

June 19, 2017

MEMORANDUM FOR Reviewer of 1220-0045

FROM Beth Rogers, Chief
Division of Safety and Health Statistics
Office of Compensation and Working Conditions
Bureau of Labor Statistics

SUBJECT Changes to Household Survey of Occupational Injuries
 and Illnesses Pilot Test (HSOII)

The Bureau of Labor Statistics (BLS) plans to change the cell phone and landline sample allocations, modify the sample size, and revise the survey instrument used for the Household Survey of Occupational Injuries and Illnesses Pilot Test (HSOII) based upon information learned from pretest results. The pretest of the survey instrument demonstrated that the survey instrument is running longer than anticipated. The proposed changes will permit BLS to collect the desired level of detail from the HSOII pilot without additional cost or loss of analytic value.

An updated survey instrument has been included with this Note to the Reviewer, which reflects all changes to the survey instrument, as well as a copy of the "Westat Pilot Study Design Report," for reference.

The key modifications to the HSOII include:

- Change the cell and landline sample allocations from 70/30 to 90/10, based on additional research and expert feedback from survey methodologists.
 - Landline-only households are currently estimated to be only 6.5% of all households (<https://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201705.pdf>), and a large portion of these contain retired individuals who would not be eligible for the survey. With a 10% landline sample, we expect about 3% of the sample to be from landline-only homes, which is acceptable for weighting purposes. This reduces the complexity and productivity losses found from trying to sample multiple people from the same home in a landline sample, or biases associated with only interviewing the person who answers the phone.

- Reduce the sample size from 5,500 to 3,520.

- The "Westat Pilot Study Design Report" states:

This pilot study will be designed to provide nationally representative estimates of prevalence of occupational injuries and illnesses over a year period (to compare to the SOII employer study). The pilot study is intended primarily to differ from the main version of this study only in terms of sample size- the pilot will not be large enough to give sufficient precision for domains (see Section 2 of the Cost-Benefit Report for a listing of these domains).

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The Cost-Benefit Analysis set an effective sample size benchmark of 5,500 employee/years (5,500 employees and a one-year time window per employee). This is the sample size necessary, assuming simple random sampling, to detect a prevalence difference of 20 percent with 80

percent power (e.g., a difference between 3.5 injuries per 100 employees per year and 4.2 injuries per 100 employees per year).

In the pretest, injury rates occurred at more than 15 injuries per 100 employees per year. For estimates of this larger magnitude (15%), small relative differences can be detected with smaller sample sizes than 5,500.

The table below, shows the variance, standard error, margin of error, and confidence intervals for injury prevalence estimates using the sample size of 3,520. Even if the prevalence is only 5% (5 injuries per 100 person years of employees), which is less than a third of the prevalence found in the admittedly small pretest, the sample size is still adequate for detecting a significant difference from the employer survey (confidence intervals would range from 4.28% to 5.72%). As noted in Westat's prior report, it will still be essential to scale up the sample size in the main study to make precise estimates within key subgroups, such as industry.

Sample size precision estimates based on sample size of 3,520

Injury Prevalence (P)	Variance	Standard Error	Margin of Error	Confidence Intervals		
0.05	5%	1.34943E-05	0.367%	0.72%	4.28%	5.72%
0.1	10%	2.55682E-05	0.506%	0.99%	9.01%	10.99%
0.15	15%	3.62216E-05	0.602%	1.18%	13.82%	16.18%
0.2	20%	4.54545E-05	0.674%	1.32%	18.68%	21.32%
0.25	25%	5.3267E-05	0.730%	1.43%	23.57%	26.43%

- Modify the survey instrument to eliminate repetitive questions and cut wordy descriptions based on pretesting of the Computer-Assisted Telephone Interview (CATI).
 - The questions asking for and referencing a brief description of the injury or illness from the screener (Q.A2c1, Q.A4b1, and Q6) were eliminated, since this information is collected in questions B1-B3. Question B4 has been eliminated as it collects similar information as question B3. Both a short and long version of the CIPSEA statement is included to help avoid attrition. There are minor revisions to some other wording and questions, such adding a “no” option to the verbatim responses in B2; eliminating a question on temp help (Q.H7); and rewording some questions in section E to cut wordy definitions of workers' compensation. The revised survey instrument is included with this submission.

These changes will not have an impact on respondent burden. If you have any questions about this request, please contact Beth Rogers by telephone at 202-691-5098 or by e-mail at rogers.elizabeth@bls.gov.