you to use paid sick leave, paid annual leave, or paid time off?
- a. YES
  - b. NO
  - c. NA
  - d. DK
  - e. REF

- E10. Did this injury/illness cause you to take leave without pay?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

E11. Did your employer continue to pay your wages and other compensation in full during the period you were unable to work because of this injury/illness?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

**Notes to interviewer:**

Do Rs know what workers' compensation is? Do they know whether a WC form was filed? Are the terms in E6-E11 familiar to Rs? Are the definitions helpful?

**Occupation and Industry at Time of Injury or Illness**

The next questions are about your occupation and industry at the time of the injury/illness. Please think about the job you held at the time of the injury/illness [TEXT FILL DESCRIPTION].

F1. Were you considered by your employer to be a full time or part time employee?

- a. FULL-TIME
- b. PART-TIME
- c. DK
- d. REF

F2. In a typical week, how many hours did you work? \_\_\_\_\_ hours

IF NECESSARY: Was it greater than or equal to 35 hours per week?

- DK
- REF

F3. Which of the following groups best describes your employer at the time of the injury/illness?

- a. Government
- b. Private-for-profit company → SKIP TO F5
- c. Non-profit organization including tax exempt and charitable organizations → SKIP TO F5
- d. Self-employed → SKIP TO F5
- e. Working in the family business → SKIP TO F5

F4. Would that be the federal, state, or local government?

- a. FEDERAL
- b. STATE
- c. LOCAL

F5. Did you work for a temporary help agency or a temporary staffing agency?

- a. YES
- b. NO
- c. DK
- d. REF

INTERVIEWER NOTE: IF R IS A FARM LABOR CONTRACTOR, R IS NOT CONSIDERED TEMPORARY HELP/STAFFING AND RESPONSE TO THIS Q IS NO.

[IF F5 (TEMP HELP OR TEMP STAFFING AGENCY) =YES]: For the next questions, please answer based on the place where you were working on a day-to-day basis when the injury/illness occurred, not the temporary agency you worked for.

F6. What is the name of the (company, organization or agency) for whom you worked? [OPEN ENDED]

DK  
REF

NOTE: IF GOVERNMENT EMPLOYER, TEXT FILL=AGENCY; IF NON-PROFIT, TEXT FILL=ORGANIZATION; ELSE TEXT FILL=COMPANY.

F7. What kind of business or industry was this? [OPEN ENDED]

DK  
REF

F8. What did they make or do where you worked? [OPEN ENDED]

DK  
REF

F9. In what state were you employed at this job? [OPEN ENDED]

DK  
REF

F10. What kind of work did you do? (For example: registered nurse, personnel manager, supervisor of order department, secretary, accountant) [OPEN ENDED]

DK  
REF

F11. What were your most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, typing and filing, reconciling financial records) [OPEN ENDED]

DK  
REF

F12. At this job, were you a member of a union or covered by a collective bargaining agreement?

- a. YES
- b. NO
- c. DK
- d. REF

F13. How many people worked at your work location?

- e. 1 to 10 workers
- a. 11 to 49 workers
- b. 50 to 249 workers
- c. 250 to 999 workers
- d. 1000 or more workers
- e. DK
- f. REF

IF R HAS ADDITIONAL INJURIES/ILLNESSES TO REPORT, GO BACK TO SECTION B. ELSE GO TO G1.

**Notes to interviewer:**

Does R have any difficulty recalling FT vs. PT work? How do Rs with irregular work schedules, seasonal employment, etc., answer the question? Does the number of hours per week typically worked accord with report of FT/PT status?

Observe respondent ability to understand and respond to questions about employment at time of the injury/illness. Probe as needed to explore an issues with response. Are respondents able to accurately report answers for F12 and F13? F13 should include total for R's work location only, not the whole company/organization.

**Demographic Characteristics**

Race/ethnicity

G1. Are you Spanish, Hispanic, or Latino?

- a. YES
- b. NO
- c. DK
- d. REF

G2. [I am going to read you a list of five race categories.] Please choose one or more races that you consider yourself to be:

- a. White
- b. Black or African American
- c. American Indian or Alaska Native
- d. Asian
- e. Native Hawaiian or Other Pacific Islander
- f. Other \_\_\_\_\_
- g. DK
- h. REF

Age

G3. What is your date of birth? Enter MM/DD/YYYY

- DK
- REF

G4. As of last week, that would make you approximately (AGE) years old. Is that correct?

[IF NECCESARY] Even though you don't know your exact birthdate, what is your best guess as to how old you were on your last birthday?

\_\_\_\_\_ YEARS

- DK
- REF

Marital Type

G5. Are you now married, widowed, divorced, separated or never married?

- a. MARRIED
- b. WIDOWED
- c. DIVORCED
- d. SEPARATED
- e. NEVER MARRIED
- f. DK
- g. REF

Gender

- G6. Are you male or female?
- MALE
  - FEMALE

Education

- G7. What is the highest level of school you have completed or the highest degree you have received?
- Less than high school
  - High school or GED
  - Associate degree or some college
  - Bachelor's degree or above

- G8. In what country were you born?

\_\_\_\_\_ [OPEN-ENDED]

**Current Industry and Occupation**

The next questions are about your **current job**. *If you have more than one job, please tell me about the job at which you usually work the most hours. If you work the same number of hours at two jobs, please tell me about the job where you were employed the longest.*

- H1. What is your current employment status? Are you currently employed full-time, part-time, or are you not employed?
- FULL-TIME
  - PART-TIME
  - NOT CURRENTLY EMPLOYED → SKIP TO END OF SURVEY
  - DK
  - REF

- H2. [IF CURRENTLY EMPLOYED] Is this job with the same employer you have already told me about?
- YES, SAME EMPLOYER → CONTINUE TO H3
  - NO, DIFFERENT EMPLOYER → SKIP TO H5

INTERVIEWER NOTE:

- IF R HAS ONLY ONE INJURY/ILLNESS AND SAME EMPLOYER OR MULTIPLE INJURIES UNDER SAME EMPLOYER, SKIP TO H4
- IF R HAS MULTIPLE INJURIES UNDER DIFFERENT EMPLOYERS, BUT CURRENT EMPLOYMENT IS WITH SAME EMPLOYER, CONTINUE TO H3

- H3. [IF MULTIPLE INJURIES UNDER DIFFERENT EMPLOYERS BUT SAME AS CURRENT EMPLOYMENT] Which job and employer are you referring to?

\_\_\_\_\_

- H4. [IF SAME EMPLOYER] Are you in the same position you were in at the time the injury/illness [TEXT FILL]?
- YES → SKIP TO PROBES AT END OF SECTION
  - NO
  - DK
  - REF

INTERVIEWER NOTE: IF SAME EMPLOYER BUT DIFFERENT JOB, ASK H5 (HOW MANY HOURS WORKED), H11 (WHAT KIND OF WORK DO YOU DO), AND H12 (MOST IMPORTANT ACTIVITIES OR DUTIES).

H5. [IF SAME EMPLOYER BUT DIFFERENT JOB OR DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] Currently, in a typical week, how many hours do you work?

\_\_\_\_\_ hours

IF NECESSARY: Was it greater than or equal to 35 hours per week?

DK

REF

INTERVIEWER NOTE: IF SAME EMPLOYER BUT DIFFERENT JOB, SKIP TO H11.

H6. [IF DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] Which of the following groups best describes your CURRENT employer?

- a. Government
- b. Private-for-profit company → SKIP TO H8
- c. Non-profit organization including tax exempt and charitable organizations → SKIP TO H8
- d. Self-employed → SKIP TO H8
- e. Working in the family business → SKIP TO H8

H7. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] Would that be the federal, state, or local government?

- a. FEDERAL
- b. STATE
- c. LOCAL

H8. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] What is the name of the (company, organization or agency) for whom you work? [OPEN ENDED]

DK

REF

H9. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] What kind of business or industry is this? [OPEN ENDED]

DK

REF

H10. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] What do they make or do where you work? [OPEN ENDED]

DK

REF

H11. [IF SAME EMPLOYER BUT DIFFERENT JOB OR DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] What kind of work do you do? (For example: registered nurse, personnel manager, supervisor of order department, secretary, accountant) [OPEN ENDED]

DK

REF

H12. [IF SAME EMPLOYER BUT DIFFERENT JOB OR DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] What are your most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, typing and filing, reconciling financial records) [OPEN ENDED]

***Debriefing questions for self-interview:***

*Review of screener section*

- How easy or difficult was it for you to answer questions about injuries/illnesses that occurred over the last year?
- How easy or hard was it to remember when the injury/illness happened? Can you tell me more about that? How did you figure out when the injury/illness happened?
- [IF CHRONIC/GRADUAL ONSET CONDITION AND PROVIDED DATE OF OCCURRENCE] How did you determine what month/year the injury/illness occurred?

*Review of injury/illness section (Section B)*

- [IF R DOES NOT PROVIDE ENOUGH INFO ABOUT THE INJURY/ILLNESS OR HOW IT IS WORK-RELATED] Tell me more about how this injury/illness was related to your job. Where were you when this happened? What were you doing? What caused the injury/illness? What part of your body was injured or affected? Tell me more about the injury/illness. Tell me about the kind of work you do.

*Review of medical care section (Section C)*

- Walk me through the medical attention you received immediately after the injury/illness occurred and any follow-up care that you experienced.

*Review of effect on work section (Section D)*

- [IF YES TO ANY ITEMS IN SECTION D] Tell me more about [TEXT FILL]. What kind of effect did the injury/illness have on your work schedule? Job duties? Ability to work? Ability to keep your job? Was the effect on [TEXT FILL] temporary or permanent?
- [IF MISSED WORK IMMEDIATELY AFTER INJURY/ILLNESS OCCURRED BUT RETURNED TO WORK] You said you were able to start work again XX days after the injury/illness. How did you figure that out? Walk me through the timeline of when you were injured and when you got back to work. You said you missed XX additional days of work due to this injury/illness. How did you figure that out? Please tell me more about what happened.
- [IF MISSED ANY DAYS OF WORK DUE TO CHRONIC GRADUAL ONSET INJURY/ILLNESS] You said you missed XX days as a result of the injury/illness. How did you figure that out? When did you miss those days of work?

*Review of effect on income or pay section (Section E)*

- [IF NO TO E1] Tell me more about the reasons why your employer did not know about this injury/illness. What was the main reason your employer did not know? Tell me more about that.
- [IF NO TO E3] Tell me more about the reasons why you or your employer did not file a workers' compensation claim for this injury/illness?
- What kind of effect did the injury/illness have on your income or pay?
- [IF YES TO ANY ITEM E8-E10] Tell me more about [TEXT FILL].

*Review of selected questions (Return to any questions that need further exploration)*

- I'd like to ask you a little more about [QUESTION]. You said [FILL]. In your own words, what do you think that question was asking? How did you decide on your answer?

*General debriefing*

- Were there any questions that were particularly difficult to answer? Tell me more about that?
- Were there any questions you felt uncomfortable answering?

- What are your suggestions on how to improve the survey?
- Is there anything else that we should know about your injury/illness that we did not ask you about?
- Do you have any questions about the survey?

***Debriefing questions for proxy respondents:***

*Proxy*

- What is your relationship to [RESPONDENT NAME]?
- How much would you say you know about R's job?
- How familiar would you say you are with R's work-related injury/illness? Are you aware of the medical treatment he/she received when the injury/illness occurred? Are you aware of how this affected R's job? How did you learn about R's injury/illness? Who in your household besides R would be the best person to answer the kinds of questions I asked?
- What questions were the hardest for you to answer for R? Why? How much would you say you know about [QUESTION TOPIC]? How easy/hard is it to remember the information the question asked about? Tell me more.
- What questions were the easiest for you to answer for R? Why? How much would you say you know about [QUESTION TOPIC]? How easy/hard is it to remember the information the question asked about? Tell me more.

*Sensitivity*

- Were you worried/Would you be worried about telling anyone else about R's work-related injury/illness? Tell me more about that.

*Review of selected items*

- I'd like to ask you a little more about [QUESTION]. You said [FILL]. In your own words, what do you think that question was asking? How did you decide on your answer?

*General debriefing*

- What are your suggestions on how to improve the survey?
- What questions were the most difficult for you to answer?
- What questions were the easiest to answer?

***Notes to interviewer:***

Is proxy reporting of work-related injuries and illnesses a sensitive issue? Why or why not?

What questions are the most and least difficult for Rs to answer? What answers are they uncertain about? Do they have suggestions for improving the survey?

Return to any questions that need further exploration.

***STEP 3: END OF INTERVIEW***

Thank you for taking part in this survey.

STOP THE RECORDER.

*RECRUITMENT QUESTION:*

We are looking for additional respondents like you who would be interested in helping with the study. Do you know anyone who had a work-related injury or illness who might be interested in participating? If yes, would you mind if we gave you a flyer about the study and send you an email about the study that you could forward to them?

INTERVIEWER: ANSWER ANY RESPONDENT QUESTIONS.

This concludes the interview. I would be happy to answer any questions that you have. Thank you for your help with this study.

MARK CASE AS COMPLETE IN RECRUITMENT DATABASE.

*MATERIALS TO TAKE AWAY FROM INTERVIEW*

- INTERVIEWER PROTOCOL BOOKLET (THIS BOOKLET)
- DIGITAL RECORDER AND BATTERIES
- NOTE PAPER, PENS, PENCILS

**HOUSEHOLD SURVEY OF OCCUPATIONAL INJURIES AND ILLNESSES**  
**Cognitive interview protocol R3 Version 4**  
**9-27-2016**

***MATERIALS NEEDED FOR INTERVIEW***

- |   |
|---|
| <input type="checkbox"/> INTERVIEWER PROTOCOL BOOKLET (THIS BOOKLET) AND SHOWCARDS<br><input type="checkbox"/> CONSENT FORM<br><input type="checkbox"/> RESPONDENT PHONE NUMBER<br><input type="checkbox"/> FULLY CHARGED DIGITAL RECORDER AND EXTRA BATTERIES<br><input type="checkbox"/> NOTE PAPER, PENS AND PENCILS |
|---|

***STEP 1: INFORMED CONSENT***

PROVIDE RESPONDENT WITH A COPY OF THE INFORMED CONSENT FORM. ASK THE RESPONDENT TO READ THE FORM, ANSWER ANY QUESTIONS, AND HAVE THE RESPONDENT SIGN THE FORM. LEAVE A SEPARATE COPY OF THE FORM WITH THE RESPONDENT.

- |   |
|---|
| <input type="checkbox"/> COLLECT VERBAL CONSENT FROM RESPONDENT |
|---|

- |  |
|--|
| <input type="checkbox"/> IF THE RESPONDENT HAS CONSENTED TO RECORDING, START THE RECORDER. |
|--|

***STEP 2: COMPLETION OF THE QUESTIONNAIRE***

BEGIN QUESTIONNAIRE.

**Interviewer probe bank (use as appropriate):**

- “How did you come up with that answer?”
- “Can you tell me in your own words what you think the question is asking?”
- “Can you tell me more about that?”

If you pick up on a visual cue that suggests an issue or confusion:

- “Tell me what you are thinking.”
- What does the word [term] in this question mean to you?
- You said [answer]. Can you tell me more about that?

If R is uncertain and asking for confirmation:

- There is not a right or wrong answer for this question. I am interested in hearing your thoughts on what the question is asking.

**INTERVIEWER:** If this interview is with a proxy respondent, please modify language accordingly. For example, instead of asking “Did you do ANY work for pay or profit?” ask “Did [your husband/wife/brother/he/she] do ANY work for pay or profit?”

## Survey Introduction

The information that you provide in this survey is confidential. Your name and your answers to the questions will not be shared with anyone outside of NORC, the survey organization conducting this survey. I would be happy to answer any questions you may have about the survey. [ANSWER RESPONDENT QUESTIONS.] Let's begin.

### Screener

This survey is about work-related injuries and illnesses that you may have experienced. I will ask you questions about the injuries and illnesses you may have had that are related to any job you held in the last 12 months. By the last 12 months, I mean since [CURRENT MONTH] of [LAST YEAR].

- A1. In the last 12 months, did you do ANY work for pay or profit?
- Yes → ELIGIBLE, CONTINUE
  - No → NOT ELIGIBLE, END INTERVIEW
  - DK
  - REF

#### Any injury

- A2. In the last 12 months, have you experienced any injuries or illnesses related to any job you held?
- Yes → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
  - No → SKIP TO A4
  - DK
  - REF

- A3. In what month and year did this injury/illness occur? [IF ILLNESS/INJURY IS A CHRONIC/GRADUAL ONSET CONDITION, ASK ALTERNATIVE QUESTIONS AS NEEDED: Did this injury/illness occur on a specific day or did it develop over time? Did you experience symptoms related to this injury/illness in the last 12 months?

MONTH/YEAR

ENTER MM/YYYY

NO SPECIFIC MONTH/YEAR BUT SYMPTOMS EXPERIENCED IN LAST 12 MONTHS

DK

REF

INTERVIEWER NOTE: IF INJURY/ILLNESS OCCURRED ON A SPECIFIC DAY, RESPONDENT SHOULD PROVIDE BEST ESTIMATE OF MONTH/YEAR. THE MONTH/YEAR REPORTED MUST BE IN REFERENCE PERIOD TO BE ELIGIBLE. IF DEVELOPED OVER TIME, CONFIRM THAT RESPONDENT NOTICED SYMPTOMS DURING REFERENCE PERIOD TO BE ELIGIBLE.

- A4. [Now I want to find out if you experienced any other work-related injuries other than the TEXT FILL INJURY RESPONDENT REPORTED (e.g., concussion) you just told me about.] In the last 12 months, have you experienced any [other] injuries, such as the following, related to any job you held?
- Sprains, strains or tears
  - Soreness or pain
  - Bruises
  - Cuts or punctures
  - Broken bones
  - Injury to muscles or joints
  - Open wounds

- h. Burns
- i. Carpal tunnel syndrome
- j. Any other injury?

- 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- 2) NO →SKIP TO A6
- 3) DK →SKIP TO A6
- 4) REF →SKIP TO A6

INTERVIEWER NOTE: READ DEFINITION IF NECESSARY. Carpal tunnel syndrome is a hand and arm condition that causes numbness, tingling and other symptoms. Carpal tunnel syndrome is caused by a pinched nerve in your wrist. [<http://www.mayoclinic.org/diseases-conditions/carpal-tunnel-syndrome/basics/definition/con-20030332>]

A5. In what month and year did this injury occur? [IF ILLNESS/INJURY IS A CHRONIC/GRADUAL ONSET CONDITION, ASK ALTERNATIVE QUESTIONS AS NEEDED: Did this injury/illness occur on a specific day or did it develop over time? Did you experience symptoms related to this injury/illness in the last 12 months?

MONTH/YEAR

ENTER MM/YYYY

NO SPECIFIC MONTH/YEAR DUE TO CHRONIC/GRADUAL ONSET CONDITION

DK

REF

A6. [Other than the TEXT FILL ILLNESS RESPONDENT REPORTED (e.g., asthma) you have already mentioned], in the last 12 months, have you experienced any [other] illnesses, such as the following, related to any job you held?

- a. Skin disorders
- b. Respiratory conditions
- c. Poisonings
- d. Hearing loss
- e. A disease or infection
- f. Cancer
- g. Anxiety or depression
- h. Any other illness?

- 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- 2) NO →SKIP TO A8
- 3) DK →SKIP TO A8
- 4) REF →SKIP TO A8

A7. In what month and year did this injury/illness occur? [IF ILLNESS/INJURY IS A CHRONIC/GRADUAL ONSET CONDITION, ASK ALTERNATIVE QUESTIONS AS NEEDED: Did this injury/illness occur on a specific day or did it develop over time? Did you experience symptoms related to this injury/illness in the last 12 months?

MONTH/YEAR

ENTER MM/YYYY

NO SPECIFIC MONTH/YEAR DUE TO CHRONIC/GRADUAL ONSET CONDITION

DK

REF

A8. [Other than the TEXT FILL INJURY/ILLNESS RESPONDENT REPORTED (e.g, concussion, asthma) you have already mentioned], in the last 12 months, have you experienced any [other] work-related injuries or illnesses that caused you to...

	Yes	No	DK	REF
a. Faint, pass out, or lose consciousness?				
b. Be unable to work for a day or more?				
c. Do less than your normal work activities?				
d. Be assigned to a different job or tasks at your place of work?				
e. Get medical treatment other than what can be treated with a first aid kit?				

IF YES, COLLECT BRIEF DESCRIPTION AND CONFIRM WORK-RELATED.  
 IF NO TO ALL ITEMS IN A8, SKIP TO A10.

READ IF NECESSARY: First aid refers to medical attention that is usually administered immediately after the injury occurs and at the location where it occurred. It often consists of a one-time, short-term treatment and requires little technology or training to administer. First aid can include cleaning minor cuts, scrapes, or scratches; treating a minor burn; applying bandages and dressings; the use of non-prescription medicine...

<https://www.osha.gov/SLTC/medicalfirstaid/recognition.html>

A9. In what month and year did this injury/illness occur? [IF ILLNESS/INJURY IS A CHRONIC/GRADUAL ONSET CONDITION, ASK ALTERNATIVE QUESTIONS AS NEEDED: Did this injury/illness occur on a specific day or did it develop over time? Did you experience symptoms related to this injury/illness in the last 12 months?

MONTH/YEAR  
 ENTER MM/YYYY  
 DK  
 REF

IF R HAS NOT REPORTED ANY INJURIES OR ILLNESSES ASK ABOUT INJURIES/ILLNESSES **EVER** EXPERIENCED. ELSE GO TO DEMOGRAPHICS.]

A10. Have you EVER experienced any injuries or illnesses related to any job you held?

- a. YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
- b. NO → SKIP TO DEMOGRAPHICS
- c. DK → SKIP TO DEMOGRAPHICS
- d. REF → SKIP TO DEMOGRAPHICS

A11. In what month and year did this injury/illness occur?

MONTH/YEAR  
 ENTER MM/YYYY  
 DK  
 REF

A12. [IF YES TO ANY INJURIES OR ILLNESSES] You have told me about X work-related injuries and illnesses you have experienced in the last 12 months.

BRIEFLY LIST EACH INJURY/ILLNESS: TEXT FILL #1, TEXT FILL #2, TEXT FILL #3, ETC.  
Is that correct?

\_\_\_\_\_TIMES

INTERVIEWER: CONFIRM NUMBER OF INCIDENTS AND BRIEF DESCRIPTION OF EACH. IF INJURY/ILLNESS EXPERIENCED WITHIN LAST YEAR, RESPONDENT WILL REPORT ON THOSE. OTHERWISE, IF NO INJURY/ILLNESS WITHIN LAST YEAR, RESPONDENT WILL REPORT ON INJURIES/ILLNESSES EVER EXPERIENCED.

IF NO INCIDENTS OF WORK-RELATED INJURIES AND ILLNESSES, GO TO DEMOGRAPHICS SECTION.

***Notes to interviewer:***

The goal of the screener section is to enumerate all instances of work-related injuries and illnesses that occurred during the reference period. What issues do respondents have in reporting these incidents? Do they understand the types of injuries and illnesses to report? Can they accurately report only those that are work-related? How do they determine the boundary of the reference period and determine whether an incident occurred within the RP?

**Injury or Illness**

[FOR FIRST INJURY/ILLNESS START AT B2]

[FOR SECOND AND FOLLOWING INJURY/ILLNESS START AT B1]

- B1. [FOR SECOND/THIRD/ETC. LOOPS] How is this injury/illness related to the other injury/illness you mentioned? Is this related to [the other/another] injury/illness you already mentioned or is it a different injury/illness?
- a. RELATED TO THE OTHER/ANOTHER INJURY/ILLNESS [GO TO NEXT LOOP]
  - b. THIS IS A DIFFERENT INJURY/ILLNESS [CONTINUE]
  - c. DK
  - d. REF

“Now I am going to ask you more about [INJURY/ILLNESS #....].”

- B2. **[WORKER ACTIVITY + some EVENT and SOURCE]** [FOR EACH LOOP] Please describe how the injury, illness, or condition occurred, and what caused it. For example: “When ladder slipped on wet floor, I fell 20 feet”; “I developed soreness in wrist over time.” [OPEN ENDED]
- B3. [SOURCE] Were there any other objects, substances, or persons involved in the injury or illness that you didn’t mention? Please include equipment, chemicals, vehicles, or anything else.
- B4. [NATURE AND BODY PART] Please describe the injury, illness, or condition. How was [BODY PART, ORGAN] affected? You can use medical terms if you know them, or just talk about the symptoms you experienced. For example: “strained back”; “chemical burn on hand”; “fainted or passed out.”
- B5. [NATURE AND BODY PART] Were there any other parts of your body or organs affected by the injury or illness that you may not have included in your description? How was [BODY PART, ORGAN] affected?

CHECKLIST
1. Description or diagnosis for injury/illness (this is the OIICS <b>nature</b> )
2. Part or parts of body affected, including body systems (OIICS <b>part</b> , obviously)
3. How the injury/illness/exposure happened (OIICS <b>event</b> )
4. Vehicles, tools, chemicals, surfaces, or any other objects involved; this can be multiple objects; this can also just be the person’s body moved incorrectly (OIICS <b>sources</b> )

**Notes to interviewer:**

Questions B2 through B5 are intended to capture (event or exposure, source of the injury/illness, part of body affected, and nature of the injury/illness). Do the questions elicit the information needed? Are the response options adequate to capture the information Rs give? Use general probing to elicit more information about the incident. (For example, if R says “I cut myself” ask: What part of your body was injured? What did you get cut with? What were you doing at the time?)

**Medical attention**

The next questions are about medical care you may have received for this injury/illness. Please think about the care you received immediately after the injury/illness occurred as well as follow-up care you received at a later time.

C1. Did you get medical advice or treatment for this injury/illness from...

a. A doctor, nurse, or other healthcare professional? [IF YES]: What type of health care professional did you see?	YES	NO	NA	DK/REF
b. [UNLESS MENTIONED ABOVE] A paramedic, firefighter, or other emergency medical personnel?				

C2. Did you get medical advice or treatment for this injury/illness at...

a. A hospital?	YES	NO	NA	DK/REF
----------------	-----	----	----	--------

A1. [IF YES TO HOSPITAL] Did you receive treatment at the hospital emergency room (ER)?				
A2.[IF YES TO HOSPITAL] Were you admitted for an overnight stay?				
A3. [IF YES TO ADMITTED] How many nights were you in the hospital? _____ NIGHTS				
b. A health clinic at your place of employment?				
c. Any place else? Please specify.				

[IF YES TO C1 OR C2, CONTINUE TO C3.]  
[OTHERWISE SKIP TO C5]

- C3. [IF YES TO C1 OR C2]. Did you receive a medical diagnosis from a health care professional? ...  
READ IF NECESSARY: Did a health care professional tell you the medical term for your injury/illness?
- YES → What was your medical diagnosis? INTERVIEWER READ IF NECESSARY: What is the medical term the health care professional used to describe your injury/illness?
  - NO
  - DK
  - REF

- C4. [IF YES TO C1 OR C2]. Did your health care professional recommend that you take any days off from work due to your injury/illness?
- YES → How many days off did the health care professional recommend? \_\_\_\_\_ DAYS OFF
  - NO
  - DK
  - REF

### Effect on work

The next questions are about how the injury/illness affected your ability to work.

IF RESPONDENT HAS A CHRONIC/GRADUAL ONSET INJURY/ILLNESS, GO TO D13.

- D1. Were you scheduled to work the day after the injury/illness?
- YES
  - NO → SKIP TO D3
  - DK → SKIP TO D3
  - REF → SKIP TO D3

- D2. [IF SCHEDULED TO WORK NEXT DAY] Were you able to work the next day?
- YES → SKIP TO D6
  - NO → SKIP TO D4
  - DK → SKIP TO D4
  - REF → SKIP TO D4

- D3. [IF WAS NOT SCHEDULED TO WORK NEXT DAY] If you had been scheduled to work, would you have been able to work the next day?
- a. YES → SKIP TO D6
  - b. NO
  - c. DK
  - d. REF

- D4. Did you return to work after the injury/illness?
- a. YES
  - b. ~~YES, BACK TO WORK SAME DAY → SKIP TO D6~~
  - c. NO → SKIP TO D19
  - d. NO, STILL OFF PAID WORK BUT EXPECTS TO RETURN → SKIP TO D19
  - e. NO, EXPECTS NEVER TO DO PAID WORK AGAIN → SKIP TO D19
  - f. DK → SKIP TO D19
  - g. REF → SKIP TO D19

- D5. [IF RETURNED TO WORK] How many days after the injury/illness did you start work again?
- a. \_\_\_\_\_ DAYS AFTER THE INJURY/ILLNESS
  - b. BACK TO WORK SAME DAY
  - c. BACK TO WORK NEXT DAY
  - d. DK
  - e. REF

INTERVIEWER NOTE: IF R INDICATES WENT BACK TO WORK ONE DAY AFTER INJURY/ILLNESS, CONFIRM THAT R MEANS THAT R WENT BACK TO WORK THE NEXT DAY, THAT IS, THE DAY AFTER INJURY/ILLNESS OCCURRED.

[IF R WENT BACK TO WORK, CONTINUE. ELSE IF R IS NOT WORKING, GO TO D19.]

- D6. When you went back to work, did you work your usual number of hours or not?
- a. YES
  - b. NO
  - c. DK
  - d. REF

- D7. When you went back to work, were you able to perform all of the normal duties of your job or not?
- a. YES
  - b. NO
  - c. DK
  - d. REF

- D8. When you went back to work, were you assigned a different job or tasks than what you did prior to the injury/illness?
- a. YES
  - b. NO → SKIP TO D10
  - c. DK → SKIP TO D10
  - d. REF → SKIP TO D10

D9. [IF DIFFERENT, D8=YES] Was your assignment to a different job or tasks permanent or temporary?

- a. PERMANENT
- b. TEMPORARY
- c. DK
- d. REF

D10. At any time after you went back to work, did you miss any (additional) days of work due to your injury/illness?

- a. YES
- b. NO →SKIP TO D19
- c. DK →SKIP TO D19
- d. REF →SKIP TO D19

D11. About how many (additional) days of work did you miss?

\_\_\_\_\_ DAYS

D12. Please explain what happened.

GO TO D19.

QUESTIONS ON EFFECT ON WORK FOR RESPONDENTS WITH CHRONIC/GRADUAL ONSET CONDITIONS:

D13. In the last 12 months, after you began experiencing symptoms due to TEXT FILL, did you miss any days of work, or not?

- a. YES, MISSED DAYS OF WORK
- b. NO, DID NOT MISS DAYS OF WORK
- c. DK
- d. REF

D14. About how many days of work did you miss?

\_\_\_\_\_ DAYS

D15. In the last 12 months, did you ever work less than your usual number of hours because of symptoms of [TEXT FILL]?

- a. YES
- b. NO
- c. DK
- d. REF

D16. In the last 12 months, were you ever unable to perform all the normal duties of your job because of symptoms of [TEXT FILL]?

- a. YES
- b. NO
- c. DK
- d. REF

- D17. In the last 12 months, were you ever assigned to a different job or tasks than what you did prior to the onset of symptoms of [TEXT FILL]?
- YES
  - NO →SKIP TO D19
  - DK →SKIP TO D19
  - REF →SKIP TO D19

- D18. Was your assignment to a different job or tasks permanent or temporary?
- PERMANENT
  - TEMPORARY
  - DK
  - REF

[TRANSITION STATEMENT FOR THOSE WHO RETURNED TO WORK: At any point after you returned to work, did the injury/illness affect your job in any of the following ways?]

D19. Did the injury/illness cause you to:

	YES	NO	NA	DK/REF
a. Quit your job?				
b. Be laid off?				
c. Be fired?				
d. Change the kind of work you do, that is, change your occupation?				

- D20. Did the injury/illness affect your ability to work in any other way?
- YES → Please specify.
  - NO
  - DK
  - REF

### Effect on Pay

The next questions are about how the injury/illness affected your income or pay.

- E1. Did your employer know about this injury/illness?
- YES → SKIP TO E3
  - NO
  - DK
  - REF

E2. [IF NO TO EMPLOYER KNOWING]: For what reasons did your employer *not* know about this injury/illness?

Did you not want your employer to know about your injury/illness...

	YES	NO	NA	DK/REF
a. To avoid being laid off?				
b. To avoid loss of wages?				
c. To avoid loss of promotion or advancement?				

d. To avoid job transfer or restriction?				
e. Because you did not realize that the injury/illness was work-related until after leaving the job?				
f. Because you felt your employer would not recognize the injury/illness as work-related?				
g. Because your employer wants to keep injury and illness rates low?				
h. Other (specify)?				

The next questions are about workers' compensation. Workers' compensation is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job.

E3. Has anyone filed a workers' compensation claim for this injury/illness?

- a. YES
- b. NO → SKIP TO E5
- c. DK
- d. REF

E4. Who filed the workers' compensation claim?

- a. EMPLOYER
- b. EMPLOYEE
- c. FAMILY MEMBER OF EMPLOYEE
- d. OTHER SPECIFY
- e. DK
- f. REF

ALL RESPONSES TO E4 GO TO SKIP INSTRUCTION BEFORE E6.

E5. IF NO ON QUESTION ABOUT FILING WORKERS' COMPENSATION: What was the main reason you or your employer did not file a workers' compensation claim for this injury/illness?

- a. You were not eligible because you did not meet waiting period
- b. Your employer did not want to file a claim
- c. You did not inform employer
- d. You were unaware of workers' compensation coverage
- e. You chose not to pursue a claim even though you were eligible
- f. Other reason, please specify
- g. DK
- h. REF

SKIP INSTRUCTION:

#1: WC FILED, CONTINUE TO E6.

#2: ELSE IF NO WC FILED BUT MISSED DAYS OF WORK, SKIP TO E8.

#3: ELSE [NO WC FILED AND DID NOT MISS DAYS OF WORK] SKIP TO SECTION F.

E6. IF R REPORTS WORKERS' COMPENSATION CLAIM FILED: Did you receive workers' compensation for this injury/illness?

- a. YES
- b. NO
- c. NA

- d. DK
- e. REF

READ IF NECESSARY: *Workers compensation* is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job.

E7. IF R REPORTS WORKERS' COMPENSATION NOT RECEIVED: Is there an open claim pending for this injury/illness?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

E8. Short-term or temporary disability benefits provide you with a portion of your income if you are temporarily unable to work due to a medical condition. Did you receive short-term (temporary) disability for this injury/illness?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

E9. Did this injury/illness cause you to use paid sick leave, paid annual leave, or paid time off?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

E10. Did this injury/illness cause you to take leave without pay?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

E11. Did your employer continue to pay your wages and other compensation in full during the period you were unable to work because of this injury/illness?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

***Notes to interviewer:***

Do Rs know what workers' compensation is? Do they know whether a WC form was filed? Are the terms in E6-E11 familiar to Rs? Are the definitions helpful?

## Occupation and Industry at Time of Injury or Illness

The next questions are about your occupation and industry at the time of the injury/illness. Please think about the job you held at the time of the injury/illness [TEXT FILL DESCRIPTION].

F1. Were you considered by your employer to be a full time or part time employee?

- a. FULL-TIME
- b. PART-TIME
- c. DK
- d. REF

F2. In a typical week, how many hours did you work? \_\_\_\_\_ hours

IF NECESSARY: Was it greater than or equal to 35 hours per week?

- DK
- REF

F3. Which of the following groups best describes your employer at the time of the injury/illness?

- a. Government
- b. Private-for-profit company → SKIP TO F5
- c. Non-profit organization including tax exempt and charitable organizations → SKIP TO F5
- d. Self-employed → SKIP TO F5
- e. Working in the family business → SKIP TO F5

F4. Would that be the federal, state, or local government?

- a. FEDERAL
- b. STATE
- c. LOCAL

F5. Did you work for a temporary help agency or a temporary staffing agency?

- a. YES
- b. NO
- c. DK
- d. REF

INTERVIEWER NOTE: IF R IS A FARM LABOR CONTRACTOR, R IS NOT CONSIDERED TEMPORARY HELP/STAFFING AND RESPONSE TO THIS Q IS NO.

[IF F5 (TEMP HELP OR TEMP STAFFING AGENCY) =YES]: For the next questions, please answer based on the place where you were working on a day-to-day basis when the injury/illness occurred, not the temporary agency you worked for.

F6. What is the name of the (company, organization or agency) for whom you worked? [OPEN ENDED]

- DK
- REF

NOTE: IF GOVERNMENT EMPLOYER, TEXT FILL=AGENCY; IF NON-PROFIT, TEXT FILL=ORGANIZATION; ELSE TEXT FILL=COMPANY.

F7. What kind of business or industry was this? [OPEN ENDED]

- DK
- REF

F8. What did they make or do where you worked? [OPEN ENDED]

DK  
REF

F9. In what state were you employed at this job? [OPEN ENDED]

DK  
REF

F10. What kind of work did you do? (For example: registered nurse, personnel manager, supervisor of order department, secretary, accountant) [OPEN ENDED]

DK  
REF

F11. What were your most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, typing and filing, reconciling financial records) [OPEN ENDED]

DK  
REF

F12. At this job, were you a member of a union or covered by a collective bargaining agreement?

- a. YES
- b. NO
- c. DK
- d. REF

F13. How many people worked at your work location?

- e. 1 to 10 workers
- a. 11 to 49 workers
- b. 50 to 249 workers
- c. 250 to 999 workers
- d. 1000 or more workers
- e. DK
- f. REF

IF R HAS ADDITIONAL INJURIES/ILLNESSES TO REPORT, GO BACK TO SECTION B. ELSE GO TO G1.

***Notes to interviewer:***

Does R have any difficulty recalling FT vs. PT work? How do Rs with irregular work schedules, seasonal employment, etc., answer the question? Does the number of hours per week typically worked accord with report of FT/PT status?

Observe respondent ability to understand and respond to questions about employment at time of the injury/illness. Probe as needed to explore an issues with response. Are respondents able to accurately report answers for F12 and F13? F13 should include total for R's work location only, not the whole company/organization.

**Demographic Characteristics**

Race/ethnicity

G1. Are you Spanish, Hispanic, or Latino?

- a. YES
- b. NO
- c. DK
- d. REF

G2. [I am going to read you a list of five race categories.] Please choose one or more races that you consider yourself to be:

- a. White
- b. Black or African American
- c. American Indian or Alaska Native
- d. Asian
- e. Native Hawaiian or Other Pacific Islander
- f. Other \_\_\_\_\_
- g. DK
- h. REF

Age

G3. What is your date of birth? Enter MM/DD/YYYY  
DK  
REF

G4. As of last week, that would make you approximately (AGE) years old. Is that correct?  
[IF NECESSARY] Even though you don't know your exact birthdate, what is your best guess as to how old you were on your last birthday?  
\_\_\_\_\_ YEARS  
DK  
REF

Marital Type

G5. Are you now married, widowed, divorced, separated or never married?  
a. MARRIED  
b. WIDOWED  
c. DIVORCED  
d. SEPARATED  
e. NEVER MARRIED  
f. DK  
g. REF

Gender

G6. Are you male or female?  
a. MALE  
b. FEMALE

Education

G7. What is the highest level of school you have completed or the highest degree you have received?  
a. Less than high school  
b. High school or GED  
c. Associate degree or some college  
d. Bachelor's degree or above

G8. In what country were you born?

\_\_\_\_\_ [OPEN-ENDED]

**Current Industry and Occupation**

The next questions are about your **current job**. *If you have more than one job, please tell me about the job at which you usually work the most hours. If you work the same number of hours at two jobs, please tell me about the job where you were employed the longest.*

- H1. What is your current employment status? Are you currently employed full-time, part-time, or are you not employed?
- FULL-TIME
  - PART-TIME
  - NOT CURRENTLY EMPLOYED → SKIP TO END OF SURVEY
  - DK
  - REF

- H2. [IF CURRENTLY EMPLOYED] Is this job with the same employer you have already told me about?
- YES, SAME EMPLOYER → CONTINUE TO H3
  - NO, DIFFERENT EMPLOYER → SKIP TO H5

INTERVIEWER NOTE:

- IF R HAS ONLY ONE INJURY/ILLNESS AND SAME EMPLOYER OR MULTIPLE INJURIES UNDER SAME EMPLOYER, SKIP TO H4
- IF R HAS MULTIPLE INJURIES UNDER DIFFERENT EMPLOYERS, BUT CURRENT EMPLOYMENT IS WITH SAME EMPLOYER, CONTINUE TO H3

- H3. [IF MULTIPLE INJURIES UNDER DIFFERENT EMPLOYERS BUT SAME AS CURRENT EMPLOYMENT] Which job and employer are you referring to?
- \_\_\_\_\_

- H4. [IF SAME EMPLOYER] Are you in the same position you were in at the time the injury/illness [TEXT FILL]?
- YES → SKIP TO PROBES AT END OF SECTION
  - NO
  - DK
  - REF

INTERVIEWER NOTE: IF SAME EMPLOYER BUT DIFFERENT JOB, ASK H5 (HOW MANY HOURS WORKED), H11 (WHAT KIND OF WORK DO YOU DO), AND H12 (MOST IMPORTANT ACTIVITIES OR DUTIES).

- H5. [IF SAME EMPLOYER BUT DIFFERENT JOB OR DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] Currently, in a typical week, how many hours do you work?

\_\_\_\_\_ hours

IF NECESSARY: Was it greater than or equal to 35 hours per week?

- DK
- REF

INTERVIEWER NOTE: IF SAME EMPLOYER BUT DIFFERENT JOB, SKIP TO H11.

- H6. [IF DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] Which of the following groups best describes your CURRENT employer?

- Government
- Private-for-profit company → SKIP TO H8
- Non-profit organization including tax exempt and charitable organizations → SKIP TO H8
- Self-employed → SKIP TO H8
- Working in the family business → SKIP TO H8

- H7. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] Would that be the federal, state, or local government?
- FEDERAL
  - STATE
  - LOCAL
- H8. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] What is the name of the (company, organization or agency) for whom you work? [OPEN ENDED]  
DK  
REF
- H9. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] What kind of business or industry is this? [OPEN ENDED]  
DK  
REF
- H10. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] What do they make or do where you work? [OPEN ENDED]  
DK  
REF
- H11. [IF SAME EMPLOYER BUT DIFFERENT JOB OR DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] What kind of work do you do? (For example: registered nurse, personnel manager, supervisor of order department, secretary, accountant) [OPEN ENDED]  
DK  
REF
- H12. [IF SAME EMPLOYER BUT DIFFERENT JOB OR DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] What are your most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, typing and filing, reconciling financial records) [OPEN ENDED]  
DK  
REF

***Debriefing questions for self-interview:***

*Review of screener section*

- How easy or difficult was it for you to answer questions about injuries/illnesses that occurred over the last year?
- How easy or hard was it to remember when the injury/illness happened? Can you tell me more about that? How did you figure out when the injury/illness happened?
- [IF CHRONIC/GRADUAL ONSET CONDITION AND PROVIDED DATE OF OCCURRENCE] How did you determine what month/year the injury/illness occurred?

*Review of injury/illness section (Section B)*

- [IF R DOES NOT PROVIDE ENOUGH INFO ABOUT THE INJURY/ILLNESS OR HOW IT IS WORK-RELATED] Tell me more about how this injury/illness was related to your job. Where were you when this happened? What were you doing? What caused the injury/illness? What part of your body was injured or affected? Tell me more about the injury/illness. Tell me about the kind of work you do.

*Review of medical care section (Section C)*

- Walk me through the medical attention you received immediately after the injury/illness occurred and any follow-up care that you experienced.

*Review of effect on work section (Section D)*

- [IF YES TO ANY ITEMS IN SECTION D] Tell me more about [TEXT FILL]. What kind of effect did the injury/illness have on your work schedule? Job duties? Ability to work? Ability to keep your job? Was the effect on [TEXT FILL] temporary or permanent?
- [IF MISSED WORK IMMEDIATELY AFTER INJURY/ILLNESS OCCURRED BUT RETURNED TO WORK] You said you were able to start work again XX days after the injury/illness. How did you figure that out? Walk me through the timeline of when you were injured and when you got back to work. You said you missed XX additional days of work due to this injury/illness. How did you figure that out? Please tell me more about what happened.
- [IF MISSED ANY DAYS OF WORK DUE TO CHRONIC GRADUAL ONSET INJURY/ILLNESS] You said you missed XX days as a result of the injury/illness. How did you figure that out? When did you miss those days of work?

*Review of effect on income or pay section (Section E)*

- [IF NO TO E1] Tell me more about the reasons why your employer did not know about this injury/illness. What was the main reason your employer did not know? Tell me more about that.
- [IF NO TO E3] Tell me more about the reasons why you or your employer did not file a workers' compensation claim for this injury/illness?
- What kind of effect did the injury/illness have on your income or pay?
- [IF YES TO ANY ITEM E8-E10] Tell me more about [TEXT FILL].

*Review of selected questions (Return to any questions that need further exploration)*

- I'd like to ask you a little more about [QUESTION]. You said [FILL]. In your own words, what do you think that question was asking? How did you decide on your answer?

*General debriefing*

- Were there any questions that were particularly difficult to answer? Tell me more about that?
- Were there any questions you felt uncomfortable answering?
- What are your suggestions on how to improve the survey?
- Is there anything else that we should know about your injury/illness that we did not ask you about?
- Do you have any questions about the survey?

***Debriefing questions for proxy respondents:***

*Proxy*

- What is your relationship to [RESPONDENT NAME]?
- How much would you say you know about R's job?
- How familiar would you say you are with R's work-related injury/illness? Are you aware of the medical treatment he/she received when the injury/illness occurred? Are you aware of how this affected R's job? How did you learn about R's injury/illness? Who in your household besides R would be the best person to answer the kinds of questions I asked?
- What questions were the hardest for you to answer for R? Why? How much would you say you know about [QUESTION TOPIC]? How easy/hard is it to remember the information the question asked about? Tell me more.
- What questions were the easiest for you to answer for R? Why? How much would you say you know about [QUESTION TOPIC]? How easy/hard is it to remember the information the question asked about? Tell me more.

*Sensitivity*

- Were you worried/Would you be worried about telling anyone else about R's work-related injury/illness? Tell me more about that.

*Review of selected items*

- I'd like to ask you a little more about [QUESTION]. You said [FILL]. In your own words, what do you think that question was asking? How did you decide on your answer?

*General debriefing*

- What are your suggestions on how to improve the survey?
- What questions were the most difficult for you to answer?
- What questions were the easiest to answer?

**Notes to interviewer:**

Is proxy reporting of work-related injuries and illnesses a sensitive issue? Why or why not?

What questions are the most and least difficult for Rs to answer? What answers are they uncertain about? Do they have suggestions for improving the survey?

Return to any questions that need further exploration.

**STEP 3: END OF INTERVIEW**

Thank you for taking part in this survey.

STOP THE RECORDER.

*RECRUITMENT QUESTION:*

We are looking for additional respondents like you who would be interested in helping with the study. Do you know anyone who had a work-related injury or illness who might be interested in participating? If yes, would you mind if we gave you a flyer about the study and send you an email about the study that you could forward to them?

INTERVIEWER: ANSWER ANY RESPONDENT QUESTIONS.

This concludes the interview. I would be happy to answer any questions that you have. Thank you for your help with this study.

MARK CASE AS COMPLETE IN RECRUITMENT DATABASE.

*MATERIALS TO TAKE AWAY FROM INTERVIEW*

- INTERVIEWER PROTOCOL BOOKLET (THIS BOOKLET)
- DIGITAL RECORDER AND BATTERIES
- NOTE PAPER, PENS, PENCILS

**Appendix E: Presentation of Questionnaire  
Development Report  
(Deliverable #15)**



# Household SOLL: Questionnaire Design

Lisa Lee

October 28, 2016

# Designing a Household SOII

## *Presentation Overview*

- Study goals
  - To develop a survey design and questionnaire on non-fatal occupational injuries and illnesses that covers the population of workers and allows BLS to estimate injuries and illnesses by employment relationship, broad industry, and occupation at the national level.
- Designing the HSOII
- Cognitive testing methodology
- HSOII questionnaire
- Next steps

# Study Goals

*Why do we need the HSOII?*

- SOII collects information from employers on nonfatal workplace injuries and illnesses
- Undercounting
  - Effects of employer
  - Effects of employee
- Reduce underreporting through household survey design
  - Study design
  - Questionnaire

# Designing the HSOII

## *Measurement goals*

- Capture recordable workplace injuries and illnesses
- Days away from work
- Restricted work activity
- Transfer to another job
- Medical treatment beyond first aid
- Loss of consciousness
- Nature, part of body, source, event/exposure
- Industry/Occupation
- Employment relationship
- Demographic information

# Designing the HSOII

## *Challenges*

- Recall issues
  - Remembering what happened
  - Remembering when it happened
- Comprehension
  - What counts as injury/illness
  - Unfamiliar terms
- Sensitivity
- Proxy reporting

# Cognitive Testing Methodology

## *Overview*

- 3 rounds of iterative testing
- In-person interviews followed by phone interviews
- Concurrent probing followed by retrospective
- Proxy interviews
- Experienced cognitive interviewers

# Cognitive Testing Methodology

## *Recruitment*

- Flyers
- Craigslist
- AmeriSpeak omnibus survey
- Facebook
- Chicago Federation of Labor

# Cognitive Testing Methodology

## Recruitment flyer



## EARN \$40 BY COMPLETING AN INTERVIEW!

- *Have you had an on-the-job injury in the last year?*
- *Have you had an illness related to your job in the last year?*

If you said **YES** to either of these questions, we want you to take part in an interview on workplace injuries and illnesses!

The interview will last no more than 60 minutes and can be completed at NORC's offices (Chicago, IL or Bethesda, MD) during regular business hours.

If you are interested, please contact us at:

[WorkerStudy@norc.org](mailto:WorkerStudy@norc.org)

(877) 408-1897

## Frequently Asked Questions

### *What is the study about?*

This study is being conducted on behalf of the Bureau of Labor Statistics to try to learn how many people experience workplace injuries or illnesses each year.

### *Who is the Bureau of Labor Statistics (BLS)?*

The Bureau of Labor Statistics (BLS) is the principal fact-finding agency for the Federal Government in the broad field of labor economics and statistics. The BLS is an independent national statistical agency that collects, processes, analyzes, and disseminates essential statistical data to the American public, the U.S. Congress, other Federal agencies, State and local governments, business, and labor. Learn more at [www.bls.gov](http://www.bls.gov).

### *Who is NORC?*

NORC at the University of Chicago is an independent research institution that delivers reliable data and rigorous analysis to guide critical programmatic, business, and policy decisions. NORC is conducting this study on behalf of the Bureau of Labor Statistics (BLS). You can learn more about NORC at its website, [www.norc.org](http://www.norc.org), or by contacting the Study Director, Dr. Lisa Lee at [Lee-Lisa@norc.org](mailto:Lee-Lisa@norc.org) or calling 877-408-1897.

### *Do I have to participate?*

Participation is voluntary. You may choose whether or not you want to be in this study. If you decide to be in the study, you may choose to skip any question you do not want to answer or stop participating at any time.

### *How much will I be paid?*

You will be given \$40 for participating in the study.

### *How long will the study take?*

The interview will take less than 60 minutes.

### *Why should I participate?*

Your input on how the questionnaire is working will help improve the data BLS collects. By participating in this study you can help make sure that the BLS collects the most complete and accurate data possible on workplace injury and illness in the United States, information that is used to inform policies designed to keep employees safe.

### *Who do I contact if I have questions about my rights as a respondent?*

If you have any questions regarding your rights as a study participant, you may call the NORC IRB Manager, toll-free, at 866-309-0542.

# Cognitive Testing Methodology

## Facebook advertisements



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at the UNIVERSITY of CHICAGO

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# Cognitive Testing Methodology

## *Recruitment*

<b>Method</b>	<b>Number reached</b>	<b>Number replied</b>	<b>Number interviewed</b>
<b>Flyer/personal contact</b>	Unknown	23	6
<b>Craigslist</b>	Unknown	61	39
<b>AmeriSpeak</b>	115	44	19
<b>Facebook</b>	Reach: 100,849 Clicks: 7,621	0	0
<b>CFL</b>	Unknown	0	0

# Cognitive Testing Methodology

## *Respondent characteristics*

- 64 respondents interviewed across 3 rounds
  - 58 main respondents and 6 proxy respondents
- Respondents represent a wide range of demographic characteristics
- Cognitive interview lasting up to one hour
- \$40 for participating

# HSOI Questionnaire

## *Questionnaire sections*

- Screener
- Injury or illness
- Medical attention
- Effect on work
- Effect on pay
- Occupation and industry
- Demographics

# HSOI Questionnaire

## *Screeener*

- Respondents generally understood what it means for an injury or illness to be work related
- Cues folded into Qs yielded additional reports of injuries and illnesses
- Respondents wanted to report the same injury/illness to multiple screener questions
- Respondents remembered dates of events
- Alternative questions and interviewer guidance for chronic and gradual onset conditions
  - Anxiety, soreness, difficulty breathing

# HSOI Questionnaire

## *Injury or illness*

Characteristic	Description
Nature	Third degree burn
Part of Body	Leg, hip
Event	Machine press caught R's leg, after it had been activated or turned on without anyone's knowledge. R thinks someone else accidentally turned it on.
Source	Machinery

Characteristic	Description
Nature	Neck, back and shoulder pain, strained neck
Part of Body	Neck, back, shoulder
Event	Developed over time due to carrying heavy books, use of computer
Source	Books, computer

# HSOI Questionnaire

## *Medical attention*

- Respondent confusion about what counts as being treated at or admitted to the hospital
  - Urgent care, outpatient care=treated at hospital
  - Being treated at the ER=admitted to hospital
- Most respondents understood “medical diagnosis”

# HSOI Questionnaire

## *Effect on work*

- Early versions of the questions included terms that were not clear
  - Being assigned to another job on a temporary basis
  - Being transferred
- Questions on ability to work next day, working usual hours
  - Next day could be respondent's day off work
  - Respondent may have irregular work schedule
- Alternate set of questions for chronic/gradual onset conditions were created

# HSOI Questionnaire

## *Effect on pay*

- Questions on whether the employer knew about the injury or illness and why employer didn't know worked well
  - Rs identified with the reasons on the list
- Respondents who received workers' compensation were able to report this
- Some respondents uncertain about the source of compensation they received

# HSOI Questionnaire

## *Occupation and industry and demographics questions*

- Some respondents did not know the sector they worked in
- Respondents who were contractors or temporary workers were unsure whether to answer questions for their employer or for the workplace to which they were assigned
- Some respondents did not want to provide the name of the employer
- Standard demographic questions worked well

# Proxy Interviews

## *Findings on accuracy of proxy reports*

- 6 pairs of proxy interviews were conducted
  - 4 husband-wife pairs
  - 1 pair of roommates
  - 2 brothers
- Accuracy of proxy reporting was high overall

# Interview Timing

## *Round 3 timing interviews*

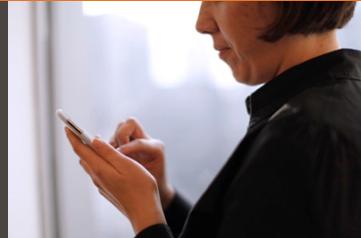
- 13 timing interviews
- Range from 20 to 48 minutes.
- Median 24:30 minutes.
- Average completion time for one loop was 27:51.
- Each additional loop averaged 10:29.

# Next Steps

## *Finalizing the HSOII questionnaire*

- Implement final revisions to the questionnaire
- Recommendations for reducing interview length
  - Remove A8
  - Make E2 and E5 open-ended questions
  - If an injury or illness does not meet the criterion for recordability, skip some or all of the questions on occupation and industry at time of injury/illness
  - Add skip instructions to the section on occupation and industry at time of injury or illness

**Thank You!**



**NORC**<sup>75</sup>  
*at the UNIVERSITY of CHICAGO*

 **insight for informed decisions™**

## **Appendix F: Final HSOII Questionnaire**

**Household Survey of Occupational Injuries and Illnesses (HSOII)**  
**Updated 11-2-2016**  
**FINAL**

**Screener**

This survey is about work-related injuries and illnesses that you may have experienced. I will ask you questions about the injuries and illnesses you may have had that are related to any job you held in the last 12 months. By the last 12 months, I mean since [CURRENT MONTH] of [LAST YEAR].

- A1. In the last 12 months, did you do ANY work for pay or profit?
- a. Yes → ELIGIBLE, CONTINUE
  - b. No → NOT ELIGIBLE, END INTERVIEW
  - c. DK
  - d. REF

Any injury

- A2. In the last 12 months, have you experienced any injuries or illnesses related to any job you held?
- a. Yes → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
  - b. No → SKIP TO A4
  - c. DK
  - d. REF

- A3. In what month and year did this injury/illness occur? [IF ILLNESS/INJURY IS A CHRONIC/GRADUAL ONSET CONDITION, ASK ALTERNATIVE QUESTIONS AS NEEDED: Did this injury/illness occur on a specific day or did it develop over time? Did you experience symptoms related to this injury/illness in the last 12 months?

MONTH/YEAR

ENTER MM/YYYY

NO SPECIFIC MONTH/YEAR BUT SYMPTOMS EXPERIENCED IN LAST 12 MONTHS

DK

REF

INTERVIEWER NOTE: IF INJURY/ILLNESS OCCURRED ON A SPECIFIC DAY, RESPONDENT SHOULD PROVIDE BEST ESTIMATE OF MONTH/YEAR. THE MONTH/YEAR REPORTED MUST BE IN REFERENCE PERIOD TO BE ELIGIBLE. IF DEVELOPED OVER TIME, CONFIRM THAT RESPONDENT NOTICED SYMPTOMS DURING REFERENCE PERIOD TO BE ELIGIBLE.

- A4. [Now I want to find out if you experienced any other work-related injuries other than the TEXT FILL INJURY RESPONDENT REPORTED (e.g., concussion) you just told me about.] In the last 12 months, have you experienced any [other] injuries, such as the following, related to any job you held?
- a. Sprains, strains or tears
  - b. Soreness or pain
  - c. Bruises
  - d. Cuts or punctures
  - e. Broken bones
  - f. Injury to muscles or joints
  - g. Open wounds
  - h. Burns

- i. Carpal tunnel syndrome
- j. Any other injury?
  - 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
  - 2) NO →SKIP TO A6
  - 3) DK →SKIP TO A6
  - 4) REF →SKIP TO A6

INTERVIEWER NOTE: READ DEFINITION IF NECESSARY. Carpal tunnel syndrome is a hand and arm condition that causes numbness, tingling and other symptoms. Carpal tunnel syndrome is caused by a pinched nerve in your wrist. [\[http://www.mayoclinic.org/diseases-conditions/carpal-tunnel-syndrome/basics/definition/con-20030332\]](http://www.mayoclinic.org/diseases-conditions/carpal-tunnel-syndrome/basics/definition/con-20030332)

A5. In what month and year did this injury occur? [IF ILLNESS/INJURY IS A CHRONIC/GRADUAL ONSET CONDITION, ASK ALTERNATIVE QUESTIONS AS NEEDED: Did this injury/illness occur on a specific day or did it develop over time? Did you experience symptoms related to this injury/illness in the last 12 months?

MONTH/YEAR  
 ENTER MM/YYYY  
 NO SPECIFIC MONTH/YEAR DUE TO CHRONIC/GRADUAL ONSET CONDITION  
 DK  
 REF

INTERVIEWER NOTE: READ IF NECESSARY TO CLARIFY THAT THE INJURY/ILLNESS REPORTED IS A SEPARATE INCIDENT. Is this [injury/illness OR TEXTFILL] related to [the other/another injury/illness OR TEXTFILL] you already mentioned or is this a different injury/illness?

A6. [Other than the TEXT FILL ILLNESS RESPONDENT REPORTED (e.g., asthma) you have already mentioned], in the last 12 months, have you experienced any [other] illnesses, such as the following, related to any job you held?

- a. Skin disorders
- b. Respiratory conditions
- c. Poisonings
- d. Hearing loss
- e. A disease or infection
- f. Cancer
- g. Anxiety or depression
- h. Any other illness?
  - 1) YES → COLLECT BRIEF DESCRIPTION, CONFIRM WORK-RELATED
  - 2) NO →SKIP TO A8
  - 3) DK →SKIP TO A8
  - 4) REF →SKIP TO A8

A7. In what month and year did this injury/illness occur? [IF ILLNESS/INJURY IS A CHRONIC/GRADUAL ONSET CONDITION, ASK ALTERNATIVE QUESTIONS AS NEEDED: Did this injury/illness occur on a specific day or did it develop over time? Did you experience symptoms related to this injury/illness in the last 12 months?

MONTH/YEAR

ENTER MM/YYYY  
NO SPECIFIC MONTH/YEAR DUE TO CHRONIC/GRADUAL ONSET CONDITION  
DK  
REF

INTERVIEWER NOTE: READ IF NECESSARY TO CLARIFY THAT THE INJURY/ILLNESS REPORTED IS A SEPARATE INCIDENT. Is this [injury/illness OR TEXTFILL] related to [the other/another injury/illness OR TEXTFILL] you already mentioned or is this a different injury/illness?

A8. [IF YES TO ANY INJURIES OR ILLNESSES] You have told me about X work-related injuries and illnesses you have experienced in the last 12 months.

BRIEFLY LIST EACH INJURY/ILLNESS: TEXT FILL #1, TEXT FILL #2, TEXT FILL #3, ETC.  
Is that correct?

\_\_\_\_\_ TIMES

INTERVIEWER: CONFIRM NUMBER OF INCIDENTS AND BRIEF DESCRIPTION OF EACH. IF INJURY/ILLNESS EXPERIENCED WITHIN LAST YEAR, RESPONDENT WILL REPORT ON THOSE. OTHERWISE, IF NO INJURY/ILLNESS WITHIN LAST YEAR, RESPONDENT WILL REPORT ON INJURIES/ILLNESSES EVER EXPERIENCED.

IF NO INCIDENTS OF WORK-RELATED INJURIES AND ILLNESSES, GO TO DEMOGRAPHICS SECTION.

## Injury or Illness

“Now I am going to ask you more about [INJURY/ILLNESS #....].”

- B1. **[WORKER ACTIVITY + some EVENT and SOURCE]** [FOR EACH LOOP] Please describe how the injury, illness, or condition occurred, and what caused it. [OPEN ENDED]

INTERVIEWER NOTE: READ EXAMPLES IF NECESSARY. For example: When ladder slipped on wet floor, I fell 20 feet; I developed soreness in wrist over time.

- B2. [SOURCE] Were there any other objects, substances, or persons involved in the injury or illness that you didn't mention? Please include equipment, chemicals, vehicles, or anything else.

- B3. [NATURE AND BODY PART] Please describe the injury, illness, or condition. How was [BODY PART, ORGAN] affected? You can use medical terms if you know them, or just talk about the symptoms you experienced.

INTERVIEWER NOTE: READ EXAMPLES IF NECESSARY. For example: strained back; chemical burn on hand; fainted or passed out.

- B4. [NATURE AND BODY PART] Were there any other parts of your body or organs affected by the injury or illness that you may not have included in your description? How was [BODY PART, ORGAN] affected?

CHECKLIST
1. Description or diagnosis for injury/illness (this is the OIICS <b>nature</b> )
2. Part or parts of body affected, including body systems (OIICS <b>part</b> , obviously)
3. How the injury/illness/exposure happened (OIICS <b>event</b> )
4. Vehicles, tools, chemicals, surfaces, or any other objects involved; this can be multiple objects; this can also just be the person's body moved incorrectly (OIICS <b>sources</b> )

## Medical attention

The next questions are about medical care you may have received for this injury/illness. Please think about the care you received immediately after the injury/illness occurred as well as follow-up care you received at a later time.

- C1. Did you get medical advice or treatment for this injury/illness from...

	YES	NO	NA	DK/REF
a. A doctor's office, urgent care clinic, or outpatient clinic?				
b. A health clinic at your place of employment?				
c. A hospital?				
d. [IF YES TO HOSPITAL] Did you receive treatment at the hospital emergency room or ER?				
e. [IF YES TO HOSPITAL] Were you admitted for an overnight stay?				
f. [IF ADMITTED] How many nights were you in the hospital? _____ NIGHTS				
[Did you get medical advice or treatment for this injury/illness from...]				
g. Emergency medical personnel, such as a paramedic or firefighter?				
h. Anyplace else? Please specify				

[IF YES TO C1a, C1b, C1c, C1g, or C1h, CONTINUE TO C2.]  
[OTHERWISE SKIP TO NEXT SECTION]

C2. [IF YES TO C1a, C1b, C1c, C1g, or C1h]. Did you receive a medical diagnosis from a health care professional?  
READ IF NECESSARY: Did a health care professional tell you the medical term for your injury/illness?

- a. YES → What was your medical diagnosis? INTERVIEWER READ IF NECESSARY: What is the medical term the health care professional used to describe your injury/illness?

- \_\_\_\_\_ DIAGNOSIS
- b. NO  
c. DK  
d. REF

C3. [IF YES TO C1a, C1b, C1c, C1g, or C1h]. Did your health care professional recommend that you take any days off from work due to your injury/illness?

- a. YES  
b. NO → SKIP TO NEXT SECTION  
c. DK → SKIP TO NEXT SECTION  
d. REF → SKIP TO NEXT SECTION

C4. How many days off did the health care professional recommend?

\_\_\_\_\_ DAYS

C5. Did you take [TEXT FILL C4 RESPONSE] days off?

- a. YES  
b. NO  
c. I TOOK LESS THAN THE RECOMMENDED NUMBER OF DAYS OFF  
d. I TOOK MORE THAN THE RECOMMENDED NUMBER OF DAYS OFF  
e. DK  
f. REF

### **Effect on work**

The next questions are about how the injury/illness affected your ability to work.

IF RESPONDENT HAS A CHRONIC/GRADUAL ONSET INJURY/ILLNESS, GO TO D13.

D1. Were you scheduled to work the day after the injury/illness?

- a. YES  
b. NO → SKIP TO D3  
c. DK → SKIP TO D3  
d. REF → SKIP TO D3

D2. [IF SCHEDULED TO WORK NEXT DAY] Were you able to work the next day?

- a. YES → SKIP TO D6  
b. NO → SKIP TO D4  
c. DK → SKIP TO D4  
d. REF → SKIP TO D4

- D3. [IF WAS NOT SCHEDULED TO WORK NEXT DAY] If you had been scheduled to work, would you have been able to work the next day?
- a. YES → SKIP TO D6
  - b. NO
  - c. DK
  - d. REF

- D4. Did you return to work after the injury/illness?
- a. YES
  - b. NO →SKIP TO D19
  - c. NO, STILL OFF PAID WORK BUT EXPECTS TO RETURN→SKIP TO D19
  - d. NO, EXPECTS NEVER TO DO PAID WORK AGAIN→SKIP TO D19
  - e. DK →SKIP TO D19
  - f. REF →SKIP TO D19

- D5. [IF RETURNED TO WORK] How many days after the injury/illness did you start work again?
- a. \_\_\_\_\_ DAYS AFTER THE INJURY/ILLNESS
  - b. BACK TO WORK SAME DAY
  - c. BACK TO WORK NEXT DAY
  - d. DK
  - e. REF

INTERVIEWER NOTE: IF R INDICATES WENT BACK TO WORK ONE DAY AFTER INJURY/ILLNESS, CONFIRM THAT R MEANS THAT R WENT BACK TO WORK THE NEXT DAY, THAT IS, THE DAY AFTER INJURY/ILLNESS OCCURRED.  
[IF R WENT BACK TO WORK, CONTINUE. ELSE IF R IS NOT WORKING, GO TO D19.]

- D6. When you went back to work, did you work your usual number of hours or not?
- a. YES
  - b. NO
  - c. DK
  - d. REF

- D7. When you went back to work, were you able to perform all of the normal duties of your job or not?
- a. YES
  - b. NO
  - c. DK
  - d. REF

- D8. When you went back to work, were you assigned a different job or tasks than what you did prior to the injury/illness?
- a. YES
  - b. NO →SKIP TO D10
  - c. DK →SKIP TO D10
  - d. REF →SKIP TO D10

D9. [IF DIFFERENT, D8=YES] Was your assignment to a different job or tasks permanent or temporary?

- a. PERMANENT
- b. TEMPORARY
- c. DK
- d. REF

D10. At any time after you went back to work, did you miss any (additional) days of work due to your injury/illness?

- a. YES
- b. NO →SKIP TO D19
- c. DK →SKIP TO D19
- d. REF →SKIP TO D19

D11. About how many (additional) days of work did you miss?

\_\_\_\_\_ DAYS

D12. What caused you to miss these (additional) days of work?

GO TO D19.

QUESTIONS ON EFFECT ON WORK FOR RESPONDENTS WITH CHRONIC/GRADUAL ONSET CONDITIONS:

D13. In the last 12 months, after you began experiencing symptoms due to TEXT FILL, did you miss any days of work, or not?

- a. YES, MISSED DAYS OF WORK
- b. NO, DID NOT MISS DAYS OF WORK
- c. DK
- d. REF

D14. About how many days of work did you miss?

\_\_\_\_\_ DAYS

D15. In the last 12 months, did you ever work less than your usual number of hours because of symptoms of [TEXT FILL]?

- a. YES
- b. NO
- c. DK
- d. REF

D16. In the last 12 months, were you ever unable to perform all the normal duties of your job because of symptoms of [TEXT FILL]?

- a. YES
- b. NO
- c. DK
- d. REF

- D17. In the last 12 months, were you ever assigned to a different job or tasks than what you did prior to the onset of symptoms of [TEXT FILL]?
- YES
  - NO →SKIP TO D19
  - DK →SKIP TO D19
  - REF →SKIP TO D19

- D18. Was your assignment to a different job or tasks permanent or temporary?
- PERMANENT
  - TEMPORARY
  - DK
  - REF

[TRANSITION STATEMENT FOR THOSE WHO RETURNED TO WORK: At any point after you returned to work, did the injury/illness affect your job in any of the following ways?]

D19. Did the injury/illness cause you to:

	YES	NO	NA	DK/REF
a. Be laid off or fired? [IF YES, SKIP TO D19c]				
b. Quit your job?				
c. Change the kind of work you do, that is, change your occupation?				

- D20. Did the injury/illness affect your ability to work in any other way?
- YES → Please specify.
  - NO
  - DK
  - REF

### Effect on Pay

The next questions are about how the injury/illness affected your income or pay.

- E1. Did your employer know about this injury/illness?
- YES → SKIP TO E3
  - NO
  - DK
  - REF

E2. [IF NO TO EMPLOYER KNOWING]: Why did your employer *not* know about this injury/illness?

### COLLECT BRIEF DESCRIPTION

The next questions are about workers' compensation. Workers' compensation is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job.

- E3. Has anyone filed a workers' compensation claim for this injury/illness?
- YES
  - NO → SKIP TO E5
  - DK
  - REF

- E4. Who filed the workers' compensation claim?
- a. EMPLOYER
  - b. EMPLOYEE
  - c. FAMILY MEMBER OF EMPLOYEE
  - d. OTHER SPECIFY
  - e. DK
  - f. REF

ALL RESPONSES TO E4 GO TO SKIP INSTRUCTION BEFORE E6.

- E5. IF NO ON QUESTION ABOUT FILING WORKERS' COMPENSATION: What was the main reason you or your employer did not file a workers' compensation claim for this injury/illness?
- a. You were not eligible
  - b. You were eligible but decided not to pursue a claim
  - c. Your employer did not want you to file a claim
  - d. You were unaware of workers' compensation coverage
  - e. Other reason, please specify
  - f. DK
  - g. REF

SKIP INSTRUCTION:

#1: WC FILED, CONTINUE TO E6.

#2: ELSE IF NO WC FILED BUT MISSED DAYS OF WORK, SKIP TO E8.

#3: ELSE [NO WC FILED AND DID NOT MISS DAYS OF WORK] SKIP TO SECTION F.

- E6. IF R REPORTS WORKERS' COMPENSATION CLAIM FILED: Did you receive workers' compensation for this injury/illness?
- a. YES
  - b. NO
  - c. NA
  - d. DK
  - e. REF

READ IF NECESSARY: *Workers compensation* is insurance that provides you with your lost wages and medical care when you become injured or ill due to your job.

- E7. IF R REPORTS WORKERS' COMPENSATION NOT RECEIVED: Is there an open claim pending for this injury/illness?
- a. YES
  - b. NO
  - c. NA
  - d. DK
  - e. REF

- E8. Short-term or temporary disability benefits provide you with a portion of your income if you are temporarily unable to work due to a medical condition. Did you receive short-term (temporary) disability for this injury/illness?
- a. YES
  - b. NO
  - c. NA
  - d. DK
  - e. REF

E9. Did this injury/illness cause you to use paid sick leave, paid annual leave, or paid time off?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

E10. Did this injury/illness cause you to take leave without pay?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

E11. Did your employer continue to pay your wages and other compensation in full during the period you were unable to work because of this injury/illness?

- a. YES
- b. NO
- c. NA
- d. DK
- e. REF

### **Occupation and Industry at Time of Injury or Illness**

The next questions are about your occupation and industry at the time of the injury/illness. Please think about the job you held at the time of the injury/illness [TEXT FILL DESCRIPTION].

INTERVIEWER NOTE: IF THIS IS SECOND OR SUBSEQUENT LOOP, GO TO F1. ELSE GO TO F4.

F1. Is the job you held at the time of the [injury/illness TEXT FILL] with the same employer you have already told me about?

- a. YES, SAME EMPLOYER → SKIP TO INTERVIEWER INSTRUCTION
- b. NO, DIFFERENT EMPLOYER → SKIP TO F4

INTERVIEWER NOTE:

- IF R HAS ONLY REPORTED ONE EMPLOYER, SKIP TO F3.
- IF R HAS REPORTED MULTIPLE EMPLOYERS, CONTINUE TO F2.

F2. [IF MULTIPLE EMPLOYERS ALREADY REPORTED] Which job and employer are you referring to?

\_\_\_\_\_

F3. [IF SAME EMPLOYER] Are you in the same position you were in at the time the injury/illness [TEXT FILL]?

- a. YES → SKIP TO NEXT SECTION
- b. NO
- c. DK
- d. REF

INTERVIEWER NOTE: IF SAME EMPLOYER BUT DIFFERENT POSITION, ASK F5 (HOW MANY HOURS WORKED), F13 (WHAT KIND OF WORK DO YOU DO), AND F14 (MOST IMPORTANT ACTIVITIES OR

DUTIES). THEN IF R HAS ADDITIONAL INJURIES/ILLNESSES TO REPORT, GO BACK TO SECTION B. ELSE GO TO G1.

F4. Were you considered by your employer to be a full time or part time employee?

- a. FULL-TIME
- b. PART-TIME
- c. DK
- d. REF

F5. In a typical week, how many hours did you work? \_\_\_\_\_ hours

READ IF NECESSARY: Was it greater than or equal to 35 hours per week?

- DK
- REF

F6. Which of the following groups best describes your employer at the time of the injury/illness?

- a. Government
- b. Private-for-profit company → SKIP TO F8
- c. Non-profit organization including tax exempt and charitable organizations → SKIP TO F8
- d. Self-employed → SKIP TO F8
- e. Working in the family business → SKIP TO F8

F7. Would that be the federal, state, or local government?

- a. FEDERAL
- b. STATE
- c. LOCAL

F8. Did you work for a temporary help agency, a temporary staffing agency, or a contractor?

- a. YES
- b. NO
- c. DK
- d. REF

INTERVIEWER NOTE: IF R IS A FARM LABOR CONTRACTOR, R IS NOT CONSIDERED TEMPORARY HELP/STAFFING AND RESPONSE TO THIS Q IS NO.

[IF F8 (TEMP HELP, TEMP STAFFING AGENCY, OR CONTRACTOR) =YES]: For the next questions, please answer based on the place where you were working on a day-to-day basis when the injury/illness occurred, not the temporary agency or contractor you worked for.

F9. What is the name of the (company, organization or agency) for whom you worked? [OPEN ENDED]

- DK
- REF

NOTE: IF GOVERNMENT EMPLOYER, TEXT FILL=AGENCY; IF NON-PROFIT, TEXT FILL=ORGANIZATION; ELSE TEXT FILL=COMPANY.

F10. What kind of business or industry was this? [OPEN ENDED]

- DK
- REF

F11. What did they make or do where you worked? [OPEN ENDED]

- DK
- REF

F12. In what state were you employed at this job? [OPEN ENDED]

- DK
- REF

F13. What kind of work did you do? (For example: registered nurse, personnel manager, supervisor of order department, secretary, accountant) [OPEN ENDED]

- DK
- REF

F14. What were your most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, typing and filing, reconciling financial records) [OPEN ENDED]

- DK
- REF

F15. At this job, were you a member of a union or covered by a collective bargaining agreement?

- a. YES
- b. NO
- c. DK
- d. REF

F16. How many people worked at your work location?

- a. 1 to 10 workers
- b. 11 to 49 workers
- c. 50 to 249 workers
- d. 250 to 999 workers
- e. 1000 or more workers
- f. DK
- g. REF

IF R HAS ADDITIONAL INJURIES/ILLNESSES TO REPORT, GO BACK TO SECTION B. ELSE GO TO G1.

### **Demographic Characteristics**

Race/ethnicity

G1. Are you Spanish, Hispanic, or Latino?

- a. YES
- b. NO
- c. DK
- d. REF

G2. [I am going to read you a list of five race categories.] Please choose one or more races that you consider yourself to be:

- a. White
- b. Black or African American
- c. American Indian or Alaska Native
- d. Asian
- e. Native Hawaiian or Other Pacific Islander
- f. Other \_\_\_\_\_
- g. DK
- h. REF

Age

G3. What is your date of birth? Enter MM/DD/YYYY

- DK
- REF

G4. As of last week, that would make you approximately (AGE) years old. Is that correct?

[IF NECESSARY] Even though you don't know your exact birthdate, what is your best guess as to how old you were on your last birthday?

\_\_\_\_\_ YEARS

- DK
- REF

Marital Type

G5. Are you now married, widowed, divorced, separated or never married?

- a. MARRIED
- b. WIDOWED
- c. DIVORCED
- d. SEPARATED
- e. NEVER MARRIED
- f. DK
- g. REF

Gender

G6. Are you male or female?

- a. MALE
- b. FEMALE

Education

G7. What is the highest level of school you have completed or the highest degree you have received?

- a. Less than high school
- b. High school or GED
- c. Associate degree or some college
- d. Bachelor's degree or above

G8. In what country were you born?

\_\_\_\_\_ [OPEN-ENDED]

**Current Industry and Occupation**

The next questions are about your **current job**. *If you have more than one job, please tell me about the job at which you usually work the most hours. If you work the same number of hours at two jobs, please tell me about the job where you were employed the longest.*

H1. What is your current employment status? Are you currently employed full-time, part-time, or are you not employed?

- a. FULL-TIME
- b. PART-TIME
- c. NOT CURRENTLY EMPLOYED → SKIP TO END OF SURVEY
- d. DK
- e. REF

- H2. [IF CURRENTLY EMPLOYED] Is this job with the same employer you have already told me about?
- YES, SAME EMPLOYER → CONTINUE TO H3
  - NO, DIFFERENT EMPLOYER → SKIP TO H5

INTERVIEWER NOTE:

- IF R HAS ONLY ONE INJURY/ILLNESS AND SAME EMPLOYER OR MULTIPLE INJURIES UNDER SAME EMPLOYER, SKIP TO H4
- IF R HAS MULTIPLE INJURIES UNDER DIFFERENT EMPLOYERS, BUT CURRENT EMPLOYMENT IS WITH SAME EMPLOYER, CONTINUE TO H3

- H3. [IF MULTIPLE INJURIES UNDER DIFFERENT EMPLOYERS BUT SAME AS CURRENT EMPLOYMENT] Which job and employer are you referring to?
- \_\_\_\_\_

- H4. [IF SAME EMPLOYER] Are you in the same position you were in at the time the injury/illness [TEXT FILL]?
- YES → SKIP TO PROBES AT END OF SECTION
  - NO
  - DK
  - REF

INTERVIEWER NOTE: IF SAME EMPLOYER BUT DIFFERENT JOB, ASK H5 (HOW MANY HOURS WORKED), H12 (WHAT KIND OF WORK DO YOU DO), AND H13 (MOST IMPORTANT ACTIVITIES OR DUTIES).

- H5. [IF SAME EMPLOYER BUT DIFFERENT JOB OR DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] Currently, in a typical week, how many hours do you work?

\_\_\_\_\_ hours

IF NECESSARY: Was it greater than or equal to 35 hours per week?

- DK  
REF

INTERVIEWER NOTE: IF SAME EMPLOYER BUT DIFFERENT JOB, SKIP TO H12.

- H6. [IF DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] Which of the following groups best describes your CURRENT employer?

- Government
- Private-for-profit company → SKIP TO H8
- Non-profit organization including tax exempt and charitable organizations → SKIP TO H8
- Self-employed → SKIP TO H8
- Working in the family business → SKIP TO H8

- H7. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] Would that be the federal, state, or local government?

- FEDERAL
- STATE
- LOCAL

- H8. Did you work for a temporary help agency, a temporary staffing agency, or a contractor?

- YES
- NO
- DK
- REF

INTERVIEWER NOTE: IF R IS A FARM LABOR CONTRACTOR, R IS NOT CONSIDERED TEMPORARY HELP/STAFFING AND RESPONSE TO THIS Q IS NO.

[IF H8 (TEMP HELP, TEMP STAFFING AGENCY, OR CONTRACTOR) =YES]: For the next questions, please answer based on the place where you were working on a day-to-day basis when the injury/illness occurred, not the temporary agency or contractor you worked for.

H9. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] What is the name of the (company, organization or agency) for whom you work? [OPEN ENDED]

DK

REF

H10. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] What kind of business or industry is this? [OPEN ENDED]

DK

REF

H11. [IF DIFFERENT EMPLOYER THAN HAD DURING INJURY/ILLNESS] What do they make or do where you work? [OPEN ENDED]

DK

REF

H12. [IF SAME EMPLOYER BUT DIFFERENT JOB OR DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] What kind of work do you do? (For example: registered nurse, personnel manager, supervisor of order department, secretary, accountant) [OPEN ENDED]

DK

REF

H13. [IF SAME EMPLOYER BUT DIFFERENT JOB OR DIFFERENT EMPLOYER THAN DURING INJURY ILLNESS] What are your most important activities or duties? (For example: patient care, directing hiring policies, supervising order clerks, typing and filing, reconciling financial records) [OPEN ENDED]

DK

REF