

THE OCCUPATIONAL SAFETY AND HEALTH SURVEY: INSTRUMENT REDESIGN

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Introduction

A major redesign of the Occupational Safety and Health Statistics (OSHS) system, the nation's primary source of information on job-related injuries and illnesses, began in 1988. The OSHS survey is a mandatory Bureau of Labor Statistics (BLS) survey, and is collected via mail in cooperation with State agencies. In order to fully convey to the reader the extensiveness of the OSHS redesign, this paper begins with a brief historical development and overview of the program.

Historical Overview¹

Occupational Safety and Health Act

The Occupational Safety and Health Act of 1970 requires the Secretary of Labor to develop an effective program of occupational safety and health statistics. In 1971, the Secretary of Labor delegated to the Commissioner of BLS the responsibility of furthering the purposes of the Act "by developing and maintaining an effective program of collection, compilation, analysis and publication of occupational safety and health statistics." The Secretary further directed the Commissioner of BLS to coordinate the above functions with the Assistant Secretary for Occupational Safety and Health.

OSHA Recordkeeping System

The recordkeeping system, which is the foundation of BLS's statistical program, was developed to aid the Occupational Safety and Health Administration (OSHA) in setting standards, to assist safety and health officers in identifying hazardous operations, and to provide BLS and State agencies with uniform and reliable safety and health statistics. Further, the statistical program would provide employers and employees with information about conditions at their workplace.

In 1978, a recordkeeping form designed to streamline OSHA mandated recordkeeping and reporting was implemented. It is referred to as the Log and Summary of Occupational Injuries and Illnesses (OSHA 200) or simply the OSHA Log. Until 1991, BLS managed the Log for OSHA, distributing copies to employers, and ensuring that recordkeeping guidelines were conveyed

clearly. The employer is mandated to record onto the OSHA Log all work-related deaths, illnesses, and injuries. Furthermore, the employer is required to describe each case in detail using a supplementary record such as the OSHA 101 provided by OSHA, or by using some equivalent form, (i.e., a form that includes all necessary information) such as a State worker's compensation form. Distribution of OSHA 101 was also managed by BLS for OSHA until 1991.

Annual Survey of Occupational Illnesses and Injuries

Shortly after the Occupational Safety and Health Act was enacted, BLS in cooperation with State agencies began to conduct the Annual Survey of Occupational Injuries and Illnesses providing national measures of the incidence and severity of workplace injuries and illnesses. The Annual Survey is collected via mail from a probability sample of approximately 280,000 establishments in private industry. Participation in the survey is mandatory. Establishments with 11 employees or more are in scope, and self-employed persons are not covered by the survey. Prior to the redesign, each sampled establishment provided summary totals of the number of injury, illness, or fatality cases experienced during the calendar year. The total numbers of lost work days and days of restricted activity were also collected, as was annual average employment and total hours worked by employees. Employers copied information for the injury and illness portion of the Annual Survey directly from the OSHA Log that they maintained throughout the year. All employers covered by the Act are required to maintain the Log with the exception of employers with fewer than 11 employees, and employers in low-risk industries such as retail and real estate. The Annual Survey samples employers who are ordinarily exempt from this recordkeeping requirement, but these sampled employers are required to maintain the OSHA Log for the year they are in the survey.

Supplementary Data System

Not long after the Annual Survey began, safety and health analysts and other interested parties identified a need for greater detail than that of incidence rates. They requested information about the characteristics of the occupational injuries and illnesses and the workers to whom they were occurring. It was generally recognized that records routinely generated by

¹Portions of the Historical Overview were taken from the BLS Handbook of Methods, Bulletin 2285.

State workers' compensation programs such as employee and employer reports, medical reports, compensation award records were all valuable sources of information about occupational injuries and illnesses. As a result, State workers' compensation agencies began, in 1976, to participate in BLS's Supplementary Data System (SDS).

The SDS program was conceptualized as providing data to "supplement" that provided by the Annual Survey. The program's source of information was a first report of injury or illness, which employers and insurance carriers submit to State workers' compensation agencies. SDS data have helped in the identification of general patterns in the characteristics of work-related injuries and illnesses. The SDS program, never designed as a nationwide system, was established in cooperation with 27 States, and included anywhere from 12 to 36 cooperating States in a given survey year. Although the SDS provided valuable information and standardized the classification, processing, and tabulations of data, it was never a complete census of occupational injuries and illnesses. In addition, it suffered from variations in coverage and reporting requirements that reflected differences in State workers' compensation laws.

Programmatic Review

By the mid-1980's OSHA, BLS and numerous representatives of business and labor had begun to feel that the existing BLS safety and health surveys should be integrated into one internally consistent statistical system. For example, the National Academy of Sciences (Pollack, & Keimig, 1987) in reviewing BLS programs felt that the Annual Survey did not provide needed information about the worker and the circumstance of the case, within an industry context. Also, the SDS was deemed insufficient because of its partial case coverage and lack of consistency across all States. It was recommended that the Annual Survey be modified to include specific categories of injuries and illnesses, thereby folding SDS type of data and incidence data into one internally consistent program that could produce national estimates on both incidence rates as well as case characteristics.

The BLS, in responding to these recommendations began an all-inclusive redesign of the Occupational Safety and Health System (OSHS). The redesign effort has included a review of all aspects of OSHS: Survey content, sampling, forms design, collection and processing. This paper will focus on the survey instrument redesign effort: changes in content and question wording; forms redesign; methodology utilized to test the "new" survey format; the data analysis and resulting survey revisions.

Revisions to Survey Content

The OSHS survey was expanded to include details about the specific injuries and illnesses incurred by employees. The following details were added to the survey:

Details About the Injured Worker

Name and social security number
Gender, Age, and Ethnicity
Length of service at the establishment
Occupation

Details About the Injury or Illness

When did the injury occur?
How many days of lost work or days of restricted work activity resulted?
What was the employee doing just before the incident occurred?
What happened - how did the injury or illness occur?
What was the injury or illness - i.e., what part of body was affected and how was it affected?
What object/ substance directly harmed the employee?

The employer is asked to provide the above information on each illness or injury case that occurs in the workplace. A prediction is made as to the expected number of cases an employer will have, and the appropriate number of "case forms" are provided. If the employer is expected to have more than 20 cases, instructions are included in the survey directing the respondent to sample from their list of injuries and illnesses so as to minimize, as much as possible, their response burden .

Survey Redesign: Research and Development Redesign Overview

The survey redesign portion of the project began in 1989 and consisted of several pilot/feasibility studies investigating alternative survey formats. As previously discussed, programmatic emphasis was placed on expanding the data base to include not only incidence rates of injury and illness by industry, but to provide demographic characteristics of the injured worker as well as begin to collect detailed information on the incidence itself. In 1991, the decision regarding the expanded scope of the survey was finalized. The complexity of the survey was such that the design of a booklet format became a necessity, and forms redesign efforts intensified. The objectives were four-fold:

1. Develop a booklet survey form with accompanying instructions that was "user friendly."
2. Design a questionnaire format with a built-in flexibility that would permit certain minor vari-

ations in item content. (These variations are required in order to maximize the survey's utility across the nation.)

3. Test and evaluate old (i.e., rephrased) questionnaire content as well as new survey items.
4. Test and evaluate the final product, i.e., the redesigned OSHS survey that was developed.

To achieve these goals, a variety of behavioral science and test development methods were used, each of which added a different perspective to our knowledge base and forms redesign efforts. (For an overview of these methods see Forsyth & Lessler, 1990; Gower & Nargunkar, 1991; and Jabine, Straf, Tanur, & Tourangeau, 1984.) Focus groups (Krueger, 1988) were used primarily in the beginning of our test development efforts to refine the scope of the survey, the item wording, and obtain a gross estimate of respondent burden. Respondent observations using a think-aloud protocol (Mullin, Miller, Melis-Wright, & Stone, 1981) were used when the survey redesign approached completion. Pretest mailing of the survey (Dillman, 1991) with an accompanying respondent (probing) questionnaire served as the last step in the "test development" phase prior to fielding the survey. These "pretest" respondents were also contacted via phone and asked additional questions regarding their response to the redesign of the survey.

The sections that follow present the developmental steps that led to the final survey booklet: the early feasibility studies, pilot studies, and repeated testing of draft survey booklets.

Feasibility Studies

During 1988, twelve feasibility studies (Bureau of Labor Statistics, 1988) were conducted by BLS. Cumulatively, the studies collected data from 20 States and sampled about 100 establishments per State (a total sample of 2000 establishments). These studies were exploratory in nature designed to find out what kind of records/data employers kept on workplace injuries and illnesses, and to inquire whether employers were willing to share these data with BLS.

The research was conducted via mail, and respondents were asked to voluntarily submit copies of particular records. Depending on the study, employers were asked to send in copies of the OSHA Log, first reports of injury, and/or injury forms filed with Workers' Compensation. The feasibility studies yielded encouraging results: Most employers maintained the OSHA Log and some accompanying first report of injury. Moreover, they were generally willing to report on the data contained in these documents.

As a result of these positive findings, BLS proceeded to further elaborate and clarify the data elements that would eventually be added to the Annual survey. To assist in their effort, BLS solicited input from the survey data user community requesting suggestions for data elements of interest to various groups. A variety of organizations were approached: OSHA, National Institute for Occupational Safety and Health (NIOSH), the BLS Labor Research Activity Council (LRAC), the BLS Business Research Activity Council (BRAC) as well as many State Labor and State Health Departments.

Pilot Studies: Phase I

In 1989, BLS returned to the field for additional research. The primary objective was to investigate which of the numerous data elements generated internally by BLS staff and/or suggested by the survey user community were collectible. A second objective was to investigate the utility of certain basic changes in existing records and/or data collection formats. The reader will recall that in addition to conducting the Annual Survey, BLS managed (for OSHA) the OSHA Log and OSHA 101 - the supplementary record developed to provide case injury or illness detail. With these pilot studies BLS was exploring improvements to all safety and health related data collection formats.

Five pilot studies were conducted in a total of fifteen (13) States (Bureau of Labor Statistics, 1989). About four hundred (400) establishments were sampled within each State yielding a total sample of approximately 5200 establishments, or 1040 establishments per pilot study. The five pilot studies were as follows:

- Pilot 1.** Testing a record keeping format that combined the information collected via the OSHA Log and first report of injury (e.g., OSHA 101) into one form. The employer was also asked to code cases identifying the nature of the injury, the part of body effected, and the source of the injury.
- Pilot 2.** Testing the same record keeping format described in Pilot 1 above, with the exception that the employer did NOT have to precode data.
- Pilot 3.** Testing a revised supplementary record (OSHA 101). As with Pilot 1, the employer was asked to precode case characteristics.
- Pilot 4.** Testing the revised supplementary record described in Pilot 3 without the coding of case characteristics.

Pilot 5. Within this study, respondents were asked to submit a copy of the OSHA Log. The State then attempted to match the injury and illness cases identified on the log to the State workers compensation files submitted by the establishment, and extract the appropriate data elements regarding case characteristic details. The reader will recall earlier discussion (see Historical overview) on the detailed data generally available within State workers' compensation agencies.

Analysis of the five pilot studies resulted in a greatly reduced list of data elements under consideration for inclusion in the Annual Survey. Further, it was concluded that employer self-coding was not a feasible pursuit. Employers made too many errors when asked to apply an unfamiliar coding scheme to their own records.

Pilot Studies: Phase II

In 1990, BLS began a second phase of pilot studies. Starting from where the first set of pilots left off and applying the knowledge gained, BLS proceeded to refine and retest the collection methodologies described in Pilots 2, 4, and 5 above. As before, each pilot study was conducted in three States (9 States in total) and approximately 400 establishments per State, yielding a sample size of approximately 1200 establishments per pilot study. Once again, employers were asked to:

- a. Complete a record keeping format that combined the information collected via the OSHA Log and first report of injury into one form.
- b. Complete a revised supplementary record (OSHA 101).
- c. Submit copies of the OSHA Log with the State following improved procedures to match cases identified by the employer to the workers compensation forms filed with the State.

As this phase of pilot studies was being conducted, OSHA and BLS agreed to separate the mandatory record keeping requirements and accompanying documents from the statistical survey or data collection aspects of occupational illnesses and injuries. This separation was welcomed by BLS, interested in increasing the distance between its pledge of confidentiality and data collection for statistical purposes only and OSHA - a government agency responsible for assessing fines for noncompliance to Safety and Health regulations. Consequently, BLS transferred all re-

sponsibility for the distribution and revisions to the OSHA Log and the supplementary record (OSHA 101) to OSHA. Taking the data collected thus far from the Phase II pilot studies, as well as the earlier BLS feasibility and Phase I pilot studies, OSHA began its own efforts at revisions to the OSHA Log and accompanying supplemental record. BLS was free to focus solely on implementing revisions to the statistical portion of occupational injuries and illnesses program, i.e., the Annual Survey. Momentum increased as development work was directed solely on the survey booklet - "Survey of Occupational Injuries and Illnesses".

Development of Survey Booklet

As the pilot studies were concluded, BLS entered a different stage in the survey instrument redesign. BLS now had a clear sense of direction with respect to the type of questions that would be added to the survey, and felt confident regarding the availability of employer records on the data of interest. It was decided that in order to accommodate the additional data elements and provide (survey completion) instructions that were clear and easy to follow, the survey instrument would have to be re-conceptualized. The Annual Survey thus changed from a 6 x 11 multi-part pin fed form, to a 8.5 x 11 multipage booklet. Development work from this point on focused on testing and refining the booklet format, the wording of newly developed items, and the accompanying survey instructions. Such testing required a different methodology from the large scale pilot testing conducted thus far. Sampling a large number of respondents at a time was no longer necessary. What was needed was to access a few respondents at a time and ask them to look at the survey booklet and provide BLS with detailed feedback.

First Draft: Focus Group and Respondent Interviews

In September 1990, a study (Palmisano, 1990) was designed to: (a) investigate the clarity of newly developed item wording and (b) evaluate the respondent's perceptions of a test version of the survey booklet -- how the content and format would impact on the ability to effectively, efficiently and accurately complete the survey. The study was conducted in two phases: the first consisted of a group of twelve (12) BLS employees, and the second consisted of five (5) individual interviews with representatives of business establishments from the private sector. All interviews were videotaped to assist with later analysis. BLS employees were chosen, partially for ease of access, but primarily for their lack of knowledge of safety and health related forms and recordkeeping guidelines and for their extensive experience with various other

"government forms". It was felt that this latter group of individuals would be in a position to comment on the strengths and weaknesses of a BLS survey having as a comparison the various forms they worked with on a daily basis. The five representatives of business establishments had experience completing the OSHA recordkeeping forms as well as the Annual Survey, and could comment on how this "new" booklet fared in comparison.

Furthermore, the two phases were expected to yield very different kinds of information: From a focus group, one expects the feedback/information to grow out of the group interaction -- one group member adding to, confirming, or disagreeing with that said by others. With one-to-one interviews, the focus is solely on the interaction between the respondent and the instrument. From such observation, one can expect greater emphasis on details and a more carefully considered reaction from the respondent. Being alone, the respondent has to feel strongly enough about a comment in order to verbalize it and cannot, as in a group, simply agree with what was stated by others.

Respondents were first asked to complete the survey booklet, and then to discuss the document listing its best and worst features, and why they thought particular features were important. The survey booklet consisted of the following: a section asking for summary data of injuries and illnesses; a sampling matrix designed to enable the employer with many cases (of injuries and illnesses) to sample a smaller number of those cases and thus reduce response burden; and copies of a case form designed to collect individual details from the sampled cases.

Data analysis revealed weaknesses in the clarity of instructions and certain item wording but, most importantly, revealed problems with the sampling matrix. Specifically, respondents found the case sampling matrix overly 'mathematical' and difficult to use, and the accompanying instructions confusing. Additionally, differences between the BLS employees and representatives of business in the type of difficulties encountered with the booklet revealed invaluable information about a "private citizen's" attention span in reading "government instructions". Instructions would have to become greatly simplified to ensure that respondents would understand them after only a cursory glance.

Results of this study led to a thorough review and revision of the contents and form of the survey booklet.

Second Draft: Respondent Interviews and Mailout Testing

BLS returned to the field in 1991 to conduct further field tests. The revised booklet was subjected to

two different types of testing: intensive "cognitive" testing involving interviews with one respondent at a time, and mass mailing of the booklet (Palmisano, 1991). Each methodology was designed to test a different aspect of the booklet.

Second Draft: Interviews with Respondents

It was decided to interview respondents from a broad range of geographic locations, establishment size, and industrial classification. Nineteen (19) interviews were conducted within establishments located in four States. Half of the establishments sampled were members of industries with typically high rates of recordable injuries and illnesses, and the remaining half were members of industries with low rates of recordable injuries and illnesses. Further, half of the sample consisted of establishments with more than 50 employees; the other half consisted of less than 50 employees. As may be obvious, establishment size and typical incidence rate for the establishment industry speaks to the level of sophistication and experience we expected a respondent to bring to bear in reviewing and commenting on the test survey booklet.

Each respondent was interviewed (and videotaped) within his/her establishment. As with the study described above (see First Draft) respondents were given a survey booklet containing a section asking for summary data of injuries and illnesses; sampling instructions designed to enable an employer with many cases (of injuries and illnesses) to sample a smaller number of those cases; and copies of a case form designed to collect individual details from the sampled cases. This time the respondents were also given a mock OSHA Log listing several "cases" and a number of completed mock supplementary forms. The latter contained the detailed characteristics pertaining to the cases listed in the mock Log. The supplementary forms were workers' compensation forms appropriate to each State in which the testing took place. These mock documents were provided to respondents in order to achieve standardization of recordkeeping documents across respondents. The focus of the study was on the interaction between each respondent and the survey booklet. Standardizing the documents respondents needed to use in completing the test survey booklet was quite important as it prevented the results from being confounded due to any variability of records maintained across establishments. A great deal of time was invested in generating these mock documents. It was deemed important that the documents be representative of what is typically found within establishments, so care was taken to ensure that a variety of injuries and illnesses were represented; not all the data were com-

plete; the records were not typed; and handwriting was not always legible, etc.

Respondents were asked to complete the test survey booklet using the Log and supplementary forms provided. They were not allowed to ask for assistance while they were in the process of completing the booklet. Respondents were told in advance that they should note any problems encountered directly on the booklet and, despite the problems, should continue as best they could. After they completed the survey, all respondents participated in a debriefing interview focused on elaboration of the problems experienced while completing the survey.

Second Draft: Large Scale Mailing

Survey booklets were mailed to a total of 1275 establishments located in three States. The test sampled establishments who, based on previous survey years and knowledge of industrial classification were expected to have a large number of cases to report. Completion of the test booklet was voluntary, as indeed was participation in all the tests discussed in this paper. Employers were informed via an enclosed letter that they had been selected to take part in the testing of the OSHS redesign, and were requested to complete the survey booklet.

Analysis of results (Finch, Enochs, Carder, 1991; Laundrie, 1991; Winter, Young, & Dorton, 1991) focused not only on the quality of the completed surveys, but also on an evaluation of the data collection and processing aspect of this newly developed survey format. In other words, it was important not only to develop a survey booklet that was easy for a respondent to understand and complete, but the booklet had to lend itself to internal (BLS) review and processing. The new booklet had to pass two litmus tests if you will: one by respondents, and the other by the cooperating States involved in processing the data.

Data from both the large scale mailing and the interviews with individual respondents were analyzed and the booklet was reviewed extensively. It was concluded that the wording of the new data elements was acceptable, as was the wording of most of the instructions. However, the forms design needed to be improved and simplified and, more importantly, so did the sampling matrix. Respondents were still having difficulties knowing which cases they were required to report on the survey booklet -- the instructions for sampling from the cases listed on their OSHA Log needed to be simplified. Appropriate revisions to the survey booklet were implemented and BLS returned to the field for another round of testing.

This particular set of revisions was pivotal in the OSHS program redesign process. Data had been ac-

cumulating that the survey data collection instrument needed to be simplified as much as possible. Further, BLS staff were becoming increasingly concerned that the size of the booklet (as conceived at this stage of development) would prove too daunting to many respondents and thus reduce response rate. As a result, it was decided to produce four different versions of the survey booklet, each version containing a different number of copies of the page (within the survey booklet) designed to collect details about the individual injury and/or illness. Based on prior years of survey data collection, BLS is able to make a prediction regarding the number of cases with injury and illness each sampled establishment is expected to have. Establishments expected to have a large number of cases with injury and illnesses would be mailed a survey booklet with a larger number of these "case pages", and establishments expected to have a few cases, would be mailed a booklet containing a few copies of the case page. Obviously, producing more than one version of the survey booklet greatly complicated the survey printing, mailing and quality control procedures as well as the overall cost of the OSHS survey program. Nevertheless, this decision was in keeping with programmatic mandate for the OSHS redesign -- to develop a "user friendly" instrument while collecting more detailed information on injuries and illnesses.

Throughout the development of the various drafts of the survey booklet, the BLS benefited from the assistance and feedback of the State Advisory Committee on Occupational Safety and Health (SACOSH.) This advisory committee was chartered to advise the BLS on matters related to OSHS redesign. It is composed of members of the States involved in collecting the OSHS data. Certain SACOSH members were proponents of developing a survey booklet that would request minimal data from the respondent and require the State to collect the rest of the data by accessing the State Workers Compensation data files. For States having the facility to access the workers compensation files via computer, this was seen as a viable option and a further move towards reducing respondent burden. Consequently, BLS produced yet another variation of the survey booklet: The "workers compensation survey booklet". It looked very similar to the "standard booklet", and also had four versions each containing different numbers of the individual case page. However, the "Workers compensation" booklet asked the respondent at a certain point within the individual case page to proceed no further if a particular case had been submitted to the State workers' compensation office, thus effectively reducing the time needed to complete the survey.

Third Draft: Think-Aloud Protocol

In early 1992, BLS began the final round of tests on the survey booklet (American Institutes for Research, 1992). Revisions as a result of information learned during second draft testing (see above) had produced a survey booklet that BLS staff felt comfortable with. The survey booklet instructions were clear and simple to follow. The forms design was utilitarian, providing visual clues early on in the document that assisted the respondent in maneuvering through the form. The sampling method (for employers expected to have many cases of injuries and illnesses) was greatly simplified and could be followed without a great deal of effort.

Nine (9) establishments were sampled and individuals working in the safety or health departments interviewed and videotaped. The respondents completed the test booklet using a think-aloud protocol and their own injury/illness records as source documents. The respondents were asked to complete the test booklet one page at a time and encouraged to "think aloud" or verbalize how they interpreted the material they were reading, and what questions they had along the way. At the end of each page of the booklet, respondents were asked prepared questions and explored any problems they had along the way. At the end of the test session, respondents were asked to complete two questionnaires: one about the test booklet and the other about their background and familiarity with Safety and Health recordkeeping documents.

Analysis of the videotapes revealed very positive findings. None of the participants had problems with the overall design of the survey, the case sampling, nor the majority of instructions. These instructions were revised as were a few items found to be in need of minor wording changes, and reordering.

Final Draft: Pretest Mailout and Respondent Debriefing

The final draft of the survey was mailed to 215 respondents located in six States (American Institutes for Research, 1992). As with the second draft of the booklet, respondents from a broad range of establishments in terms of size and industrial classification were sampled. The sampling was purposeful, designed to obtain respondents with maximum variability in exposure to safety and health regulations and cases of work-related injuries and illnesses. Each respondent was mailed a test survey booklet, a survey questionnaire, and a cover letter describing the purpose of the test. The survey questionnaire asked respondents questions about their experience in completing the booklet: the time it took to complete the survey; availability of in-house records needed as source documents; various

probes related to answers provided; suggestions for improvement, etc.

After completed survey booklets were received and reviewed, respondents were called and asked follow-up questions about the survey. This "respondent debriefing" included prepared questions asked of all respondents as well as specific questions related to the way a particular respondent completed the booklet. It is interesting to note that all establishments sampled had been in the sample for the Annual Survey that year, and therefore, had completed the "official survey" a few months prior to this mailout test. Despite this additional burden all respondents were obliging and giving of their time.

Analyzing the completed survey booklets, the questionnaires, and evaluating the phone interviews, it was concluded once again that respondents had little trouble with the overall design of the survey. There were very few problems with the survey's wording, and areas where some employers became confused were minor enough so as to warrant minimal changes to the final survey booklet. Phone interviews with respondents proved particularly useful in determining the sensitivity respondents had to certain items. Though the sampled respondents completed all items, they did not particularly like providing certain information. Respondent debriefings are particularly useful in eliciting information that cannot not be obtained from a review of the completed survey booklets. The importance of such information is further underscored when one considers that in a survey with a sample size of 280,000 establishments (such as the OSHS) such response sensitivity could reflect thousands of complaints and perhaps even a decrease in response rate. In this particular case, the sensitive items were deemed to be of great importance to the survey and were retained. However, other steps were taken (programmatically) to reduce any potential negative impact on the survey and its contents.

Although specific details of any portion of the OSHS redesign are beyond the scope of this paper, two examples of steps taken to reduce potential negative impact of the redesign should be mentioned: The BLS engaged in an extensive "outreach" effort that involved the development of outreach materials (slides, outlines, talking points) for use by the cooperating State agencies. An outreach brochure was developed to announce the arrival of the redesigned Annual Survey, and was sent to establishments that had been in the sample for more than one year. Furthermore, numerous national organizations were contacted via mail and asked to include a notice of information about the Survey changes in mailings to their constituents. Many organizations included this notice in their newsletters

and/or magazines. Others chose to send the notice under separate cover to their membership.

An alternate method developed to reduce any potential negative impact of the survey, its changes, and sensitivity to its contents was providing an entire page in the survey booklet for respondent comments and feedback. The backpage of the survey booklet, designed to appear friendly and inviting, requests comments or suggestions about the survey -- what respondents liked as well what they didn't. The BLS is sincere when adding: "We will review and carefully consider your comments and ideas as we work to improve our survey." BLS is currently in the process of collecting, collating and coding all the comments we have received. Soon, we will be in a position to address revisions to the "redesigned" Annual Survey of Occupational Injuries and Illnesses. The process will begin all over again and we will return to the field to test, once more, changes we have made to the survey booklet. In light of lessons learned these past few years of redesign, the OSHS survey is now considered to be an ever changing program under a process of continual improvement.

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