

# COVID-19 Protocol Changes and Consumer Expenditure Diary Reporting in 2020

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# Time Periods and Protocol Changes

## ■ **Baseline:** January – March 18, 2020

- ▶ Involved usual diary placement, interviewer pickup, and entry procedures (with few exceptions).

## ■ **Period 1:** March 19 – May 2020

- ▶ In mid-March the Census Bureau stopped personal visits, and the Census National Processing Center closed.
- ▶ Diary collection involved interviewers calling respondents and transcribing entries into a paper diary.
- ▶ Included phone transcription from completed paper diaries that interviewers could not pick up.

## ■ **Period 2:** June 2020

- ▶ Eligible respondents were referred to online diaries, with an alternative of phone transcription.



# Sample of Consumer Units (CUs) by Time Period

CUs with at least one week with a complete disposition

Month (2020)	Baseline	Period 1	Period 2
January	614	--	--
February	594	--	--
March	60	399	--
April	--	334	--
May	--	341	--
June	--	--	318
<b>TOTAL</b>	<b>1,268</b>	<b>1,074</b>	<b>318</b>



## Count of Diaries

Time Period	Diaries	With Entries	No Entries
Baseline	2,496	2,402	94
Period 1	2,097	2,037	60
Period 2	628	600	28
<i>Telephone</i>	424	401	23
<i>Online</i>	204	199	5

# Responding Sample Composition – Demographics

## ■ Compared across:

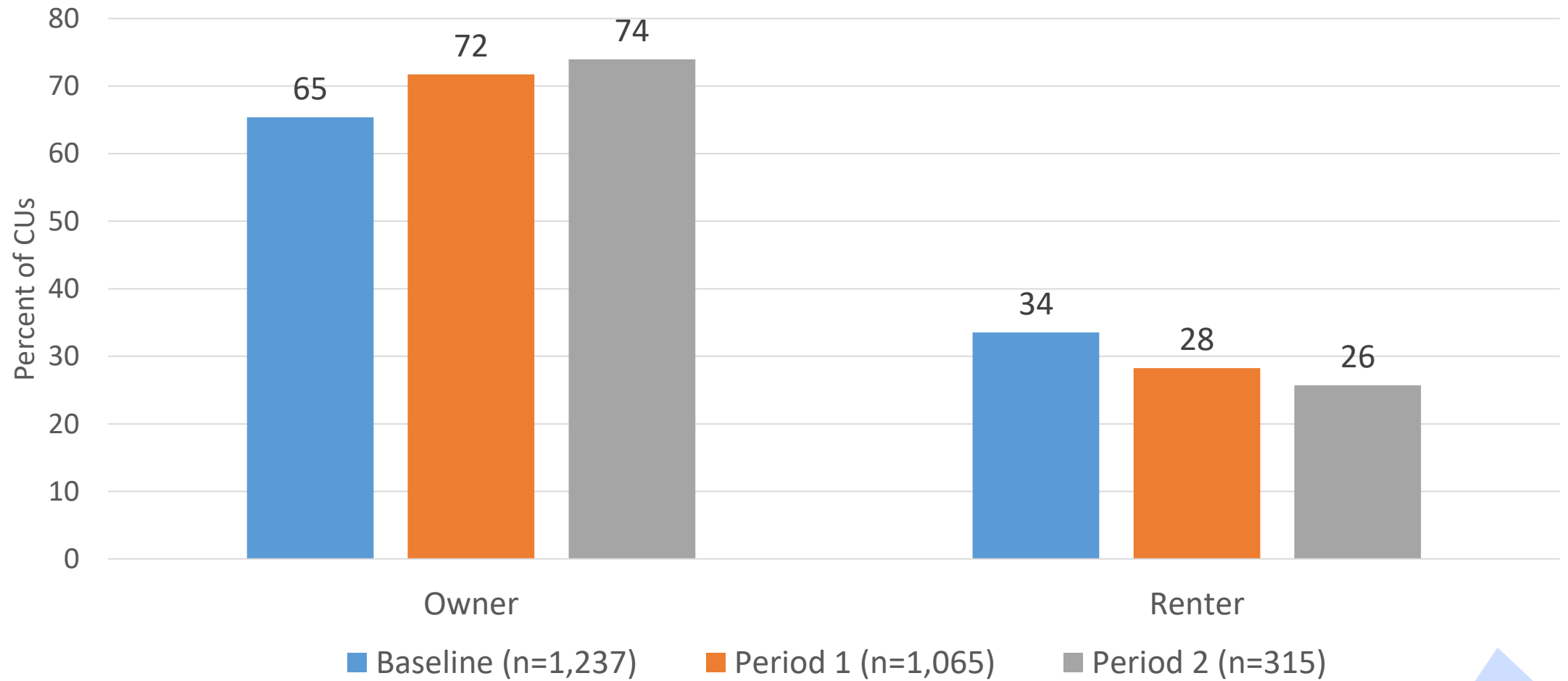
- ▶ Baseline vs. Periods 1 and 2
- ▶ Within Period 2 – Online Diaries vs. Telephone Transcription

## ■ Demographic characteristics

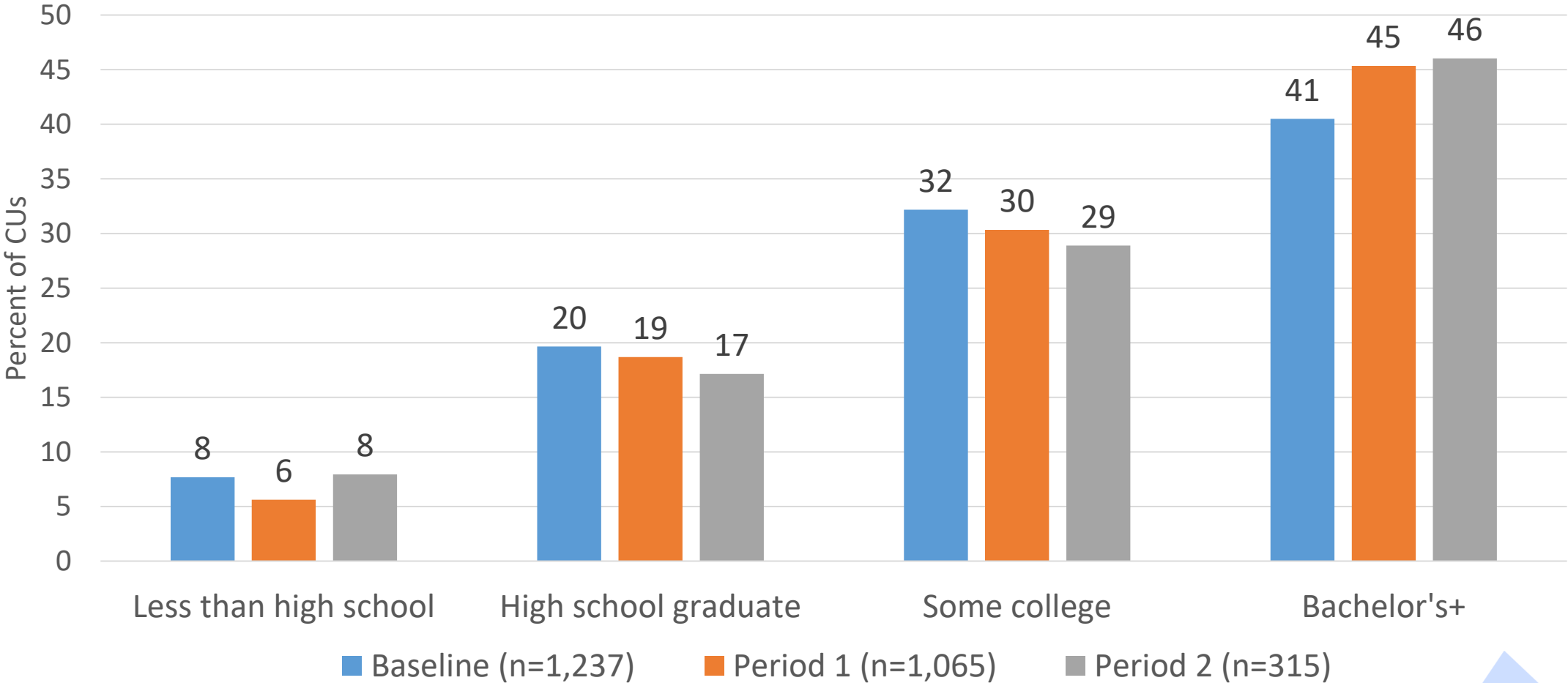
- ▶ Race, Hispanic origin, Gender, Age, and Education of Reference Person
- ▶ Housing tenure
- ▶ CU size



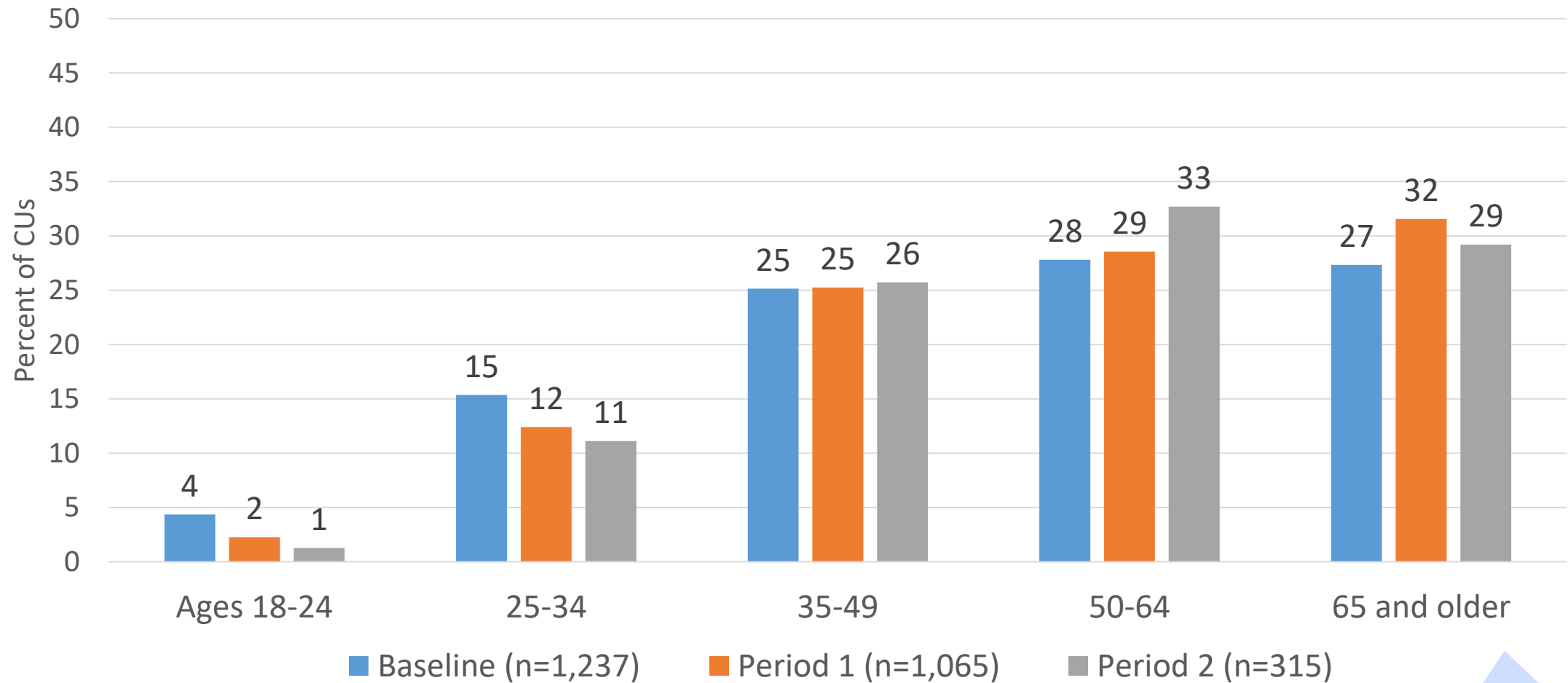
# Housing Tenure



# Education of Reference Person

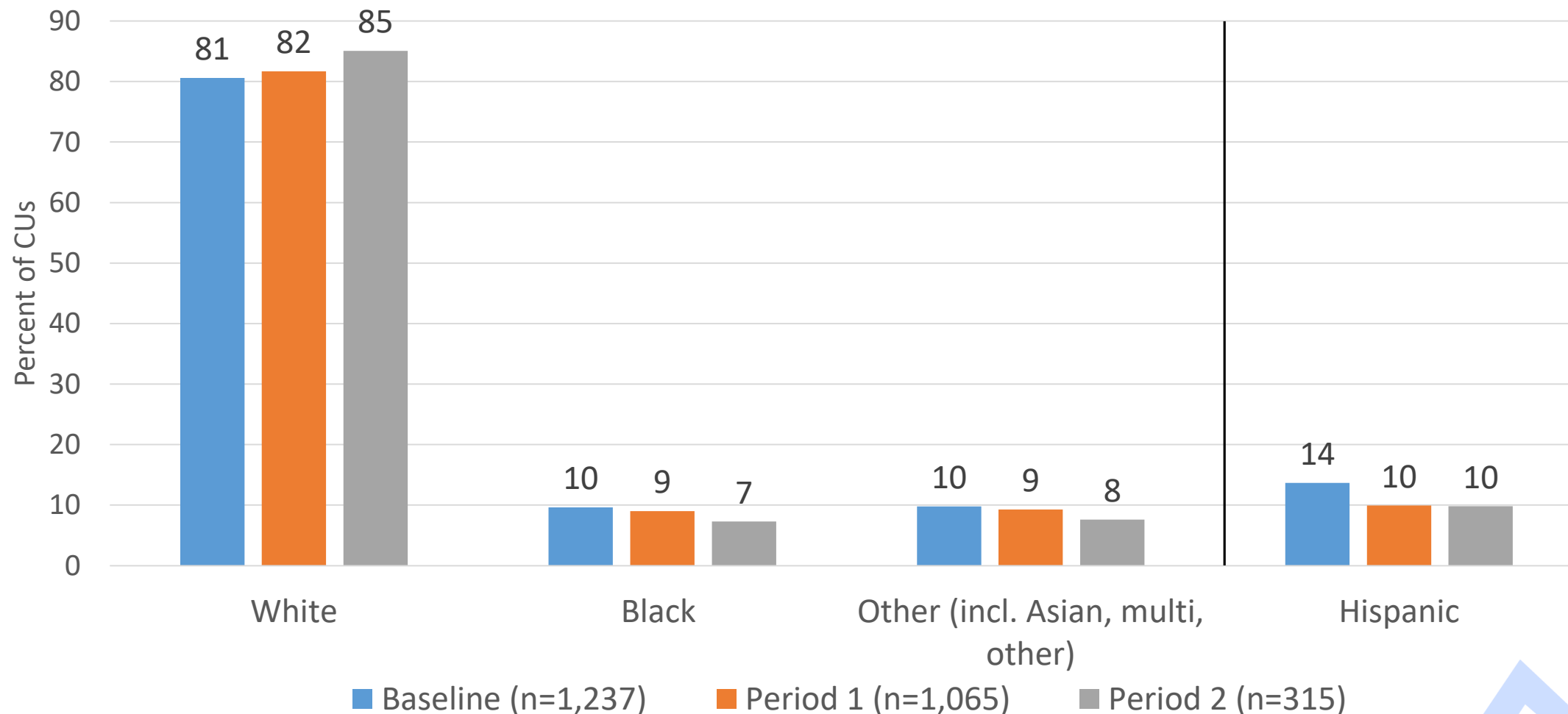


# Age of Reference Person

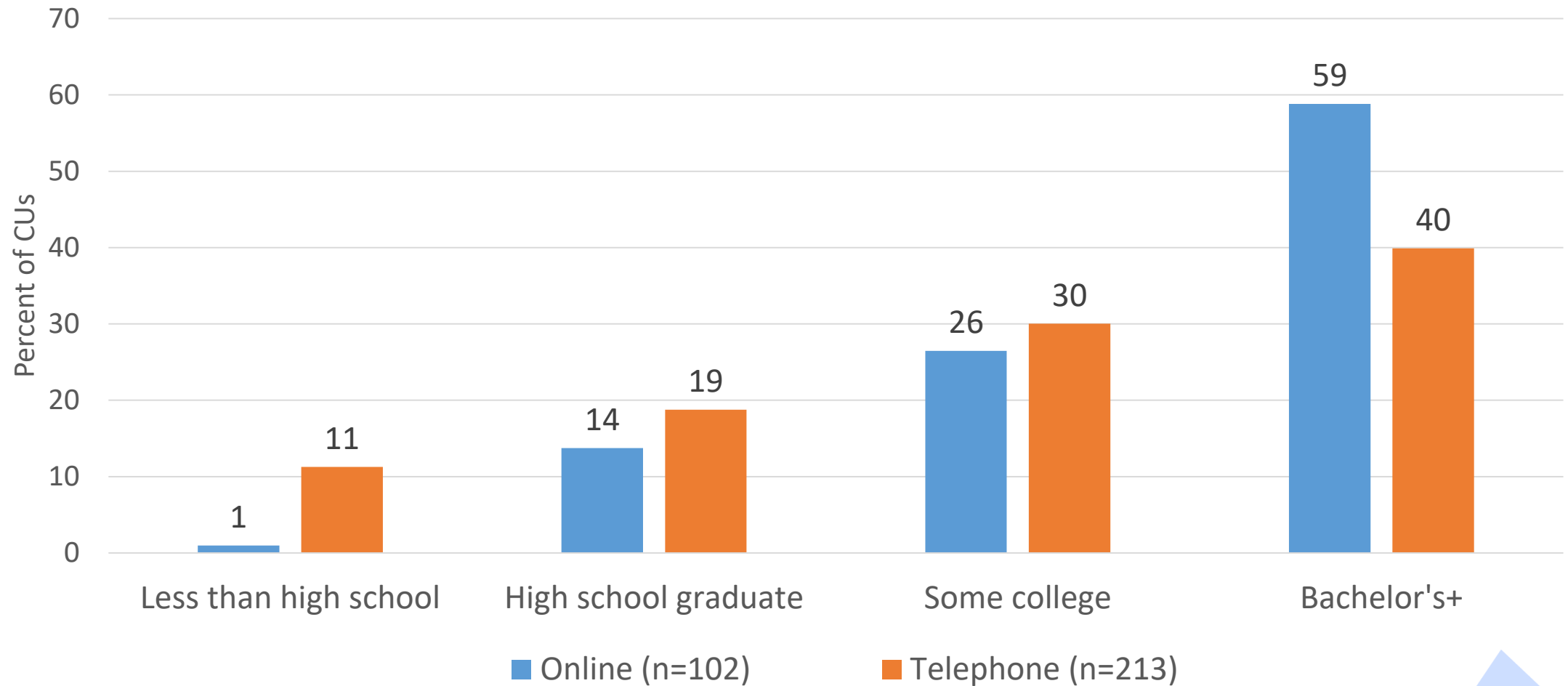




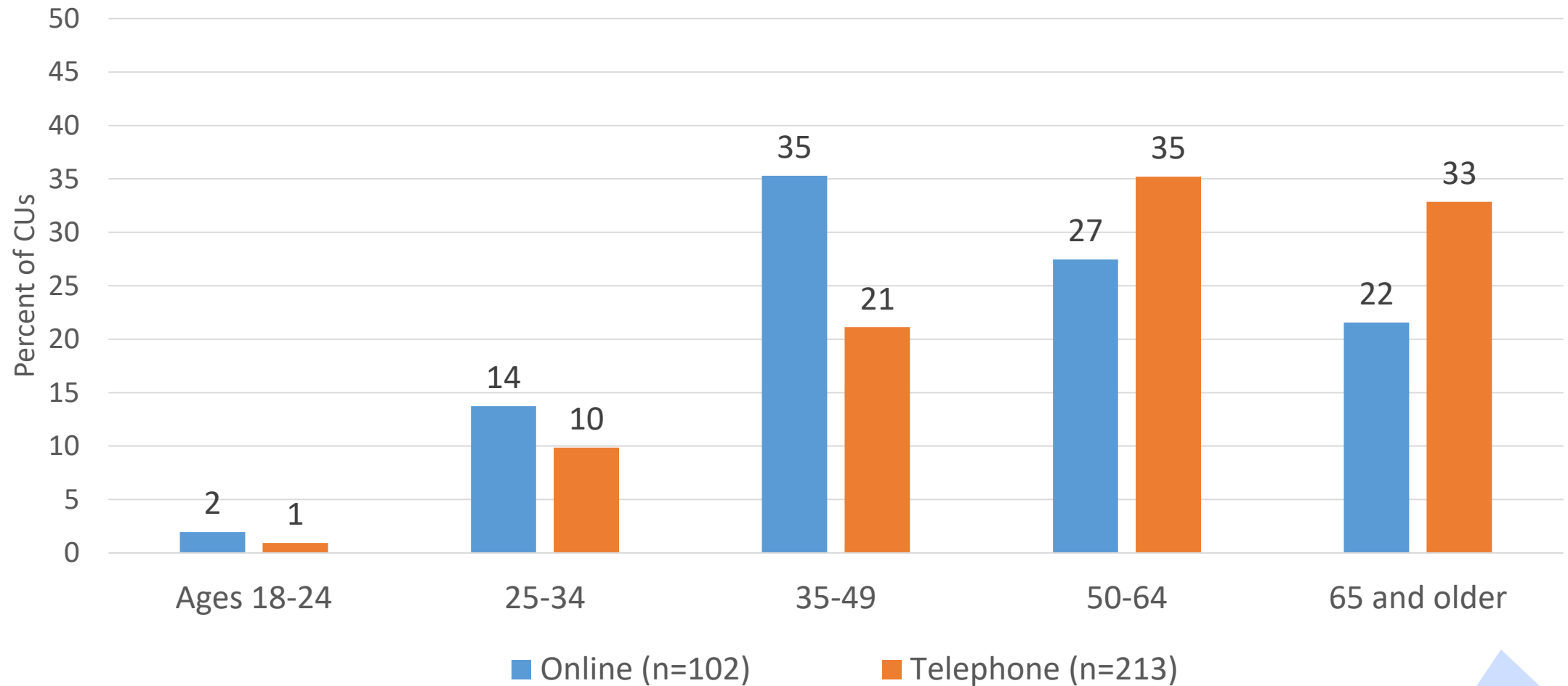
# Race/Ethnicity of Reference Person



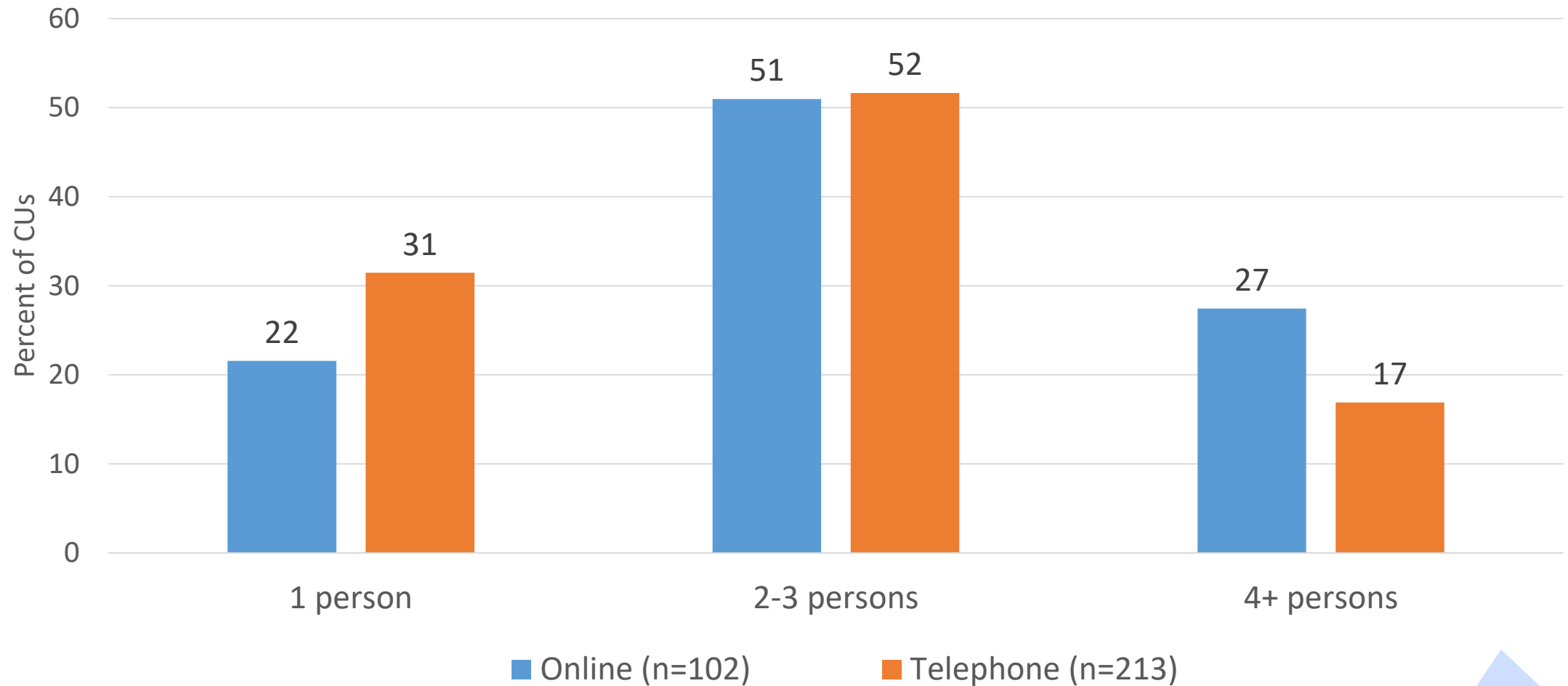
# Within Period 2: Education of Reference Person – by Mode



# Within Period 2: Age of Reference Person – by Mode



# Within Period 2: CU Size – by Mode



# Impact on Diary Reporting



# Impact on Diary Reporting

## ■ Data Quality

- ▶ Expenditure counts
- ▶ Itemization
- ▶ Recall
- ▶ Drop Off
- ▶ Item Non-Response

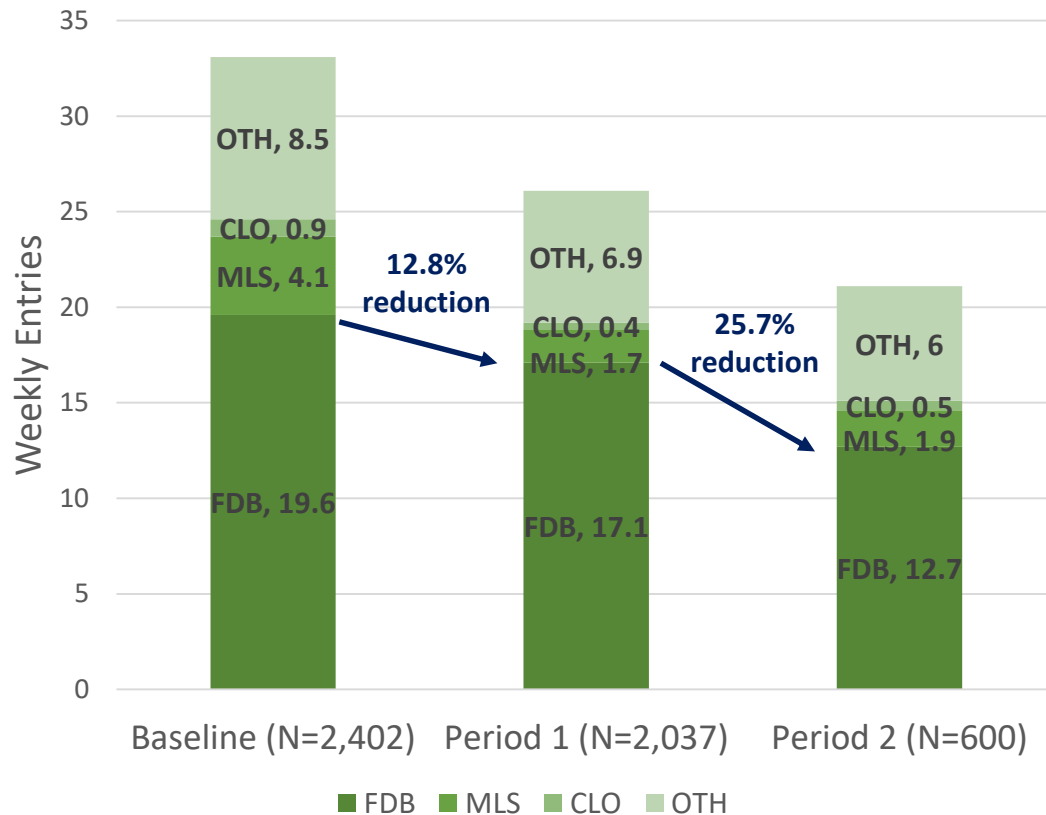
## ■ Mode Differences

## ■ Next Steps



# Counts

Change in Average Weekly Diary Entries



- Excluded blank diaries
- Decline over time in weekly entries
- Baseline to Period 1
  - ▶ 21% decline in total entries
  - ▶ Large share of decline from fewer entries in CLO, MLS (59%)
  - ▶ FDB entries declined (13%)
- Period 1 to Period 2
  - ▶ 19% decline in total entries
  - ▶ Larger reduction in FDB (26%)

# Itemization

- Examined FDB section
- Found that not all entries were itemized, despite instructions
- Increasing prevalence of item descriptions containing ‘groceries’

	Diaries	Diaries containing ‘Groceries’ description	Median ‘groceries’ expenditure
Baseline	2,402	6%	\$53.51
Period 1	2,037	11.2%	\$71.49
Period 2	600	12.5%	\$79.06

- ‘Groceries’ entries associated with large and increasing expenditure amounts

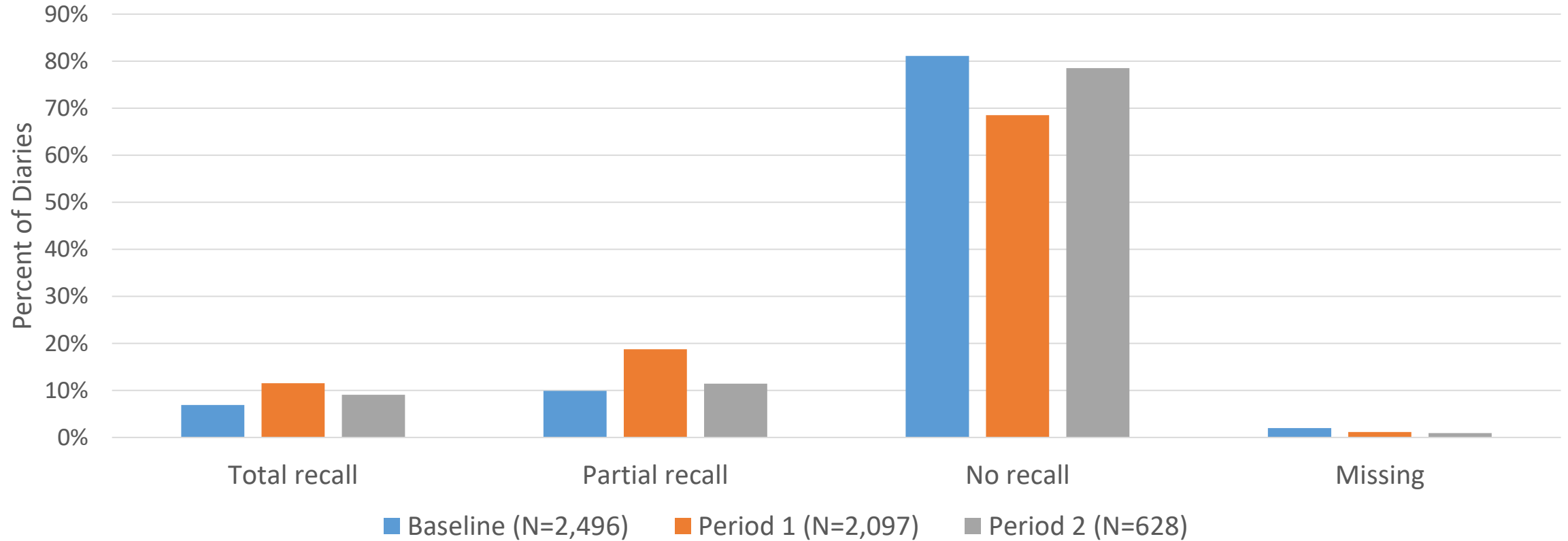




# Recall

- FRs asked to indicate at diary pickup...
    - ▶ Were there any entries added (ANYENTR),
    - ▶ Were there any expenditures added through recall (ANYRECAL)
  - Total Recall = Diaries reported to have no entries but recall
  - Partial Recall = Diaries reported to have entries and recall
  - No Recall = Diaries with or without\* entries and no recall
- \*CU temporarily absent, legitimate blank diaries

# Recall



# Drop Off

- Respondent participation in the diary-keeping task noted to decline over time
- Measure: averaged percent of each CU's two-week entries in week one
- Calculated for CUs with 1+ entry ( $CU = x_{1+2} > 0$ )

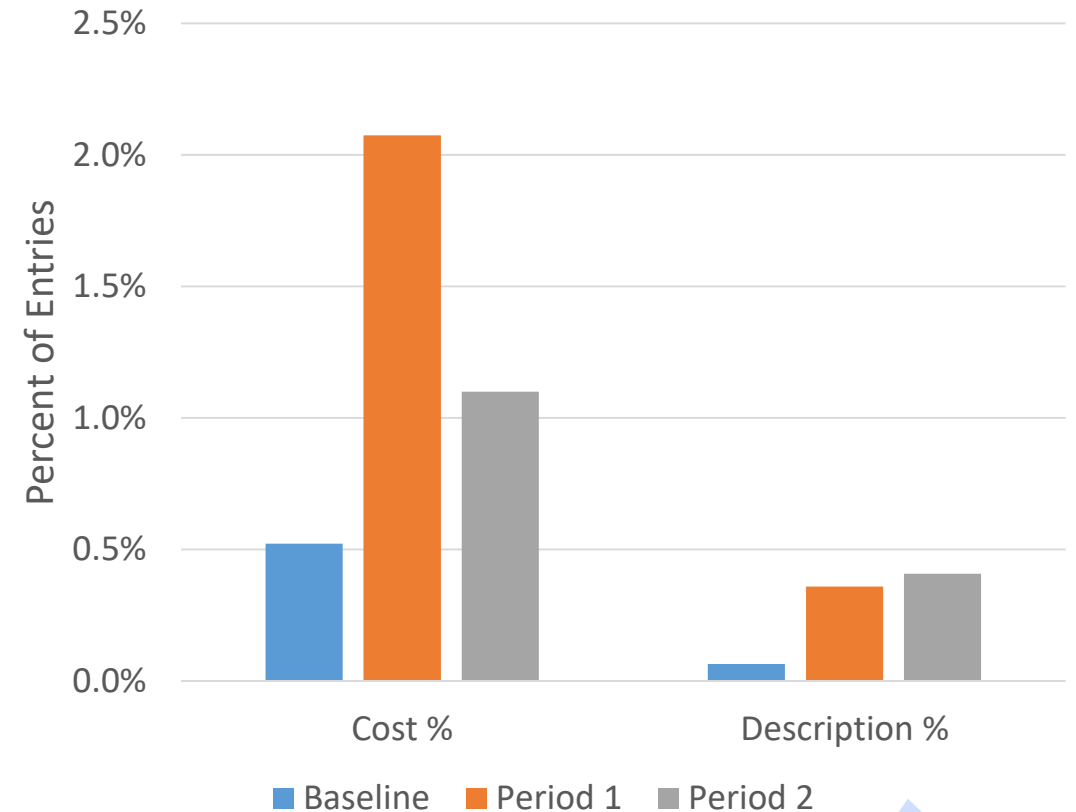
	CUs	Week 1 mean entries	Week 2 mean entries	Mean entries	Mean CU Drop Off*
Baseline	1,165	35.3	31.8	67.1	53.0%
Period 1	972	28.0	25.5	53.6	52.4%
Period 2	285	22.7	20.4	43.1	53.6%

\*Difference by period not significant

# Item Non-Response

- Examined missing data for non-blank diaries
- Excludes meals section for item description analysis
- Rates significantly increased from Baseline to Period 1
- Introduction of online diary in Period 2:
  - > lower missing for cost, but
  - > higher missing for item description

Item Non-Response in Cost and Item Description Fields







No, I was tipsy last night  
when a telephone survey called,

Directed by  
**MATTHEW NASTUK**









# Mode Differences – Period 2

- Phone transcription most frequently used (68% of CUs)
- Difference in weekly entries supplied by mode (excluding blank diaries)

	N (diaries)	Mean	Median
Phone	401	19.5	14
Online	199	24.3	17

- Although difference significant, online CUs had larger CU sizes, higher education levels
- Phone transcription diaries adhered more closely to instructions for itemizing

	Diaries	Diaries containing un-itemized 'Groceries' description
Phone	401	10.7%
Online	199	16.1%



## Mode Differences – Period 2

- Phone collection associated with an increased collection of expenditures via recall
  - ▶ 25.5% of (phone) CUs with recall, only 10.3% with recall for online CUs
- One area with improved reporting observed among online CUs, item non-response

	Entries	Entries with missing cost value
Phone	7,816	1.6%
Online	4,828	0.2%

# Summary

- Analysis found COVID-19 impacts on CED participant composition, reporting behavior
- Decline in entries of concern, likely a mix of factors:
  - ▶ Shifts in spending due to COVID-19
  - ▶ Declines in reporting quality
  - ▶ Food expenses not itemized correctly
- Moderating extents of recall and item non-response in certain fields had patterns suggesting FRs may have adjusted to new procedures over time
- Caveats: small sample size for Period 2 data, unable to control for demographics
- Little evidence online diaries exacerbated entry declines, despite some problems noted with lack of itemizing



# Next Steps

- A subsequent report will
  - ▶ further examine the introduction of online diaries (completion, recall, receipt provision)
  - ▶ rates of non-itemization of food section entries,
  - ▶ incorporate controls on CU demographic characteristics, and
  - ▶ continue analysis for the remaining months of 2020



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