

WORKPLACE SAFETY AND HEALTH

Information Dissemination, Sources, and Needs
Among Trade Associations and Labor Organizations



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



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EXECUTIVE SUMMARY

From April 2008 to April 2009, the National Institute for Occupational Safety and Health (NIOSH) conducted the survey, "Workplace Safety and Health Information Dissemination, Sources, and Needs among Trade Associations and Labor organizations." The survey obtained information from business and professional associations and labor organizations to better understand how they obtain workplace safety and health information and communicate it to their members. The organizations also provided information about their perception and use of NIOSH as a source of workplace safety and health information. Because business and professional associations and labor organizations are powerful resources for providing information to their members, the survey results are intended to improve NIOSH's efforts to partner with these organizations. Improved partnerships will enable NIOSH to better reach employers and employees with workplace safety and health information.

NIOSH has a long history of partnering with individual business and professional associations and labor organizations on projects designed to prevent occupational injuries and illnesses. These associations are crucial to the mission of NIOSH because they are trusted sources of occupational safety and health information and guidance that are essential to their industry [Bol  at 2003]. This study was the first effort of NIOSH to systematically obtain information from business and professional associations and labor organizations within the eight original National Occupational Research Agenda (NORA) industrial sectors about the communication channels they use and the types of workplace safety and health information they provide to their members. This study also gathered feedback about their knowledge and perception of NIOSH and its products and services.

Of the 2,324 organizations contacted for inclusion in the survey, only 308 completed the full survey instrument. In contrast, a total of 1,640 respondents completed a two-question short form, which allowed NIOSH to assess the extent of workplace health and safety information distribution for the overall sample. Among the 1,948 organizations responding to either the full survey instrument or the short form, approximately 40.9 % of labor organizations, 15.6% of business associations, and 9.6% of professional associations indicated they distribute workplace safety and health information to their members. Large differences were also observed between the eight NORA industrial sectors, with the construction sector having the highest percentage of organizations disseminating workplace safety and health information to their members and the service sector having the lowest percentage.

Of the 308 organizations responding to the full survey instrument, over 95% of all three organization types indicated they disseminate workplace safety and health information to their members. This was in sharp contrast to the 1640 organizations completing the short form where only 7.5% of the labor organizations, 0.8% of the business associations, and 1.5% of the professional association indicated disseminating workplace safety and health information to their members. The low percentage of organizations completing the full-survey instrument may in large part be due to the lack of occupational safety and health activities conducted within these organizations.

The following are key findings for all sectors combined, among the 308 organizations responding to the full survey:

- ***Disseminating workplace safety and health information:*** A large majority of the organizations surveyed reported disseminating workplace safety and health information to their members. Government agencies were the leading source of workplace safety and health information for business organizations and professional associations, and the second most used source for labor organizations which relied on other labor organizations as their primary source. The Occupational Safety and Health Administration (OSHA) was the most mentioned agency.
- ***Importance of workplace safety and health information and unmet workplace safety and health needs:*** Workplace safety and health was rated as highly important to members by most organizations. More than 25% of all three organization types indicated they had unmet workplace safety and health needs.
- ***Channels of communication:*** Websites were the most common communication channel offered by most organization types. Of those organizations with websites, a majority indicated that they used their website to disseminate workplace safety and health information. Most organizations among all three types reported sponsoring conferences that provided workplace health and safety information and training.
- ***Knowledge and perception of NIOSH and use of NIOSH information:*** Labor organizations and business associations were most familiar with NIOSH before the survey. Most organizations surveyed knew that NIOSH made recommendations, rather than regulations, and that NIOSH was a research institute. Almost all organizations with prior knowledge of NIOSH either agreed or strongly agreed that NIOSH is an important and credible resource for workplace safety and health information. Approximately two-thirds of labor organizations with previous knowledge of NIOSH were aware of the Health Hazard Evaluation (HHE) program, compared to 37% of professional associations and 25% of business associations. Seventy percent of labor organizations aware of the HHE program indicated they had previously used an HHE report. A majority of all three organization types indicated an interest in receiving workplace safety and health information from NIOSH, and more than half indicated an interest in having NIOSH contact them about partnering on a workplace safety and health issue.

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BACKGROUND

The National Institute for Occupational Safety and Health (NIOSH) conducted a survey of business (i.e., trade) and professional associations and labor organizations to better understand how they obtain and communicate workplace safety and health information to their members. Information also was collected about their awareness, perception, and use of NIOSH as a source of workplace safety and health information. Through communication efforts, NIOSH 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 behaviors, and ultimately improve American working life.

Although the means for packaging and delivering NIOSH-generated information varies, two primary communication vehicles are NIOSH numbered publications and individual series such as the Hazard Evaluation and Technical Assistance (HETA) and Fatality Assessment and Control Evaluation (FACE) reports. These NIOSH documents are made available to the public on the NIOSH website and via *NIOSH e-News*, home page announcements, and promotion at conferences. Historically, automatic mailings and responses to new requests for NIOSH publications have exceeded 750,000 copies per year and hundreds of thousands of documents and files downloaded from the NIOSH website. However, these numbers tell little of whether the reports are reaching their intended audiences or, more important, whether the information is perceived as credible and useful.

To reach key audiences, NIOSH relies on partnerships with business groups, professional associations, and labor organizations. All three types of organizations are powerful intermediaries for providing information to their members, whether the members are companies or individuals (e.g., safety professionals, business owners). Both business (also referred to as “trade”) and professional associations operate within sectors to represent the common interests of their members and provide them with services [Bean 2006; Chartered Quality Institute 2016]. They serve as intermediaries in delivering goods and services to businesses [Hasle, Limborg 2005; Sinclair et al. 2013] and helping associations maintain business and government relations [Walters 2003]. Business associations are organizations founded and funded by companies within an industry (e.g., chamber of commerce). They often engage in advertising, lobbying, making political donations, and offer conferences and networking opportunities for members. Professional associations are created to further the careers and development of individuals in a particular profession (e.g., industrial hygienists, occupational health nurses). Labor organizations also serve intermediary roles; they provide members with information and training, and they disseminate information on labor laws and workers’ rights [Walters, Mishel 2003; Weil 2004]. Furthermore, labor organizations typically represent members in collective bargaining and negotiations with employers. Labor organizations targeted for this study included national organizations that represent and provide support to local unions (i.e., locals).

This NIOSH survey was designed to obtain information from business and professional associations and labor organizations within each of the eight original NIOSH National Occupational Research Agenda (NORA) industrial sectors. These sectors included Agriculture, Forestry, and Fishing (AFF); Construction (CON); Healthcare and Social Assistance (HSA); Manufacturing (MAN); Mining (MIN); Services except Healthcare and Social Assistance (SER); Transportation,



Warehousing, and Utilities (TWU); and Wholesale and Retail Trade (WRT). This survey was the first opportunity for NIOSH to systematically obtain information about the distribution and use of workplace safety and health information by business and professional associations and labor organizations.

Survey data were collected from business associations, professional associations, and labor organizations to address the following questions:

1. Do business associations, professional associations, and labor organizations distribute workplace safety and health information to their members?
2. Which channels of communication are used by business associations, professional associations, and labor organizations to disseminate information? Do they use these channels to distribute workplace safety and health information?
3. What workplace safety and health information and training is being offered by business associations, professional associations, and labor organizations to their members? What channels are being used to deliver this information and what sources are being used to obtain workplace safety and health information?
4. Do business associations, professional associations, and labor organizations have important issues and unmet needs with respect to workplace safety and health information?
5. (How important are workplace safety and health issues to business associations, professional associations, and labor organizations within the various industrial sectors?
6. What is the perception of NIOSH as a source of workplace safety and health information?
7. What NIOSH information services (website, printed materials, 800-number, etc.) are used by business associations, professional associations, and labor organizations? What is the perception of these services?

METHODS

Sampling

Data were collected from business associations, professional associations, and labor organizations within each of the eight original NIOSH NORA industrial sectors. Simple random sampling was carried out in each of these subpopulations. The sampling frame was ascertained from the Thomson Gale *Associations Unlimited* database [2006], a leading source for information about associations and professional societies. *Associations Unlimited* provides coverage of 22,000 national associations in the United States. The 2006 database provided the names of 8,342 organizations in the categories of interest, including 3,234 business-oriented trade associations, 4,819 professional-oriented associations, and 289 labor organizations. Because of the small number of labor organizations identified within some of the sectors from the *Associations Unlimited* database, the sample was enriched with additional labor organizations found on the Internet by means of the Google search engine.

Figure 1. Flow from sampling frame to final sample response

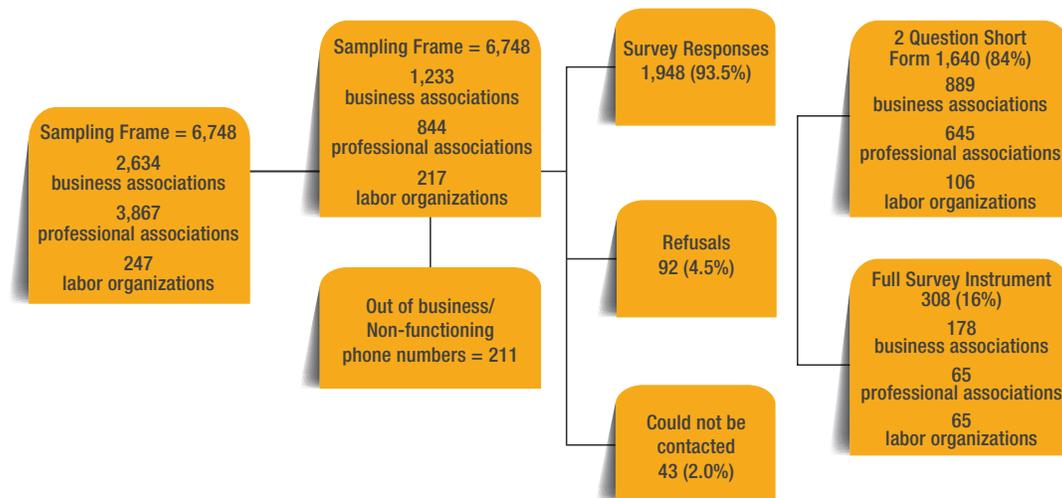


Figure 1 shows the flow of eligible organizations from the sampling frame to the final survey respondents. After elimination of duplicate organizations, the sampling frame consisted of 6,748 organizations: 2,634 business associations, 3,867 professional associations, and 247 labor organizations. The three categories of organizations included in the survey differ in their functions and types of members, so organizations within the same sector were expected to differ in their practices of providing workplace health and safety information to their members. To account for possible differences in occupational safety and health (OSH) information distribution among the 3 organizational groups and within the 8 industrial sector groups, the entire population was stratified into 24 subpopulations.

The numbers of organizations in each of the 24 strata varied greatly, and data within each stratum needed to be reported with sufficient precision to be useful. Therefore, the approach



of disproportionate stratified sampling was carried out to ensure that there were enough cases included in smaller strata for meaningful results. By this approach, the percentage of members sampled differed from one stratum to another. It was desirable to obtain the overall percentage of organizations responding affirmatively for the variables of interest for all business associations combined, all professional associations combined, as well as all labor organizations combined. To calculate these results, the data were weighted to take into account the stratified sampling design for a few of the business association and professional association strata. No weighting was necessary for the labor organization strata since sampling did not occur. The final number of organizations in the sample ($n = 2,294$) included 1,233 business associations, 844 professional associations, and 217 labor organizations. Nineteen of the 24 strata contained 120 or fewer organizations; therefore, every member of that group was included in the survey. For strata containing more than 120 organizations, a random sample of 120 was selected to be surveyed, with the goal of having 96 organizations from the group agree to participate. Prior to contacting survey respondents, we obtained clearances from the NIOSH Institutional Review Board (IRB) and U.S. Office of Budget and Management (OMB).

Survey Development

Two survey instruments were developed: a full survey instrument and a two-item short-form. The short form was designed to capture data from respondents who declined to complete the full-survey instrument. The short-form survey contained two survey items to capture a minimum amount of data to determine (1) whether the organization disseminated workplace safety and health information to their members and the (2) attitude of the organization's members as to the importance of health and safety issues.

The full survey instrument was divided into three sections. The first section included general questions about each business or professional association or labor organization and the respondent's role within their organization with respect to workplace health and safety. The second section focused on the communication channels being used by these organizations to provide information and training to their members and the use of these channels to distribute workplace safety and health information. This section also obtained information about the sources used by these organizations to obtain workplace safety and health information. The third section included questions about respondents' knowledge, perception, and use of NIOSH as a source of workplace safety and health information.

Data Collection and Analysis

Data were collected from April 2008 to April 2009. Using a computer-assisted telephone interview (CATI) system to capture survey responses, interviewers called the organizations and asked to speak with the person most responsible for workplace safety and health issues. If the proper person was reached and agreed to participate, the interviewer further explained the survey and time required. Those individuals not willing to complete the full-survey interview were asked to complete the two-item short form. Interviewers attempted up to 10 contacts with each organization. Most of the respondents to the short form did not answer the second question about the importance of workplace safety and health issues to their members. A

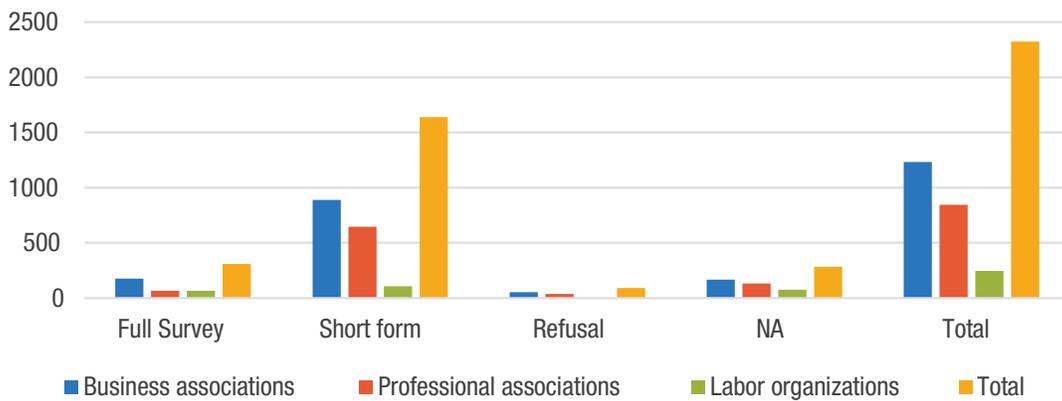


number of the full survey participants declined to answer several questions on the full survey. The data were transcribed from SelectSurvey® and formatted with Microsoft Excel®. Answers to closed-ended questions were assigned numeric values to facilitate analysis. Answers to open-ended questions were recorded as received. The data were sorted by organizational type: business association, professional association or labor organization.

RESULTS

A total of 2,294 business and professional associations and labor organizations were contacted for participation in this study, with 308 (13.3%) completing the full survey and 1,640 (70.6%) completing the short version. Most of the 254 organizations (12.2%) that could not be contacted were determined to be no longer in existence, and 92 organizations (4.0%) elected not to participate in the study. The 308 organizations completing the full survey included 178 business associations, 65 professional associations, and 65 labor organizations. Figure 2 shows the number of respondents to the full survey instrument and short form, according to organization type.

Figure 2: Survey response by organization type

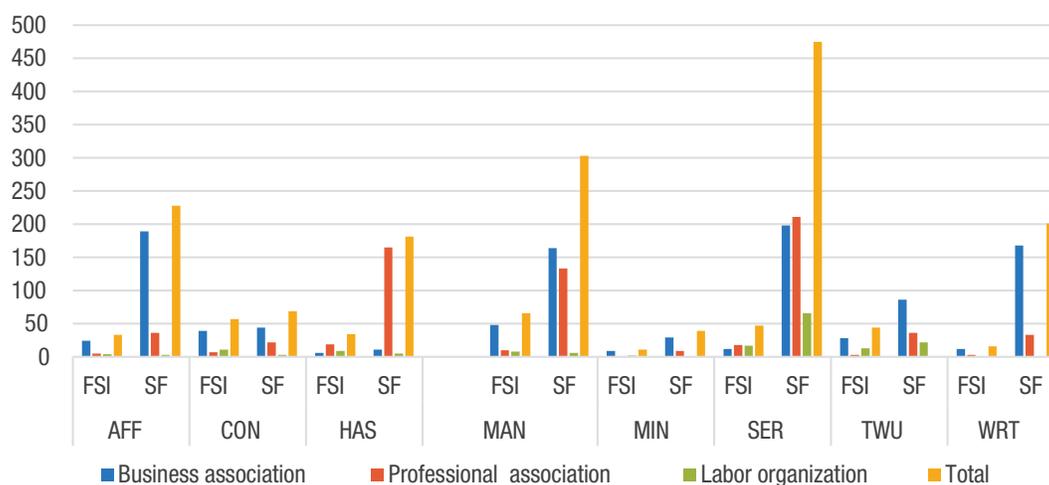


NA = Not reached



Figure 3 shows the distribution of the 308 organizations that completed the full survey and the 1,640 organizations that completed the short form, by organization type and industrial sector. With the exception of three of the 24 strata (labor organizations within the WRT and MIN sectors and professional associations within the MIN sector), all strata have three or more full survey responses.

Figure 3: Full survey instruments and short forms completed by organization type and sector*



*Agriculture, Forestry, and Fishing (AFF); Construction (CON); Healthcare and Social Assistance (HSA); Manufacturing (MAN); Mining (MIN); Services Except Healthcare and Social Assistance (SER); Transportation, Warehousing, and Utilities (TWU); and Wholesale and Retail Trade (WRT).

FSI = Full survey instrument; SF = Short form.

Table 1 shows the number of organizations (n=308) responding to the full survey instrument by sector.

Table 1: Number of full survey responses by sector

Organization	Sector								Total
	AFF	CON	HAS	MAN	MIN	SER	TWU	WRT	
Labor organizations	4	11	9	8	2	17	13	1	65
Business associations	24	39	6	48	9	12	28	12	178
Professional associations	5	7	19	10	0	18	3	3	65
Total	33	57	34	66	11	47	44	16	308

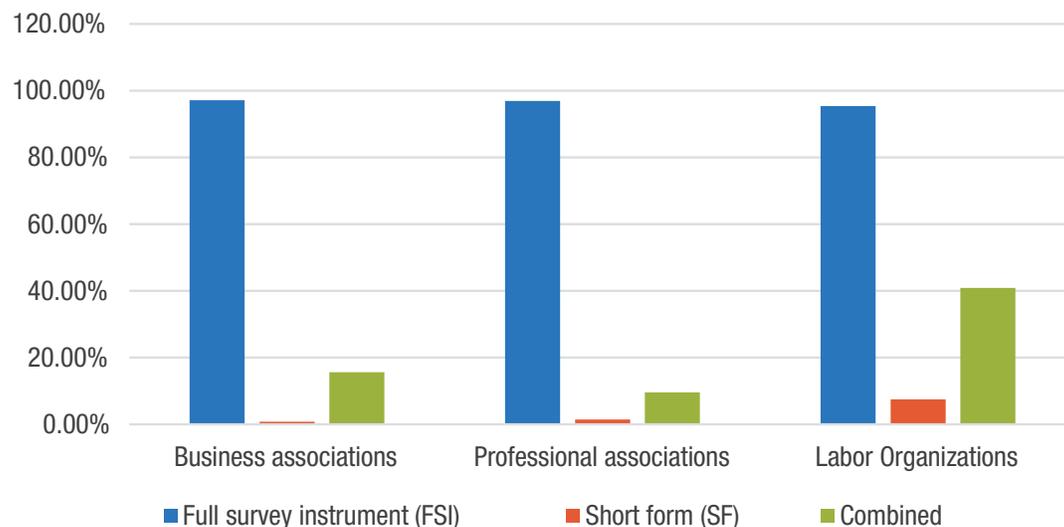
Agriculture, Forestry, and Fishing (AFF); Construction (CON); Healthcare and Social Assistance (HSA); Manufacturing (MAN); Mining (MIN); Services Except Healthcare and Social Assistance (SER); Transportation, Warehousing, and Utilities (TWU); and Wholesale and Retail Trade (WRT).



1. Do business associations, professional associations, and labor organizations distribute workplace safety and health information to their members?

Figure 4 shows the combined data from the 1,948 respondents answering either version of the survey. For the question asking whether organizations disseminated workplace safety and health information to their members, the answer was obtained from 93.5% of the currently active organizations surveyed. The weighted analysis by organization type showed a total of 40.9% of labor organizations, 15.6% of business associations, and 9.6% of professional associations disseminated this information to their members. If we consider only the 308 organizations responding to the full survey instrument, then more than 95% of each organization type disseminated workplace safety and health information to their members. This is in sharp contrast to the organizations completing the short form, whose dissemination rates varied from approximately 1% to 7.5%.

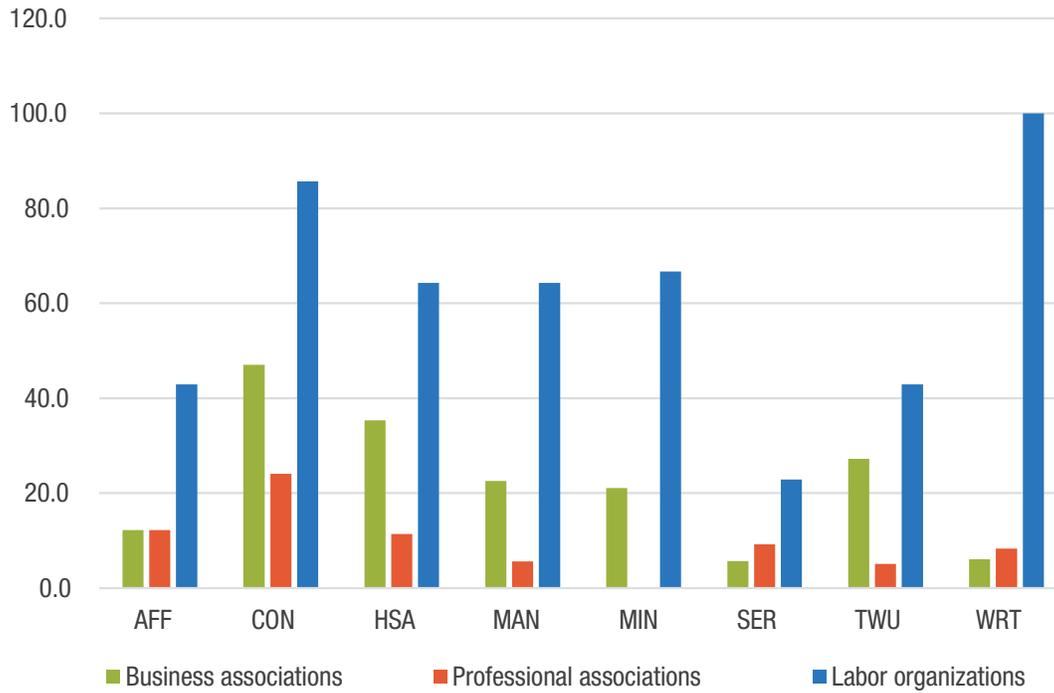
Figure 4: Percentage of organizations completing the Full survey instrument and the Short form



Industrial sectors varied widely in the percentage of organizations providing workplace safety and health information. Figure 5 shows the overall percentage (of full survey and short form respondents combined, 1,948) of organizations disseminating workplace safety and health information to their members for each of the 24 strata. Results indicated that the construction sector had the highest percentage of organizations disseminating workplace safety and health information to their members (85.7% of labor organizations, 47.0% of business associations, and 24.1% of professional associations). The service sector had the lowest percentage (22.9% of labor organizations, 5.7% of business associations, and 9.2% of professional associations).



Figure 5. Workplace safety and health information disseminated, by organization type and sector*



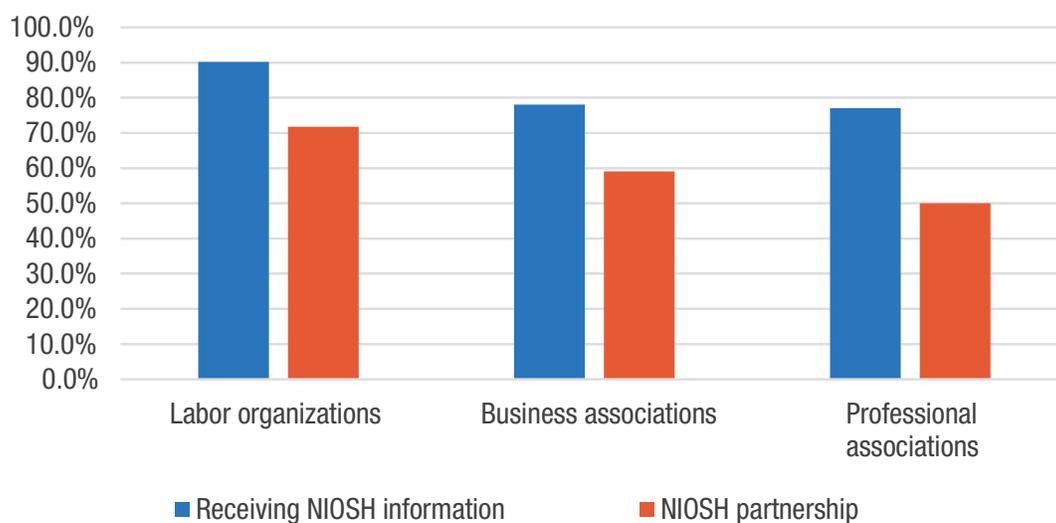
*Full survey instrument and short form respondents combined.

Agriculture, Forestry, and Fishing (AFF); Construction (CON); Healthcare and Social Assistance (HSA); Manufacturing (MAN); Mining (MIN); Services Except Healthcare and Social Assistance (SER); Transportation, Warehousing, and Utilities (TWU); and Wholesale and Retail Trade (WRT).



In the full survey, organizations were asked about their interest in receiving NIOSH information about workplace safety and health that they could distribute to their members. Respondents accounting for at least 75% of all three organization types indicated interest in receiving this information (Figure 6). Respondents also were asked whether they would be interested in having NIOSH contact them in the future about partnering on a workplace safety and health issue. Approximately 71% of labor organizations, 59% of business associations, and 50% of professional associations indicated an interest in being contacted about a future partnership with NIOSH.

Figure 6. Survey respondents' interest in NIOSH information or partnership





2. Which channels of communication are used by business associations, professional associations, and labor organizations to disseminate information? Do they use these channels to distribute workplace safety and health information?

The full survey instrument asked about various communication channels available for disseminating information to members and whether these channels were used to disseminate workplace safety and health information. Table 2 presents the results of the 308 full survey responses by organization type for all sectors combined. Each response is included only once in the analyses within its originally identified industrial sector. E-mail was the most available communication channel, and more than 90% of both business and professional associations and 70% of labor organizations indicated the availability of e-mail. Relatively similar percentages of the three organization types indicated they had a magazine (45.4%–57.9%) or newsletter (53.8%–72.4%), and a smaller percentage had a technical journal (10.9%–38%). Of organizations that had these communication channels, the vast majority indicated they use these channels to disseminate workplace safety and health information to their members.



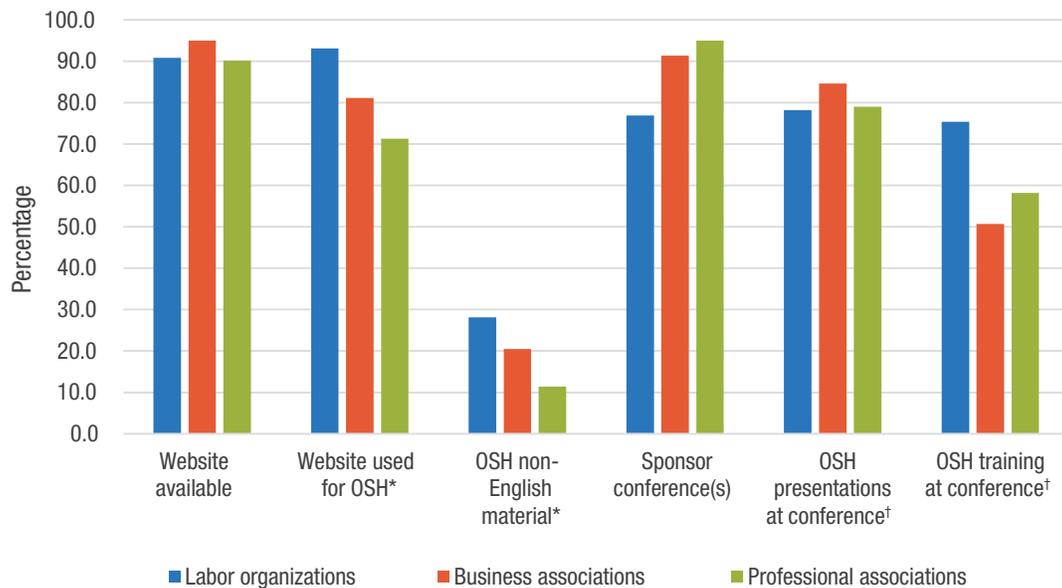
Table 2: Channels for disseminating workplace safety and health information, by organization type

Organization type, channel	% (% range) with channel available	% (% range) disseminating through channel*		
		Never	Sometimes	Often
Labor organization				
E-mail	72.3 (61.4–83.2)	6.4 (0.3–12.5)	55.3 (41.5–69.1)	38.3 (25.0–51.6)
Magazine	56.9 (44.3–69.5)	2.4 (0.0–7.4)	24.4 (10.2–38.6)	73.2 (58.8–87.8)
Newsletter	53.8 (41.1–66.6)	7.9 (0.0–17.2)	36.8 (21.6–52.1)	55.3 (39.6–70.9) 10
Technical journal	10.9 (3.1–18.8)	0	37.5 (0.0–93.7)	62.5 (6.2–100.0)
Business association				
E-mail	95.4 (92.5–98.3)	4.9 (1.5–8.4)	59.8 (51.0–68.6)	35.3 (26.7–43.8)
Magazine	45.4 (37.0–53.8)	3.3 (0.0–7.7)	42.5 (30.7–54.2)	54.3 (42.0–66.5)
Newsletter	72.4 (64.5–80.2)	2.8 (0.0–5.8)	53.7 (43.5–63.9)	43.5 (33.4–53.6)
Technical journal	18.4 (11.5–25.4)	20.4 (3.7–37.2)	58.8 (38.6–79.0)	20.8 (4.5–37.0)
Professional association				
E-mail	91.4 (83.0–99.7)	9.3 (0.5–18.0)	75.4 (61.7–89.2)	15.3 (3.6–27.0)
Magazine	57.8 (43.3–72.3)	2.3 (0.0–7.2)	69.6 (47.9–91.4)	28.0 (6.8–49.2)
Newsletter	68.8 (53.2–84.4)	3.0 (0.0–7.3)	74.0 (58.2–89.7)	23.0 (7.4–38.7)
Technical journal	38.0 (21.4–54.6)	7.8 (0.0–18.2)	64.0 (35.3–92.7)	28.2 (0.0–56.9)

*Percentage is based on those with communication channel available.

More than 90% of all three types of organizations had a website, and most organizations with a website indicated use of this communication channel to disseminate workplace safety and health information (Figure 7). With regard to conference sponsorship, more than 90% of business and professional associations and 75% of labor organizations indicated that they sponsored one or more conferences. Among those organizations that sponsored a conference, more than three-fourths included workplace safety and health presentations at their conferences and more than half offered workplace safety and health training at these events.

Figure 7: Website and conference dissemination of OSH information, by organization type



*Percentage based on organizations with a website available.

†Percentage based on those who sponsored a conference.

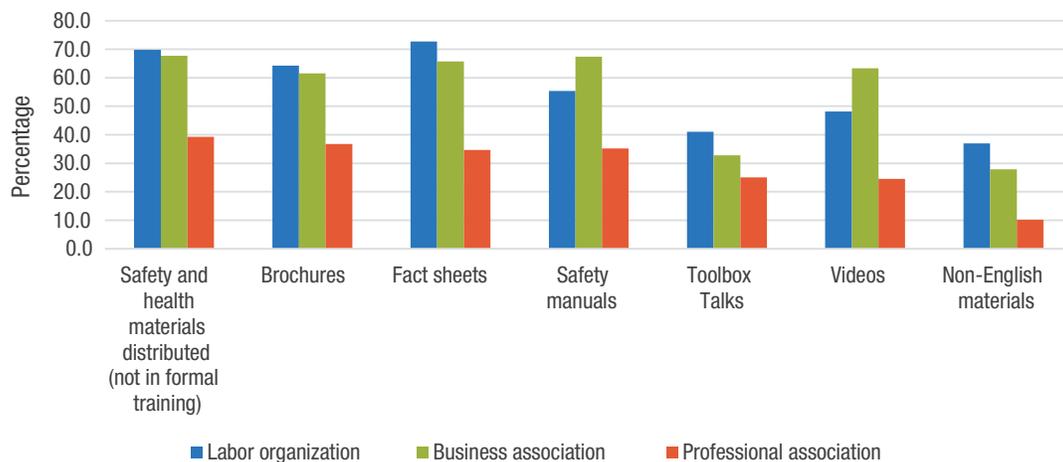
A small percentage of these organizations (28.1% of labor organizations, 20.5% of business associations, and 11.4% of professional associations) had workplace safety and health information in a language other than English on their website, the most common being Spanish.



3. What workplace safety and health information and training is being offered by business associations, professional associations, and labor organizations to their members? What channels are being used to deliver this information and what sources are being used to obtain workplace safety and health information?

Among the 308 organizations completing the full-version survey, almost 70% of both labor organizations and business associations disseminated workplace safety and health materials to their members beyond what is provided through formal safety and health training (Figure 8). However, only 40% of professional associations indicated they distributed any workplace safety and health information in addition to their formal training. The most common formats used to disseminate this workplace safety and health information included fact sheets, brochures, and safety manuals. Of those organizations that distributed these materials, 37% of labor organizations distributed non-English information. The percentage decreased to 28% of business associations and 10% of professional associations. Spanish was the most common non-English language that was used in non-training workplace safety and health materials.

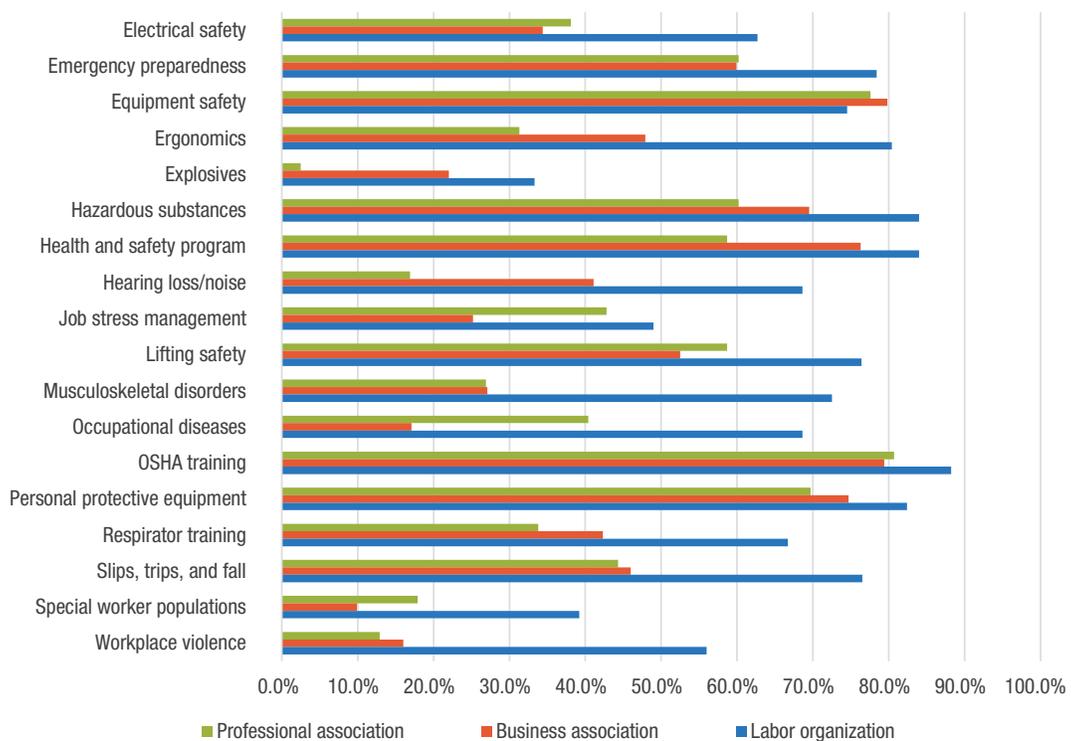
Figure 8: Workplace safety and health materials distributed beyond those in formal training



Percentage is based on those who distributed materials beyond formal training.

More than half of all three organization types indicated they provided workplace safety and health training to their members (75% of labor organizations, 63% of professional associations, and 56% of business associations). Among those organizations, the courses offered by more than 50% of all three organization types included emergency preparedness, equipment safety, hazardous substances, health and safety programs, lifting safety, OSHA regulations, and personal protective equipment (Figure 9).

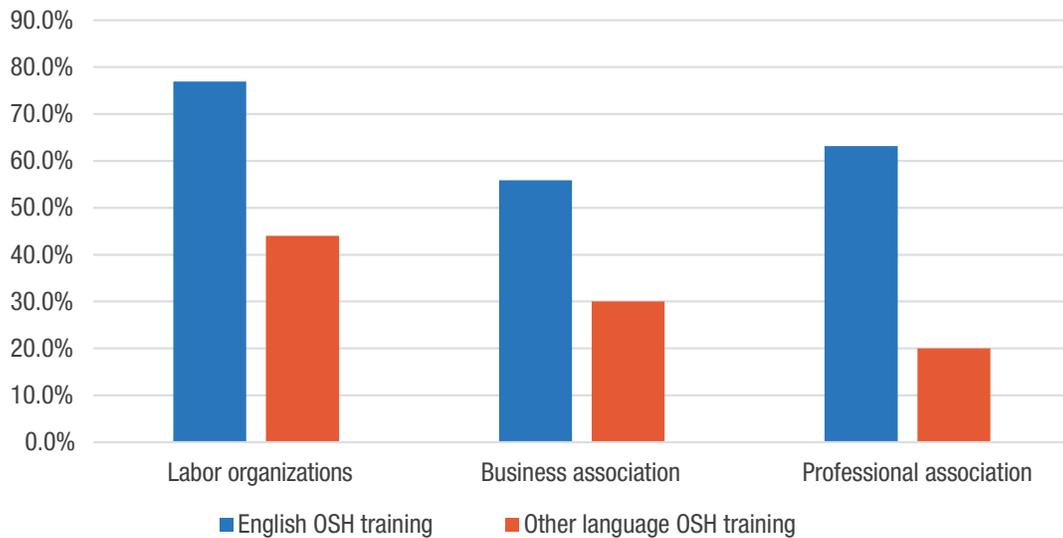
Figure 9: Workplace safety and health training courses offered, by organization type





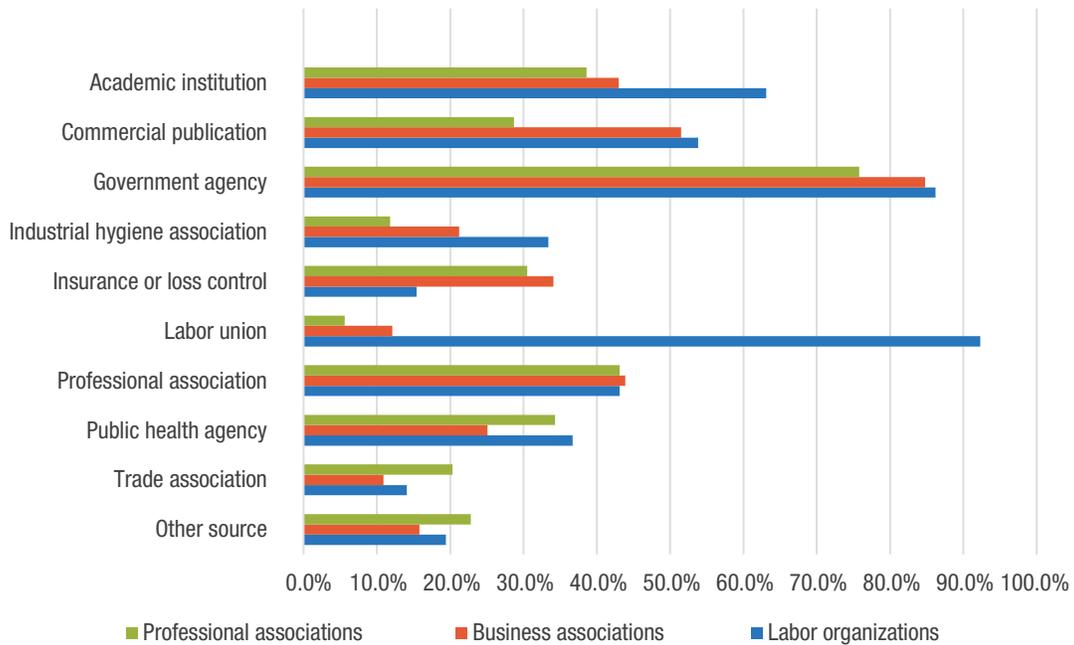
Among organizations providing workplace safety and health training, 44% of labor organizations, 30% of business associations, and 20% of professional associations provided training in a language other than English, with Spanish being the most common language (Figure 10).

Figure 10. OSH training provided in English and other languages by organization type



A wide range of information sources was used by the three organization types. Government agencies were the leading source of workplace safety and health information for business organizations and professional associations, and the second most used source for labor organizations which relied on other labor organizations as their primary source (Figure 11). OSHA was the most mentioned government agency. Other highly selected sources included commercial publications, professional associations, and academic institutions. Insurance companies were selected as a source of workplace safety information by about one third of the business and professional associations.

Figure 11. Sources of workplace safety and health information used by survey respondents





4. Do business associations, professional associations, and labor organizations have important issues and unmet needs with respect to workplace safety and health information?

Most of the 308 respondents, regardless of organization type, indicated that workplace safety and health issues were very important to their members (see Table 3). When response choices 4 and 5 are combined, 92% of labor organizations, 85% of business associations, and 73% of professional associations indicated *high* or *very high importance* of workplace safety and health issues to their members.

Table 3. Importance of workplace safety and health issues to organizations surveyed

Importance	Labor organizations Percentage (95% CI)	Business association Percentage (95% CI)	Professional associations Percentage (95% CI)
1 Not important	0.0	1.1 (0.0–3.2)	3.6 (0.0–10.7)
2	1.6 (0.0–4.7)	4.7 (0.9–8.4)	3.2 (0.0–7.2)
3	6.3 (0.9–12.4)	9.3 (4.3–14.2)	20.6 (6.3–34.8)
4	21.9 (12.8–31.0)	18.0 (11.0–25.0)	11.7 (1.1–22.3)
5 Very important	70.3 (60.1–80.5)	67.0 (58.7–75.3)	61.0 (44.5–77.5)

Table 4 shows the importance of safety and health issues by survey type and for both forms combined. When considering the responses to the short form and the both forms combined, a large percentage of the respondents did not answer this question. Sector-specific results about importance of workplace safety and health issues are discussed in the next section (Question 5).

Table 4. Importance of workplace safety and health issues to members (by survey type)

Organization	Labor organizations	Business associations	Professional associations
Full survey instrument	N=65	N=178	N=65
High importance	90.8% (83.5%–98.0%)	84.7% (78.5–91.0%)	69.1% (53.4%–84.8%)
Lower importance	7.7% (1.0%–14.3%)	15.0% (8.8%–21.8%)	27.1% (12.0%–42.2%)
No response	1.5% (0.0%–4.6%)	0.3% (0.0%–0.8%)	3.8% (0.0%–10.8%)
Short form	N=106	N=889	N=645
High importance	31.1% (22.1%–40.1%)	0.2% (0.0%–0.6%)	2.3% (0.6%–4.0%)
Lower importance	4.7% (0.6%–8.9%)		1.3% (0.1%–2.6%)
No response	64.2% (54.7%–73.6%)	99.8% (99.4%–100.0%)	96.4% (94.3%–98.4%)
Combined	N=171	N=1067	N=710
High importance	53.8% (4.6.6%–61.1%)	13.3% (11.0%–15.5%)	8.0% (5.4%–10.6%)
Lower importance	5.8% (2.3%–9.4%)	2.3% (1.3%–3.3%)	3.5% (1.7%–5.4%)
No response	40.4% (33.1%–47.6%)	84.4% (82.0%–86.8%)	88.4% (85.4%–91.6%)

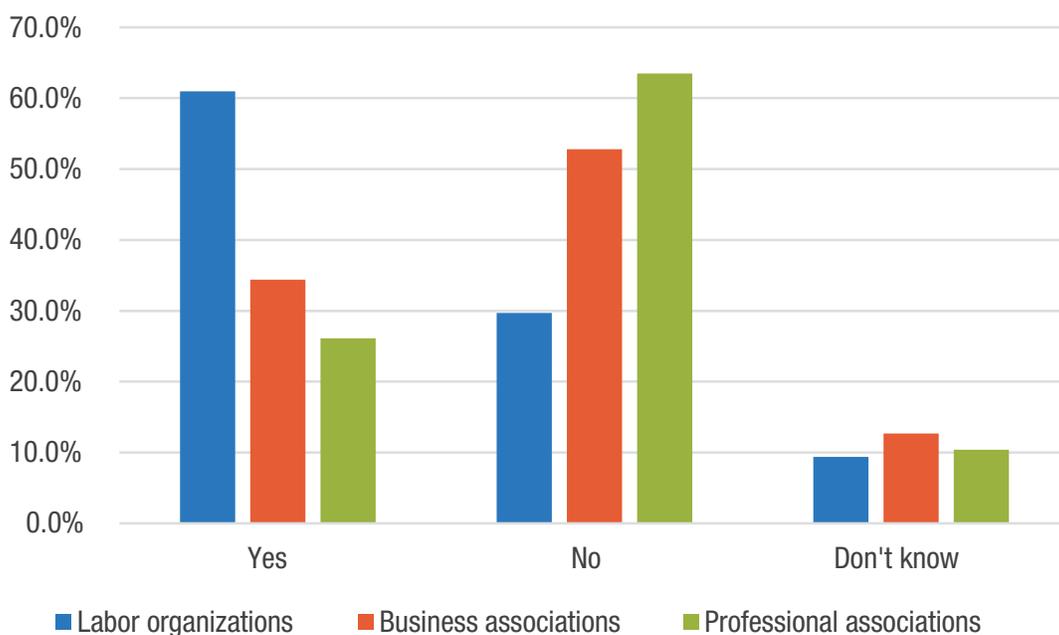
Weighted percent of organizations with 95% confidence interval

High importance = 4 or 5 on a scale of 1–5; Lower importance = 1, 2, or 3 on a scale of 1–5



More than 60% of labor organizations, versus only 34.4% of business associations and 26% of professional associations, indicated that they had unmet workplace safety and health needs. Figure 12 indicates the percentage of organizations, by type and sector, indicating “yes” in having unmet workplace safety and health needs. Sector-specific results about unmet needs are discussed in the next section (Question 5).

Figure 12. Percentage of organizations indicating unmet workplace safety and health needs



5. How important are workplace safety and health issues to business associations, professional associations, and labor organizations within the various industrial sectors?

Table 5 shows the full survey instrument and short form combined responses to the question about the importance of workplace safety and health issues to members, by sector and organization type. The vast majority of the respondents completing the short form did not answer this question. “No response” was the primary choice for all except for labor organization respondents. Among 7 of the 8 sectors, respondents from labor organizations indicated that workplace safety and health issues were of “high importance” to them.

Table 5: Importance of workplace safety and health issues, by organization type and sector*

Organization	Sector							
	AFF	CON	HSA	MAN	MIN	SER	TWU	WRT
Business associations								
Higher importance	8.9%	42.2%	23.5%	20.3%	23.7%	4.3%	22.8%	3.9%
Lower importance	2.3%	3.6%	11.8%	2.8%	—	1.4%	1.8%	2.8%
No response	88.7%	54.2%	64.7%	76.9%	76.3%	94.3%	75.4%	93.3%
Professional associations								
Higher importance	9.8%	20.7%	8.7%	6.3%	—	7.9%	5.1%	2.8%
Lower importance	2.4%	3.4%	1.6%	0.7%	—	4.4%	2.6%	5.6%
No response	87.8%	75.9%	89.7%	93.0%	100%	87.8%	92.3%	91.7%
Labor organizations								
Higher importance	42.9%	85.7%	78.6%	71.4%	66.7%	39.8%	57.1%	100%
Lower importance	28.6%	—	—	7.1%	—	7.2%	2.9%	—
No response	28.6%	14.3%	21.4%	21.4%	33.3%	53.0%	40.0%	—

*Full survey instrument and short form respondents combined.

Higher importance = 4 or 5 on a scale of 1–5; lower importance = 1, 2, or 3 on a scale of 1–5.



Unmet needs for each sector were described with open-ended responses to the question, “Does your association (union) have any unmet needs in the area of workplace (worker) safety and health?” To report the unmet needs by sector, all 308 full survey responses are detailed by sector type within the original sector assigned. Responses were analyzed using a thematic analysis [Braun, Clarke 2006] which grouped responses together that reflect a similar theme. The coding process involved reviewing the original responses for familiarity, organizing the responses into potential themes, and confirming the themes and checking them for consistency. When an open-ended response was interpreted to reflect one of the emergent themes, it was categorized into that theme. Except when otherwise noted, each open-ended response was assigned exclusively to one theme. The following themes reflecting types of unmet needs emerged and rank-ordered according to the frequency with which they emerged in the coding:

1. Information—topics
2. Information—general comments
3. Money and resources
4. Personnel
5. Training
6. Information—delivery
7. Unmet needs—general comments
8. Communication and coordination
9. Data and statistics
10. Language and translation
11. Management
12. Politics and legislation
13. Standards and regulations
14. Time
15. Workers
16. Education
17. Equipment
18. Insurance

Sector Specific Analyses

Each of the following sections contain results for the eight NORA sector that pertain to: (1) sampling for each sector, (2) distribution of workplace safety and health information, (3) ratings of the importance of workplace safety and health issues, and (4) responses indicating unmet needs for that sector.

Agriculture, Forestry, and Fishing (AFF)

Sampling. Attempts were made to contact 301 distinct organizations within the Agriculture, Forestry, and Fishing (AFF) sector, including 240 business associations, 50 professional associations, and 11 labor organizations. A total of 261 organizations (86%) were successfully contacted, with 33 (13%) responding to the full survey instrument and 228 (87%) responding to the two-question short form. Sampling was not conducted for the professional association and labor organization strata in the AFF sector, since fewer than 120 organizations of these types were found in the sampling frame. Therefore, the adjusted population was the number of organizations that responded to either the full survey or the two-question short form, with a sampling weight of 1 for both of these strata (since attempts were made to contact all of the organizations). The AFF findings are from the organizations assigned to the AFF Sector in the sampling frame but excludes those organizations that identified as representing another sector rather than AFF on the survey.

Information Distribution. Among those organizations completing the full survey, 100% of the professional associations, 95.8% of the business associations, and 75% of the labor organizations indicated they provide workplace safety and health information to their members, although the confidence intervals were wide for labor organizations because of the small number of responses. In contrast, among those responding to the short form, less than 2% of business associations and no professional associations or labor organizations indicated they provide this information (see Table 6).

Table 6: Organizations distributing workplace safety and health information by survey type (AFF Sector)

Survey type	Labor organizations (FS=4, SF=3)	Business associations (FS=24, SF=189)	Professional associations (FS=5, SF=36)
Full survey instrument (FSI)	75.0% (0.0%–100%)	95.8% (87.2%–100.0%)	100%
Short form (SF)	0%	1.6% (0.0%–3.4%)	0%
Combined	42.9% (0.0%–92.3%)	12.2% (7.8%–16.6%)	12.2% (1.7%–22.7%)

Weighted percentage of organizations with 95% confidence interval



Importance of Issues. The ratings of the importance of workplace safety and health issues reported in Table 7 show the responses from organizations assigned to AFF only who responded to the full-survey instrument (n=33). Results show that 75% of labor organizations and about 80% of both business and professional association respondents indicated that workplace safety and health issues were of either *high* or *very high importance* to their members. Participants also were asked to list the three most important workplace safety and health issues for members. Issues most often mentioned were equipment safety, food safety, transportation safety, and personal protective equipment. The vast majority of short-form respondents did not distribute workplace safety and health information and did not respond to the question about the importance of workplace safety and health issues.

Table 7: Importance of workplace safety and health issues among AFF

Organization	Frequency	Percent	95% Confidence Limits for Percent	
Business associations				
Higher importance	19	79.17%	61.65	96.68
Lower importance	5	20.83%	3.32	38.35
Professional associations				
Higher importance	4	80.00%	24.47	100.00
Lower importance	1	20.00%	0.00	75.53
Labor organizations				
Higher importance	3	75.00%	0.00	100.00
Lower importance	1	25.00%	0.00	100.00
Total	33			

Higher importance = 4 or 5 on a scale of 1–5; lower importance = 1, 2, or 3 on a scale of 1–5.

Unmet Needs. In terms of unmet needs among AFF respondents to the full survey, 75% of labor organizations stated that they had unmet workplace safety and health needs, with the percentage decreasing to 38% for business associations and 20% of the professional associations (see Table 8). A total of 10 AFF respondents identified unmet needs with open-ended responses, with six organizations identifying 1 unmet need and four listing two specific unmet needs. Table 9 lists all original open-ended responses (right column) grouped by theme (left column), with information-related unmet needs being the most frequently occurring themes.

Table 8: Survey respondents indicating unmet workplace safety and health needs (AFF Sector)

Organization Type	Frequency	Percent	95% Confidence Limits for Percent	
Business associations				
Yes	9	37.5%	16.62	58.38
No	13	54.17%	32.67	75.66
Don't know	2	5.76%	0.00	20.26
Professional associations				
Yes	1	20%	0.00	75.53
No	4	80%	24.47	100.00
Labor organizations				
Yes	3	75%	0.00	100.00
Don't know	1	25%	0.00	100.00
Total	33			

Weighted percentage of organizations with 95% confidence limit



Table 9: Unmet Needs in AFF. Themes and Corresponding Comments

Theme	Corresponding Comments
Information—topics	Pesticides (chemical issues) Heat protection Management of Swine Flu Pandemic stress Outdoor power equipment safety follow-up Up-to-date resources on Communications OSHA training and materials
Information—general comments	If we had a regular source of targeted information for our folks, that would be very useful. If there are new products, techniques or regulations, that would help.
Information—delivery	Better delivery systems for us to use to get information to farmers, ranchers and employers.
Data and statistics	Accurate data on agricultural safety and injury because they are tracked differently.
Personnel	The Coast Guard has a new mandate for vessels to have monthly training and Safety drills and we don't have enough people to train and drill. Plus, it is very expensive to train a safety drill conductor.
Unmet needs—general comments	Answering this would take a long essay, at least for any sort of specificity. Short answer—Americans are still dying, getting injured, getting sick in workplaces. Of course there are unmet needs.
Communication and coordination	Greater participation in existing safety initiatives
Insurance	Finding healthcare plans for uninsured farmers

Construction (CON)

Sampling. Within the Construction (CON) Sector, attempts were made to contact 93 business associations, 39 professional associations, and 19 labor organizations (151 total). Of the 142 organizations considered still active, 126 (89%) were successfully contacted; 57 (45%) of those contacted responded to the full survey and 69 (55%) responded to the two-question short form. The overall participation rate (for both full survey and short form) for the CON sector was similar to that for all sectors combined; however, a higher percentage of CON organizations participated in the full survey. The CON findings are from the organizations assigned to the CON Sector but excluding those organizations that identified themselves as representing another sector rather than CON on the survey.

Information Distribution. As with AFF, there were contrasts between full- and short-version survey respondents in how many organizations distributed workplace safety and health information. The results show that 100% of labor organizations and professional associations, and 97.4% of business associations responding to the full survey provide workplace safety and health information to their members. In contrast, among the short form responders, only 33.3% of labor organizations, 2.3% of business associations, and no professional associations provided such information (see Table 10).

Table 10: Organizations distributing workplace safety and health information by survey type (CON Sector)

Survey type	Labor organizations (FS=11, SF=3)	Business associations (FS=39, SF=44)	Professional associations (FS=7, SF=22)
Full survey instrument (FSI)	100%	97.4% (92.2–100.0%)	100%
Short form (SF)	33.3% (0%–100%)	2.3% (0%–6.9%)	0%
Combined	85.7% (64.7%–100%)	47.0% (36.0%–58.0%)	24.1% (7.6%–40.7%)

Weighted percentage of organizations with 95% confidence interval



Importance of Issues. The ratings of the importance of workplace safety and health issues reported in Table 11 include CON respondents from 57 organizations who completed the full-version survey (because most short-survey respondents did not answer this question). Among full-survey respondents, at least 85% of all three organization types rated workplace safety and health as being very important to their members (100% of labor organizations, about 90% of business associations, and almost 86% of professional associations).

Table 11: Importance of workplace safety and health issues among CON

Organization	Frequency	Percent	95% Confidence Limits for Percent	
Business associations				
Higher importance	35	89.74%	79.78	99.71
Lower importance	3	7.69%	0.00	16.44
No response	1	2.56%	0.00	7.75
Professional associations				
Higher importance	6	85.71%	50.76	100.00
Lower importance	1	14.29%	0.00	49.24
Labor organizations				
Higher importance	11	100.00%	100.00	100.00
Total	57			

Higher importance = 4 or 5 on a scale of 1–5; lower importance = 1, 2, or 3 on a scale of 1–5.

Unmet Needs. As shown in Table 12, among organizations who noted unmet needs with respect to worker safety and health, the highest percentage was of professional associations (57%). The percentage dropped to 46% for labor organizations and 31% for business associations. Among the 19 respondents in CON who identified unmet needs, 16 listed 1 need, two identified two, and one organization listed three different unmet needs. Table 13 lists all original open-ended responses grouped by theme (left column), with the unmet need for specific OSH topics (e.g., crane safety, fall protection) being the most prevalent theme (actual responses in the right column).

Table 12: Survey respondents indicating unmet workplace safety and health needs (CON Sector)

Organization Type	Frequency	Percent	95% Confidence Limits for Percent	
Business associations*				
Yes	13	34.21%	18.41	50.01
No	21	55.26%	38.70	71.83
Don't know	4	10.53%	0.30	20.75
Professional associations				
Yes	4	57.14%	7.71	100.00
No	3	42.86%	0.00	92.29
Labor organizations				
Yes	6	54.55%	19.46	89.63
No	3	27.27%	0.00	58.65
Don't know	2	18.18%	0.00	45.36
Total	56			

*One frequency missing



Table 13: Unmet Needs in CON. Themes and Corresponding Comments

Theme	Corresponding Comments
Information—topics	<p>Crane safety, a lot of areas we fall short on because no curriculum available. Accidents recently in New York.</p> <p>We should offer more training on keeping workers physically safe instead of focusing so much on ammonia safety.</p> <p>All areas of construction.</p> <p>Standards Productions, Building Trades</p> <p>Fall protection issues</p> <p>Electrical safety training within the telecommunications industry</p>
Education	<p>Strengthening educational component</p> <p>Would like to do more consumer education</p>
Language and translation	<p>Translating materials into Spanish</p> <p>Safety materials found and supplied in Spanish language</p>
Personnel	<p>We need more safety and health professionals. A wider, more diverse pool of professionals</p> <p>Safety and Health Director position, looking to be filled in next month.</p>
Money and resources	<p>There is a need for more money, more resources. [The association] tries to assist researchers with money but there is always a need for more funding.</p> <p>Lack the ability to get in-front of as many contractors and members as possible. Limited time and money.</p>
Training	<p>Offer more training courses.</p> <p>We are always looking for more training.</p>
Time	<p>Not enough time to dedicate safety and health training for all members.</p> <p>Lack the ability to get in-front of as many contractors and members as possible. Limited time and money.</p>
Information—delivery	<p>It's hard to get the message out. Maybe the internet will help with that, we still have some accidents. But it is a challenge to reach everyone.</p>
Information—general comments	<p>Would like to have enough resources to train every member face to face. A lot of publications can't be funded</p>
Unmet needs—general comments	<p>There is always something.</p>
Data and statistics	<p>Evaluation of data</p>
Equipment	<p>Effective working equipment</p>

Healthcare and Social Assistance (HSA)

Sampling. Attempts were made to contact 273 distinct organizations within the Healthcare and Social Assistance (HSA) sector, including 17 business associations, 239 professional associations, and 14 labor organizations. Of the 241 organizations still thought active, 215 (89%) were successfully contacted; 34 (16%) of those contacted responded to the full survey, and 181 responded to the two-question short form. The remaining HSA findings are from the organizations that were assigned to the HSA Sector after excluding those organizations who were originally assigned to HSA who identified with other sectors.

Information Distribution. Table 14 presents the weighted analysis for the HSA Sector as to the percentage of trade associations and labor organizations that distribute workplace safety and health information to their members. Data from the full survey and the short survey combined show that while 64% of labor organizations indicated that they distribute OSH information to their member, only 35% of business associations and 11% of professional associations indicated they distribute this material. When the responses are partitioned into the full survey versus two-question short form, the results for the responding to the full survey revealed that 100% of labor organizations and business association and 94.7% of professional associations indicated that they provided workplace safety and health information to their members. In contrast, among short form responders, only three professional organizations (1.8%) and no professional associations or labor organizations indicated they provide such information.

Table 14: Organizations distributing workplace safety and health information (by survey type) (HSA Sector)

Survey type	Labor organizations FS=9, SF=5	Business associations FS=6, SF=11	Professional associations FS=19, SF=165
Full survey (FS)	100%	100%	94.7% (83.7%–100%)
Short form (SF)	0%	0%	1.8% (0%–3.9%)
Combined	64.3% (35.6%–93.0%)	35.3% (10.0%–60.6%)	11.4% (6.8%–16.1%)

Weighted percentage of organizations with 95% confidence interval



Importance of Issues. Most of the organizations that did not distribute information did not answer the question about the importance of workplace safety and health issues. The importance reported in Table 15 include the 34 HSA respondents who completed the full-version survey. Among full-survey HSA respondents, 89% of labor organizations, 67% of business associations, and 84% of professional associations answered that their members considered workplace safety and health to be of higher importance. Confidence intervals were wide because of the small number of participants.

Table 15: Importance of workplace safety and health issues among HSA

Organization	Frequency	Percent	95% Confidence Limits for Percent	
Business associations				
Higher importance	4	66.67%	12.47	100.00
Lower importance	2	33.33%	0.00	87.53
Professional associations				
Higher importance	16	84.21%	66.15	100.00
Lower importance	3	15.79%	0.00	33.85
Labor organizations				
Higher importance	8	88.89%	63.27	100.00
No response	1	11.11%	0.00	36.73
Total	34			

Higher importance = 4 or 5 on a scale of 1–5; lower importance = 1, 2, or 3 on a scale of 1–5.

Unmet Needs. Among full survey respondents, a total of 78% of the labor organizations indicated that they had unmet workplace safety and health needs. This percentage dropped to 42% of professional associations and about 33% of business associations (see Table 16). A total of 15 HAS respondents provided open-ended examples of unmet needs, with 11 listing 1 need, three identifying two, and one listing three different unmet needs. Table 17 lists all original open-ended responses grouped by theme (left column). Most frequently occurring responses (right column) reflect needs for more OSH topics, money and resources, and policies that better served their organizations' needs.

Table 16: Survey respondents indicating unmet workplace safety and health needs (HSA Sector)

Organization Type	Frequency	Percent	95% Confidence Limits for Percent	
Business associations				
Yes	2	33.33%	0.00	87.53
No	2	33.33%	0.00	87.53
Don't know	2	33.33%	0.00	87.53
Professional associations*				
Yes	8	44.44%	19.02	69.87
No	8	44.44%	19.02	69.87
Don't know	2	11.11%	0.00	27.19
Labor organizations*				
Yes	7	87.5%	57.94	100.00
No	1	12.5%	0.00	42.06
Total	32			

Weighted percentage of organizations with 95% confidence interval

*One frequency missing



Table 17: Unmet Needs in HSA. Themes and Corresponding Comments

Theme	Corresponding Comments
Information—topics	<p>Any health and safety issue that would be relevant to professionals, i.e., physicians or nurses, who run operating rooms.</p> <p>Obtaining information that pertains to individuals in private practice</p> <p>More work is needed on lateral violence</p> <p>Chemical exposures</p> <p>Update sharps safety information</p> <p>Need more research on work related issues: reducing exposure</p> <p>Need more research on work related issues: intervention research</p>
Money and resources	<p>Additional Funding for TB control</p> <p>Insufficient resources</p> <p>Lack of resources</p> <p>Funding resources</p>
Politics and legislation	<p>Members are required to attend some of the lectures by law. The American Podiatric Medical Association's programs are pre-approved by certain states and the states do not accept our lectures as credit. We are sometimes not allowed] to present our information. A lot of politics are involved.</p> <p>Legislatively, EMTs and paramedics do not qualify for death benefits—as police and firefighters do.</p>
Information—general comments	<p>Need more information to share with members.</p> <p>Expanding publications</p>
Communication and coordination	<p>Effective communication between professionals and the public, or the lack there of.</p> <p>Communication is a big problem.</p>
Personnel	<p>Understaffing</p>
Training	<p>Expansion of training function inside organization</p>
Data and statistics	<p>Need statistics for government employees related to health and safety accident</p>
Unmet needs—general comments	<p>Don't know what they are. We know they get hurt, more than police officers, less than fire fighters. Lots of claims... but lower than construction. Just beginning to study what workplaces safety means in EMS arena.</p>

Manufacturing (MAN)

Sampling. Within the Manufacturing (MAN) sector, attempts were made to contact 433 distinct organizations, including 241 business associations, 170 professional associations, and 22 labor organizations. Of the 391 remaining organizations still believed to be in business, successful contacts were made with 369 (94%); 66 (18%) of those contacted responded to the full survey instrument, and 303 (82%) responded to the two-question short form. The overall participation rate among the MAN sector was similar to that for all sectors combined: 93.5% of the currently active organizations. Sampling was not needed for the labor organization MAN strata, because there were fewer than 120 organizations in the sampling frame. The adjusted population was the number of organizations that responded to either the full survey or the two-question short form. The remaining MAN findings are from the respondents who were assigned to the MAN Sector only and excludes MAN organizations who identified with other sectors.

Information Distribution. Table 18 shows the weighted analysis of business and professional associations and labor organizations that distributed workplace safety and health information to their members for the MAN Sector. Data from the full survey and the short survey combined show that while 64.3% of labor organizations indicated that they distribute workplace safety and health information to their member, only 22.6% of business associations and 5.6% of professional associations responded that they do so. When the responses were partitioned into full surveys versus the two-question short forms, the results showed that among those responding to the full survey instrument, 100% of the labor organization and 97.9% of business association and 70% for professional association respondents indicated their organizations provide workplace safety and health information to their members. In contrast, among those answering the short survey form, 16.7% of labor organization and less than 1% of business and professional association respondents indicated that their organizations provide such information.

Table 18: Organizations distributing workplace safety and health information (by survey type) (MAN Sector)

Survey type	Business associations FS=48, SF=164	Professional associations FS=10, SF=133	Labor organizations FS=8, SF=6
Full survey (FS)	97.9% (93.7%–100%)	70.0% (35.4%–100%)	100%
Short form (SF)	0.6% (0%–1.8%)	0.8% (0%–2.2%)	16.7% (0%–5.5%)
Combined	22.6% (17.0%–28.3%)	5.6% (1.8%–9.4%)	64.3% (35.6%–93.0%)

Weighted percentage of organizations with 95% confidence interval



Importance of Issues. The ratings of the importance of workplace safety and health issues reported here include the 66 respondents who were assigned to MAN only and who completed the full-version survey (Most of the short survey form respondents did not answer this question.). When full survey respondents were asked to rate the importance of workplace safety and health to their members on a scale from 1 (Not important) to 5 (Very important), the results showed that well over three-fourths of all organization types (87.5% of labor organizations, 87.5% of business associations, and 90% of professional associations) believed that workplace safety and health were *very important* to their members (see Table 19).

Table 19: Importance of workplace safety and health issues among MAN

Organization	Frequency	Percent	95% Confidence Limits for Percent	
Business associations				
Higher importance	42	87.50%	77.80	97.20
Lower importance	6	12.50%	2.80	22.20
Professional associations				
Higher importance	9	90.00%	67.39	100.00
No response	1	10.00%	0.00	32.62
Labor organizations				
Higher importance	7	87.50%	57.94	100.00
Lower importance	1	12.50%	0.00	42.06
Total	66			

Higher importance = 4 or 5 on a scale of 1–5; lower importance = 1, 2, or 3 on a scale of 1–5.

Unmet Needs. Respondents also were asked if their organization had unmet needs with respect to worker safety and health, and 38% of the labor organizations, 50% of the professional associations, and 33% of business associations indicated that they had unmet workplace safety and health needs (see Table 20). Nineteen respondents from manufacturing provided open-ended examples of unmet needs, with 13 listing 1 need, three identifying two, two naming three, and one respondent mentioning four distinct unmet needs. Table 21 lists all original open-ended responses grouped by theme (left column). Most frequently occurring responses (right column) reflect needs for more OSH topics, money and resources, and better delivery of OSH information.

Table 20: Survey respondents indicating unmet workplace safety and health needs (MAN Sector)

Organization Type	Frequency	Percent	95% Confidence Limits for Percent	
Business associations*				
Yes	16	34.78%	20.48	49.08
No	24	52.17%	37.18	67.17
Don't know	6	13.04%	2.93	23.16
Professional associations				
Yes	5	50.0%	12.30	87.70
No	4	40.5%	3.06	76.94
Don't know	1	10.0%	0.00	32.62
Labor organizations				
Yes	3	37.5%	0.00	80.77
No	5	62.5%	19.23	100.00
Total	64			

Weighted percentage of organizations with 95% confidence interval

*Two frequencies missing



Table 21: Unmet Needs in MAN. Themes and Corresponding Comments

Theme	Corresponding Comments
Information—topics	<p>Uniform guidelines for safety equipment</p> <p>More pertinent information about dust exposure and overall safety specific to the manufacturing industry.</p> <p>Tools for compliance with the combustible dusts directive</p> <p>Members lack exercise and don't care about diabetes or dying at a young age. [The organization] needs a way to reach these members and explain to them the need for exercise.</p> <p>The National Installer Training Program is inadequate</p> <p>There is no certification program.</p> <p>Informed, industry specific materials</p>
Unmet needs—general comments	<p>I don't know of anything specific at present, but we are by no means perfect, so there must be some needs we are not meeting.</p> <p>Always need more</p> <p>Nothing specific... just always room for improvement</p> <p>Worker safety and health HSA not been a focus.</p>
Money and resources	<p>Increased funding</p> <p>Difficult to economically maintain newsletter</p> <p>Expensive to update</p> <p>*Expensive to hire people to keep-up with all the changes in regulations</p>
Information—delivery	<p>Trying to not overload our members with too much information.</p> <p>Getting out materials that are concise</p> <p>We could use help from NIOSH and other government groups to help spread the word on how we can join resources to help manufacturers in this area.</p>
Training	<p>Worker training</p> <p>On the job training</p> <p>Several members in our Association have indicated that many of the OSHA training courses, while good and beneficial, are too general. We have the need for industry-specific training and work and safety courses.</p>
Information—general comments	<p>We are always looking for appropriate safety-related articles and information to be printed in the magazine.</p> <p>OSHA HSA outdated safety materials from 1978 despite our efforts to update information to 2000.</p>
Management	<p>Management commitment to safety.</p> <p>Reasonable employers</p>
Personnel	<p>New president</p> <p>Expensive to hire people to keep-up with all the changes in regulations</p>
Standards and regulations	<p>There is a significant void between code officials and health and safety officers who don't know there are national standards in place.</p> <p>Greater efforts should be made to ensure that] non-certified products are not allowed into the United States marketplace.</p>
Workers	<p>Representation of more workers</p>

*Also categorized in "Personnel"

Mining (MIN)

Sampling. Within the Mining (MIN) sector, attempts were made to contact 56 distinct organizations, including 40 business associations, 11 professional associations, and 5 labor organizations. Successful contacts were made with 50 (89%) of these organizations. Among the 53 organizations still believed to be active organizations, 50 (94%) responded; 11 (22%) of them responded to the full survey and 39 (78%) to the two-question short form. The remaining MIN findings are from the respondents who were assigned to the MIN Sector only and excludes MIN organizations who identified with other sectors.

Information Distribution. The percentage of trade associations and labor organizations in the MIN Sector that distribute workplace safety and health information to their members is presented in Table 22. No sampling was needed since there were fewer than 120 organizations in each of 3 MIN strata within the sampling frame. Therefore, the adjusted population was the number of organizations that responded to either the full survey or the two-question short form and the sampling weight was one. When the data from the full survey and the two-question short form are combined, the results show that 2 of the 3 (67%) responding labor organizations indicated that they distribute workplace safety and health information to their members, while only 21% of 38 business associations and none of the 9 professional associations did so. When the MIN responses were partitioned into those responding to the full survey versus the two-question short form, the results show that among those organizations completing the full survey instrument, 89% of the business associations and 100% of the labor organizations indicated they provide workplace safety and health information to their members. No professional organizations in the MIN sector responded to the full survey. In contrast, among those responding to the short form, no respondent from any of the organization types indicated that they provide such information.

Table 22: Distributing workplace safety and health information (by survey type) (MIN Sector)

	Labor organizations FS=2, SF=1	Business associations FS=9, SF=29	Professional associations FS=0, SF=9
Full survey (FS)	100%	88.9% (63.3%–100%)	—
Short survey (SF)	0%	0%	0%
Combined	66.7% (0%–100%)	21.1% (7.5%–34.6%)	0%

Weighted percentage of organizations with 95% confidence interval



Importance of Issues. The ratings of the importance of workplace safety and health issues reported in Table 23 include the 11 respondents who were assigned to MIN only and completed the full-version survey. All organizations (100%) completing the full survey indicated that workplace safety and health were *very important* to members. In contrast, no respondents to the short form answered this question.

Table 23: Importance of workplace safety and health issues among MIN

Organization	Frequency	Percent	95% Confidence Limits for Percent	
Business associations				
Higher importance	9	100.00%	100.00	100.00
Labor organizations				
Higher importance	2	100.00%	100.00	100.00
Total	11			

Higher importance = 4 or 5 on a scale of 1–5; lower importance = 1, 2, or 3 on a scale of 1–5.

Unmet Needs. In terms of unmet workplace safety and health needs, both of the MIN labor organization respondents indicated that their organization had some unmet needs, whereas less than 25% of the business association respondents (2 of the 9; 22%) indicated unmet needs (see Table 24). Only three identified one unmet need, while one organization listed three. Table 25 lists all open-ended responses (right column) grouped by theme (left column). Types of unmet needs included the need for more OSH topics, resources, workers’ needs, and the need for more time to devote to safety and health.



Table 24: Survey respondents indicating unmet workplace safety and health needs (MIN Sector)

Organization Type	Frequency	Percent	95% Confidence Limits for Percent	
Business associations				
Yes	2	22.22%	0.00	56.12
No	5	55.56%	15.04	96.07
Don't know	2	22.22%	0.00	56.12
Labor organizations				
Yes	2	100.0%	100.0	100.0
Total	11			

Table 25: Unmet Needs in MIN. Themes and Corresponding Comments

Theme	Corresponding Comments
Information—topics	Workplace safety Reduction of black lung cases Supplemental miner act *Our needs are great, unfortunately time and resources are limited.
Money and resources	My association is a volunteer Association. Increased funding.
Workers	Consistent market for oil and gas industry so when we hire we don't have to lay off our workers.
Time	Our needs are great, unfortunately time and resources are limited. [My association] is a volunteer Association.

*Also categorized in "Time"



Services (Except Healthcare and Social Assistance) (SER)

Sampling. Attempts were made to contact 605 distinct organizations within the Services (SER) sector, including 241 business associations, 259 professional associations, and 105 labor organizations. Of the 546 organizations thought to be currently active, 522 (96%) were successfully contacted; 47 (9%) of those contacted responded to the full survey, and 483 (91%) responded to the two-question short form. The labor organization SER stratum was not sampled, because there were fewer than 120 organizations in the sampling frame. The remaining SER findings are from the respondents who were assigned to the SER Sector only and excludes SER organizations who identified with other sectors.

Information Distribution. The weighted analysis for SER sector is presented in Table 26 showing the percentage of business and professional associations and labor organizations that distribute workplace safety and health information to their members. Data from the full survey and short form combined show that while 23% of labor organizations indicated that they distributed workplace safety and health information to their member, only 9% of the professional associations and 6% of the business associations responded that they did so. The percentage of organizations disseminating workplace health and safety information in the SER Sector is less than the percentages found for all sectors combined: 41% for labor organizations, 16% of business associations, and 10% of professional associations. When the responses are partitioned into full surveys versus the 2-question short form, the results show that for the full survey respondents, 100% of the business and professional associations and 88% of labor organizations provide workplace safety and health information to their members. In contrast, among short form respondents, only 6% of labor organizations, 1% of the professional associations, and no business organizations provide such information.

Table 26: Organizations distributing workplace safety and health information (by survey type) (SER Sector)

	Business associations FS=12, SF=198	Professional associations FS=18, SF=211	Labor organizations FS=17, SF=66
Full survey (FS)	100%	100%	88.2% (71.1%–100%)
Short form (SF)	0%	1.4% (0%–3.0%)	6.0% (0.2%–12.0%)
Combined	5.7% (2.5%–8.9%)	9.4% (5.0%–12.9%)	22.9% (13.7%–32.1%)

Weighted percentage of organizations with 95% confidence interval

Importance of Issues. The ratings of the importance of workplace safety and health issues reported in Table 27 include the 47 full-survey respondents who were assigned to the SER sector. When asked to rate the importance of workplace safety and health to their members on a scale from 1 (Not important) to 5 (Very important), 82% of labor organizations, 61% of professional associations, and 75% of business associations indicated that safety and health issues were *very important*.

Table 27: Importance of workplace safety and health issues among SER

Organization	Frequency	Percent	95% Confidence Limits for Percent	
Business associations				
Higher importance	9	75.00%	46.26	100.00
Lower importance	3	25.00%	0.00	53.74
Professional associations				
Higher importance	11	61.11%	36.17	86.06
Lower importance	6	33.33%	9.21	57.46
No response	1	5.56%	0.00	17.28
Labor organizations				
Higher importance	14	82.35%	62.15	100.00
Lower importance	3	17.65%	0.00	37.85
Total	47			

Higher importance = 4 or 5 on a scale of 1–5; lower importance = 1, 2, or 3 on a scale of 1–5.



Unmet Needs. Respondents were asked if their organization had unmet needs with respect to worker safety and health, and 64% of labor organizations versus 16% of professional and 42% of business trade organizations expressed this concern (see Table 28). Eighteen respondents from the services sector provided examples of unmet needs, with 13 listing one need and five identifying three unmet needs. Table 29 lists all original open-ended responses (right column) grouped by theme (left column). The greatest number of unmet needs appear to be related to information and training.

Table 28: Survey respondents indicating unmet workplace safety and health needs (SER Sector)

Organization Type	Frequency	Percent	95% Confidence Limits for Percent	
Business associations				
Yes	5	41.67%	8.95	74.38
No	5	41.67%	8.95	74.38
Don't know	2	16.67%	0.00	41.40
Professional associations*				
Yes	3	17.65%	0.00	37.85
No	12	70.59%	46.44	94.74
Don't know	2	11.76%	0.00	28.84
Labor organizations				
Yes	11	64.71%	39.38	90.03
No	4	23.53%	1.05	46.01
Don't know	2	11.76%	0.00	28.84
Total	46			

Weighted percentage of organizations with 95% confidence interval

*One frequency missing

Table 29: Unmet Needs in SER. Themes and Corresponding Comments

Theme	Corresponding Comments
Information—topics	<p>Materials are scarce in area of automotive safety</p> <p>Principals are always interested in ways to improve school safety.</p> <p>Emerging infectious diseases such as MRSA and pandemic flu.</p> <p>Fall prevention</p> <p>Ergonomics</p> <p>Slips/trips/falls</p> <p>Electrical safety</p> <p>More information on chemical safety</p> <p>Lack of recognition of the safety and health risks involved with animal control/care work. Animal Control work is a dangerous profession that requires its workers to be provided ongoing training opportunities regarding occupational safety issues.</p>
Information—delivery	<p>We never see anything from the CDC/NIOSH and would like updates and publications.</p> <p>We operate on a shoe-string budget, as we all are volunteers. However, we do have areas for worker safety and health, and need assistance to sharing information with members</p> <p>Methods on appropriate distribution of h/s materials</p> <p>Manual for training-hardcopy and downloadable.</p>
Training	<p>Regular reminders on training</p> <p>More funding for additional training</p> <p>Making training mandatory</p> <p>Providing training</p>
Money and resources	<p>Funding</p> <p>Funding</p> <p>More clients</p>
Information—general comments	<p>More materials to distribute</p> <p>Easy to read materials.</p> <p>DVDs on HAZcom for each discipline (we have one for costumers, but need them for scenic artists, designers, etc.).</p>
Politics and legislation	<p>Legislative needs</p> <p>Regulatory affairs</p> <p>Identifying the industry to the government as a legitimate group which are at high risk for safety problems (i.e. grips, riggers)</p>
Personnel	<p>Staffing</p>
Language and translation	<p>Reaching out in different languages.</p>



Transportation, Warehousing, and Utilities (TWU)

Sampling. Within the Transportation, Warehousing, and Utilities (TWU) sector, attempts were made to contact 215 distinct organizations, including 131 business associations, 44 professional associations, and 40 labor organizations. Successful contacts were made with 188 (87%) of these organizations. Of the 201 organizations thought to be currently active, 188 (94%) were successfully contacted; 44 (23%) of those contacted responded to the full survey and 144 (77%) responded to the two-question short form. None of the TWU respondents were sampled since there were fewer than 120 organizations in the sampling frame for each organization type. Therefore, the adjusted population was the number of organizations that responded to either the full survey or the two-question short form and the sampling weight was 1 for all three TWU strata.

Information Distribution. The percentage of business and professional associations and labor organizations that distribute workplace safety and health information is presented in Table 30. Data from the full survey and short form combined show that overall, 43% of labor organizations distributed workplace safety and health information to their member, with the percentage dropping to 27% of the business associations and only 5% of the professional associations. When the responses were partitioned into full surveys versus two-question short form, results from the full survey responses showed that 100% of labor organizations and 93% of business associations provided workplace safety and health information to their members, while only 67% of the professional associations distribute this information to their members. In contrast, among short survey responders, only 9% of labor organizations, 6% of business associations, and no professional associations provided such information.

Table 30: Organizations distributing workplace safety and health information by survey type (TWU Sector)

Survey type	Labor organizations FS=13, SF=22	Business associations FS=28, SF=86	Professional associations FS=3, SF=36
Full survey (FS)	100%	92.9% (82.7%–100%)	66.7% (0%–100%)
Short survey (SF)	9.1% (0%–22.1%)	5.8% (0.1%–10.9%)	0%
Combined	42.9% (25.6%–60.1%)	27.2% (18.9%–35.5%)	5.1% (0%–12.4%)

Weighted percentage of organizations with 95% confidence interval

Importance of Issues. The ratings of the importance of workplace safety and health issues reported in Table 31 include the 44 full-survey respondents who were assigned to TWU. Workplace safety and health were considered to be *important* or *very important* to members by 100% of labor organization, 93% of business association, and 67% of professional association respondents. In contrast, among those responding to the short form, only 64% of labor organizations and no business or professional associations indicated workplace safety and health to be of higher importance to their members. However, it is important to note that the majority of the professional association respondents (92%) and business association respondents (75%) did not answer this question.

Table 31: Importance of workplace safety and health issues among TWU

Organization	Frequency	Percent	95% Confidence Limits for Percent	
Business associations				
Higher importance	26	92.86%	82.69	100.00
Lower importance	2	7.14%	0.00	17.31
Professional associations				
Higher importance	2	66.67%	0.00	100.00
Lower importance	1	33.33%	0.00	100.00
Labor organizations				
Higher importance	13	100.00%	100.00	100.00
Total	44			

Higher importance = 4 or 5 on a scale of 1–5; lower importance = 1, 2, or 3 on a scale of 1–5.



Unmet Needs. Respondents were asked whether their organization had unmet worker safety and health needs. None of the four professional associations indicated that they had unmet needs, whereas 32% of the business associations and 54% of the labor organizations expressed having such needs (see Table 32). Among the respondents in TWU, 18 identified unmet needs, with 11 listing one need, four naming two, and three respondents identifying three unmet needs. Table 33 lists all original open-ended responses (right column) grouped by theme (left column). The greatest number of unmet needs appeared to be related to information, particularly the need for more topics in OSH.

Table 32: Survey respondents indicating unmet workplace safety and health needs (TWU Sector)

Organization Type	Frequency	Percent	95% Confidence Limits for Percent	
Business associations*				
Yes	10	37.04%	17.57	56.50
No	15	55.56%	35.52	75.59
Don't know	2	7.41%	0.00	17.96
Professional associations				
No	3	100.0%	100.0	100.0
Labor organizations				
Yes	7	53.85%	22.49	85.20
No	6	46.15%	14.80	77.51
Total	43			

Weighted percentage of organizations with 95% confidence interval

*One frequency missing

Table 33: Unmet Needs in TWU. Themes and Corresponding Comments

Theme	Corresponding Comments
Information—topics	Contractor safety Physical fitness resources for members Diet and nutrition Sleep apnea Other information as situations arise Workplace violence HAZ-MAT Workplace violence Infection Control HAZ-MAT Epidemiological studies Noise reduction
Personnel	Safety and Health Director position, looking to be filled in next month. More people resources to work on health and safety issues Staffing
Training	Offer more training courses. Addressing the re-training and refresher courses for adult learners; particularly in use of motor vehicles. Would like to afford additional training for members
Standards and regulations	We're developing a culture assessment, trying to find key performance indicators. We're trying to figure out why some groups are compliant with the safety regulations and why some groups aren't. We are investigating safety cultures to a greater degree than we ever have. A clarification of the regulations that apply to the maritime Associations No forum to resolve air quality issues for air and aerospace workers.
Communication and coordination	Contracting/communication with local agencies—resolution activities Formal coordination between FRA & OSHA
Information—general comments	Always looking for new sources and approaches to keep safety reminders and reinforcement tools fresh and innovative Try to continue and new if information
Language and translation	Language translation
Money and resources	Underfunding
Management	It's up to the individual company, who is the OS&H manager. If manager knows regulations and so forth. The smaller the company, the less likely to have someone who knows regs inside and out.



Wholesale and Retail Trade (WRT)

Sampling. Within the Wholesale and Retail Trade (WRT) sector, attempts were made to contact 275 distinct organizations, including 230 business associations, 42 professional associations, and 3 labor organizations. Among the 246 organizations thought to be currently active, 217 (88%) were successfully contacted; and 16 (7%) of those contacted responded to the full survey instrument, and 201 (93%) responded to the two-question short form. WRT had the lowest percentage of organizations responding to the full survey instrument. The remaining WRT findings are from the respondents who were assigned to the WRT Sector only and excludes WRT organizations who identified with other sectors.

Information Distribution. The percentage of business and professional associations and labor organizations that distribute workplace safety and health information to their members for the WRT sector is presented in Table 34. The WRT strata were not sampled, since there were fewer than 120 organizations in the sampling frame for these organization types. Therefore, the adjusted population was the number of organizations that responded to either the full survey or the two-question short form, and the sampling weight was one for all three WRT strata. The data show that the 1 labor organization within the WRT sector indicated they distributed workplace safety and health information to their members with only 6% of business associations and 8% of professional associations indicating they did so. When the responses were partitioned into full surveys versus two-question short form, results for the full survey show that the one labor organization respondent, 11 of the 12 (92%) of business association, and 2 of the 3 (66%) of the professional association respondents provided workplace safety and health information to their members. In contrast among short form responders, none of the 168 business organizations and one 1 of the 33 (3%) professional association respondents indicated that their organizations provided workplace safety and health information to their members. No labor organizations completed the short form.

Table 34: Organizations distributing workplace safety and health information by survey type (WRT Sector)

	Business associations FS=12, SF=168	Professional associations FS=3, SF=33	Labor organizations FS=1, SF=0
Full survey (FS)	91.7% (73.3%–100.0%)	33.3% (0%–100.0%)	100%
Short form (SF)	0%	3.0% (0%–9.2%)	—
Combined	6.1% (2.6%–9.6%)	8.3% (0%–17.8%)	100%

Weighted percentage of organizations with 95% confidence interval

Importance of Issues. The ratings of the importance of workplace safety and health issues reported in Table 35 include the 16 full-survey respondents who were assigned to WRT. No short survey participants responded to the question. Full survey respondents were asked to rate the importance of workplace safety and health to their members on a scale from 1 (Not important) to 5 (Very important). Workplace safety and health were considered to be *important* or *very important* to the one labor organization, 58% of business associations, and 33% of professional associations. However, the confidence intervals were wide because of the small number of participants.

Table 35: Importance of workplace safety and health issues among WRT

Organization	Frequency	Percent	95% Confidence Limits for Percent	
Business associations				
Higher importance	7	58.33%	25.62	91.05
Lower importance	5	41.67%	8.95	74.38
Professional associations				
Higher importance	1	33.33%	0.00	100.00
Lower importance	2	66.67%	0.00	100.00
Labor organizations				
Higher importance	1	100.00%		
Total	16			

Higher importance = 4 or 5 on a scale of 1–5; lower importance = 1, 2, or 3 on a scale of 1–5.



Unmet Needs. Respondents were asked if their organization had unmet needs with respect to worker safety and health. Half or fewer of all organizations expressed unmet needs (see Table 36). Only four respondents from wholesale retail and trade identified any unmet needs, with three providing one comment and one respondent listing three. Table 37 lists all original open-ended responses (right column) grouped by theme (left column). The greatest number of unmet needs appeared to be related to information, particularly the need for more topics in OSH.

Table 36: Survey respondents indicating unmet workplace safety and health needs (WRT Sector)

Organization Type	Frequency	Percent	95% Confidence Limits for Percent	
Business associations				
Yes	3	25.0%	0.00	53.74
No	8	66.67%	35.38	97.95
Don't know	1	8.33%	0.00	26.67
Professional associations				
Yes	1	33.33%	0.00	100.00
No	2	66.67%	0.00	100.00
Labor organizations				
Yes	1	100.0%		
Total	16			

Weighted percentage of organizations with 95% confidence interval

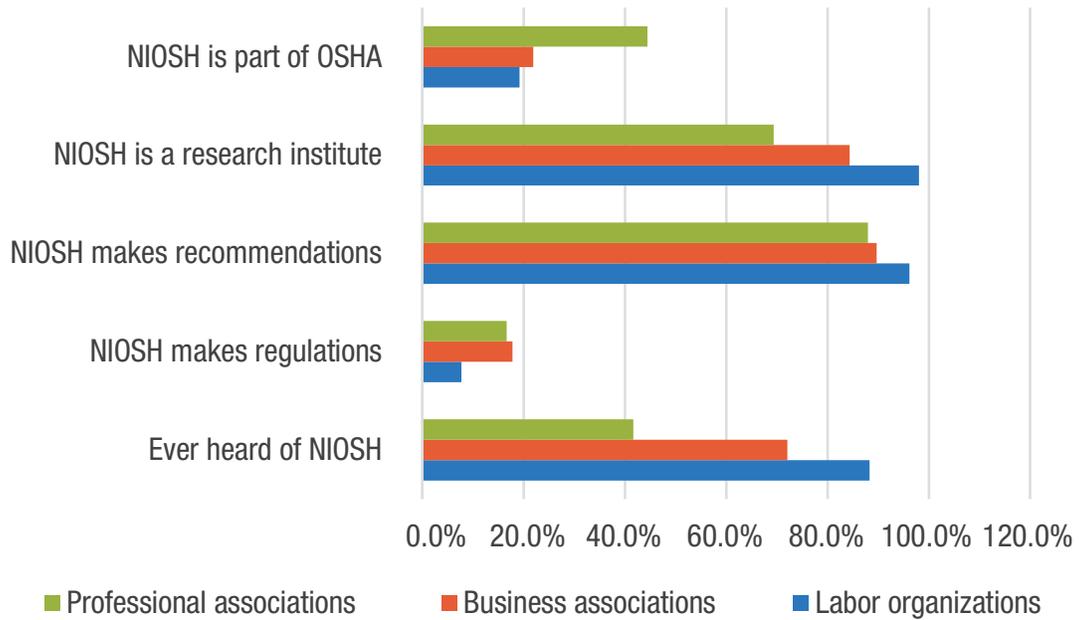
Table 37: Unmet Needs in WRT. Themes and Corresponding Comments

Theme	Corresponding Comments
Information—topics	There's no really good safety information for gas station owners. Hazardous material handling Slips and falls Toxic chemical handling
Training	It's a matter of members attending the training programs. We offer courses by the members don't attend.
Communication and coordination	Creating a better environment to negotiate health and safety needs within the industry.

6. What is the perception of NIOSH as a source of workplace safety and health information?

More than 88% of the labor organization full survey respondents had previously heard of NIOSH, as had 72% of business associations and 42% of professional associations (Figure 13). Of those who had heard of NIOSH, most respondents from all three organization types knew that NIOSH is an organization that makes recommendations rather than regulations and that NIOSH is a research institute. However, approximately 20% of both labor organizations and business associations agreed with the statement that NIOSH is part of OSHA; more than 44% of professional associations with previous knowledge of NIOSH had this misunderstanding.

Figure 13. Survey respondents' knowledge and perception of NIOSH



Percentage based on those with previous knowledge of NIOSH.

Among organizations with previous knowledge of NIOSH, approximately 66% of labor organizations but only 37% of professional associations and 25% of business associations were aware of the NIOSH Health Hazard Evaluation (HHE) program. Seventy percent of labor organizations that were aware of the HHE program indicated they had previously used an HHE report (Table 38). Among those aware of the HHE program, use of HHE reports was mostly by respondents in labor organizations.

Table 38. Survey respondents' knowledge of NIOSH HHE program

Knowledge or use of program	Labor organizations % (95% CI)	Business associations % (95% CI)	Professional associations % (95% CI)
Aware of the NIOSH HHE program*	67.9 (55.1–80.7)	24.6 (15.4–33.9)	37.1 (9.1–65.1)
Ever used NIOSH HHE report†	71.8 (56.8–86.8)	29.8 (13.3–46.3)	0.00

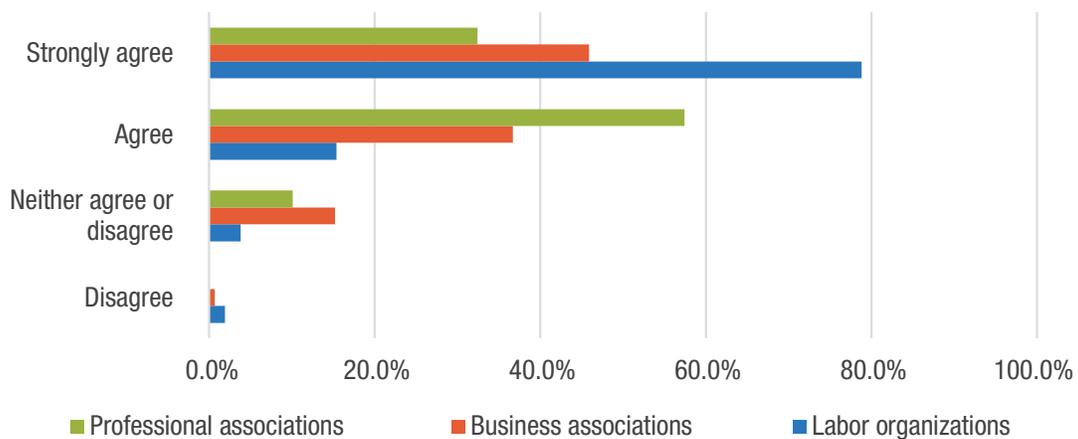
*Percentage based on those with previous knowledge of NIOSH.

†Percentage based on those aware of NIOSH HHE Program.

Based on results from 308 responses to the full survey instrument.

When asked about their perception of NIOSH as an important resource for workplace safety and health information, approximately 90% of all three organization types who responded to the full survey (n = 308) either agreed or strongly agreed with this statement; 79% of labor organizations, 46% of business associations, and 32% of professional associations strongly agreed with this statement (Figure 14).

Figure 14. Survey respondents' view of NIOSH as an important resource for the OSH community

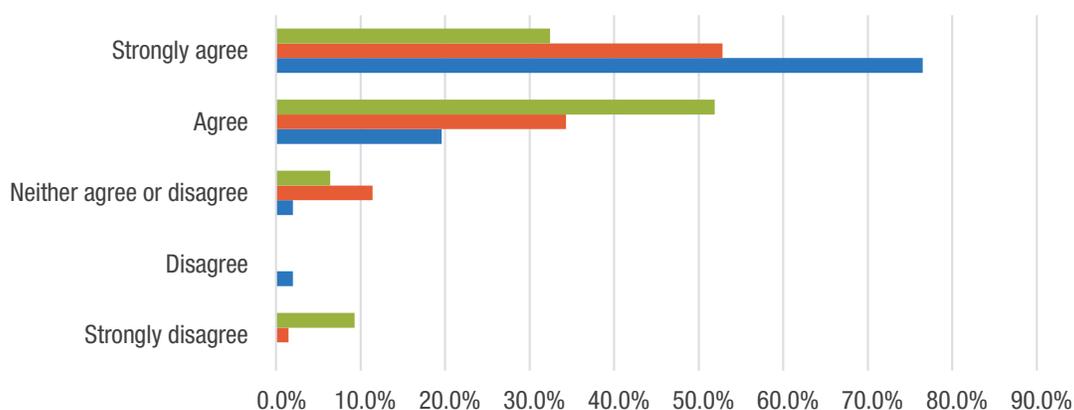


Percentage based on those with previous knowledge of NIOSH.



When asked whether NIOSH was a credible source for workplace safety and health information, 97% of labor organizations, 87% of business associations, and 84% of professional associations either strongly agreed or agreed with this statement (Figure 15). A small group (4.0% of the labor organizations, 12.9% of the business associations, and 15.7% of the professional associations) did not agree that NIOSH is a credible source for workplace safety and health information.

Figure 15. Survey respondents' view of NIOSH as a credible source of OSH information

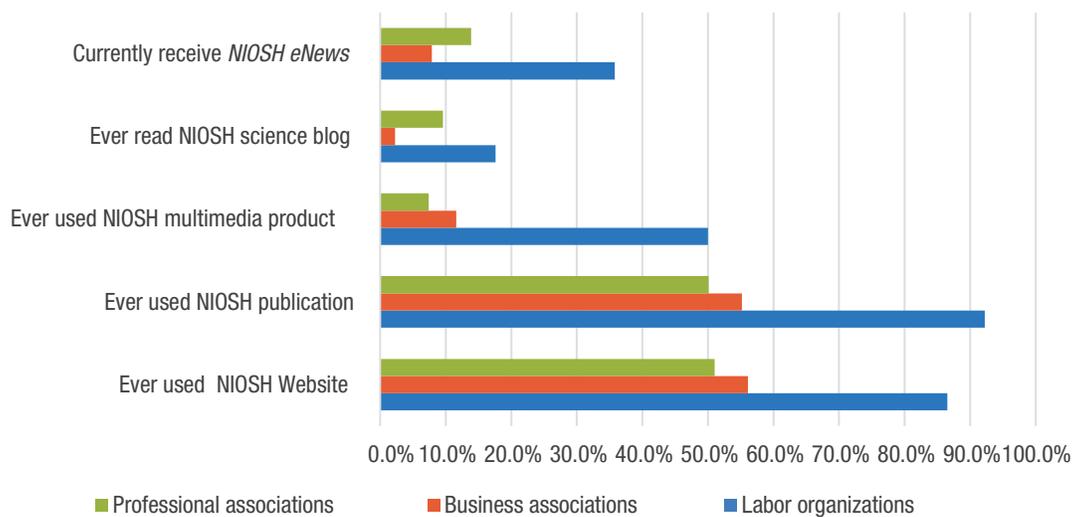


Percentage based on those with previous knowledge of NIOSH.

7. What NIOSH information services (website, printed materials, 800-number, etc.) are used by business associations, professional associations, and labor organizations? What is the perception of these services?

From respondents who completed the full survey instrument and who had previous knowledge of NIOSH, information was obtained about the use of specific NIOSH communication channels and products for supplying workplace safety and health information (Figure 16). Over 85% of labor organization respondents had used the NIOSH website, with the percentage dropping to 56% of business association respondents and 51% of professional association respondents. Similar results were found for previous use of NIOSH publications. The NIOSH source of information least frequently used by labor organizations and business associations was the NIOSH Science Blog, and the source least frequently used by professional associations was multimedia products.

Figure 16. Use of NIOSH information by organizations surveyed

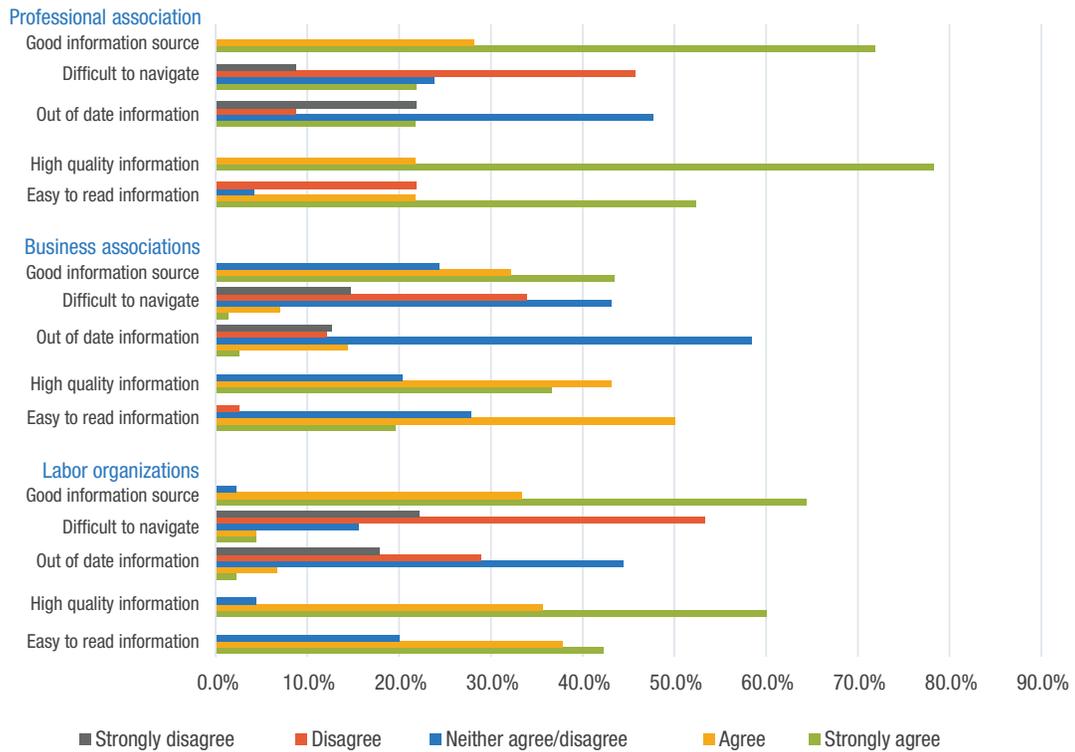


Percentage based on those with previous knowledge of NIOSH.
Based on results of the 308 responses to the full survey instrument.



Among the respondents who reported previous use of the NIOSH website, approximately three-quarters of all three organization types either agreed or strongly agreed that the NIOSH website has *easy-to-read information*, has *high quality information*, and is a *good source for workplace safety and health information* (Figure 17). However, approximately 22% of professional association respondents disagreed with the statement that the NIOSH website has easy-to-read information, and between 9% and 22% of the respondents either agreed or strongly agreed that the NIOSH website is difficult to navigate and contains out-of-date information.

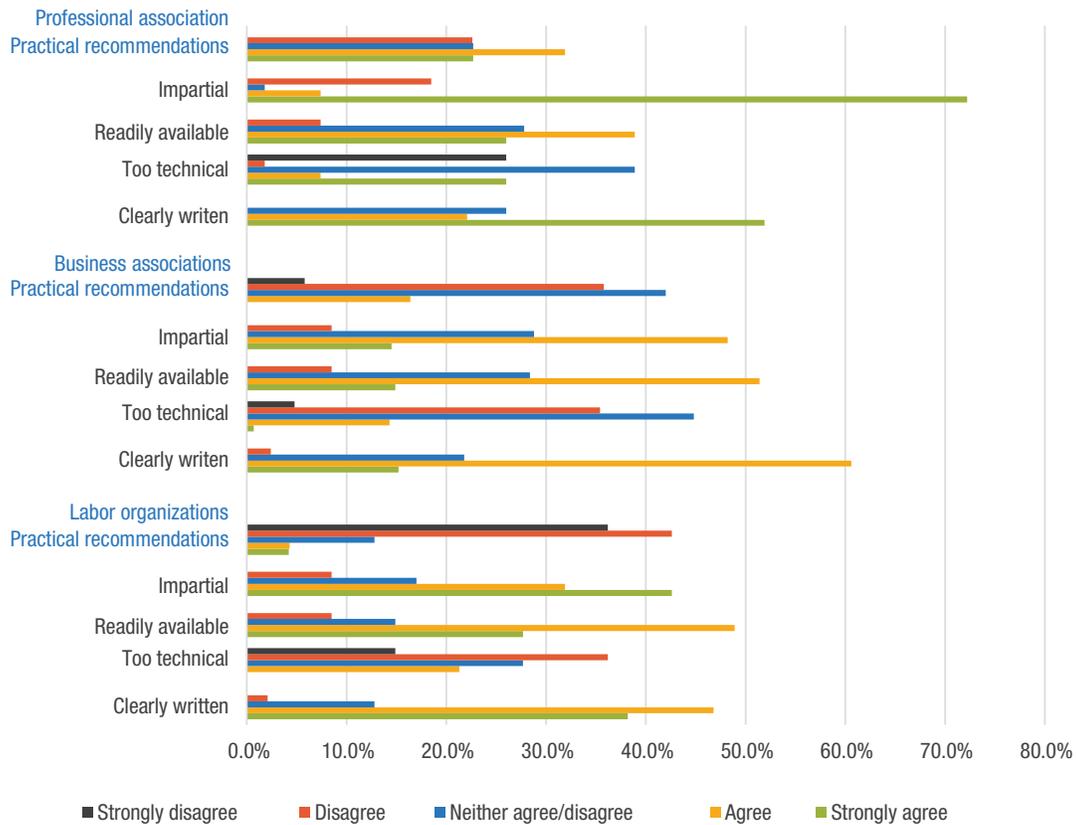
Figure 17. Perception of the NIOSH website by respondents who reported previous use of the website



Based on results of the 308 responses to the full survey instrument.

More than 92% of those responding from labor organizations indicated past reference or use of a NIOSH publication (Figure 18); the percentage dropped to 55% of business associations and 50% of professional associations. Respondents with previous knowledge of NIOSH publications were also asked to provide additional information on NIOSH publications, such as their clarity, technical level, and impartiality. Approximately three-fourths of respondents from all three organization types agreed or strongly agreed that NIOSH publications are clearly written, readily available, and impartial. However, approximately 15–33% of respondents from all organization types indicated that NIOSH publications may be too technical and about 23–79% indicated that the publications did not provide practical recommendations.

Figure 18. Perception of NIOSH publications by respondents who reported previous use of NIOSH publications



Based on results of the 308 responses to the full survey instrument.



CONCLUSIONS

The findings in this report suggest that the majority of professional and business trade associations and labor organizations do not disseminate workplace safety and health information to their members. All three types of organizations have been shown to be effective intermediaries for reaching their members [Boléat 2003; Cunningham, Sinclair 2015; Wilts, Meyer 2005]. However, these survey results indicate that fewer than half of all labor organizations, 20% of business associations, and 10% of professional associations provide workplace health and safety information to their members. Given these findings, there appears to be unrealized opportunity to use these organizations as intermediaries for transferring workplace safety and health information to their members, especially within the professional and business associations. Research by Walters and Lamm [2003] and Cunningham and Sinclair [2015] highlights the engagement of these organizations in that they have the greatest chance as intermediaries to improve workplace safety and self-regulation of small-business work environments. This is especially important since small-businesses often don't have the resources to devote to safety and health beyond the cost of association membership.

Labor organizations have a tradition of holding worker safety as a core value. They have continued to invest in education and technical guidance to improve their credibility and appeal among workers [Ceniceros 2012]. Labor organizations are generally efficient in gathering and disseminating information on workplace rights and laws (Weil 2004), informing workers on issues unique to individual sectors [Viscusi 1983], and using formal and informal channels to collect and distribute information [Weil 2004]. For these reasons, partnering with labor organizations to disseminate information might be considered a best practice for improving worker safety and health.

In general, the organizations in this study reported relying on the government as a trusted source of workplace safety and health information. Respondents identified approximately 40 different government agencies as sources, with the Occupational Safety and Health Administration (OSHA) being the most frequently mentioned. Agencies such as NIOSH have a unique opportunity to expand their partnerships with professional and business trade associations and labor organizations to address the specific workplace safety and health needs and concerns of their members. These organizations can play an important role as intermediaries for transferring tailored OSH information to union workers, professional association members, and businesses within specific industrial sectors [Chartered Quality Institute 2016].

With regard to sector-specific findings, the percentage of associations disseminating workplace safety and health information was greatest in the construction sector and lowest in the service sector. Many respondents across the sectors indicated that their organization had unmet workplace safety and health needs. These findings represent new opportunities for strengthening channels of communication and delivery, as well as building relationships with associations to address the unmet needs.

A limitation of these findings is that they depict perceptions occurring between 2008 and 2009, which pre-date the proliferation of social media (such as Twitter, Instagram, and Facebook) that allow agencies such as NIOSH to provide new dissemination channels to these organizations. Advanced formats such as smartphone apps allow intermediaries to customize



the information they retrieve, decide what is relevant to their industry, and repackage it for dissemination to their members. To facilitate its rapid uptake, government agencies should continue to develop and use new communication technologies when delivering workplace safety and health information to these organizations. Another observation is that responding organizations elected to participate in the study because of apparent vested interests in workplace health and safety. This potential bias could have led to more positive responses to questions about the importance of OSH issues or opinions of NIOSH as an important and credible source of OSH information.



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