Customer Satisfaction Survey

NIOSH Publications and Information Services

Final Report

December 2004

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health
Education and Information Division

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ABSTRACT

In 2003, the National Institute for Occupational Safety and Health (NIOSH), in collaboration with four professional stakeholder associations, developed and administered a customer satisfaction survey. The purpose of the survey was to determine stakeholders' experiences with NIOSH publications and information services and to solicit suggestions for improving them. The four professional associations surveyed included the American Association of Occupational Health Nurses (AAOHN), the American College of Occupational and Environmental Medicine (ACOEM), the American Industrial Hygiene Association (AIHA), and the American Society of Safety Engineers (ASSE). Of the 1,200 anonymous and randomly selected participants, 688 persons responded, yielding a 57% response rate.

The majority of respondents identified themselves as being well educated and experienced professionals who worked in large organizations, had Internet access, and performed a variety of occupational safety and health (OSH) activities. Respondents ranked the Occupational Safety and Health Administration (OSHA) and NIOSH as primary sources of OSH information. Seventy-four percent of the respondents reported that they read or referred to NIOSH OSH information within the past 12 months, and 76% reported that they had previously taken a course in which NIOSH publications were used as information materials. Of the respondents that had used or referred to NIOSH materials in the past, 80% felt that their organization's safety and health practices had been influenced a lot or a little by NIOSH publications, and approximately half (49%) reported that NIOSH publications were cited or referred to by name in their organization's policies and procedures. The vast majority of respondents (97%) who had used or referred to NIOSH materials in the past strongly agreed or agreed that *NIOSH is an important resource for the OSH community* and (99%) strongly agreed or agreed that *NIOSH is a credible source for obtaining OSH information*. These respondents also strongly agreed or agreed with statements that characterized NIOSH publications as useful, practical, clear, and impartial.

The NIOSH Web site was reported as the most popular method of obtaining NIOSH information. Although the findings reflect favorably for NIOSH, 21% of the respondents had not used or were not familiar with NIOSH publications or information services. This percentage varied by professional association, with AIHA and ASSE respondents indicating higher past use. Items that rated high for future NIOSH publications included practical applications and guides, documents for educating workers and employers, and criteria documents. Highly rated improvements to NIOSH information dissemination efforts included announcing publications on the NIOSH Web site, publicizing NIOSH Health Hazard Evaluations, and creating CD-ROM collections of publications.

The survey results suggest that NIOSH could (1) expand its outreach to the 21% of respondents who had not used NIOSH materials, (2) examine the proportion of technical to nontechnical publications produced by NIOSH, (3) rework dissemination plan strategies, and (4) expand future efforts to include non-OSH professionals. As a cautionary note, the 43% of selected participants who did not respond to the survey may limit the ability to make inferences about the full population. Nonetheless, NIOSH can use the baseline response levels in this survey to target ways for continuing to improve the usefulness, relevance, and quality of its publications.

EXECUTIVE SUMMARY

During a 30-year period, the National Institute for Occupational Safety and Health (NIOSH) has produced nearly 5,000 documents bearing the Institute name.[1] The majority of these information products are available from the NIOSH Web site, the NIOSH technical inquiry service, or the publications distribution office. As public concern for OSH issues has increased, the demand for NIOSH information materials also has increased.

A NIOSH goal is to assess the impact of its information materials on the safety and health of workers. Government agencies are using customer satisfaction surveys as a tool to assess performance standards that influence impact. In 2003, NIOSH collaborated with four of its major stakeholder associations in developing and administering a customer satisfaction survey. The organizations were the American Association of Occupational Health Nurses (AAOHN), the American College of Occupational and Environmental Medicine (ACOEM), the American Industrial Hygiene Association (AIHA), and the American Society of Safety Engineers (ASSE). To ensure data quality, the survey instrument was reviewed by independent survey experts before distribution, all data transcription from survey to e-file were double-entered by independent teams, and the data were analyzed by an outside statistical survey team.[2]

The NIOSH Customer Satisfaction Survey (NCSS), consisting of 26 questions, 6 sections, and 11 printed pages, was reviewed and approved for distribution by the Office of Management and Budget (OMB No. 0920–0544) for a 1-year period beginning in March 2002 and ending in March 2003. NIOSH mailed the survey in mid-January 2003 to a random sample of 1,200 members—300 from each of the four associations. Participation was voluntary and all responses were anonymous. By March 31, 2003, NIOSH had received 688 completed surveys. The combined response rate from the four associations was 57% (688/1200).[3]

KEY FINDINGS

Availability and Use of NIOSH Publications[4] among All Survey Respondents

- 79% of the respondents answered *yes* when asked whether they had ever used or been referred to a NIOSH publication; 21% answered *no* (Question 11).
- 84% of respondents identified the Occupational Safety and Health Administration (OSHA) and 74% identified NIOSH as a primary source of OSH information[5] (Question

[1] NIOSH has funded an additional 28,000 reports and journal articles (nearly 1,000 per year), all of which are indexed at http://www2a.cdc.gov/nioshtic-2/Nioshtic2.htm.

[2] Institute for Policy Research, University of Cincinnati, One Edwards Center, Cincinnati, Ohio.

[3] Appendix includes a copy of the NIOSH Questionnaire and the survey responses.

[4] For this Survey, *NIOSH publications* were defined as any combination of NIOSH printed materials, NIOSH CD-ROMs, NIOSH Web site materials, or information from the NIOSH technical information inquiry service (800-Number and Fax line).

10) when asked whether in the past 12 months they had read or referred to any OSH information published by a given list of organizations and sources.

Availability and Use of NIOSH Publications among Respondents Who Had Ever Used a NIOSH Publication[6]

- 76% of respondents answered *yes* when asked whether NIOSH publications had been used as information materials in a course or educational program that they had ever attended, 10% answered *no*, and 14% did not know (Question 13).
- 49% of the respondents indicated that NIOSH publications had been referred to or cited by name in their organizations' policies and procedures, whereas 30% indicated they had not been cited, 17% did not know, and 4% did not apply (Question 19).
- 80% of the respondents indicated that their organization's safety and health practices had been influenced by NIOSH publications either a lot (36%) or a little (44%), whereas 3% indicated not at all and 17% did not know (Question 20).
- 76% of the respondents indicated that they had recommended to a colleague one or more NIOSH information or communication products[7] (Question 14d).

NIOSH as an Information Source

- 99% of the respondents who used or referred to NIOSH materials either strongly agreed (71%) or agreed (28%) with the statement that *NIOSH is a credible source for obtaining OSH information*; 1% had no opinion (Question 15a).
- 97% of the respondents who used or referred to NIOSH materials either strongly agreed (65%) or agreed (32%) with the statement that *NIOSH is an important resource for the OSH community*; 3% had no opinion (Question 15h).
- 92% of the respondents who used or referred to NIOSH materials either strongly agreed or agreed with survey statements that characterized NIOSH publications as containing up-to-date information (92%), impartial information (80%), information at the appropriate technical level (92%), clearly written information (91%), and useful recommendations (92%) (Question 16a–e).

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[5] Questions with multiple responses (MRQs) were treated as a single question with *x* possible answers, where x is the number of choices (items) available for each MRQ. The frequencies of *yes* or *no* responses for each choice were counted and converted to a percentage. The resulting percentage for each choice is a measure of *rank order*. The sum of the frequencies for MRQs will exceed 100% [Sanatos 2000]. Getting the most out of multiple response questions. J Extension 38(3):1-6, Tables 1 and 2].

[6] For this Survey, *NIOSH publications* were defined as any combination of NIOSH printed materials, NIOSH CD-ROMs, NIOSH Web site materials, or information from the NIOSH technical information inquiry service (800-Number and Fax line).

[7] Question 14d asked about the frequency of recommending a NIOSH publication where the choice of *rarely* was defined as (<3). Hence, 76% is the sum of the percentages associated with the three frequency labels: frequently (10%), occasionally (29%), and rarely (37%).

- 68% of the respondents who used or referred to NIOSH materials reported using NIOSH printed publications either frequently (24%) or occasionally (44%) in the past 12 months (Question 14a). A similar number of respondents also reported accessing the NIOSH Web site either frequently (32%) or occasionally (36%) in the past 12 months[8] (Question 14b).
- 78% of the respondents who used or referred to NIOSH materials had requested or received OSH information from NIOSH through its Web site; 62% had received it through NIOSH technical information inquiry service (800-Number and Fax line); and 16% had received it through the NIOSH exhibit program (Question 12).
- 87% of the respondents who used or referred to NIOSH materials either strongly agreed (38%) or agreed (49%) with the statement that *the NIOSH Web site provides high-quality, usable information* (1% disagreed and 12% had no opinion) (Question 15c). Furthermore, 84% of the respondents either strongly agreed (32%) or agreed (52%) with the statement that *the NIOSH Web site provides effective access to NIOSH information and publications* (2% disagreed and 14% had no opinion) (Question 15d).

Use and Types of NIOSH Publications

- Respondents who used or referred to NIOSH materials reported having referred to NIOSH publications at least three times or more during the past 12 months for the following purposes or tasks (Question 18):
  - Conducting OSH training (51%)
  - Establishing OSH programs (47%)
  - Performing hazard exposure assessments (46%)
  - Formulating new/revised safety and health policy/practices (46%)

- Respondents who used or referred to NIOSH materials assigned a value to a list of suggestions for improving NIOSH information dissemination and placed the highest value (sum of values 1 and 2)[9] on the following items (Question 21c, f, h, l):
  - Package/distribute NIOSH publications around common themes (83%)
  - Announce publications on the NIOSH Web site (81%)
  - Create CD-ROM collections of publications (69%)
  - Publicize and increase circulation of NIOSH Health Hazard Evaluation (HHE) Reports (65%)

- Respondents who used or referred to NIOSH materials identified the following types of publications that *NIOSH should consider emphasizing in the future*. Multiple responses were allowed. The topics are listed below in rank order, beginning with the most popular choice (Question 25):
  - Practical applications and guides (checklists, how-to publications, self-audits) (81%)
  - Recommended safety and health standards (criteria documents) (72%)

[8] Where *frequently* is >10 times per year, *occasionally* is 3 to 10 times per year, and *rarely* is <3 times per year.
[9] With a Likert scale, the common practice is to combine the top two values to describe the results.

- Booklets for educating and informing workers (67%)
- Booklets for educating and informing owners and managers (55%)
- Case studies (HHEs and fatality investigations) (51%)
- Scientific/technical documents (41%)
- Analytical methods manual (35%)

CONCLUSIONS

Overall, the view of NIOSH publications and information services among respondents from the four associations was highly favorable:

- The respondents agreed with statements characterizing NIOSH publications as credible, impartial, and useful.
- The respondents agreed that NIOSH is an important resource for the OSH community.
- The respondents are actively involved in professions directly related to OSH and are among the best educated of the NIOSH audience. As a result, these factors created a group of respondents who are practitioners and have the potential to provide an accurate and critical assessment of NIOSH material.
- The overall positive findings expressed by this group about NIOSH products and services lend real weight to the favorable conclusion.

Although in general the findings reflect favorably for NIOSH, 21% of the respondents had not used or were not familiar with NIOSH publications or information services. This percentage varied by association, with occupational physicians (ACOEM) and occupational nurses (AAOHN) indicating lower past use than industrial hygienists (AIHA) and safety engineers (ASSE).

RECOMMENDATIONS

- Develop strategies to better reach important OSH stakeholders with limited or no past use of NIOSH materials or information services.
- Develop strategies for increasing positive response levels on questions of usefulness, relevance, quality, and accessibility.
- Expand web-based announcements of NIOSH publications.
- Produce more theme-type publications, CD collections of materials, and HHE collections.
- Survey other important audiences for NIOSH materials, including employers, workers, labor and trade associations, and other nonprofessional bodies.
- Assess NIOSH dissemination plans. Results from this survey suggest that NIOSH continue updating its mailing list to ensure that NIOSH publication products are reaching individuals or organizations that have a continuing need for copies of all publications. Rethinking the direct mail route of dissemination could perhaps save the Institute money and improve customer satisfaction.

CONTENTS

ABBREVIATIONS

AAOHN	American Association of Occupational Health Nurses
ACGIH	American Conference of Governmental Industrial Hygienists
ACOEM	American College of Occupational and Environmental Medicine
AIHA	American Industrial Hygiene Association
ANSI	American National Standards Institute
ASSE	American Society of Safety Engineers
CDC	Centers for Disease Control and Prevention
CPS	Certified Safety Professional
EPA	U.S. Environmental Protection Agency
FACE	Fatality Assessment and Control Evaluation
GAO	Government Accounting Office
GPRA	Government Performance and Results Act
HETA	Hazard Evaluation and Technical Assistance Report
HHE	Health Hazard Evaluation
MRQs	Multiple Response Questions
NIOSH	National Institute for Occupational Safety and Health
OMB	Office of Management and Budget
OSH	occupational safety and health
OSHA	Occupational Safety and Health Administration
r2p	research to practice

ACKNOWLEDGMENTS

Any project of this scope involves the dedication and efforts of many people. This project could not have been done without the participation and collaboration of the leadership of the American Association of Occupational Health Nurses (AAOHN), the American College of Occupational and Environmental Medicine (ACOEM), the American Industrial Hygiene Association (AIHA), and the American Society of Safety Engineers (ASSE). NIOSH is especially grateful to these four professional organizations for their enthusiastic support of this effort.

Vern Anderson, Chief, Information Resources Branch, was responsible for the completion of the survey development, direction of the survey, analysis, and development of the report. The concept and overall responsibility for the project belong to Paul Schulte, Director, Education and Information Division (EID).

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1. INTRODUCTION TO THE STUDY

The National Institute for Occupational Safety and Health (NIOSH) developed a NIOSH Customer Satisfaction Survey to measure the dimensions of customer satisfaction for its publications and information delivery services. The survey was designed in response to Executive Order 12862, *Setting Customer Service Standards*, which requires Federal agencies to provide the highest quality service to the American people. The Customer Satisfaction Survey was referenced in the 1999 Government Accounting Office (GAO) report, *Selected Approaches for Verification and Validation of Agency Performance Information*, as a valid and reliable measure to meet requirements of the Government Performance and Results Act (GPRA). As mandated in the Occupational Safety and Health Act of 1970 (PL 91–596), the mission of NIOSH is to conduct research and investigations on work-related disease and injury and to disseminate information for preventing identified workplace hazards [Sections 20 (a) (1) and (d)]. This dual responsibility recognizes the need to translate research into workplace application to impact worker safety and well-being. Specifically, NIOSH, through its recommendations and communication efforts, seeks to promote greater awareness of occupational hazards and their control, influence public policy and regulatory action, shape national research priorities, change organizational practices and individual behavior, and ultimately, improve American working life. Although the means for packaging and delivering NIOSH-generated information varies, one of the primary communication vehicles is its series of numbered print publications.

Each year NIOSH develops and disseminates between 35 and 50 primary numbered publications, along with 100 or more annual series publications such as the NIOSH Fatality Assessment and Control Evaluation (FACE) Reports and the Health Hazard Evaluation (HHE) Reports. At the time of this report, the NIOSH publication inventory contains nearly 4,500 scientific and educational documents and communication products relevant to OSH issues.[1] These publications can be accessed through NIOSHTIC–2, a web-enabled searchable database providing public access to more than 33,000 NIOSH-funded publications produced since 1970 (http://www.cdc.gov/NIOSH/NIOSHTIC2).

The NIOSH Customer Satisfaction Survey was designed to determine (1) to what extent NIOSH publications are perceived as credible, useful sources of information about OSH issues (a product evaluation), (2) whether NIOSH is successful in distributing its OSH information products to the appropriate user audience (a marketing evaluation), and (3) to what extent (and in what ways) NIOSH publications have influenced workplace safety and health program practices (an impact evaluation). The project aim was to determine what improvements could be made in the nature of NIOSH publications and/or their manner of delivery that could enhance their use and benefits.

The purpose of this report is to (1) describe the process for developing and administering the NIOSH Customer Satisfaction Survey, (2) report the findings from the survey, and (3) consider the implications for future action. The results will be used by those involved in preparing and

[1] Although the current inventory consists of about 4,500 titles, NIOSH has produced more than 5,000 titles that bear the Institute name.

disseminating various types of NIOSH documents to aid in future writing and distribution efforts.

In addition, the survey results will be shared with the partner associations—namely, the American Association of Occupational Health Nurses (AAOHN), the American College of Occupational and Environmental Medicine (ACOEM), the American Industrial Hygiene Association (AIHA), and the American Society of Safety Engineers (ASSE). The outcomes of the survey hold important benefits to the associations' individual members. Specifically, each association will learn more about their members' work activities, organizations for which they work, years of experience, education, sources of OSH information, and training needs. In turn, the associations can form alliances with NIOSH to participate in NIOSH strategic planning to assure NIOSH is meeting their needs for protecting workers.

2. METHODS OF RESEARCH

FOCUS GROUPS

The survey content and format were developed with the assistance of stakeholders who participated in one of three local focus groups. The members of each focus group were drawn from members of the four collaborating associations, namely the AAOHN, ACOEM, AIHA, and ASSE. Members of these organizations were selected because it was necessary to recruit persons who had some knowledge and expertise in OSH and who were likely to be familiar with NIOSH.

The first focus group examined different types of survey instruments that have been used by various organizations to assess customer satisfaction. Ideas for specific questions were identified and various formats were considered. Members of the subsequent focus groups were given draft questionnaires to determine their opinions, concerns, beliefs, awareness, and experiences related to the survey questions. Their opinions were used to modify and improve the survey used in this study. The final version of the NIOSH Customer Satisfaction Survey and protocol was reviewed by three nationally recognized survey experts as well as the Centers for Disease Control and Prevention (CDC) Human Subjects Review Board.

SURVEY CONTENT

The NIOSH Customer Satisfaction Survey consisted of six sections, as outlined in Table 1. Each section was designed to elicit information that would assist NIOSH in focusing its publications on the needs of the users. The report of the findings from this survey is organized by section. The survey mailing included a seven-page list of NIOSH publications. This list of approximately 260 publications (1997–2002) was provided as a memory aid to the survey participants.

The list, which was organized by categories and topic areas, industry, media, and type of hazard, also served as a useful reference guide for the survey respondents to help them in ordering additional publications through the NIOSH 800-Number publication ordering system. The survey respondents were also directed to the NIOSH Web site, where electronic versions of the titles were available.

Table 1. Survey contents and associated questions

Section	Content	Question numbers
I	Background—tell us about yourself	1–8
II	Your sources for OSH information	9–14*
III	Your opinions about NIOSH information	15–17
IV	Your opinions about NIOSH publications	16
V	Your use of NIOSH publications	18–20
VI	Marketing NIOSH products and services	21–26
Final comments	Open structure	—

*Question 11 served as a branching question that terminated the survey when answered *no*.

SAMPLING METHODS

Population

The target audience consisted of OSH professionals who belonged to one or more of the four primary professional organizations: AAOHN (13,000 members), ACOEM (6,500 members), AIHA (12,400 members), and ASSE (33,000 members). Of the largest group (ASSE), only a segment identified as Certified Safety Professionals (CSPs, N=7,000) were included in the target population because of the type of work they did. As a result of the members' professional affiliations and status, the final target population of about 40,000 was considered for this survey to represent a relatively homogeneous population.[2]

Sample Size

Because the target population was considered homogeneous for statistical purposes (internal variances are small), the sample size needed for the analysis is smaller. Dillman [2000] provides a formula and a table (see Table 5) for estimating sample sizes for populations considered *more uniform in their response variations* than a 50/50 split. According to Dillman, when the target population exceeds 5,000 (up to 1 million or more), the required sample size for this type of population may range from 660 to 700.[3] Specifically, a sample size of 700 is more than sufficient for a 95% confidence level with a sampling error of $\pm$ 3%. This precision level is appropriate here for making needed inferences and estimating proportions.

Response Rate

An appropriate response rate is determined from the size of the acceptable sample. Since this was NIOSH's first randomized survey mailing, no precedent existed.[4] The literature suggested that mailed surveys might yield response rates as low as 20% and as high as 80% [Dillman 2000; Hayes 1998]. However, in situations where the sampled respondents are connected or affiliated with a common organization or association, a response rate of 60% or better can be expected [Dillman 2000; Cochran 1977]. A response rate of 60% was anticipated because the survey population was affiliated with a professional organization that endorsed the NIOSH survey. Indeed, the associations provided support and publicity by providing letters to their membership encouraging participation in the NIOSH survey. Finally, NIOSH followed nearly all recommendations from survey experts [Hayes 1998] for improving response rates, which included use of follow-up letters and reminder cards at appropriate intervals as well as the offer of a token appreciation item (that is, a T-shirt valued at $2.50).

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[2] Homogeneity describes populations that are not 50/50 splits for the study characteristic.

[3] With homogeneous populations, sample sizes may be lower because internal variances are lower [Dillman 2000].

[4] In 1976, NIOSH contracted with John Short & Associates to develop a NIOSH information dissemination strategy. They developed an 11-item questionnaire that was sent to all NIOSH mailing list addresses. The findings are contained in a report entitled *NIOSH Information Dissemination Strategy*.

Distribution Size

Once the response rate was projected and the required sample size was established, the distribution size was determined.[5] Distribution size is computed by dividing the required sample size of 700 by the estimated response rate (60%). Rounding up to the nearest 100 yields a proposed distribution size of 1,200 for the survey mailing. With four associations, the 1,200 distribution plan allowed an equal number of persons (300) to be drawn at random from each of the four associations. By choosing an equal number of surveys (300) to be mailed to each group, each association had an equal opportunity to respond and thereby make their views known.[6] In this way, a large association was not able to exert more influence on the survey results than a smaller association.[7]

The final sample was screened to ensure that persons having multiple association memberships were selected once and assigned to the group most aligned with their professional training based on the title listed on their membership address. NIOSH employees who are members of the four associations were excluded from the membership listing before the sample was drawn. An electronic version of the questionnaire was developed, as suggested by the Office of Management and Budget (OMB) in their approval notice, giving respondents the option to complete the survey on the NIOSH Web site and e-mail the survey anonymously to NIOSH. Table 2 provides a view of the sample, segmented by professional association.

Table 2. Survey participation information by association

Survey item	AIHA	ASSE	ACOEM	AAOHN	Total
Population size	12,400	7,000*	6,500	13,000	38,900
Number of surveys mailed (randomly)	300	300	300	300	1,200
Number of surveys returned	194	180	148	166	688
Participation rate† (%)	64	60	49	55	—
Affiliation response rate‡ (%)	28.2	26.2	21.5	24.1	100

*The sample from ASSE consisted of the 7,000 Certified Safety Professionals.

†Rate = surveys returned/surveys mailed.

‡Rate = surveys returned by association/688.

Survey Mailing

The survey mailing (January 21, 2003) was preceded by a personalized letter sent 2 weeks earlier from NIOSH. The pre-survey letter was designed to alert the member that he or she had been randomly selected from a directory provided by his/her association to participate in the

[5] Distribution size is the number of survey packets to be mailed.

[6] With a sample size of 300, fewer than 5% of the members of an association would receive a survey packet.

[7] A stratified sample, based on size of the associations, would have optimized projections to the total 40,000 members of the combined four associations. Hence a high response rate from a large organization could skew the findings towards the views of the larger organization.

NIOSH survey and that the survey package would arrive in approximately 2 weeks. The pre-survey letter included a letter from the president of the respondent's association pledging support for the survey. In addition, the survey director's phone number and e-mail address were included for those members who wanted further information or who did not want to participate in the survey. Of the 1,200 mailed surveys, 11 were returned with unknown addresses. The 11 were replaced with random selections from each association from which the unknown address was identified. Reminder post cards were sent to nonrespondents 2 weeks after the original survey mailing. Four weeks after the initial survey, a second follow-up mailing with a second copy of the survey was sent to those individuals who had not returned the questionnaire. The initial mailing generated a 38% response rate; the follow-up mailing yielded another 13%. By March 31, the remaining 6% of the surveys were returned.

DATA ANALYSIS PLAN

Organization

This report is organized to present the findings of the survey as percentages. For a specific question or subquestion, the data consist of the sum of the response frequencies divided by the number of respondents answering that question to form percentages. The percentages are shown in the tables, figures, and text of this report. Where respondents had only a single choice, the sum of the response frequency equals 100% (small rounding variations can occur).[8]

To enhance the informational value from individual questions, the data also were broken down or organized by the association with which each respondent was affiliated. Since each survey was printed with a unique control number that tracked affiliation membership, both survey distribution and association membership were controlled. The affiliation designator provided a convenient way to organize the data according to professional training and job responsibilities/activities. The same computational rules were followed for the questions where separate organizational affiliation data were shown.[9] The tables and figures in this report provide the frequency of the response as a percentage for the question. For the combined respondent sample, the label designator *Total All* is used in the figures. The figure labels for each of the four associations are AAOHN, ACEOM, AIHA, and ASSE.

A number of questions instructed the respondents to mark *all* answers from a supplied list that was applicable. Questions with multiple responses were treated as independent questions, each requiring a *yes* or *no* response. For each survey question allowing multiple responses, the frequency of yes-no responses for each choice was counted and converted to a percentage. For this report, the percentage values from the multiple-response questions were treated as measures of rank order [Sanatos 2000, Tables 1 and 2].

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[8] For example, Question 7 asked about access to the Internet on the job; 659 of the 677 respondents answered *yes*, (yielding a 97.3% positive rate) and 18 answered *no* (for a 2.66% negative response rate). The participation rate for Question 7 (677/688) was 98.4%. The value of 688 is the total number of survey participants.

[9] The findings are displayed in a series of figures and tables in the *Survey Research Findings* section of this report.

Data Quality Procedures

Section 515 of Public Law 106-554, known as the Data Quality Act, required the OMB to promulgate guidance to agencies ensuring the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by Federal agencies. OMB government-wide guidelines were published as an interim report on September 28, 2002, [66 Fed. Reg. 49718] and finalized on February 22, 2002 [67 Fed. Reg. 8452]. The sources for the notices are available at the following Web site: **http://www.whitehouse.gov/omb/**. All aspects of this study were conducted to comply with the standards of the Data Quality Act.

SURVEY PROCEDURE

The NCSS, consisting of 26 questions, was reviewed and approved for distribution by OMB for a 1-year period beginning in March 2002 and ending on March 31, 2003.[10] The printed survey was 11 pages, including the cover and instructions. A number of questions had multiple parts, required multiple responses, and provided opportunities for written comments. Depending on the respondent's familiarity with NIOSH services and information, the survey could be completed in 10 to 25 minutes.

NIOSH mailed the survey in mid-January 2003 to a random sample of 300 members from each of the four organizations, providing a combined sample size of 1,200. Participation was voluntary and all responses were anonymous. All participants were instructed to complete the first 11 questions of the survey. The initial 11 questions were designed to gauge the type of work, experience, education, and organization affiliation of the respondents (that is, the demographics of the respondents). Questions 9 and 10 sought information about the respondent's preferred sources of OSH information. Question 11 asked specifically about NIOSH as a *source of information* for the respondent. If the respondent indicated that he or she had never used or referred to a NIOSH publication (including NIOSH printed materials, NIOSH Web site materials, or information from the NIOSH 800-Number), the respondent was instructed to skip the remaining questions, turn to the back page of the survey, and follow the instructions to return the survey as completed in an enclosed, self-addressed, prepaid government envelope.

MAILED AND E-MAILED SURVEY RETURNS

At the end of the 10-week period that was allowed for the return of the forms, 688 completed forms were received. The 688 surveys represented a 57% overall response rate of potential respondents. Although NIOSH projected a 60% response rate with a mailing of 1,200 surveys, the 688 completed and returned surveys were within the original targeted range of 660–700 surveys needed for statistical estimation.

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[10] OMB No. 0920–0544. To comply with the OMB access initiative, a Web-based version of the questionnaire was also available to all survey participants. The appendix provides a copy of the survey with summary responses.

AFFILIATION RESPONSE RATE

The data in Table 2 provide a summary of the population size, distribution, participation, and affiliation rates for each association and the totals. The affiliation response rate was computed from the quotient of the number of surveys returned by the members of each association (e.g., 194 AIHA) and the total returned (688). AIHA had the highest participation rate with 64% and accounted for 28% of the sample respondents, whereas the ACOEM participation rate was 49% and accounted for 21.5% of the total sample. Although Table 2 does not show it, 603 (88%) returned the printed version by mail. The remaining 85 (12%) chose to complete the electronic survey and return it using the e-mail option.

3. SURVEY RESEARCH FINDINGS

SURVEY SECTION I: BACKGROUND OF RESPONDENT

From a list of 14 safety and health professions, the respondents were asked to choose one or more professions that most closely matched their own (Question 1). The results are shown in Table 3. The most frequently chosen professions were industrial hygienist (31%), safety professional/manager (31%), nurse (25%), and physician (18%). The most common *other* category used the term *environmental expert* or *engineer* as a professional title. As expected, the four most frequently identified professions were consistent with the professions represented by the four collaborating associations—that is, industrial hygienists (AIHA), industrial and safety engineers (ASSE), physicians (ACOEM), and nurses (AAOHN).

Table 3. Question 1: Self-reported professional identities of respondents

Occupation	% respondents
Industrial hygienist	31
Safety professional/manager	31
Nurse	25
Physician	18
Environmental engineer	12
Educator/trainer	9
Risk/loss control manager	7
Researcher	3
Toxicologist	3
Ergonomist/work physiologist	2
Human resource specialist	1
Economist	—
Physical therapist	—
Industrial psychologist	—

Tables 4a through 4d summarize data from four separate survey questions (Questions 2, 3, 4, and 6). The tables show that the majority of respondents were well educated, experienced, worked in large organizations, and had received some training dealing with OSH issues during the past year.

Table 4a. Question 2: Education level of respondents

Education level	% respondents
Some college	4
Associate	8
Bachelor's degree	34
Master's degree	33
Doctoral	9
Post doctoral degree	12

Table 4b. Question 3: OSH Training hours received

Hours of training	% respondents
None	5
1–8	15
9–16	17
17–40	34
41–120	25
>3 weeks	4

Table 4c. Question 4: OSH Experience

Years of experience	% respondents
0–5	11
6–10	17
11–15	27
16–20	17
>20	28

Table 4d. Question 6: Organization size

Number of employees	% respondents
Self only	5
<50	11
50–100	3
101–500	14
>500	67

Table 5 provides information about the types of job activities most commonly performed by the practitioners in the respondent sample. Some of the key activities include establishing safety and health programs, providing worker training, interpreting the Occupational Safety and Health Administration (OSHA) guidance, performing hazard assessments, and delivering medical support. Although not shown in the tables, the respondents were asked *what type of organization they had worked for* (Question 5). The most frequently identified work setting was company/business at 43%, followed by a hospital/clinic setting at 19%. Private consultants were the third most frequently identified at 13%, and industry/trade associations at 10%.[11] Question 7 dealt with Internet access at work. As of the 1st quarter of 2003, 97% of the respondents had access to the Internet at work.

Table 5. Question 8: Self-reported professional responsibilities

Responsibility	% respondents
Establish/conduct OSH programs	52
Conduct workers' OSH training	41
Interpret/apply/enforce OSHA regulations	41
Conduct workplace safety audits and inspections	37
Deliver medical services	36
Perform hazard assessments	35
Formulate new/revised OSH policies/practices	31
Keep records/report injury and disease cases	25
Perform accident/loss control analyses	25
Conduct professional-level OSH training	20
Design/implement hazard control measures	18
Perform air sampling/monitoring	15
Develop/conduct research projects	6
Design/lay out facilities to meet production/safety specifications	2

[11] The percentages exceed 100% because respondents were allowed to identify all work settings where they were employed.

SURVEY SECTION II: RESPONDENTS' SOURCES FOR OSH INFORMATION

Printed, Electronic, and Others (Question 9)

Respondents were asked how often (as measured in terms of days, weeks, months, etc.) they used printed, electronic, and/or other sources of OSH information. *Printed sources* included traditional books, journals, and technical reports. *Electronic sources* included the Web, CD-ROMs, and software; and *other sources* included colleagues, experts, and information from attending conferences/personal meetings. This question was aimed at determining preferences and usage for accessing OSH information. The data are displayed in Table 6.

Table 6. Question 9: Frequency of using electronic and printed sources for finding OSH information

Frequency	% respondents
Printed sources:	
Daily	34
Weekly	39
Monthly	21
Quarterly	3
Yearly	1
Bi-annually	0
Never	1
Electronic sources:	
Daily	41
Weekly	38
Monthly	14
Quarterly	3
Yearly	1
Bi-annually	1
Never	2
Other sources	
Daily	22
Weekly	30
Monthly	26
Quarterly	12
Yearly	4
Bi-annually	4
Never	2

Despite the computer-driven information revolution and the slightly higher usage of electronic sources of OSH information on a daily basis, printed materials continued to be an important source for providing OSH information. Both printed and electronic sources of NIOSH information were accessed

at least weekly by more than 70% of the respondents. Meetings and colleagues also were used at least weekly by 52% of the respondents as a source of OSH information.

Sources of OSH Information (Question 10)

Respondents were provided with a list of 23 organizations that serve as sources of OSH information. Question 10 asked whether they had *in the past 12 months, read or referred to OSH information provided or published by any of the listed organizations or sources*. Since multiple responses were allowed, the data in Table 7 are best interpreted as a rank order score. OSHA was ranked first (84% score), NIOSH was second (74%), and ANSI was third (46%). Professional associations also ranked high as sources of information.

Table 7. Question 10: Associations to which respondents look for OSH information

Association	% respondents
Occupational Safety and Health Administration (OSHA)	84
National Institute for Occupational Safety and Health (NIOSH)	74
American National Standards Institute (ANSI)	46
American Conference of Governmental Industrial Hygienists (ACGIH)	45
American Industrial Hygiene Association (AIHA)	44
U.S. Environmental Protection Agency (EPA)	44
American Society of Safety Engineers (ASSE)	40
National Fire Protection Agency (NFPA)	39
Commercial newsletters, magazines, publications, etc.	33
American College of Occupational and Environmental Medicine (ACOEM)	32
American Association of Occupational Health Nurses (AAOHN)	30
National Safety Council (NSC)	30
Agency for Toxic Substances and Disease Registry (ATSDR)	22
Trade organizations	15
U.S. Department of Energy (DOE)	11
American Public Health Association (APHA)	9
Nuclear Regulatory Commission (NRC)	9
National Institute of Environmental Health Sciences (NIEHS)	8
Labor organizations	8
Health Physics Society (HPS)	4
Center for Chemical Process Safety (CCPS)	3
Human Factors Society (HFS)	3

Figure 1 shows the responses by association for the two primary sources of OSH information. Respondents who were members of AIHA identified NIOSH and OSHA at nearly the same frequency (about 90%), whereas respondents who belonged to ASSE, ACOEM, and AAOHN selected OSHA more frequently, followed closely by NIOSH (Question 10).

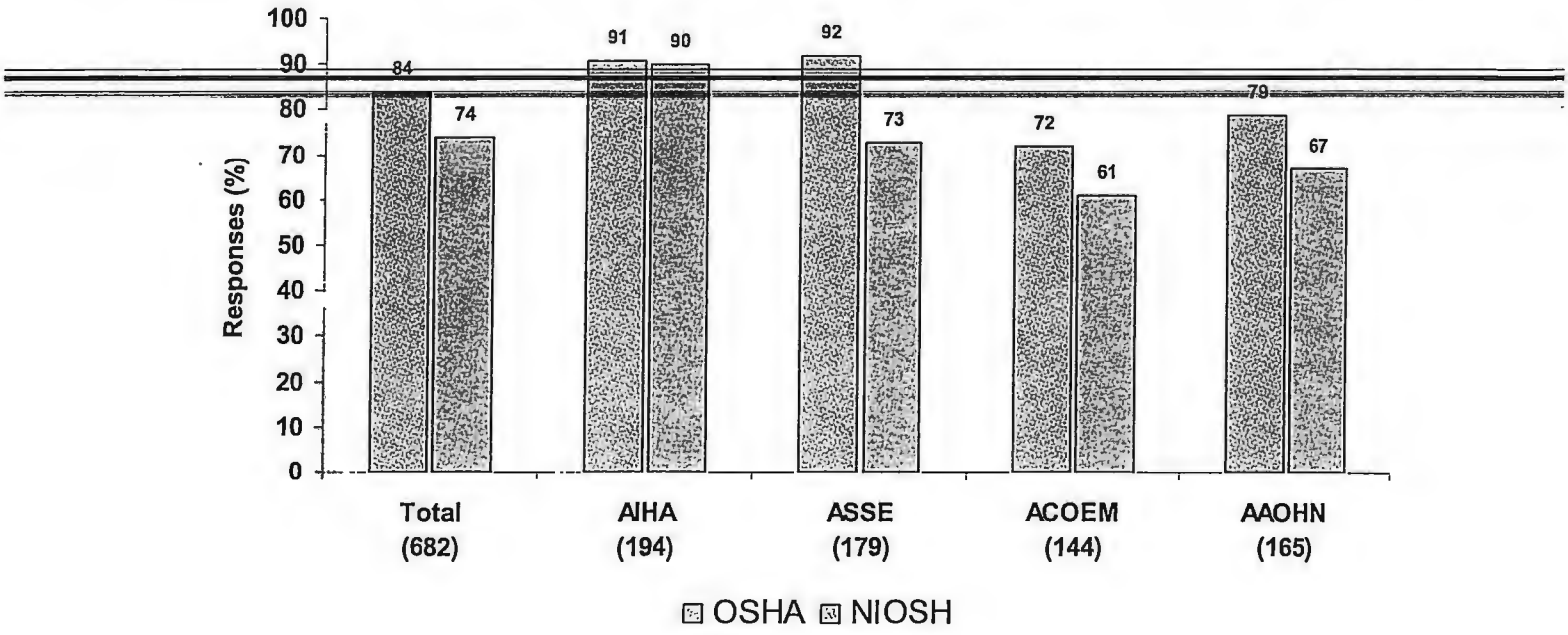

Figure 1. Question 10: Percentage of respondents who have ever read or referred to OSH information from OSHA and/or NIOSH within the past 12 months, by association.

Accessing NIOSH Information (Question 11)

Question 11 was designed to separate practitioners who had used or referred to NIOSH publications from those who had never used NIOSH information products. The results indicated that 21% of the respondents had not used NIOSH information. Since those respondents would not be familiar with NIOSH information products, they were directed to stop and return the survey in the self-addressed envelope. Of the 679 responders, 141 (21%) responded *no*. The remaining 538 (79%) indicated that they had used or referred to NIOSH information (that is, printed publications, the Web site, and the 800-Number), and therefore were instructed to continue with the survey.[12]

[12] If the respondents were not familiar with NIOSH information products, they would not have been able to respond to the subsequent questions, which asked about the quality and delivery of NIOSH information materials.

The data in Figure 2 show that the percentage of those who had ever used or referred to a NIOSH publication varied among the four stakeholder groups. Respondents who were members of AIHA and ASSE had greater percentages of their members who had some familiarity with NIOSH publications, (96% and 83%, respectively); whereas, fewer respondents who belonged to ACOEM and AAOHN had ever used or referred to a NIOSH publication (66% and 67%, respectively).

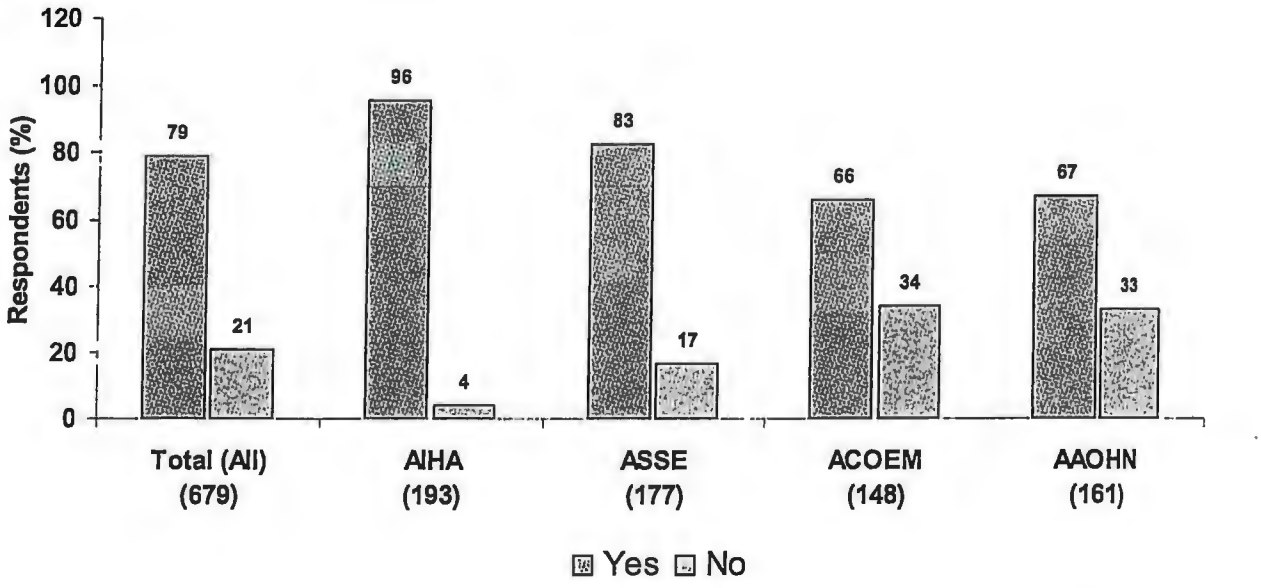

Figure 2. Question 11: Percentage of respondents who have ever read or referred to a NIOSH publication, by association.

Use of Electronic and Conventional Access (Question 12)[13]

Respondents who had requested/received NIOSH information identified the NIOSH Web site (78%) as their primary source for obtaining these materials, followed by the NIOSH 800-Number (43%), NIOSH Fax-line (19%), and NIOSH Exhibit Program (16%). For each information service, Figure 3 provides the relative percentages (or ranking) for all respondents, by association.

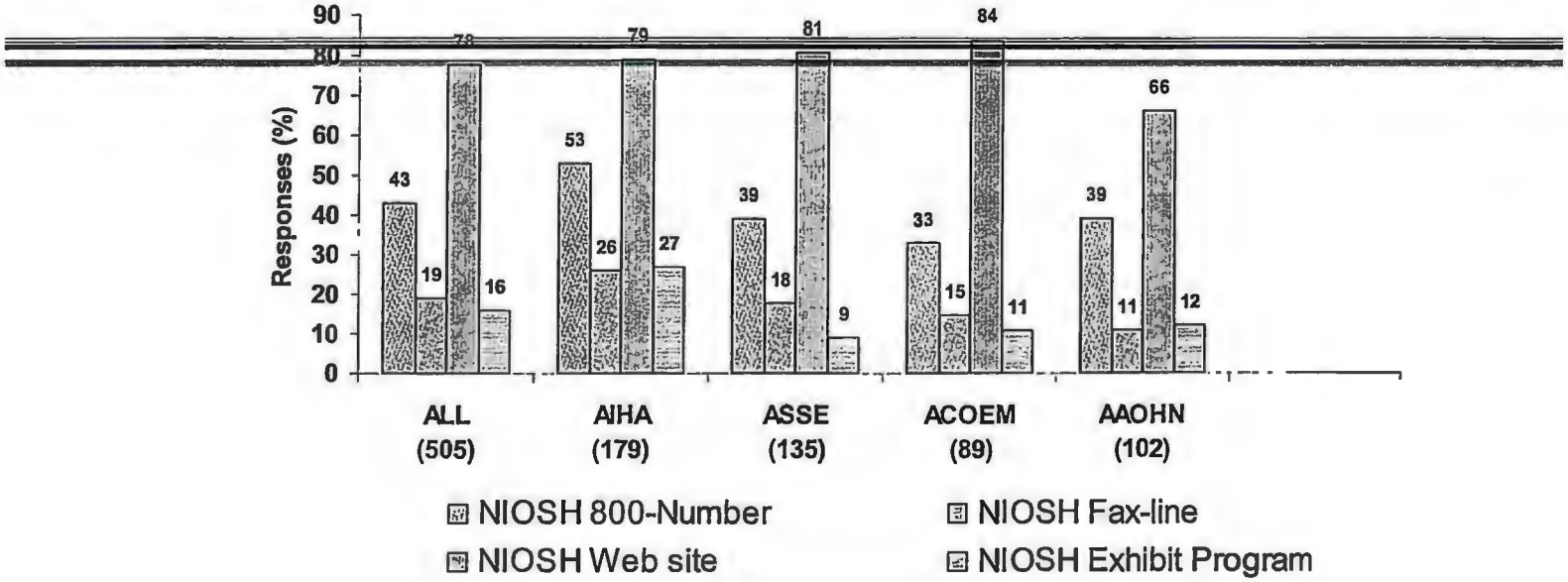

Figure 3. Question 12: Most frequently used sources cited by respondents for obtaining NIOSH information.

[13] The responses from the remaining questions are from the 79% who responded *Yes* to Question 11.

Use of NIOSH Information in Educational/Training Courses (Question 13)

This question was designed to assess the extent to which NIOSH publications are being used as information materials in training and educational programs. Based on the response to this question, more than three out of four respondents (76%) reported attending a course or educational program where NIOSH materials had been used, 14% did not know, and 10% answered *no*. Figure 4 separates the respondents according to their professional affiliations. The findings remain consistent across organizations.

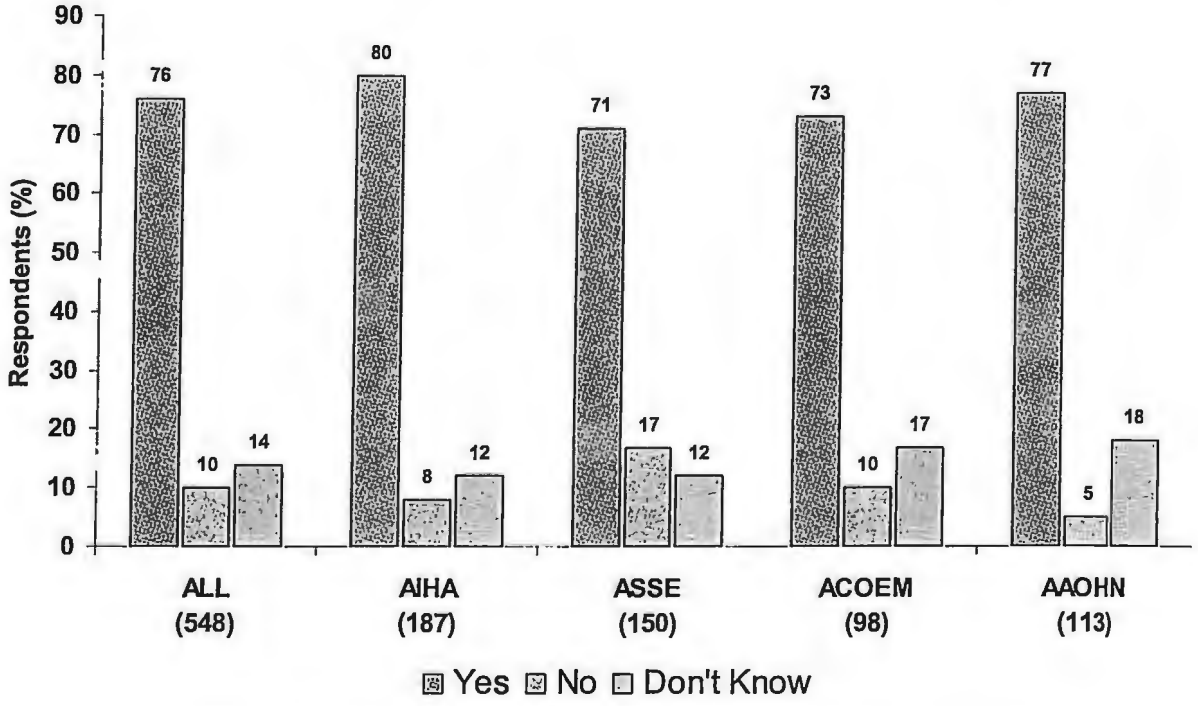

Figure 4. Question 13: Percentage of respondents who had or had not taken a course or attended an educational program in which NIOSH publications were used, by association.

Determining How Frequently NIOSH Publications and Its Web Site are Used (Question 14)

Question 14 used a frequency scale with four levels to assess the usage of NIOSH publications and information services. Each level included a numerical value to ensure consistency. The levels were defined as follows: frequently (>10), occasionally (3–10), rarely (<3), and never (0). The responses were further separated by association. The findings in Figures 5 and 6 show the percentages for all respondents and then by professional association. A majority of the respondents reported frequent and/or occasional use of both NIOSH-printed publications and the NIOSH Web site. If the percentages are combined for frequently and occasionally, 68% of the respondents used both printed publications and the NIOSH Web site at least three times per year.

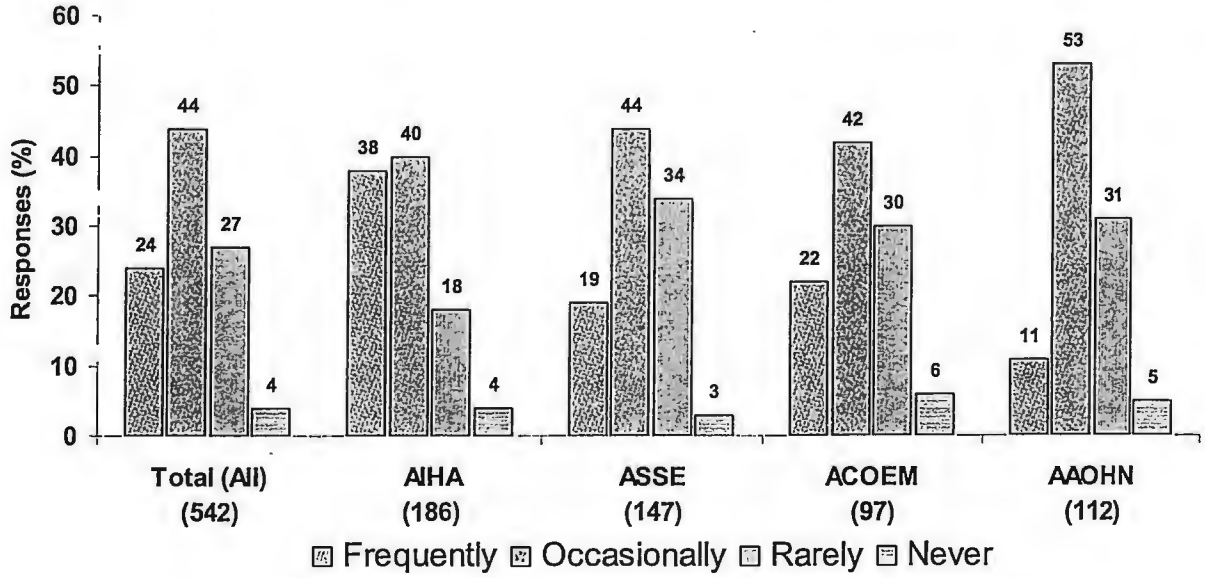

Figure 5. Question 14a: Frequency with which respondents used NIOSH printed publications to find OSH information.

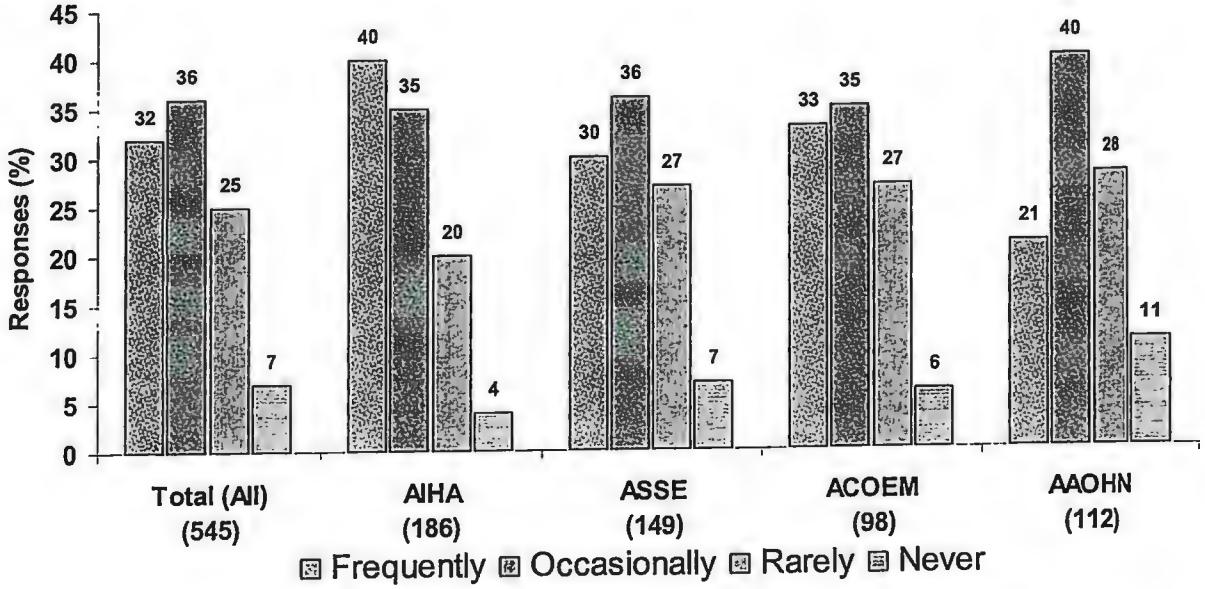

Figure 6. Question 14b: Frequency with which respondents accessed the NIOSH Web site to find OSH information.

Figure 7 (Question 14d) provides a unique measure of the value of NIOSH publications. The respondents were asked how frequently they had *recommended a NIOSH publication . . . to a colleague*. Four choices of frequency were provided, including *never*. The premise is that documents or information materials that are personally valued are more frequently shared with colleagues than less useful publications. Approximately 10% of the respondents recommended a publication or information product more than 10 times in the past year. About three quarters (76%) of the respondents indicated that they had recommended a NIOSH information product to a colleague within the past year.[14] Figure 7 also shows that regardless of professional affiliation, the values on the frequency scale are relatively consistent.

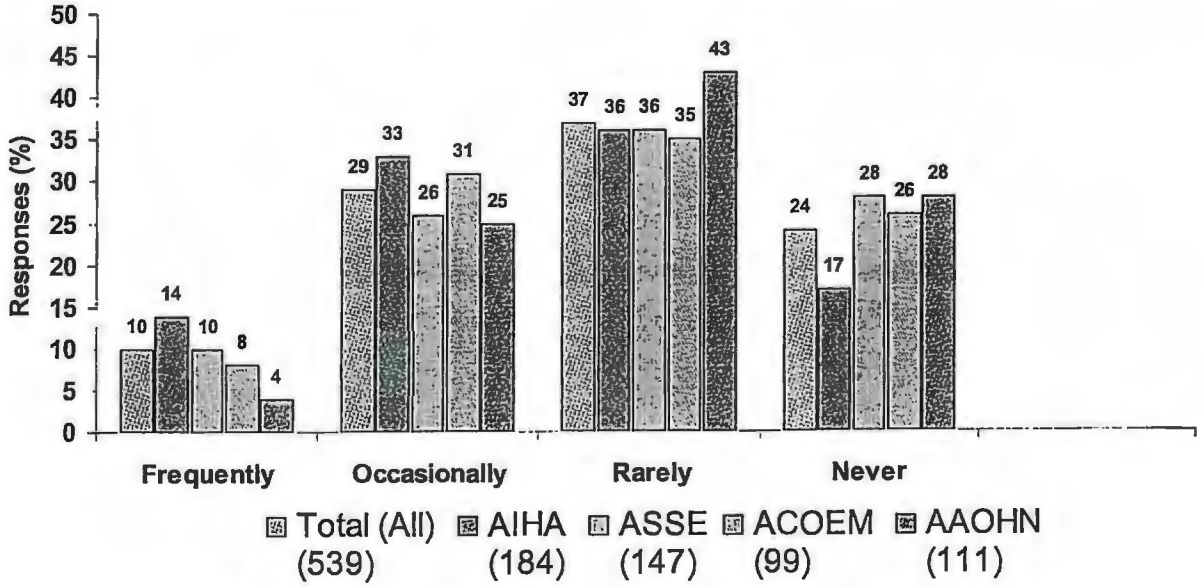

Figure 7. Question 14d: Frequency with which respondents have recommended NIOSH publications to a colleague.

SURVEY SECTION III: NIOSH AS A SOURCE FOR OSH INFORMATION (Question 15)

Question 15 consisted of eight statements about NIOSH as a source of OSH information. To assess these items, a five-point Likert rating scale was used. The scale provided four levels of agreement (strongly agree, agree, disagree, strongly disagree) and a *no opinion* option. The data in Table 8 (Question 15a) shows that 99% of the respondents who had used or referred to NIOSH materials either strongly agreed (71%) or agreed (28%) that *NIOSH is a credible source for obtaining OSH information* (1% had no opinion). Similarly, 97% of the respondents either strongly agreed (65%) or agreed (32%) with the statement that *NIOSH is an important resource for the OSH community* (3% had no opinion) (Question 15h).

[14] To compute that value of 76%, sum the percentages from *rarely*, *frequently*, and *occasionally*, under the *all* category. This will yield a value of 76%. (*Rarely* was described as *less than 3 times*).

Table 8. Question 15: Respondents' perceptions of NIOSH information delivery

Statement	% respondents				
	Strongly agree	Agree	Disagree	Strongly disagree	No opinion
a. NIOSH is a credible source.	71	28	—	—	1
b. NIOSH Listserv* keeps me informed about NIOSH products/services.	4	17	2	2	75
c. The NIOSH Web site contains quality, usable information.	38	49	1	—	12
d. The NIOSH Web site provides effective access.	32	52	2	—	14
e. The NIOSH 800-Number provides usable information.	8	27	1	—	64
f. The NIOSH 800-Number provides effective access.	9	28	2	1	60
g. The NIOSH exhibits at conferences keep me informed.	15	42	3	1	39
h. NIOSH is an important resource for the OSH community.	65	32	—	—	3

*The NIOSH Listserv preceded the *NIOSH eNews* and was a first attempt at electronic outreach, which may account for the 75% with no opinion. The *eNews* has more than 18,000 subscribers and was launched a month after this survey was completed.

The data in Table 8 also show general satisfaction with the NIOSH Web site. Eighty-seven percent of the respondents who used or referred to NIOSH materials either strongly agree (38%) or agree (49%) with the statement that *the NIOSH Web site provides high-quality, usable information* (1% disagree and 12% had no opinion) (Question 15c). Similarly, 84% of the respondents either strongly agree (32%) or agree (52%) with the statement that *the NIOSH Web site provides effective access to NIOSH information and publications* (2% disagree and 14% had no opinion) (Question 15d). Many fewer respondents had opinions about other NIOSH information services (800-Number, Listserv, exhibits), but those who had an opinion were generally favorable about these services.

Figure 8 (Question 15a) shows how the respondents, grouped by affiliation, rated the statement concerning NIOSH credibility. If the percentages for agree and strongly agree are combined, the level of support for the creditability statement was nearly 100% for respondents from all four professional associations. For a research and service agency, the issue of credibility is one of the key factors needed in carrying out its mission.

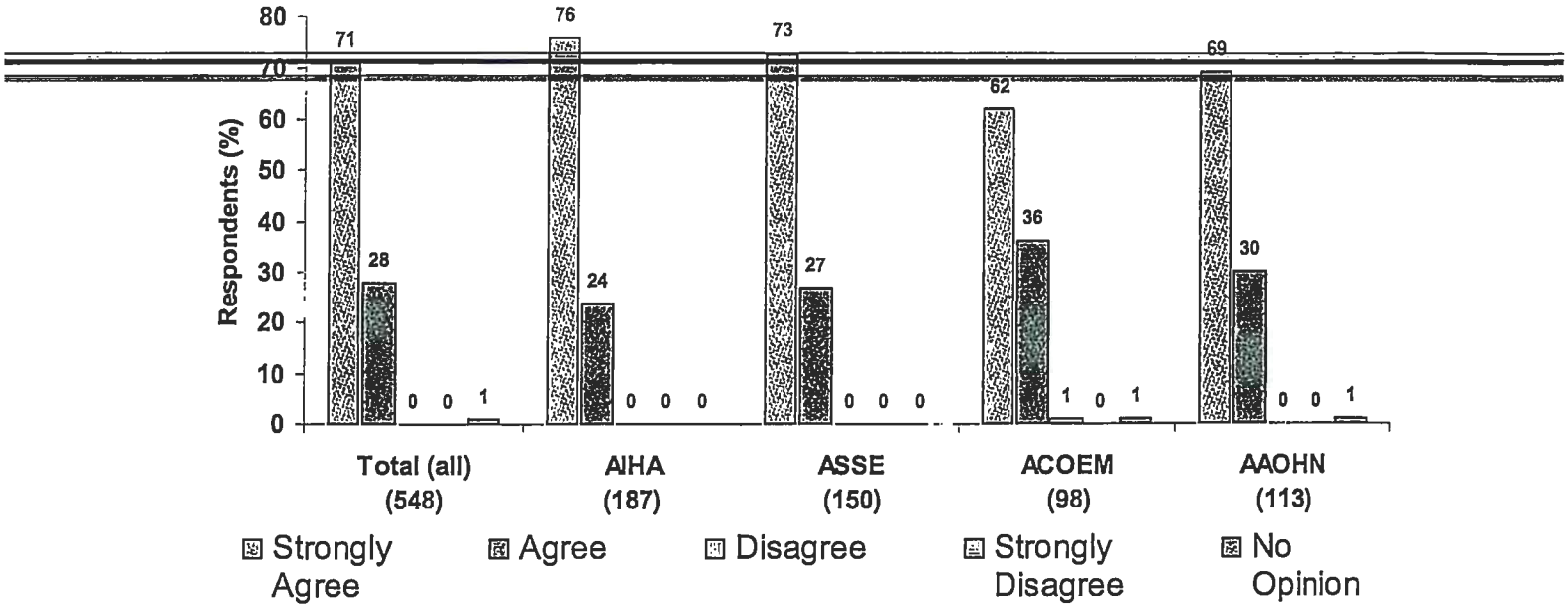

Figure 8. Question 15a: Percentage of respondents who agreed that NIOSH is a credible source for obtaining OSH information, by association.

Figure 9 (Question 15h) shows how the respondents, grouped by affiliation, rated the statement concerning NIOSH being *an important resource for the OSH community*. Again, when the percentages for agree and strongly agree are combined, the level of support for the concept of NIOSH as an important resource was rated at nearly 100%. The values for AIHA and ASSE were somewhat higher in the strongly agree category than corresponding values observed with the other two associations. A possible reason is that over the years, NIOSH has published hundreds of documents that are particularly relevant to the work of industrial hygienists and occupational safety professionals.

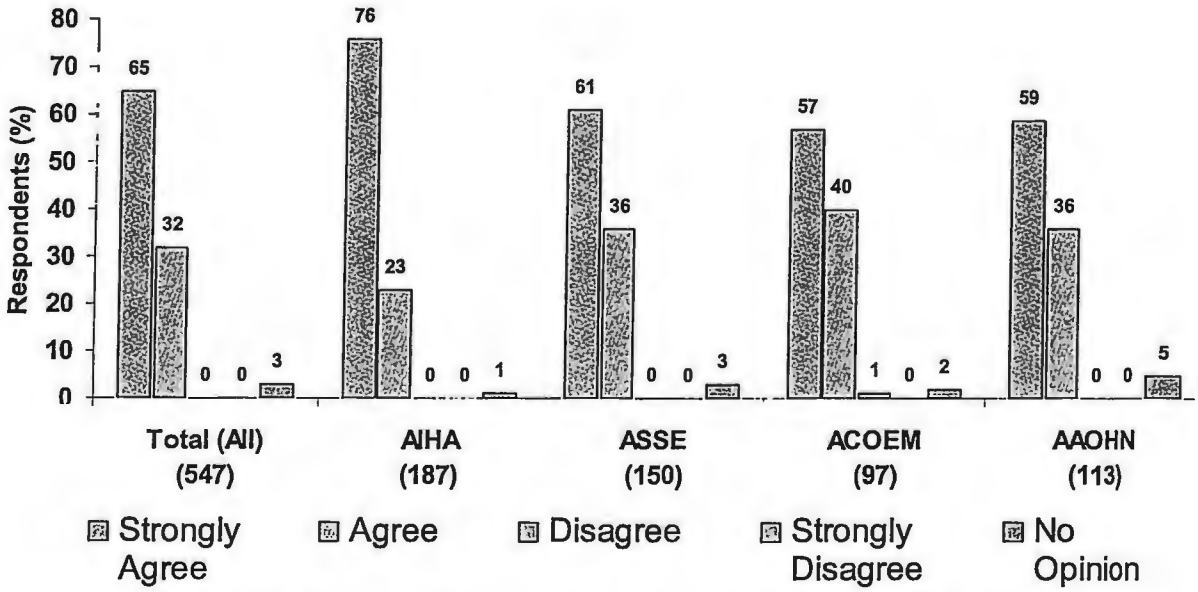

Figure 9. Question 15h: Percentage of respondents who agreed that NIOSH is an important resource for the OSH community, by association.

SURVEY SECTION IV: OPINIONS ABOUT NIOSH PUBLICATIONS

Ratings of NIOSH Publications (Questions 16a-k)

The questionnaire contained a series of 11 statements about NIOSH publications. A five-point Likert rating scale was used to assess the respondents' perceptions of NIOSH publications. The scale had four levels of agreement (strongly agree, agree, disagree, strongly disagree) and a *no opinion* option. Table 9 provides the level of agreement for each statement for all respondents, and Figure 10 provides the results in a bar graph. The majority of the respondents either strongly agreed or agreed with the survey statements that characterized NIOSH communication products as containing up-to-date information (92%), providing useful recommendations and guidance (92%), at the appropriate technical level (92%), being clearly written (91%), providing practical recommendations (83%), and impartial (80%). These data support one of the NIOSH primary responsibilities—to provide high-quality technical publications to the OSH community.

Table 9. Question 16: Respondents' perceptions about NIOSH publications

Statement	% respondents				
	Strongly agree	Agree	Disagree	Strongly disagree	No opinion
a. NIOSH publications contain current, up-to-date information.	30	62	3	—	5
b. NIOSH publications are impartial.	21	59	6	—	14
c. NIOSH publications are at the appropriate technical level.	24	68	2	—	6
d. NIOSH publications are clearly written.	21	70	4	—	5
e. NIOSH publications provide useful recommendations and guidance.	29	63	3	—	5
f. NIOSH publications provide practical recommendations.	19	64	7	—	10

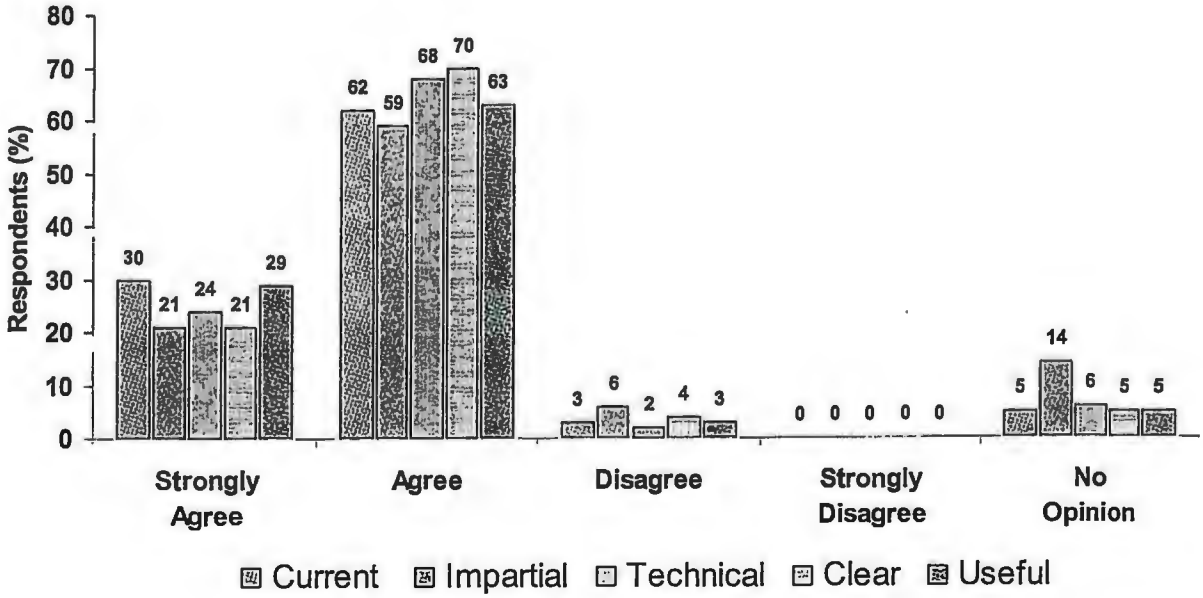

Figure 10. Questions 16a-16e: Percentage of respondents who agreed or disagreed with various descriptions of NIOSH publications.

NIOSH Web Site and the 800-Number

Two statements were used to obtain information related to the ease of accessing NIOSH publications through the NIOSH Web site and the NIOSH 800-Number (Questions 16h and 16k).[15] Seventy-two percent of the respondents either strongly agreed or agreed that *finding NIOSH publications on the NIOSH Web site is easy*, while 6% disagreed and 22% had no opinion. Significantly fewer respondents had an opinion about the ease of using the NIOSH 800-Number publication ordering system; 65% had no opinion. Of the remaining respondents, 31% agreed or strongly agreed that the 800-Number ordering system was easy to use and 4% either disagreed or strongly disagreed.

Question 17 asked the respondents to list up to three publications by title or name that they had found most useful. The survey package included a list of approximately 225 NIOSH publications from the last 5 years, which served as a reference. The list of publications was organized by broad subject areas to assist the respondent in identifying the publications. The most useful NIOSH document was the *NIOSH Pocket Guide to Chemical Hazards*, with 135 selections; this document was followed by the *NIOSH Manual of Analytical Methods*, with 28 selections; and *Preventing Needlestick Injuries*, with 20 selections. Twenty-nine publications had five or more selections. The wide range of titles that were considered *most useful* illustrates the variety of topics that NIOSH must address to meet the needs of the user community.

SURVEY SECTION V: USE OF NIOSH PUBLICATIONS

How NIOSH Materials are Used

NIOSH continues to develop a variety of information materials, often in multiple formats—electronic, printed, and CD-ROMs. These materials may range from a simple two-page fact sheet to an extensive chemical database such as the *NIOSH Pocket Guide to Chemical Hazards*. Question 18 was designed to determine *if NIOSH materials were being used by the respondents* as a reference tool in performing various job duties and if so, to what extent (the frequency of usage). Table 10 provides a condensed view of the data and provides insight into the issue of usage and relevance of documents to OSH practitioners. This table shows that NIOSH materials are used frequently in job activities such as training, developing OSH programs, hazard exposure assessments, and formulating OSH policies.

[15] Refer to the Appendix, Question 16 of the survey for the data on h and k.

Table 10. Question 18: Number of times respondents used NIOSH publications in performing OSH functions during the preceding 12 months

OSH function	% respondents using NIOSH publications				
	>10 times/yr	3–10 times/yr	<3 times/yr	Never	NA*
Establish OSH programs	12	35	28	8	17
Conduct OSH training	15	36	25	8	16
Perform hazard exposure tests	15	31	25	9	20
Implement hazard controls	9	30	24	10	27
Formulate OSH policies/practices	11	35	27	10	17
Conduct research projects	7	14	14	15	50
Conduct workplace inspections	8	24	28	17	23
Perform air sampling/monitoring	14	20	16	12	38
Prepare reports for management	8	21	29	16	26

*Not applicable.

Figure 11 (Question 18) provides a view of the data using a simple horizontal bar graph. A couple of findings stand out. First, most of these practitioners were not involved in research.[16] As a result, when they were asked how often they referred to a NIOSH publication when *developing and conducting research projects*, 50% of the respondents marked *not applicable*, 15% *never*, and 7% *frequently*. With respect to the other four job activities, a mix of usage may account for the range of frequency seen below. NIOSH publications are frequently used or referred to when practitioners are involved in hazard assessment and training.

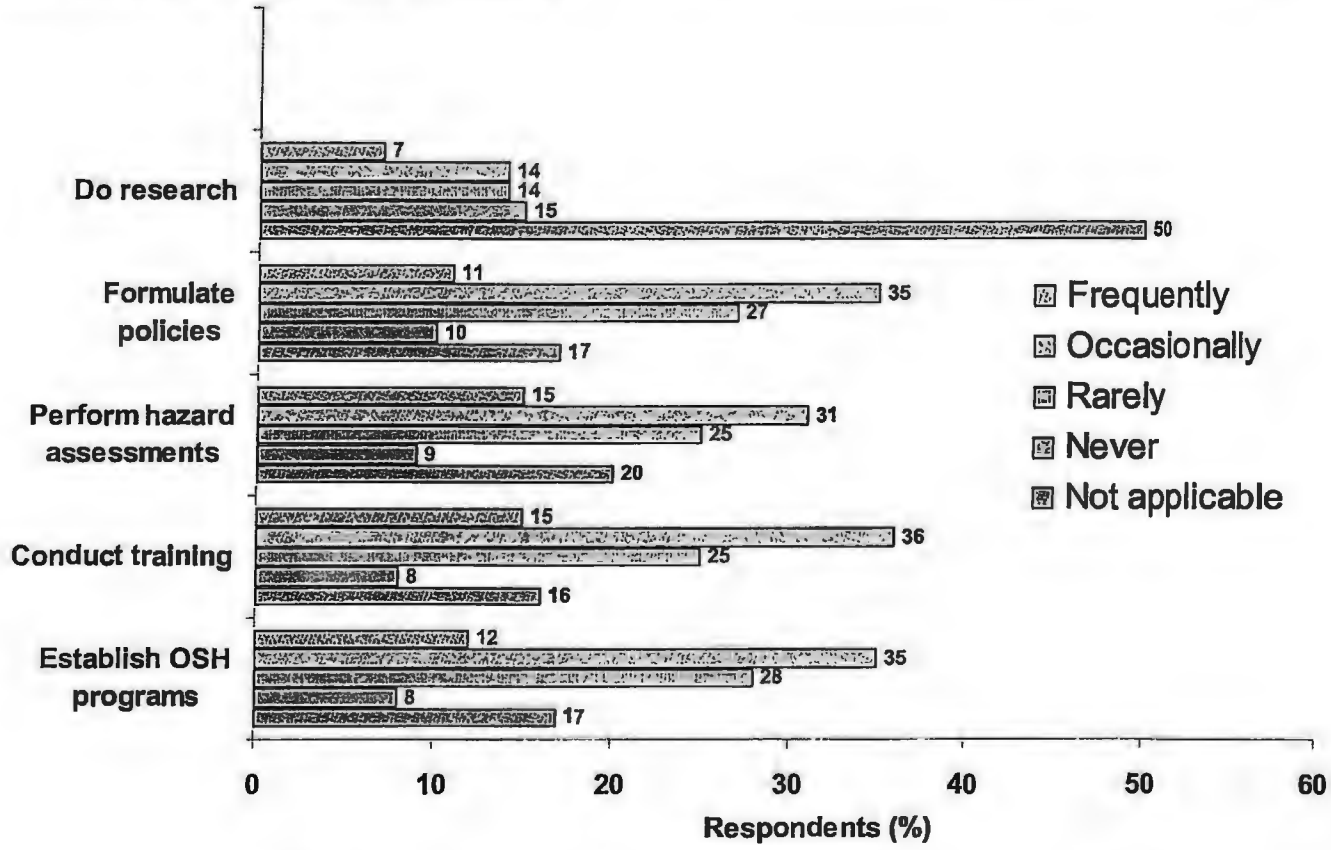

Figure 11. Question 18: Percentage of respondents reporting various frequencies with which they use NIOSH publications to do tasks.

[16] This is based on the findings from Question 8 (Table 5) where only 6% reported that they developed or conducted research projects.

Impact of NIOSH on Policies and Procedures

One of the key measures of effectiveness is to examine the extent to which an organization (a workplace) has used, referred to, or adopted guidance and recommendations produced by a non-rule-making agency such as NIOSH. Figure 12 shows the responses by association for Question 19. There was remarkable consistency across all four associations with respect to this question. For all of the respondents, slightly fewer than 50% indicated that NIOSH publications had been referred to or cited by name in their organizations' policy and procedures, whereas 30% indicated that they had not been cited, 17% did not know, and 4% indicated the question did not apply.

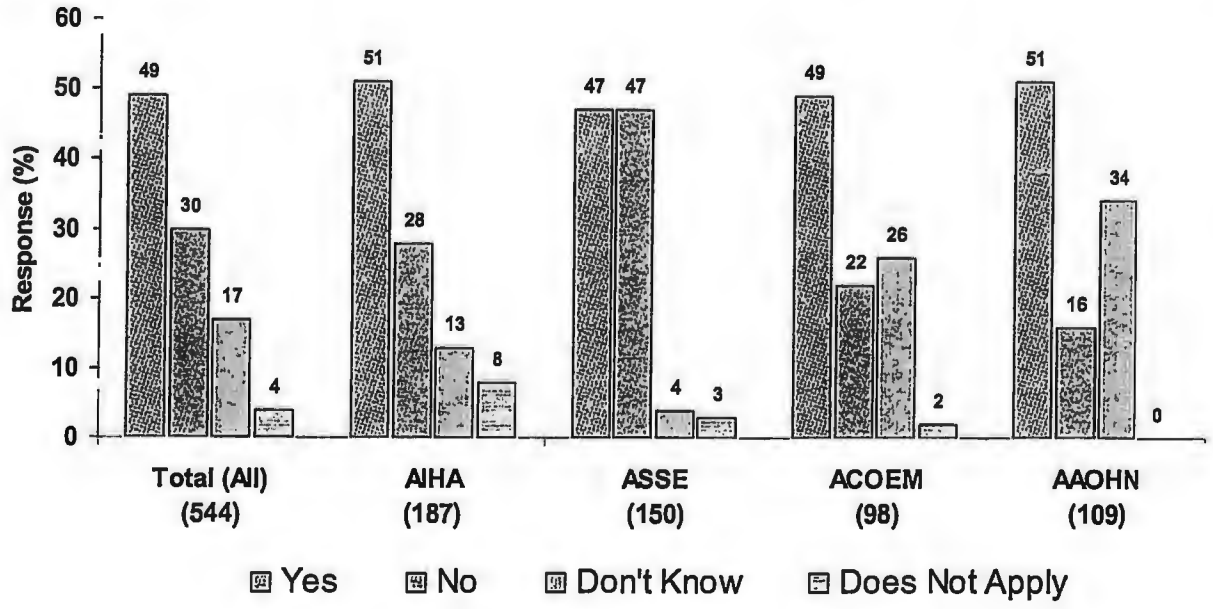

Figure 12. Question 19: Percentage of respondents reporting whether they have or have not referred to or cited a NIOSH publication by name in their association's policies and procedures, by association.

Question 20 asked *to what extent your organization's safety and health practices (had) been influenced by NIOSH publications*; 36% responded a lot, 44% a little, 17% did not know; 3% marked not at all. Figure 13 shows the responses by association. Again, if the top two choices are combined (*a little* and *a lot)*, the results are encouraging, ranging from 70% to 84%. This question provides yet another marker for performance and can be used as a baseline or to set a goal.

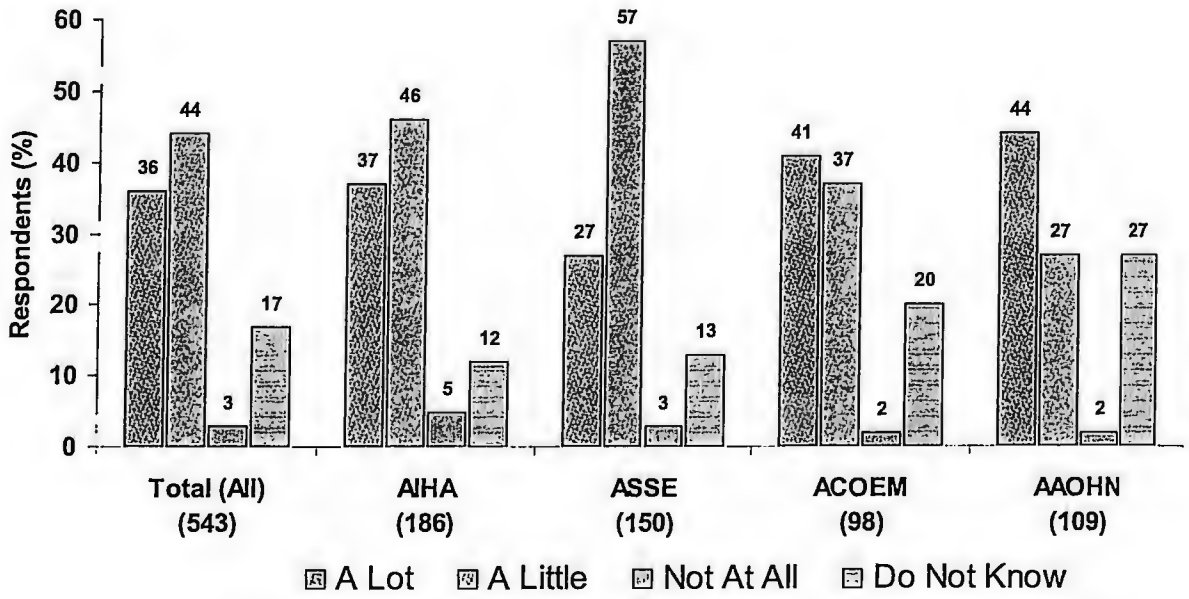

Figure 13. Question 20: Percentage of respondents reporting that their OSH practices have or have not been influenced by NIOSH publications, by association.

SURVEY SECTION VI: SUGGESTIONS FOR NIOSH PRODUCTS AND SERVICES

The survey form provided a list of 13 statements, suggesting ways for NIOSH to improve its products and information delivery (Question 21). The statements were selected from the comments made by the members of the original focus groups who helped develop the content for this survey. Each survey statement included a five-point Likert scale. The scale ranged from 1 (a high value) through 5 (a low value). The respondents were asked to indicate a value for each suggested improvement. Table 11 (Question 21) provides the respondents' ratings of the suggested improvements to information dissemination at NIOSH. When the percentages for values 1 and 2 are combined, Statement h (*Package/distribute NIOSH publications around common themes)* was rated in the top two categories by 83% of the respondents.[17] Statement c (*Announce publications on the NIOSH Web site)* was rated second (81%), Statement l (*Creating CD-ROM collections of publications*) was third (69%), and Statement f (*Publicizing and increasing the circulation of Health Hazard Evaluations Reports*) was fourth (65%).

[17] This practice of combining the values of the top two choices from a five-point Likert scale is referred to in the marketing survey literature as the *top-two-box* finding.

Table 11. Question 21: Respondents' ratings regarding specific suggestions

Suggestion	Distribution of respondents' ratings (%) High* 1	2	3	4	Low 5
a. Produce more NIOSH catalogues that describe publications and reports.	25	25	26	12	12
b. Announce publications on NIOSH Listserv.	24	26	26	10	14
c. Announce publications on NIOSH Web site.	49	32	14	3	2
d. Promote availability of NIOSHTIC-2 database for search/access of its reports.	25	31	24	10	10
e. Establish reader interest profiles and send publications that match reader profiles.	17	26	26	14	16
f. Publicize and increase the circulation of NIOSH Health Hazard Evaluation Reports.	24	41	23	8	4
g. Produce more Investigative Reports.	18	36	31	10	5
h. Package/distribute publications around common themes.	41	42	12	3	2
i. Increase use of direct mail ticklers.	10	20	28	20	22
j. Develop technical documents understandable to workers.	21	30	29	13	7
k. Support chat room on Web for OSH.	8	17	27	26	22
l. Create CD-ROM collections of publications.	36	33	17	7	7
m. Make publications in different languages.	11	14	21	16	38

*Ratings range from high preference (1) to low preference (5).

Table 12 (Question 22) provides information about the preferences of respondents for being notified regarding new NIOSH publications. Clearly, the NIOSH Web site received the highest preference (88%), followed by the NIOSH publications catalog (63%).[18] This suggests that the respondents understand and use the NIOSH Web site to find information about new publications. Their preference for receiving NIOSH publications by direct mail was considerably lower (46%) and matched the score for the NIOSH Listserv (46%).[19]

Although the NIOSH 800-Number was not selected as a high preference source for learning about new NIOSH information (35%), the 800-Number remains popular as a source to reach NIOSH, not only for questions about new publications, but also to receive publications and request information about issues related to OSH.[20]

Table 12. Question 22: Preferred method of being notified about new NIOSH publications

	Distribution of respondents' ratings (%)				
	High *				Low
Notification method	**1**	**2**	**3**	**4**	**5**
NIOSH Listserv	20	26	24	9	21
NIOSH Web site	67	21	7	3	2
NIOSH 800-Number	12	23	26	19	20
NIOSH conferences/exhibits	21	31	26	13	9
NIOSH direct mailing	18	28	22	14	18
NIOSH publications catalog	30	33	20	10	7

*Ratings range from high preference (1) to low preference (5).

[18] This is based on the *top-two-box* score.

[19] The NIOSH Listserv had been in operation for less than a year and preceded the launch of the current more contemporary NIOSH *eNews*.

[20] The 800-Number receives about 80,000 calls per year and disseminates more than 900,00 information products per year.

Table 13 (Question 23) provides information about various methods for obtaining NIOSH publications. The respondents were instructed to show their preferences for each statement by assigning a value from 1 to 5. The NIOSH Web site received the highest ratings for accessing NIOSH information, whether by e-mail or downloaded from the NIOSH Web site. Since 97% of these professionals had access to the Internet at work (Question 7), the Internet provides access at any time and from any location. The other choices offer more limited access as to time and place or to the extent of information available.

Table 13. Question 23: Preferred method for obtaining NIOSH publications

	Distribution of respondents' ratings (%)				
	High *				Low
Method	**1**	**2**	**3**	**4**	**5**
Request via Web site e-mail	63	24	8	2	3
Download from NIOSH Web site	74	16	7	1	2
Call NIOSH 800-Number	14	28	26	14	18
Telephone NIOSH authors/staff	9	17	28	22	24
Request via NIOSH Fax-line	7	20	30	20	23
Request at NIOSH conferences or exhibits	13	26	29	18	14

*Ratings range from high preference (1) to low preference (5).

Question 24 was an open-ended question in which the respondents were asked to *list three new safety and health topics that NIOSH should address in future publications*. The responses are organized/catalogued by subject matter. The results are shown in Table 14 for the eight most popular topics in order of frequency.

Table 14. Question 24: Eight topics NIOSH should address in future publications by frequency of listing

Suggested topic	Order of most frequent listing
Mold containment	1
Indoor air quality	2
Ergonomics-related topics	3
Respirator selection and use	4
Counter terrorism	5
Safety-related topics	6
Health effects topics	7
Smallpox protection	8

Table 15 (Question 25) provides a list of seven types of publications (information products) that the original focus group participants suggested be included in the survey. The rank score reflects the choices of the respondents when asked to select as many of the types of publications (information products) that *NIOSH should consider emphasizing in the future.* Publications dealing with practical applications and guidelines generated the highest ranked score. There also continues to be a demand for publications dealing with recommended safety and health standards. Materials for educating workers and owner/managers were also popular. With OSH practitioners such as the survey respondents, interest in technical or scientific documents generally appears to be more limited.

Table 15. Question 25: Types of publications NIOSH should emphasize in the future

Type of publication	Rank by % respondents who selected the type of publication
Practical applications/guides (checklists, audits, *how to* publications)	81
Recommended safety and health standards	72
Booklets or documents for educating workers	67
Booklets or documents for educating owners/managers	55
Case studies (HHEs and FACE)	51
Scientific/technical documents	41
Manual of analytical methods	35

Question 26, the final question of the survey, asked whether it *would be reasonable for NIOSH to charge a nominal shipping and handling fee (e.g., $5) for publication orders of five or more copies?* Eighty-two percent of the respondents answered *yes* to the question, 9%, *no,* and 9%, *no opinion.*

4. CONCLUSIONS

The respondents were generally well educated and experienced in their respective fields of OSH. As would be expected, the four most common occupations were industrial hygienist, safety professional/manager, occupational nurse, and occupational physician. Most of the respondents worked in large companies or businesses and performed a range of jobs that included establishing and conducting OSH programs, interpreting and applying OSHA regulations, and conducting training and workplace safety audits and inspections. The vast majority of the respondents had attended an OSH training course in the past year. The respondents had nearly universal access to the Internet at work. As a result, the majority strongly preferred to access the NIOSH Web site to learn about new publications rather than receive notification of new NIOSH publications through the mail.

The respondents typically looked to government sources for information about OSH. NIOSH, along with OSHA, were the two main sources consulted on a regular basis. Other highly ranked sources included the ANSI and ACGIH. One surprise was the popularity of the National Fire Protection Agency as a source for OSH information. Various commercial newsletters, magazines, and publications were also identified as sources for OSH information. The respondents also identified their own professional associations as important sources of information.

These findings serve as a useful guide for developing information and communication products for these important stakeholder associations. It is recommended that NIOSH be more proactive in developing partnerships with these associations. Some steps may include increasing the sharing of information through the use of Web site cross-promotions and disseminating information through various association and commercial publications. There also may be opportunities before the national association's meetings to collaborate with the associations and sponsor exhibits promoting common areas of interest.

The findings from the NCSS indicated that overall, NIOSH is meeting the information needs of the majority of the members of these four OSH professional associations. Nearly 80% of the respondents had used NIOSH materials in some form in the past, and 80% of those believed that NIOSH information materials had influenced their organization's safety and health practices either a lot (36%) or a little (44%). Nearly 50% of the respondents reported that NIOSH materials had been used or cited by name in their organization's policies and procedures. This was consistent across professions.

The respondents also gave NIOSH nearly a 100% grade for being a *credible source of OSH information*. Moreover, when the respondents were asked to express their degree of agreement with the statement that *NIOSH is an important resource for the OSH community*, 97% strongly agreed or agreed with the statement. Additionally, NIOSH received strong support from the respondents for producing publications that are up-to-date, impartial, clearly written, at the appropriate technical level, and provide useful and practical information.

Among the respondents that had ever used or referred to a NIOSH publication, the majority had referred to NIOSH materials at least once during the past 12 months when performing the following

job tasks: conducting OSH training, establishing OSH programs, formulating new or revised OSH policy/practices, performing hazard exposure assessments, designing and implementing hazard control measures, conducting workplace safety and health audits and inspections, and preparing reports for management. However, only a small percentage of the respondents (15% or less) referred to NIOSH materials on a frequent (>10 per year) when performing these job tasks. Additionally, a comparable small percentage of respondents indicated that they had not used a NIOSH publication during the same 12-month period when performing these tasks. This may be due to the fact that a number of the listed tasks were activities usually performed by an industrial hygienist rather than the three other professions surveyed. Since only 25% of the sample constituted industrial hygienists, it is apparent that those unique industrial hygienist tasks, such as air sampling and work place inspections, would not show high percentages.

The majority of respondents in this survey were OSH practitioners. As a result, they may not have been as interested in research-oriented documents as researchers would be. The data suggest that NIOSH may want to focus on developing information materials that assist practitioners in performing their tasks. The fact that NIOSH materials for a number of OSH activities were *rarely or never consulted* by some of the respondents should be further examined to determine the reason(s) behind this finding.

The NCSS also identified customer preferences for future information products. For example, respondents were supportive of information that provided practical and clear guidance on matters related to policy, such as NIOSH criteria documents. The survey also revealed a demand for information and tools designed and packaged for more direct application, checklists, how-to, and self-audits.

The NCSS also pointed out opportunities for improvement. Specifically, 21% of the respondents had never used or referred to NIOSH materials. When the data were analyzed by association membership, this effect was most noted among survey respondents who belonged to the two medical associations (ACOEM and AAOHN). These findings may reflect either a lack of awareness of NIOSH or a lack of awareness of NIOSH as a source of OSH information. Either way, the results suggest a need for improved communication, dissemination, and/or attribution, especially within the OSH medical community. These findings present opportunities for more direct knowledge sharing and interaction with the four stakeholder associations.

5. FUTURE ACTIONS

NIOSH recently launched a program geared to the translation of NIOSH *research to practice* (**r2p**). The goal is to develop outcomes from scientific research that improve the practice of prevention. Outcomes from **r2p** efforts may include new technologies, analytical methods, inventions, prevention policies, and publications. The **r2p** initiative recognizes the vast amount of technical information that NIOSH has produced over the years and the fact that this information has not been accessible or summarized in a fashion so it can be used at the workplace or in training sessions. NIOSH is taking a very proactive stance to ensure that research efforts, where feasible, can be translated into materials or booklets and documents for workers, owners, and managers. Similarly, case study information is seen as a valuable resource. More than 2,500 Hazard Evaluation and Technical Assistance (HETA) investigations and a similar number of fatality reports and control technology reports have been collected and published around common themes or hazards. Many of these case reports have relevance to situations where similar worksite hazards and prevention opportunities exist and are associated with work practices that promote healthy work.

The survey results suggest that NIOSH should continue to focus on the development of publications that incorporate *practical applications and guides*. In the NIOSH survey, this type of publication was the highest ranked publication topic to be *emphasized in the future*. The survey findings also indicate that NIOSH should evaluate its dissemination plans for its primary publications. Over the years, various mailing lists have been compiled based on user requests. New publications are routinely sent to all members on the mailing lists. NIOSH also purchases specific mailing lists for special purpose publications, such as those aimed at firefighters. Competition for the attention of busy OSH practitioners is even more difficult now with the Internet. NIOSH needs to find ways to market the value of its documents to the practitioners. These individuals need information that will assist them to do their job better and more easily. This message needs to be clear and out in front. Credible information that enhances the effectiveness of OSH practitioners will be well received, but targeted groups must be made aware of NIOSH products. This is more likely to occur if the targeted or user groups are brought into the document development process at the beginning stages.

NIOSH will also continue efforts to improve communication with stakeholder associations. The NIOSH Web site has added features requested by customers; notably, topic pages highlighting recent advances in surveillance, evaluation, and control of occupational hazards. Future changes will be made including the capability to search the NIOSH Web site for case studies of effective controls and interventions.

In conclusion, the response levels for various questions in this survey may serve as a baseline on which NIOSH will develop projects to increase desired responses. This should increase the utility, relevance, and quality of the information so that NIOSH communication products continue to move the OSH community toward further preventive action.

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APPENDIX

Response Summary Questionnaire

SECTION I

BACKGROUND—TELL US ABOUT YOURSELF

The following questions ask about your professional training and background.
***Please fill in the circle next to your response completely:* ●, *NOT* ⊘ *or* ✓**

1. **How would you define your professional training/background?** (*Fill in ALL circles that apply.*)

18% - Physician
31% - Safety professional/manager
3% - Toxicologist
7% - Risk/loss control manager
2% - Ergonomist/work physiologist
25% - Nurse
–% - Economist
3% - Researcher
–% - Physical therapist
31% - Industrial hygienist
–% - Industrial psychologist
1% - Human resource specialist
9% - Educator/trainer
12% - Other (*Specify*):_____

2. **What is the highest educational level that you have attained?** (*Fill in ONE circle.*)

4% - Some college
8% - Associate degree
34% - Bachelor's degree
33% - Master's degree
9% - Doctoral degree
12% - Post-doctoral studies or training

3. **In the past 12 months, how many hours/days/weeks did you spend attending training courses dealing with OSH issues?** (*Fill in ONE circle.*)

5% - None
15% - 1–8 hours
17% - 9–16 hours
34% - 17–40 hours
25% - 41–120 hours
4% - More than 3 weeks

4. **How much professional experience do you have in OSH matters?**
(*Fill in ONE circle.*)

11% - 0–5 years
17% - 6–10 years
27% - 11–15 years
17% - 16–20 years
28% - More than 20 years

5. **In your current job, what type of organization do you work for?**
(Fill in **ALL** circles that apply.)

43% - Company/business
7% - University/college
–% - Labor organization
10% - Industry or trade association
19% - Hospital/clinic
13% - Private consultant
1% - Self-employed health service worker
–% - Professional society staff
9% - Federal government agency
4% - State government agency
2% - Local government agency
7% - Other (*Specify*): _____

6. **In your current job, how would you classify the size of the organization in which you work?**
(*Fill in **ONE** circle.*)

5% - Self only
11% - Very small (less than 50 employees)
3% - Small (50 to 100 employees)
14% - Medium (101 to 500 employees)
67% - Large (more than 500 employees)
–% - Don't know

7. **In your current job, do you have access to the Internet?**

97% - Yes
3% - No

8. **In your current job, which of the following activities best represent your primary responsibilities?** (*Fill in up to **FIVE** circles.)*

52% - Establish/conduct OSH programs
41% - Conduct worker OSH training
20% - Conduct professional-level OSH training
35% - Perform hazard exposure assessments
25% - Perform accident investigations/loss control analyses
18% - Design/implement hazard control measures
31% - Formulate new/revised OSH policy/practices
41% - Interpret/apply/enforce OSHA regulations
36% - Deliver medical services
25% - Keep records/report injury and disease cases
6% - Develop/conduct research projects
37% - Conduct workplace safety audits and inspections
15% - Perform air sampling/monitoring
2% - Design/lay out facilities to meet production/safety specifications
9% - Other (*Specify*): _____

SECTION II

YOUR SOURCES FOR OSH INFORMATION

9. **In your current job, how often do you use the following sources of OSH information?** (*Fill in ONE circle for EACH source.*)

Printed Sources (i.e., books, journals, tech reports)	**Electronic Sources** (i.e., Web search, CD-ROMs, software)	**Other Sources** (i.e., colleagues, experts, meetings, conferences)
34% - Daily	**41%** - Daily	**22%** - Daily
39% - Weekly	**38%** - Weekly	**30%** - Weekly
21% - Monthly	**14%** - Monthly	**26%** - Monthly
3% - Quarterly	**3%** - Quarterly	**12%** - Quarterly
- % - Bi-annually	**1%** - Bi-annually	**4%** - Bi-annually
1% - Yearly	**1%** - Yearly	**4%** - Yearly
1% - Never	**2%** - Never	**2%** - Never

10. **In the PAST 12 MONTHS, have you read or referred to OSH information provided or published by any of the following organizations or sources?** *(Fill in ALL circles that apply.)*

30% - AAOHN American Association of Occupational Health Nurses
45% - ACGIH American Conference of Governmental Industrial Hygienists
32% - ACOEM American College of Occupational and Environmental Medicine
44% - AIHA American Industrial Hygiene Association
46% - ANSI American National Standards Institute
9% - APHA American Public Health Association
40% - ASSE American Society of Safety Engineers
22% - ATSDR Agency for Toxic Substances and Disease Registry
3% - CCPS Center for Chemical Process Safety
11% - DOE Department of Energy
44% - EPA Environmental Protection Agency
3% - HFS Human Factors Society
4% - HPS Health Physics Society
39% - NFPA National Fire Protection Agency
8% - NIEHS National Institute of Environmental Health Sciences
74% - NIOSH National Institute for Occupational Safety and Health
30% - NSC National Safety Council
84% - OSHA Occupational Safety and Health Administration
9% - NRC Nuclear Regulatory Commission
15% - Trade Organizations
8% - Labor Organizations
33% - Commercial newsletters, magazines, publications, etc. (*Specify*):_____
11% - Other (*Specify*):_____

11. **Have you ever USED or REFERRED to a NIOSH publication (i.e., printed NIOSH material, NIOSH CD-ROM, NIOSH Web site material, or information from the 800-Number)?**

    79% - Yes (Please **Continue** to **Question 12**)

    21% - No (Please **STOP** here. Go to the back page of the questionnaire and follow the instructions for sending the questionnaire back to NIOSH.)

12. **Have you ever requested/received OSH information from NIOSH by any of the following sources?** (*Fill in ALL circles that apply.*)

    43% - NIOSH 800-Number
    19% - NIOSH Fax-line
    78% - NIOSH Web site
    16% - NIOSH exhibit program
    13% - NIOSH staff expert
    6% - NIOSH Listserv
    15% - NIOSH sponsored conferences
    5% - Other_____

13. **Have you ever taken a course or attended an educational program in which NIOSH publications were used as information materials?** (*Fill in ONE circle.*)

    76% - Yes
    10% - No
    14% - Don't know
    –% - Does not apply

14. **Please indicate the frequency that you performed each of the following tasks within the PAST 12 MONTHS.** *(Fill in the circle of your answer for EACH item below.)*

STATEMENTS	Frequently >10 Times	Occasionally 3–10 Times	Rarely <3 Times	Never 0 Times
a. Used NIOSH **printed publications** to find OSH information.	**24%**	**44%**	**27%**	**5%**
b. Used the NIOSH **Web site** to find OSH information.	**32%**	**36%**	**25%**	**7%**
c. Used the NIOSH **800-Number** to find OSH information.	**1%**	**9%**	**30%**	**60%**
d. **Recommended** a NIOSH publication, CD-ROM, or material from the NIOSH Web site to a colleague.	**10%**	**29%**	**37%**	**24%**

SECTION III

YOUR OPINION ABOUT NIOSH AS AN INFORMATION SOURCE

15. **Please indicate how strongly you agree or disagree with each of the following statements.** *(Fill in the circle of your answer for EACH item below.)*

STATEMENTS	Strongly agree	Agree	Disagree	Strongly disagree	No opinion
a. NIOSH is a credible source for obtaining OSH information.	71%	28%	–%	–%	1%
b. The NIOSH Listserv keeps me informed about its products and services.	4%	17%	2%	2%	75%
c. The NIOSH Web site contains high-quality, usable information.	38%	49%	1%	–%	12%
d. The NIOSH Web site provides effective access to NIOSH information and publications.	32%	52%	2%	–%	14%
e. The NIOSH 800-Number provides high quality, usable information.	8%	27%	1%	–%	64%
f. The NIOSH 800-Number provides effective access to NIOSH information and publications.	9%	28%	2%	1%	60%
g. The NIOSH exhibits at conferences keep me informed about new NIOSH publications and services.	15%	42%	3%	1%	39%
h. NIOSH is an important resource for the OSH community.	65%	32%	–%	–%	3%

SECTION IV

YOUR OPINIONS ABOUT NIOSH PUBLICATIONS

16. **Please indicate how strongly you agree or disagree with each of the following statements about NIOSH publications.** *(Fill in the circle of your answer for EACH item below.)*

STATEMENTS	Strongly agree	Agree	Disagree	Strongly disagree	No opinion
a. NIOSH publications contain current, up-to-date information.	30%	62%	3%	–%	5%
b. NIOSH publications are impartial.	21%	59%	6%	–%	14%
c. NIOSH publications are at the appropriate technical level.	24%	68%	2%	–%	6%
d. NIOSH publications are clearly written.	21%	70%	4%	–%	5%
e. NIOSH publications provide useful recommendations and guidance.	29%	63%	3%	–%	5%
f. NIOSH publications provide recommendations that are practical.	19%	64%	7%	–%	10%
g. The length of NIOSH publications is appropriate for coverage of the topic.	17%	65%	5%	–%	13%
h. The NIOSH 800-Number publication ordering system is easy to use.	8%	23%	3%	1%	65%
i. NIOSH publications are user-friendly.	17%	70%	4%	1%	8%
j. NIOSH publications are delivered in a timely manner.	15%	47%	6%	1%	31%
k. Finding NIOSH publications on the current NIOSH Web site is easy.	17%	55%	6%	–%	22%

17. **Based on your past use of NIOSH publications, which publications did you find most useful (List up to three publications). Please provide a short explanation of why you found them useful.** *(For the following questions, please refer to the enclosed List of NIOSH Publications.)*

a. _____

b. _____

c. _____

SECTION V

YOUR USE OF NIOSH PUBLICATIONS

18. **Please indicate how often you referred to NIOSH publications (printed documents, CD-ROMS, or information on the NIOSH Web site) during the PAST 12 MONTHS when performing each of the following tasks.** *(Fill in the circle of your answer for EACH item below.)*

TASKS *I refer to NIOSH publications when*	Frequently >10 Times	Occasionally 3–10 Times	Rarely <3 Times	Never 0 Times	Not Applicable
a. Establishing occupational safety and health programs.	12%	35%	28%	8%	17%
b. Conducting occupational safety and health training.	15%	36%	25%	8%	16%
c. Performing hazard exposure assessments.	15%	31%	25%	9%	20%
d. Designing/implementing hazard control measures.	9%	30%	24%	10%	27%
e. Formulating new/revised safety and health policy/practices.	11%	35%	27%	10%	17%
f. Developing/conducting research projects.	7%	14%	14%	15%	50%
g. Conducting workplace safety audits and inspections.	8%	24%	28%	17%	23%
h. Performing air sampling or monitoring.	14%	20%	16%	12%	38%
i. Preparing reports for management.	8%	21%	29%	16%	26%

The following questions pertain to your organization's *use* of NIOSH publications.

19. **Has a NIOSH publication been referred to or cited by name in your organization's policy and procedures?**

49% - Yes
30% - No
17% - Don't know
4% - Does not apply—no written OSH policy and procedures

20. **To what extent have your organization's safety and health practices been influenced by NIOSH publications?**

36% - A lot
44% - A little
3% - Not at all
17% - Don't know

SECTION VI

MARKETING OF NIOSH PRODUCTS AND SERVICES

21. **Listed below are suggested ways for improving NIOSH dissemination of information. Please indicate the value to YOU on a scale of 1 to 5 for each suggested improvement where "1" indicates a high value to you and "5" indicates a low value.** *(Fill in the circle of your answer for EACH item below.)*

STATEMENTS	High value 1	2	3	4	Low value 5
a. Produce more NIOSH catalogues that describe publications and reports.	25%	25%	26%	12%	12%
b. Announce publications on NIOSH Listserv.	24%	26%	26%	10%	14%
c. Announce publications on NIOSH Web site.	49%	32%	14%	3%	2%
d. Promote availability of NIOSHTIC-2 database for search/access of its reports.	25%	31%	24%	10%	10%
e. Establish reader interest profiles and send publications that match reader profiles.	17%	27%	26%	14%	16%
f. Publicize and increase the circulation of NIOSH Health Hazard Evaluation Reports.	24%	41%	23%	8%	4%
g. Produce more Technology Reports and other investigative reports.	18%	36%	31%	10%	5%
h. Package and distribute NIOSH publications around common themes (e.g., noise and hearing loss, ergonomics, agriculture).	41%	42%	12%	3%	2%
i. Increase use of direct mail ticklers.	10%	20%	28%	20%	22%
j. Develop versions of technical documents more understandable to workers.	21%	30%	29%	13%	7%
k. Support a chat room on the NIOSH Web site to discuss current issues.	8%	17%	27%	26%	22%
l. Create CD-ROM collections of publications.	36%	33%	17%	7%	7%
m. Make publications available in different languages. (*Specify languages*):_____	11%	14%	21%	16%	38%
n. Other *(Specify)*: _____	–%	–%	–%	–%	–%

22. **Listed below are various methods of notifying the public about new NIOSH publications. Please indicate YOUR preference on a scale of 1 to 5 for each notification method where "1" indicates a high preference for that method and "5" indicates a low preference.** *(Fill in the circle of your answer for EACH item below.)*

STATEMENTS	High preference 1	2	3	4	Low preference 5
a. NIOSH Listserv	20%	26%	24%	9%	21%
b. NIOSH Web site	67%	21%	7%	3%	2%
c. NIOSH 800-Number	12%	23%	26%	19%	20%
d. NIOSH conferences/exhibits	21%	31%	26%	13%	9%
e. NIOSH Direct mailing	18%	28%	22%	14%	18%
f. NIOSH Publication catalog	30%	33%	20%	10%	7%

23. **Listed below are various methods of obtaining NIOSH publications. Please indicate YOUR preference on a scale of 1 to 5 for each method of obtaining NIOSH publications where "1" indicates a high preference for that method and "5" indicates a low preference.** *(Fill in the circle of your answer for EACH item below.)*

STATEMENTS	High preference 1	2	3	4	Low preference 5
a. Request via Web site e-mail	63%	24%	8%	2%	3%
b. Download from NIOSH Web site	74%	16%	7%	1%	2%
c. Call NIOSH 800-Number	14%	28%	26%	14%	18%
d. Telephone NIOSH authors/staff	9%	17%	28%	22%	24%
e. Request via NIOSH Fax-line	7%	20%	30%	20%	23%
f. Request at NIOSH conferences or exhibits	13%	26%	29%	18%	14%
g. Other *(Specify below)*:_____	–%	–%	–%	–%	–%

24. **Please list THREE new safety and health topics that NIOSH should address in future publications.**

a. _____

b. _____

c. _____

25. **Which of the following types of publications should NIOSH consider emphasizing in the future?** (*Fill in ALL circles that apply.*)

72% - Recommended safety and health standards (criteria documents)
67% - Booklets or documents for educating and informing workers
55% - Booklets or documents for educating and informing owners and managers
51% - Case studies (Health Hazard Evaluations and fatality investigations)
41% - Scientific/technical documents
35% - Manual of Analytical Methods
81% - Practical applications and guides (checklists, self-audits, "how-to" publications)

26. Would you consider it reasonable for NIOSH to charge a nominal shipping and handling fee (e.g., $5) for publication orders of **5 or more** copies?

82% - Yes
9% - No
9% - No opinion

WE CARE ABOUT WHAT YOU THINK. Please use this space to provide us any additional comments you have about this survey or about the services and products provided by NIOSH.

_____

_____

THANK YOU FOR COMPLETING THE QUESTIONNAIRE!

Your help is greatly appreciated. Please take the following steps:

- Place your questionnaire in the pre-paid envelope provided and seal it.
- Fill out the enclosed Survey Response Card to identify the five NIOSH publications you wish to receive from the booklet List of NIOSH Publications.
- Mail the questionnaire and Response Card separately to assure your anonymity.