

# National SOII Respondent Follow-Up Survey

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## Executive Summary

Nonfatal workplace injury and illness data published by the Bureau of Labor Statistics' (BLS) Survey of Occupational Injuries and Illnesses (SOII) provide a valuable measure of the safety and health of America's workers. Concerns have been raised about the completeness of the SOII data, particularly that injury and illness cases are underreported to the survey.

BLS contracted with Westat to conduct additional quantitative research into employer recordkeeping practices. The goals of this study included determining if BLS could use records or follow-up interviews to capture cases that may have been left off initial SOII reporting by employers; how common record-keeping errors were made, especially those that may lead to SOII underreporting; and if establishments were willing to send in updated injury and illness logs.

A sample of 3,703 private sector establishments was drawn from a universe of respondents who participated in the 2013 SOII. Establishments were sampled by state, size class, and industry sector. After data collection was completed, adjustments for nonresponse were made and point and variance estimates were produced.

## Results

### OSHA Recordkeeping and Log Maintenance

- Around one-half of establishments indicated that they maintained OSHA logs for the period of the study (2013). The percentage of establishments for which OSHA logs were not maintained (44 percent) was not statistically significantly different than those that maintained logs.
- Smaller establishments were less likely to report maintained OSHA logs (41 percent) than were mid-sized (71 percent) and large establishments (85 percent).
- The majority of establishments (87 percent) indicated that the person directly responsible for answering the Respondent Survey had responsibility to complete or assist with completing OSHA recordkeeping or other injury and illness tracking. Of establishments for which OSHA logs were maintained, about one-half (48 percent) said that the person with primary responsibility for maintaining the OSHA logs had received formal training; the percentage for those reporting no formal training was also about one-half (46 percent).

### SOII Reporting

- Fifty-one percent of establishments indicated that the person directly responsible for reporting to the SOII 2013 was doing so for the first time.
- The sources that establishments used to complete the 2013 SOII included the OSHA Log (37 percent) and the OSHA Case Detail form (25 percent), and also company injury and illness records (63 percent) and workers' compensation data (43 percent).

### General Recordkeeping Practices

- The majority of establishments (68 percent) recorded cases within seven days, which is consistent with OSHA recordkeeping guidelines.
- There was confusion about how to determine the number of days away from work to record. Approximately one-quarter of establishments correctly identified that the basis for the number of days away from work is calendar days; 55 percent incorrectly specified shift days.
- According to OSHA guidelines, incidents to temporary workers should be recorded at the location where they are supervised. Thirty-seven percent of establishments that used temporary agency workers indicated that they would include them on the SOII.

### Timing Issues

- A majority of establishments (87 percent) could not recall if timing issues (*e.g.*, cases happening late in the year or injuries becoming more serious over time) ever occurred at their company.

### **Conclusions**

The results of the Respondent Survey indicate that keeping of OSHA logs is not widely prevalent, and that small establishments are less likely to keep records than establishments of other sizes. Also, relatively few SOII respondents indicated using OSHA Log (forms 300A and 301) to complete the survey.

OSHA Recordkeeping training was not prevalent, and survey questions designed to evaluate understanding of recordkeeping requirements showed that there was considerable misunderstanding of the concepts.

Improvements in communication or training for establishments selected to respond to the SOII about required recordkeeping or improvements to SOII collection procedures that can mitigate the effects that these have on the quality of SOII estimates should be examined. Possible changes could include redesigning survey materials, increasing the use of email notification to participate in the survey, and providing notifications throughout the reference year.

## 1. Background on Underreporting Research

The Bureau of Labor Statistics (BLS) collects and publishes information on nonfatal workplace injuries and illnesses from the Survey of Occupational Injuries and Illnesses (SOII). From the SOII, estimates of the total numbers and rates of injuries and illnesses, as well as cases that require at least one day away from work and cases that require job transfer or work restriction, are published for detailed industries. For those cases that require at least one day away from work, estimates are also published for case circumstances and worker demographics, which give a more comprehensive description of the kinds and types of occupational injuries and illnesses. The SOII is the only national source of these data, and millions of occupational injury and illness estimates are produced annually.

The annual survey of approximately 230,000 establishments requires employers to report on the workplace injuries and illnesses of employees. The information is collected from Occupational Safety and Health Administration (OSHA) injury and illness logs. Recordkeeping guidelines for what constitutes a workplace injury or illness to be reported to the SOII is likewise determined by OSHA,<sup>1</sup> which has responsibility for maintaining these recordkeeping guidelines and issuing interpretations. Separately, OSHA also requires employers in certain industries to maintain records at their establishment and to report those records to OSHA. There is overlap between these two groups of establishments. The recordkeeping requirements for OSHA (and therefore SOII) are not the same as the criteria for determining if an injury or illness is covered by workers' compensation. In addition, workers' compensation criteria vary across states while OSHA rules are consistent across states, allowing for production of consistent national estimates.

Research indicates that there is likely an underreporting of injuries and illnesses to the SOII.<sup>2</sup> Preliminary BLS and BLS-funded research focused on matching cases reported to the SOII<sup>3</sup> (including the detailed information available for cases with at least one day away from work) to other available data sources such as workers' compensation claims. This research indicates that cases to the SOII were underreported, but variations in data sets and methodology in the studies result in differing estimates of underreporting (Ruser, 2010;<sup>4</sup> Washington State Department of Labor, 2011;<sup>5</sup> Nestoriak and Pierce, 2012).<sup>6</sup>

Additional research focused on interviewing employers to determine their injury and illness recordkeeping practices. Some of these studies included conducting qualitative interviews with limited

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<sup>1</sup> Occupational Safety and Health Administration Injury and Illness Recordkeeping and Reporting Requirements, <https://www.osha.gov/recordkeeping/>

<sup>2</sup> Research on the Completeness of the Injury and Illness Counts from the Survey of Occupational Injuries and Illnesses, <https://www.bls.gov/iif/undercount.htm>

<sup>3</sup> Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses Matching Bibliography, <https://www.bls.gov/iif/soii-bibliography.htm#matching>

<sup>4</sup> John W. Ruser, *Allegations of Undercounting in the BLS Survey of Occupational Injuries and Illnesses*, U.S. Bureau of Labor Statistics, Office of Survey Methods Research, October 2010

<sup>5</sup> Washington State Department of Labor and Industries, *SOII Undercount Research: Washington SOII-WC Record Linkage, 2000 – 2011* (working paper)

<sup>6</sup> Nicole Nestoriak and Brooks Pierce, *Comparing Injury Data from Administrative and Survey Sources: Methodological Issues*, U.S. Bureau of Labor Statistics, Office of Survey Methods Research, October 2012

number of employers (Phipps and Moore, 2010;<sup>7</sup> Wuellner and Bonauto, 2014).<sup>8</sup> These qualitative interviews pointed to potential issues with employer understanding of OSHA recordkeeping guidelines and SOII survey instructions.

To produce statistically valid estimates of employers' understanding of recordkeeping and responding to the SOII, BLS partnered with four states (Minnesota<sup>9</sup>, New York<sup>10</sup>, Oregon<sup>11</sup>, and Washington<sup>12</sup>) to conduct four state-based surveys. In addition to the separate state reports from this effort, a report combining results from all states was produced (Wuellner and Phipps, 2016<sup>13</sup>). Previous SOII respondents were sampled, contacted by telephone, and asked about OSHA recordkeeping practices, injury and illness tracking, SOII reporting practices, and understanding of OSHA recordkeeping guidelines. The study found a large number of establishments were unfamiliar with OSHA recordkeeping or recording guidelines and had often not had multiple years of experience reporting to the SOII. Across the four states, only 19 percent of establishments reported that the person directly responsible for responding to the SOII had participated for multiple years.

## 2. National SOII Respondent Follow-Up Survey

### 2.1 Goals and Methodology

As data collection for the four state study was concluding, BLS contracted with Westat to conduct a nationally representative survey of SOII respondents. This was undertaken to provide understanding about recordkeeping practices and knowledge for the entire U.S., especially given variations in workers' compensation by state. The study was also designed to further examine employer recordkeeping and reporting practices, especially those related to the potential reporting of late cases.

A sample of 3,703 private sector establishments was drawn from a universe of respondents who had been sampled to participate in the 2013 SOII and who had then provided a response. All estimates presented in this paper were weighted, and the sample weights were developed to account for this two-phase survey design. State and local government establishments were excluded. Establishments in the railroad and mining sector that are obtained directly from the Federal Railroad Administration<sup>14</sup> and the Mine Safety and Health Administration<sup>15</sup> were excluded from the National SOII Respondent Follow-Up Survey (henceforth referred to as the Respondent Survey). The sample was stratified by state, size class,

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<sup>7</sup> Polly Phipps and Danna Moore, [Employer Interviews: Exploring Differences in Reporting Work Injuries and Illnesses in the Survey of Occupational Injuries and Illnesses and State Workers' Compensation Claims](#), U.S. Bureau of Labor Statistics, Office of Survey Methods Research, 2010

<sup>8</sup> Sara Wuellner and Dave Bonauto, [Exploring the relationship between employer recordkeeping and underreporting in the BLS Survey of Occupational Injuries and Illnesses](#), *American Journal of Industrial Medicine* 57 no. 10 (October 2014), pp. 1133-1143

<sup>9</sup> William Boyer and Brian Zaidman, B, [SOII Undercount Project Minnesota Interviews with SOII Respondents](#), September 2014

<sup>10</sup> Karen Cummings, , [SOII Undercount Research: Employee Interview Project New York State](#), September 2014

<sup>11</sup> Nathan Johnson, Karen Howard, and Ronni, Rachele, R, [Bureau of Labor Statistics SOII Undercount Research: Oregon Employer Survey Final Report](#), September 2014

<sup>12</sup> Sara Wuellner, Dave Bonauto, Christine Rappin, and Wendy Lu, [SOII Undercount Research: Telephone Interviews with SOII Respondents, Washington, September 2014](#)

<sup>13</sup> Sara Wuellner and Polly Phipps, [Employer-based work injury recordkeeping: Data from four states](#), March 2017

<sup>14</sup> Federal Railroad Administration <https://railroads.dot.gov/>

<sup>15</sup> Mine Safety and Health Administration <https://www.msha.gov/>

and industry sector. Size class was defined as small, medium, and large sized establishments, which is a collapsed version of the 5-category size class structure of the SOII. Industry was defined using 15 North American Industry Classification System (NAICS) sectors, with some sectors collapsed.

**Table 1: Percentage of Sample by Industry Sector**

NAICS	Description	Percentage of Sample
11	Agriculture, Forestry, Fishing, and Hunting	1.0
21	Mining, Quarrying, and Oil and Gas Extraction	0.5
22	Utilities	0.7
23	Construction	6.5
31-33	Manufacturing	13.9
42	Wholesale Trade	5.3
44-45	Retail Trade	16.7
48-49	Transportation and Warehousing	4.2
51	Information	1.9
52-53	Finance and Insurance, Real Estate and Rental and Leasing	4.5
54-56	Professional, Scientific, and Technical Services; Management of Companies and Enterprises; Administrative and Support and Waste Management and Remediation Services	11.8
61	Educational Services	1.7
62	Health Care and Social Assistance	15.2
71-72	Arts, Entertainment, and Recreation; Accommodation and Food Services	12.6
81	Other Services	3.6

A questionnaire was developed to examine key concepts, including:

- Could BLS use records or follow-up interviews to capture cases that may have been left off initial SOII reporting;
- How common are recordkeeping errors, especially those that may lead to SOII underreporting;
- What kinds of SOII reporters are associated with late cases and measurement errors;
- Are SOII respondents able and willing to send in updated OSHA logs?

The survey was conducted by Computer Assisted Telephone Interviewing (CATI). Respondents were notified of the request to participate in the Respondent Survey by email or letter. Interviews were obtained from 1,852 establishments and OSHA logs were collected from 777 establishments.

## **2.2 Nonresponse Bias Analysis, Adjustment and Estimation**

After data collection was completed, the sample weights were adjusted for survey nonresponse using the same categories of sampling criteria. Point estimates for each of the interview questions were produced. This paper will present these estimates as proportions of responses, in some cases cross-tabulated by size class or industry sector. Variance estimates for each estimate were also produced and are available upon request. All statements were tested for statistical validity.

### **3. Results**

#### **3.1 OSHA Recordkeeping and Log Maintenance**

##### **3.1.1. Keeping OSHA Logs**

Each establishment sampled to report data to the SOII is required to keep OSHA logs for the duration of the reference year in which they have been sampled. At the beginning of the reference year, every establishment is provided a notification that they are required to complete the SOII along with a copy of the OSHA logs. All SOII notifications to keep records for the 2013 reference year were delivered to respondents by USPS. These logs are to be used by the respondent to record specific cases through the year which are totaled at the end of the reference year into a summary form. For the SOII, respondents are also asked to record detailed case-specific information on the OSHA-provided case form for cases that required at least a day away from work (or for a sample of the cases if there are more than 15 cases). Asking respondents to maintain OSHA logs throughout the year, and not relying on other sources or memory, is intended to increase the accuracy of information reported to the SOII.

Despite the requirement, about one-half (43 percent) of establishments maintained OSHA logs, which was not statistically different from the percentage that reported that they did not keep logs (44 percent).

In addition to the requirement to keep these records when sampled by the SOII, some establishments are also required by OSHA to keep these records on an annual basis. OSHA exempts establishments in some industries from the requirement to keep injury and illness records.<sup>16</sup> All establishments with 11 or more employees in the following sectors must keep OSHA records: Agriculture, Forestry, Fishing and Hunting; Oil and Gas Extraction, Utilities; Construction; Manufacturing; and Wholesale Trade. No establishments in the Educational Services sector are required to keep OSHA records. All other sectors include a mix of exempt and non-exempt industries.

The percentage of establishments indicating that OSHA logs were kept ranges from 92 percent in Agriculture, Forestry, Fishing, and Hunting to 17 percent in Educational Services. The percentage of establishments in the Agriculture, Forestry, Fishing, and Hunting (92 percent); Utilities (83 percent); Construction (70 percent); Manufacturing (74 percent); Retail Trade (60 Percent); and Transportation and Warehousing (73 percent) sectors that reported that they kept OSHA logs was higher than the percentage of establishments in these sectors that did not. Most establishments in these sectors are also required by OSHA to keep logs if they employ more than ten employees.<sup>17</sup> In the Finance and Insurance, Real Estate and Rental and Leasing (73 percent); Educational Services (70 percent); and Arts,

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<sup>16</sup> Occupational Safety and Health Administration Non-Mandatory Appendix A to Subpart B -- Partially Exempt Industries, <https://www.osha.gov/laws-regs/regulations/standardnumber/1904/1904SubpartBAppA>

<sup>17</sup> Some establishments in the Retail Trade and Transportation and Warehousing sectors are exempt regardless of size

Entertainment and Recreation, Accommodation and Food Services sectors (62 percent) more establishments reported that they did not maintain OSHA records than the percentage of establishments that did, even though some subindustries within these sectors are required by OSHA to do so.

**Table 2: Percentage of Establishment Indicating that OSHA Logs are Maintained**

	YES	NO	DON'T KNOW	REFUSED
Private Industry	43	44	13	0
Agriculture, Forestry, Fishing, and Hunting	92	8	0	0
Mining, Quarrying, and Oil and Gas Extraction	21	75	3	0
Utilities	83	2	15	0
Construction	70	28	2	0
Manufacturing	74	18	8	0
Wholesale Trade	42	57	1	0
Retail Trade	60	30	11	0
Transportation and Warehousing	73	26	1	0
Information	46	53	1	0
Finance and Insurance, Real Estate and Rental and Leasing	19	73	8	0
Professional, Scientific, and Technical Services; Management of Companies and Enterprises; Administrative and Support and Waste Management and Remediation Services	32	53	16	0
Educational Services	17	70	12	0
Health Care and Social Assistance	49	32	19	0
Arts, Entertainment, and Recreation; Accommodation and Food Services	24	62	14	0
Other Services	20	32	47	0

Small establishments reported the lowest percentage of keeping OSHA logs (41 percent) when compared to mid-sized (71 percent) and large establishments (85 percent).

### 3.1.2. Who Keeps Track of OSHA Recordkeeping?

The majority of establishments (87 percent) indicated that the person directly responsible for answering the Respondent Survey had responsibility to complete or assist with completing OSHA recordkeeping or other injury and illness tracking. Of those who indicated multiple people had responsibility for this task, a majority (71 percent) of establishments indicated the person directly responsible for answering the Respondents Survey had the primary responsibility for recordkeeping and injury and illness tracking.

### 3.1.3. OSHA Recordkeeping Training

Training in OSHA recordkeeping requirements is designed to increase recordkeepers' knowledge of the kinds of injuries and illnesses that should be recorded and what information recordkeepers are required to include about those cases. This training intends to increase the quality of the information employers record on OSHA logs.

For respondents who indicated that OSHA logs were kept at their establishment or firm, the Respondent Survey asked if the person with primary responsibility for OSHA recordkeeping had ever received formal training in the form of classes, seminars, or online courses. Around one-half of establishments (48 percent) reported that the person with primary responsibility for OSHA recordkeeping had received formal recordkeeping training. About the same percentage of establishments (46 percent) indicated that formal training had not been received.

A majority of establishments in the Utilities and Information sectors reported that the primary recordkeeper had received formal training. Construction was the only sector in which a majority of establishments indicated the primary recordkeeper (83 percent) had never received formal training.

**Table 3: Percentage of Respondents Keeping OSHA Logs Who Had Received Formal OSHA Recordkeeping Training**

	YES	NO	DON'T KNOW	REFUSED
Private Industry	48	46	6	0
Agriculture, Forestry, Fishing, and Hunting	72	28	0	0
Mining, Quarrying, and Oil and Gas Extraction	45	55	0	0
Utilities	92	8	0	0
Construction	17	83	0	0
Manufacturing	63	31	6	0
Wholesale Trade	24	73	3	0
Retail Trade	66	17	18	0
Transportation and Warehousing	47	51	1	0
Information	87	7	6	0
Finance and Insurance, Real Estate and Rental and Leasing	62	37	2	0
Professional, Scientific, and Technical Services; Management of Companies and Enterprises; Administrative and Support and Waste Management and Remediation Services	41	56	3	0
Educational Services	42	58	0	0
Health Care and Social Assistance	68	31	1	0
Arts, Entertainment, and Recreation; Accommodation and Food Services	47	44	8	1
Other Services	9	62	29	0

Of the establishments who indicated that recordkeepers had received formal OSHA recordkeeping training, a higher percentage of them (66 percent) indicated that that training had last occurred between 1 and 5 years than any other time period prior to the Respondent Survey. Twelve percent reported that training had taken place in the past year.

#### **3.1.4. SOII Reporting**

Fifty-one percent of establishments indicated that the person directly responsible for completing the SOII in 2013 was a first-time respondent to the SOII in the year 2013, while an additional 29 percent did



not know if that person had completed the SOII prior to 2013. Twenty percent of establishments indicated that that person was not a first time responder to the SOII. While the questions asked were not the same, this is similar to the percentage of establishments in the four-state study that indicated that the person directly responsible for completing SOII had completed the SOII multiple times (19 percent across the four states). Previous experience to SOII reporting is likely to increase knowledge and thereby accuracy of the information reported to SOII.

The Respondent Survey asked establishments to provide information on the sources that they used to complete the SOII at the conclusion of the 2013 reference year. They were asked to indicate all the sources that they used to do so. Despite being provided the OSHA logs at the time they were notified of their mandatory responsibility to report to the SOII, 37 percent of establishments used the OSHA Summary form 300A and 25 percent of establishments used the OSHA 301 detailed case form. Many establishments used sources that are not necessarily consistent with OSHA recordkeeping or SOII concepts. Sixty-three percent used company-specific injury and illness records, such as injury report forms or individual files kept on employees and 43 percent of respondents used workers' compensation records such as claims or first state reports.<sup>18</sup> This indicates that individual company definitions of injuries and illnesses or workers' compensation criteria may form some of the basis of reporting occupational injury and illness to the SOII rather than OSHA recordkeeping guidelines.

### **3.1.5. Workers' Compensation Completion**

Most establishments (81 percent) reported that the person directly responsible for answering the Respondent Survey was also involved in completion of workers' compensation claims. As the guidelines for workers' compensation differ from OSHA recordkeeping rules and by state, establishments with employees responsible for reporting to the SOII and also completing workers' compensation claims may have difficulty in correctly applying OSHA recordkeeping rules when reporting to the SOII.

### **3.1.6. General Recordkeeping Practices**

Establishments were asked a series of questions about general recordkeeping practices, separate from the practices at their establishment or firm for completing the 2013 SOII. If a establishment indicated that OSHA logs were maintained, they were asked about recordkeeping practices related to the OSHA log; if not, the question was altered to refer more generally to the "BLS Survey," meaning the SOII. For the purposes of determining the respondents' understanding of general recordkeeping practices, responses from these two groups are considered together.

OSHA requires that injuries and illnesses be recorded on the log within seven days of occurrence. Most establishments (68 percent) stated that cases were recorded within one week. A majority of establishments in the following sectors reported recording injuries and illnesses within a week: Mining, Quarrying, and Oil and Gas Extraction (98 percent); Construction (86 percent); Manufacturing (76 percent); Wholesale Trade (89 percent) and Educational Services (83 percent).

Establishments also reported practices that were not compliant with OSHA recordkeeping guidelines and demonstrated confusion about how to correctly identify information to be included on the OSHA log and to SOII. Approximately a quarter of establishments (28 percent) accurately identified calendar days as the basis for the determination of the number days away from work. Fifty-five percent

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<sup>18</sup> Respondents could select multiple responses to this question and percentages do not total to 100.

incorrectly identified shift days as the number of days away from work measure. Respondents in small establishments were less likely to correctly identify calendar days (25 percent) than those in mid-sized and large establishments (60 and 71 percent, respectively).

According to OSHA recordkeeping guidelines, injuries and illnesses to temporary workers should be recorded at the establishment where they are supervised. However, for establishments in companies where temporary workers are employed from staffing agencies, 37 percent include injuries or illnesses to these workers on the SOII.

Of the establishments that maintained OSHA logs, 41 percent did not add or update cases on the previous year's OSHA log, an additional 14 percent never needed to add or update cases on the log, and 35 percent did add or update cases to the previous year's log.

### **3.1.7. Recordkeeping vignettes**

In a further attempt to gauge respondents' recordkeeping knowledge about key OSHA rules, recordkeeping vignettes were asked of each respondent. As each vignette has a correct answer, it is possible to assess the sophistication of respondents' understanding of OSHA recordkeeping. The establishments who indicated that they maintain logs were asked specifically about OSHA recordkeeping while establishments that did not keep logs were asked if they would include the injury on the SOII. The responses to the questions indicate that there is considerable confusion about key OSHA recordkeeping concepts.

#### ***Vignette 1:***

"Let's say an employee sprained their ankle at work on Friday. The doctor recommended they take two days off work. They were not scheduled to work on the weekend, and returned to work on Monday."

Three questions were asked related the vignette:

- Would your company consider this recordable/include on the OSHA log/SOII?
- (If yes) Would you record days away from work?
- (If yes) How many?

The correct responses to the three questions are 1) this is a recordable case that should be included on the OSHA log/SOII, 2) that days away from work should be recorded, and 3) the number of days away from work recorded should be two. Approximately one-half of establishments (56 percent) correctly answered yes to the first question, 28 percent answered the question incorrectly, and an additional 16 percent of establishments reported that they did not know the answer. Of those who correctly said yes to the first question, about half (54 percent) then incorrectly answered that this is not a days away from work case. Of those who responded correctly to the first two questions in the vignette that this is a recordable, days away from work case, a majority (78 percent) correctly reported that the number of days away from work was to be recorded as two.

#### ***Vignette 2:***

"Let's say a worker broke their arm at work, saw their family doctor and did not file a workers' compensation claim, instead using their personal medical insurance. Would your company consider this recordable/include on the SOII?"

The correct response is that this is a recordable case that should be recorded and included on the SOII. About three out of five establishments (61 percent) correctly identified this as a recordable case.

***Vignette 3:***

“Let’s say a worker was injured, and the doctor recommended two days away from work and 10 days of modified or restricted job duties. Would your company classify this as a “days away from work case” or a “days of job transfer and restriction” case for the OSHA log/SOII?”

The correct answer is that this should be identified as a days away from work case. Twenty-nine percent of establishments correctly identified it as a days away from work case, 31 percent identified it as a days of job transfer or restriction case, while 17 percent considered it an “other” kind of case and 22 percent said that they did not know.

**3.1.8. Timing Issues That May Prevent Inclusion of and Injury or Illness Case in the SOII**

Another goal of the Respondent Survey was to determine if there are cases that occur that do not get recorded on the OSHA log or reported to the SOII due to timing issues (such as the case being reported in November or December, the case worsening after being reported, or reported/worsening after the submission of the SOII), pending workers’ compensation status, or employment considerations (such as an employee no longer working at the company). Establishments were asked if they could recall any of these instances happening at their company. Most establishments (87 percent) reported that they did not recall any of these types of timing situations occurring at any time at their company.

When asked individually about each of the specific situations, a majority of establishments indicated that none of these scenarios had ever happened and none had happened in 2013.

Despite a majority of establishments not recalling situations likely to cause missing cases or reporting that their company does not update or need to update the OSHA log, most establishments indicated (72 percent) that they could produce an OSHA log with updates if asked.

**4. Conclusions**

The goals of the Respondent Survey included determining if there were recordkeeping issues found among establishments (especially those that would lead to SOII underreporting), if the SOII could capture late cases by following up with establishments, and if establishments could supply BLS with OSHA logs after the submission of SOII.

Results show that there were notable recordkeeping issues found, especially related to the percentage of establishments who keep OSHA logs, the relatively low occurrence of recordkeeper training, the use of sources other than the OSHA forms in responding to the SOII, and in confusion related to recordkeeping knowledge in general.

The results of the Respondent Survey indicate that establishments keeping OSHA logs is not a common practice, with the about same percentage of establishments reporting that they maintain logs and do not maintain logs. Smaller establishments are less likely to keep OSHA logs than mid-sized or large establishments. Six sectors of fifteen reported more establishments maintaining OSHA logs than did not. The other sectors either reported a higher percentage of establishments that did not maintain logs or

that there was no difference in the percentage of establishments keeping or not keeping OSHA records. Even in sectors where some establishments are required to keep OSHA logs on a regular annual basis, results show that not all establishments replied that OSHA logs were kept. Also, only around a third of establishments indicated using the OSHA summary form 300A and one quarter of establishments indicated using the OSHA Case Form 301 to complete the survey.

About half of establishments reported that the person responsible for keeping the OSHA log (if maintained) had some form of formal recordkeeping training, most of whom reporting training within in the last five years. Survey questions designed to indicate understanding of recordkeeping requirements showed that there was considerable misunderstanding of these concepts. Reported answers to occupational injury and illness scenarios indicate confusion over the use of calendar days to determine the duration of an injury or illness, which is likely to contribute to the underreporting of both the total number of cases with days away from work as well as the total number of days away from work required for cases that are correctly identified. Also, similar levels of confusion over the requirement to record the injuries and illnesses of temporary workers should be examined further to determine if this increases the underreporting of injuries and illnesses to these workers

Most establishments indicated that late cases had never happened at their company but that if asked, they could supply an updated OSHA log.

Further research is required to determine if there are improvements to make in communication or training to SOII respondents about required recordkeeping. Also, improvements to SOII collection procedures should be examined, focusing on mitigating any effects that these procedures have on the quality of SOII estimates. Possible changes to SOII collection could include redesigning survey materials, increasing the use of email notifications to include first-time respondents to the survey, and providing notifications throughout the reference year.

To improve the recordkeeping knowledge of SOII respondents, BLS could provide access to currently available online OSHA Recordkeeping training modules and other training resources with SOII survey materials. BLS could also work with OSHA to help develop new training options to be made available to all establishments required to keep OSHA logs, whether as a respondent to SOII or required to keep records for OSHA. BLS's knowledge of topics where employers may be confused by or unaware of recordkeeping guidelines, gained by routine SOII data collection and the research designed to better understand the SOII undercount, can be shared with OSHA to help guide the trainings to topics most in need of improvement.