

## **GAO Review of Efforts to Ensure Accuracy of Injury and Illness Data**

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### **Introduction**

In 2007, there were approximately 4 million cases in which workers in the United States were injured or became ill as a result of unsafe or unhealthy working conditions, and more than 5,600 workers died as a result of their injuries, according to data reported by the Department of Labor's (DOL) Bureau of Labor Statistics (BLS). The rate of nonfatal occupational injuries and illnesses (hereafter referred to as injuries and illnesses) among private sector employers as reported by BLS in 2007 has generally declined since 1992; the rate of worker fatalities decreased from 1992 to 2001, and has remained relatively constant since 2002. Under the Occupational Safety and Health Act of 1970 (OSH Act), DOL's Occupational Safety and Health Administration (OSHA) is responsible for protecting the safety and health of the nation's workers. The OSH Act requires DOL to collect and compile accurate statistics on worker injuries and illnesses. One of two sources of these statistics is BLS's Survey of Occupational Injuries and Illnesses (SOII), which provides nationwide data on workers' injuries and illnesses in most industries. The other is OSHA's survey of selected employers' injury and illness records called the OSHA Data Initiative (ODI), which provides injury and illness data for workers in high hazard industries. The OSH Act and DOL regulations require employers with more than 10 employees to record other than minor injuries and illnesses on logs maintained at each worksite. However, 83 percent of all employers are generally not required to record work-related injuries and illnesses, either because the employers are too small (have fewer than 11 employees) or because they are in industries with historically low rates of injuries and illnesses and have thus been exempted by OSHA from recording injuries and illnesses.

At the request of the Senate Committee on Health, Education, Labor and Pensions, the House Committee on Education and Labor, and selected subcommittees, we reviewed DOL's efforts to ensure that injuries and illnesses are properly recorded by employers. Specifically, we were asked us to determine (1) whether DOL verifies that employers are accurately recording workers' injuries and illnesses and, if so, the adequacy of these efforts, and (2) what factors may affect the accuracy of employers' injury and illness records. To address our first objective, we

interviewed DOL officials to determine the types of verification efforts the agency conducts for the data collected in its SOII and ODI surveys, and the agency components responsible for these efforts. We also reviewed relevant laws and regulations. After determining that OSHA verifies the ODI data it collects through onsite audits of selected employers' injury and illness records (records audits), we interviewed OSHA headquarters officials and collected relevant documentation regarding the agency's audit procedures. We analyzed data from records audits conducted by OSHA from 2005 to 2007 of employers' calendar year 2003, 2004, and 2005 injury and illness records (the most recent data available).<sup>1</sup> We were not able to independently verify the injury and illness data audited by OSHA because we do not have access to the injury and illness records of private employers. To better understand OSHA's records audit procedures, we interviewed OSHA regional administrators and area directors, as well as inspectors who conducted the audits in each of OSHA's 10 regions, including inspectors with various levels of audit experience, to obtain a range of perspectives. To address our second objective, we interviewed OSHA and BLS officials; experts, including academics and researchers; labor representatives and worker advocates; and representatives from an employer association, and surveyed a representative sample of occupational health practitioners in the United States. We selected experts based on the depth of their experience and the extent to which their work had been cited by other experts, among other criteria. We selected labor representatives and worker advocacy organizations based on the number of workers and types of industries they represented. Our survey of occupational health practitioners included occupational physicians, occupational physician assistants, and nurse practitioners specializing in occupational health. We independently selected a random sample of each of the three groups, resulting in a sample of 409 of the 1,941 physicians; 396 of the 1,246 physician assistants; and 382 of the 861 nurse practitioners, for a total representative sample of 1,187 of the 4,048 occupational health practitioners. We identified these groups from information obtained from a firm that manages data on members of professional medical organizations. Our survey yielded a response rate that allowed us to generalize our results to the total population of the three groups. All estimates we report from the survey results have a margin of error of plus or minus 7 percentage points or less at the 95 percent confidence level.

We conducted this performance audit from August 2008 through October 2009 in accordance with generally accepted government auditing standards. These standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. This paper is an extract from the full report on our work.<sup>2</sup>

## **Background**

Under the OSH Act, OSHA is responsible for protecting the safety and health of the nation's workers. The agency helps ensure the safety and health of over 112.5 million private sector workers in approximately 8.6 million worksites in the United States by setting and enforcing

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<sup>1</sup> Hereafter, all years cited in this report are calendar years unless otherwise noted. Records audits are almost always conducted 2 calendar years after the target data year. Of the 753 records audits that were conducted for 2003-2005 records, 99.7 percent were conducted in 2005-2007; two records audits were conducted in January and February of 2008.

<sup>2</sup> Our full report is GAO, *Workplace Safety and Health: Enhancing OSHA's Records Audit Process Could Improve the Accuracy of Worker Injury and Illness Data*, GAO-10-10 (Washington, D.C.: October 15, 2009).

safety and health standards, rules, and regulations, and inspecting worksites to ensure employer compliance. OSHA helps to ensure safe and healthy working conditions for workers through its 11 national office directorates and 10 regional offices. The national office directorates include the Directorate of Enforcement Programs, which provides guidance to OSHA inspectors on how to enforce safety and health regulations and standards and how employers are to comply with them, and the Directorate of Evaluation and Analysis, which establishes policies and analyzes safety and health data. OSHA directly enforces safety and health regulations and standards in about half the states; the remaining states have each been granted authority by OSHA to set and enforce their own workplace safety and health standards for worksites under a state plan approved by OSHA (state-plan states).<sup>3</sup>

The OSH Act requires nonexempt employers to prepare and maintain records of injuries and illnesses sustained by their workers and make them available to OSHA.<sup>4</sup> The primary record employers are required to maintain is OSHA's Form 300 Log of Work-Related Injuries and Illnesses. For each work-related injury and illness that requires medical treatment other than first aid, the employer is required to record the worker's name; the date; a brief description of the injury or illness; and the number of days the worker was away from work, assigned to restricted duties, or transferred to another job as a result of the injury or illness. Employers are also required to describe each injury and illness on the Injuries and Illnesses Incident Report (OSHA's Form 301). About 1.5 million employers with more than 10 employees—representing about 17 percent of the approximately 8.6 million private sector worksites and an estimated 53 million employees covered by OSHA—must keep such records. OSHA has established definitions and recordkeeping guidelines to assist employers in determining which injuries and illnesses must be recorded in their injury and illness logs. Injuries and illnesses serious enough to be recorded include those that result in lost work time, medical treatment other than first aid, restriction of work, loss of consciousness, or transfer to another job. OSHA requires employers to post summaries of their logs annually at each worksite and to provide them to OSHA and BLS if requested. OSHA's recordkeeping standards, which took effect in January 2002, were intended to simplify the recordkeeping rules and forms used to record injuries and illnesses.<sup>5</sup>

OSHA also promotes workplace safety and health by targeting industries and employers with the highest number of workplace injuries and illnesses for inspection. OSHA does this through both programmed (scheduled) inspections and unprogrammed (unscheduled) inspections conducted by inspectors in area offices throughout its 10 U.S. regions. OSHA places the highest priority on unprogrammed inspections initiated in response to fatality investigations, formal complaints, referrals, and other situations that could pose a risk to the safety and health of

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<sup>3</sup> In these states, the state standards must be at least as effective as the federal standards. See 29 U.S.C. § 667(c)(2). Most of the state-plan states cover public and private sector worksites. However, four states (Connecticut, New Jersey, New York, and the Virgin Islands) cover public sector (state and local government) worksites only; private sector worksites are covered by federal OSHA. Under the Occupational Safety and Health Act of 1970, "state" is defined to include the District of Columbia, Puerto Rico, the Virgin Islands, American Samoa, Guam, and the Trust Territory of the Pacific Islands. See 29 U.S.C. § 652(7).

<sup>4</sup> Generally, in addition to employers with 10 or fewer employees, DOL's regulations exempt worksites in specific low hazard retail, service, finance, insurance, or real estate industries from OSHA's recordkeeping requirements. However, all employers must report to OSHA any workplace incident that results in a fatality or the hospitalization of three or more employees. In addition, employers are required to respond to the OSHA and BLS surveys even if they are otherwise exempt from OSHA's recordkeeping requirements.

<sup>5</sup>66 Fed. Reg. 5916.

workers. OSHA gives a lower priority to programmed inspections, which include those selected by OSHA through its Site-Specific Targeting program, which it uses to target high hazard worksites for inspection.<sup>6</sup> Table 1 shows the number of programmed and unprogrammed inspections OSHA conducted from fiscal years 2003 through 2007.

**Table 1. Number of Inspections Conducted by OSHA, Fiscal Years 2003-2007**

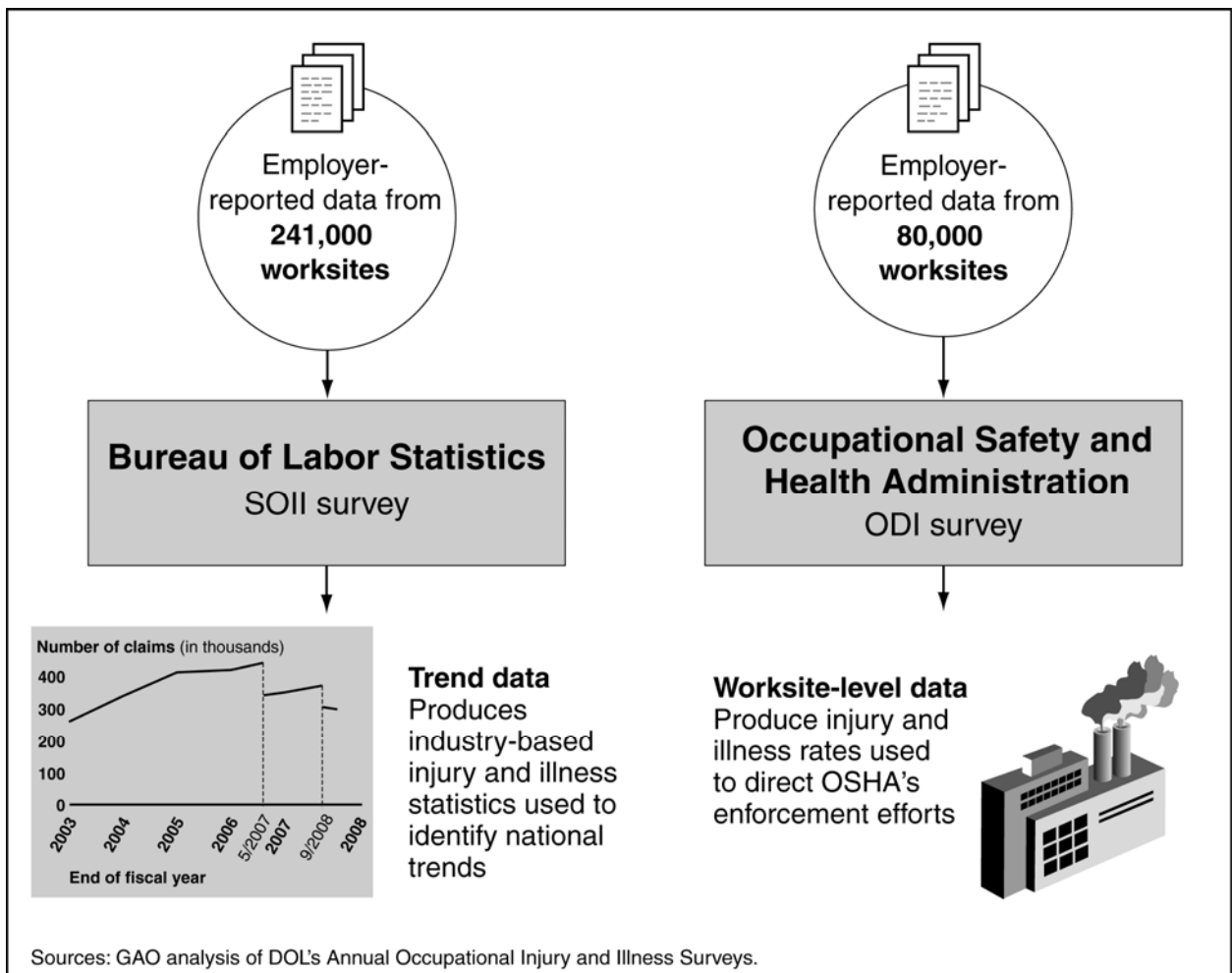
Number of Inspections	FY 2003	%	FY 2004	%	FY 2005	%	FY 2006	%	FY 2007	%
<b>Total Inspections</b>	<b>39,778</b>	<b>100</b>	<b>39,112</b>	<b>100</b>	<b>39,828</b>	<b>100</b>	<b>38,537</b>	<b>100</b>	<b>39,323</b>	<b>100</b>
Programmed inspections	22,436	56	21,576	55	21,404	54	21,506	56	23,035	59
Unprogrammed inspections	17,342	44	17,536	45	18,424	46	17,031	44	16,288	41
Fatality investigations	1,021		1,060		1,114		1,081		1,043	
Complaints	7,969		8,062		7,716		7,376		7,055	
Referrals	4,472		4,585		4,787		5,019		5,007	
Other	3,880		3,929		4,807		3,555		3,183	

(Source: GAO based on OSHA data.)

BLS's SOII includes injury and illness data from employers' logs for about 241,000 worksites; the ODI survey includes data from about 80,000 worksites in high hazard industries.<sup>7</sup> The SOII is a coordinated federal-state effort that estimates the number of workplace injuries and illnesses that occur at worksites in most industries in the United States. Because the data come from OSHA logs, the injuries and illnesses counted by the survey are only those required by OSHA to be recorded. As such, the data differ from those collected by other systems, such as data collected using workers' compensation claims. While BLS and OSHA collect the same basic information, they largely collect data from different employers. However, BLS estimates a potential overlap of less than 10 percent of employers who must complete both the BLS SOII and OSHA ODI surveys in a given year. In these cases, employers send the data to both BLS and OSHA because the agencies do not share data. Figure 1 shows the surveys and how they are used.

<sup>6</sup> In addition to targeting worksites for inspection through its Site-Specific Targeting program, OSHA also targets worksites through its national, regional, and local emphasis programs.

<sup>7</sup>The SOII excludes the self-employed; farms with fewer than 11 employees; private households; federal government agencies; and, for national estimates, employees in state and local government agencies.

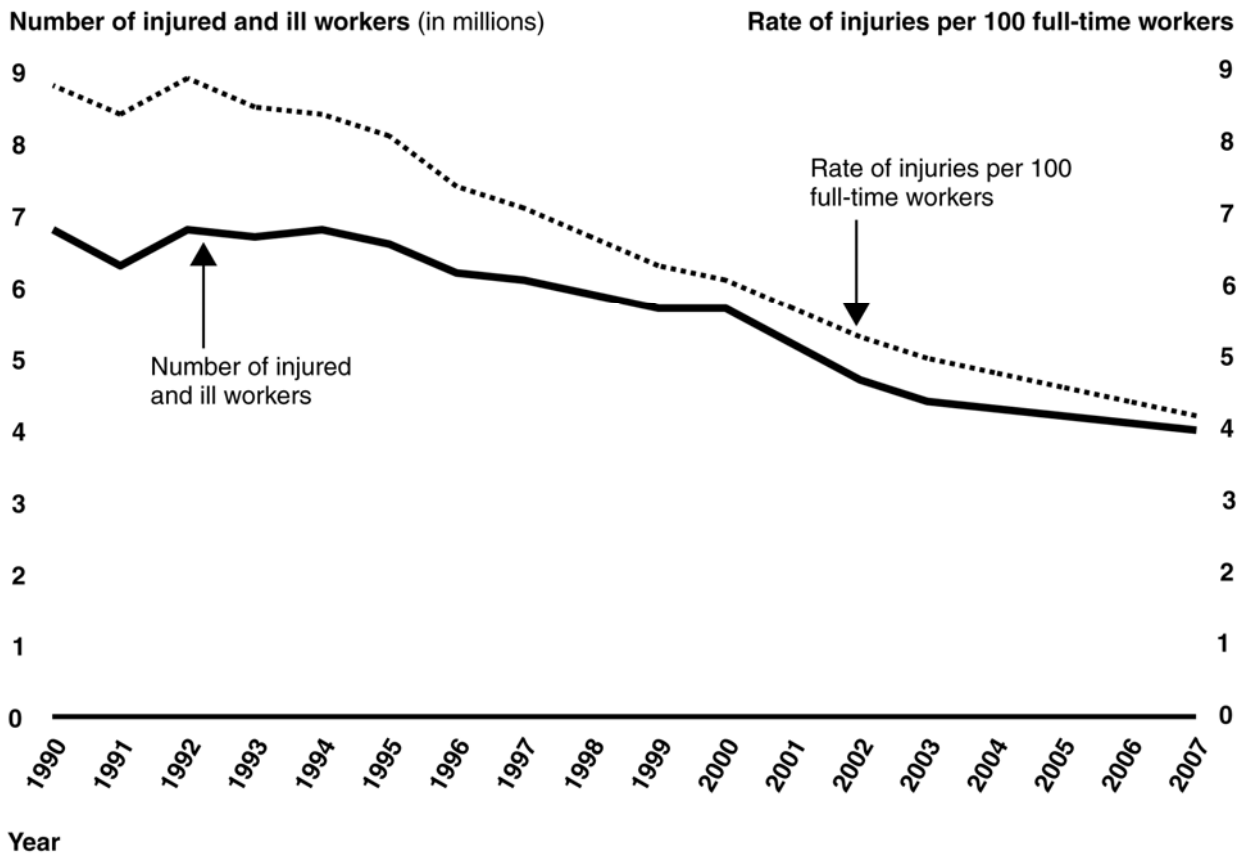


**Figure 1. DOL's Annual Occupational Injury and Illness Surveys**

BLS's data show a generally steady decline in the number and rate of injuries and illnesses reported by employers from 1992 to 2007 (see Figure 2). DOL officials often cite this decline as evidence of the success of OSHA's workplace safety programs and its enforcement efforts. However, because of the SOII's sole reliance on employer-reported injury and illness data, some academic studies have reported that the survey may undercount the total number of workplace injuries and illnesses.<sup>8</sup> OSHA officials stated that the decline has been driven by employer improvements to workplace safety and health, and by the decrease in the number of

<sup>8</sup>See, for example, Leslie I. Boden and Al Ozonoff, "Capture-Recapture Estimates of Nonfatal Workplace Injuries and Illnesses," *Annals of Epidemiology*, vol. 18, no. 6 (2008); Kenneth D. Rosenman, et al., "How Much Work-Related Injury and Illness is Missed By the Current National Surveillance System?," *Journal of Occupational and Environmental Medicine*, vol. 48, no. 4 (2006); and J. Paul Leigh, James P. Marcin, and Ted R. Miller, "An Estimate of the U.S. Government's Undercount of Nonfatal Occupational Injuries," *Journal of Occupational and Environmental Medicine*, vol. 46, no. 1 (2004).

manufacturing jobs in the United States. According to BLS, manufacturing jobs in the United States have declined by almost 24 percent since 1998. The OSHA officials also said that the decline in the rate of U.S. occupational injuries and illnesses is consistent with declines in other countries. Data from the International Labour Organization show that several countries experienced declines in their rates of injuries and illnesses from 1992 to 2006.<sup>9</sup>



Source: BLS.

(Note: Rule changes in 2002 may affect the comparability of the data in this time series.)

**Figure 2. Number and Rate of Injuries and Illnesses in the United States, 1990-2007**

From the time the ODI was established in 1995, OSHA has annually surveyed about 80,000 of the approximately 130,000 worksites with 40 or more workers it defines as being in high

<sup>9</sup> The International Labour Organization is the United Nations agency that brings together representatives of governments, employers, and workers of its member states to jointly shape policies and programs that promote decent and productive employment.

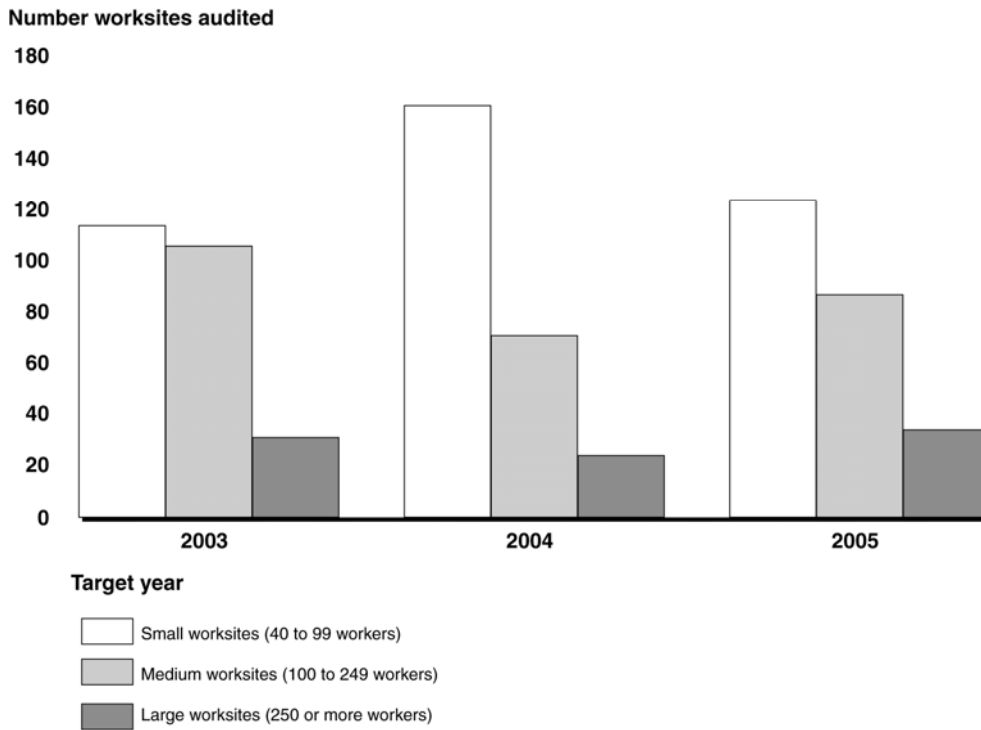
hazard industries.<sup>10</sup> According to OSHA officials, the survey size is based on the budgetary resources OSHA had when the ODI was established. The agency uses data from the ODI to target employers for inspections, outreach, and technical assistance, and to measure its performance in reducing workplace injuries and illnesses. For example, OSHA provides employers with onsite assistance to help them identify and correct hazards and set up safety and health programs. OSHA also provides employers with training and education to help them reduce worker accidents and injuries. The 130,000 worksites in the ODI universe are selected from manufacturing and 22 other industries OSHA defined as high hazard on the basis of their injury and illness rates reported by BLS in 2002: worksites with a lost workday injury and illness (LWDII) rate of 5.0 or higher.<sup>11</sup> To expand its coverage of high hazard worksites, OSHA included 20,000 construction worksites in its 2008 ODI. OSHA has also proposed including worksites with 30 or more employees in the ODI, instead of using the current threshold of 40 or more employees.

OSHA and some state-plan states annually conduct onsite audits of employer injury and illness logs to verify the accuracy of the ODI data. While OSHA inspectors check employers' injury and illness records during safety and health inspections, a records audit is the primary mechanism OSHA uses to verify the accuracy of the data submitted by employers for the ODI. OSHA annually conducts records audits for a representative sample of approximately 250 of the 130,000 worksites included in its ODI survey. The primary purpose of a records audit is to verify that the injury and illness data submitted to OSHA are identical to the data in the employer's injury and illness log and that they are accurate. The records audits OSHA conducted from 2005 to 2007 of employers' 2003, 2004, and 2005 injury and illness data occurred at a range of worksites of differing sizes based on the average number of workers at each worksite (see Figure 3).

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<sup>10</sup> OSHA generally excludes from the ODI worksites with fewer than 40 employees; those in states that do not participate in the ODI; and all construction sites, hospitals, and general merchandise stores. The ODI also excludes worksites in the mining and railroad industries because their injuries and illnesses are tracked separately by the Mine Safety and Health Administration and the Federal Railroad Administration, respectively.

<sup>11</sup> Until 2002, DOL used the LWDII rate to compare the rates of injuries and illnesses among worksites of varying sizes. The rate was calculated based on the total number of injuries or illnesses resulting in lost work days. In 2002, after revising its recordkeeping requirements, DOL began using the days away from work, restricted activity, or job transfer (DART) rate to compare injuries and illnesses among worksites instead of the LWDII rate.



Source: OSHA.

**Figure 3. Number of Worksites Audited by Size, 2003-2005**

The audits cover worksites in a variety of industries, including health services, trucking and warehousing, fabricated metal products, and printing and publishing (see Table 2).



**Table 2. Number of Records Audits by Type of Industry, 2003-2005**

Industry	Number of audited worksites <sup>a</sup>			Total
	2003	2004	2005	
Agricultural production—crops	2	0	2	<b>4</b>
Agricultural production—livestock	1	0	0	<b>1</b>
Agricultural services	1	0	1	<b>2</b>
Food and kindred products	22	14	13	<b>49</b>
Tobacco manufacturers	0	0	0	<b>0</b>
Textile mill products	4	2	3	<b>9</b>
Apparel and other textile products	3	7	5	<b>15</b>
Lumber and wood products	7	4	11	<b>22</b>
Furniture and fixtures	7	5	4	<b>16</b>
Paper and allied products	4	7	6	<b>17</b>
Printing and publishing	12	14	7	<b>33</b>
Chemicals and allied products	9	12	9	<b>30</b>
Petroleum and coal products	1	1	0	<b>2</b>
Rubber and miscellaneous plastic products	14	16	9	<b>39</b>
Leather and leather products	1	0	0	<b>1</b>
Stone, clay, and glass products	5	8	8	<b>21</b>
Primary metal industries	8	7	9	<b>24</b>
Fabricated metal products	20	24	21	<b>65</b>
Machinery, except electrical	23	15	20	<b>58</b>
Electric and electronic equipment	11	16	12	<b>39</b>
Transportation equipment	8	3	10	<b>21</b>
Instruments and related products	8	6	5	<b>19</b>
Miscellaneous manufacturing industries	4	3	3	<b>10</b>
Trucking and warehousing	15	22	21	<b>58</b>
U.S. Postal Service	0	0	0	<b>0</b>
Water transportation	0	0	0	<b>0</b>
Transportation by air	6	2	2	<b>10</b>
Transportation services	0	0	1	<b>1</b>
Electric, gas, and sanitary services	3	2	2	<b>7</b>
Wholesale trade—durable goods	5	16	8	<b>29</b>
Wholesale trade—nondurable goods	8	7	8	<b>23</b>
Building materials and garden supplies	9	10	13	<b>32</b>

Industry	Number of audited worksites <sup>a</sup>			Total
	2003	2004	2005	
Health services	30	33	32	95
<b>Total</b>	<b>251</b>	<b>256</b>	<b>245</b>	<b>752</b>

Source: OSHA.

<sup>a</sup>OSHA surveys a portion of its ODI universe annually and as a result, an industry may be included one year and excluded the next. Therefore, industries in this table may not have any records audits for a given year because the industry was not included in that year's ODI.

Based on its analysis of OSHA's records audits of employers' 2003, 2004, and 2005 injury and illness data, Eastern Research Group, Inc.<sup>12</sup> found an accuracy rate of over 90 percent for the total number of cases that were required to be recorded and those involving days away from work, restricted activity, or job transfer (DART).<sup>13</sup> OSHA uses these findings to support the agency's continued use of the ODI data to target worksites for enforcement and compliance assistance, and to measure the agency's performance in reducing workplace injuries and illnesses.

## **DOL Verifies the Injury and Illness Data in the ODI, But OSHA Does Not Always Collection Information from Workers, and Excludes Certain Industries**

Although DOL is not required to, it verifies some of the workplace injury and illness data it collects from employers on the ODI survey via OSHA's records audits. However, OSHA's efforts to verify the accuracy of the data are not adequate because OSHA overlooks some information it could obtain from workers about injuries and illnesses during these audits that could help verify the accuracy of the data. In addition, OSHA excludes certain high hazard industries from its data collection efforts, which precludes them from being selected for records audits and makes them unlikely to be targeted by OSHA for inspections, outreach, and technical assistance. BLS does not verify the injury and illness data it collects from employers in the SOII that are used to report national injury and illness statistics and trends, but it has taken or is planning to take several actions to respond to concerns about the quality and completeness of the data.

### OSHA Does Not Require Inspectors to Interview Workers During Records Audits

OSHA does not require inspectors to interview workers during records audits about injuries and illnesses that they or their co-workers may have experienced. Although OSHA's procedures manual states that inspectors must conduct interviews if they believe the records do not provide full and accurate information, it does not provide criteria for what constitutes "full and accurate" information. OSHA officials confirmed that it is optional for inspectors to interview workers during records audits. As a result, inspectors may miss opportunities to obtain information from workers about injuries and illnesses that may not have been properly recorded by employers on their injury and illness logs. As noted in our previous work, there are potential risks in relying

<sup>12</sup> Eastern Research Group, Inc. is a private consulting firm that annually analyzes the records audit data collected by inspectors.

<sup>13</sup>The DART rate is calculated by totaling the number of work-related injuries and illnesses that resulted in days away from work, job duty restrictions, or job transfer at a worksite; dividing by the total number of hours worked by all workers during the calendar year; and multiplying this number by 200,000, which represents a base for 100 full-time workers working 50 weeks per year.

solely on employer-reported data.<sup>14</sup> When OSHA inspectors conduct records audits, the audit procedures direct them to inspect the records of a random sample of workers at the worksites, among other things. These records, which are provided to the inspectors by the employer, can include workers' compensation records, medical records, accident reports, and records of absences.

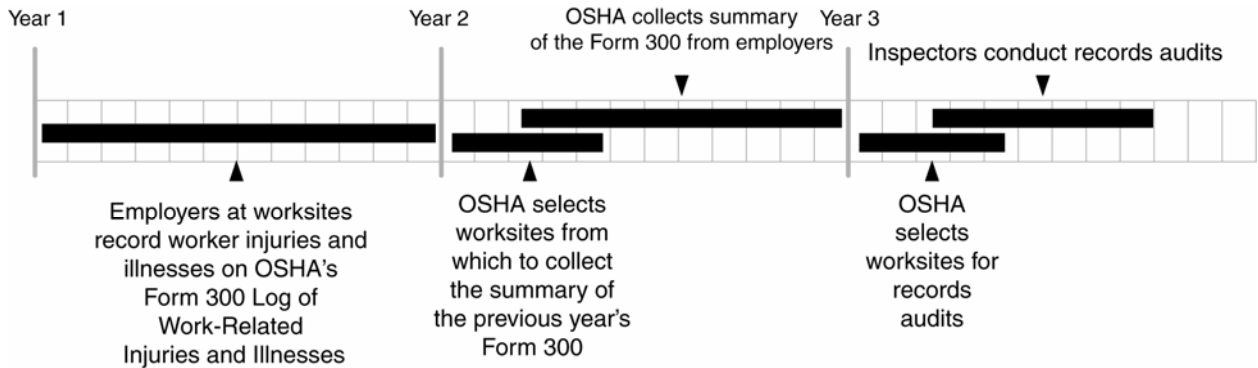
In addition to reviewing these records, OSHA's procedures provide inspectors with the option to interview workers. Worker interviews are the only source of information used during the audit not provided by the employer. If inspectors choose to interview workers, OSHA's audit software generates a sample of workers to be interviewed from the initial random sample of workers. For the 753 records audits OSHA conducted of employers' 2003, 2004, and 2005 injury and illness records, we found that inspectors chose to interview workers in about half of the audits. During our interviews, inspectors told us one challenge they face in interviewing workers is that many workers are no longer employed at the worksite or are unavailable to be interviewed at the time of the audit. Of these inspectors who conducted interviews, 9 of 14 reported they are rarely or never able to interview the full sample of workers. We examined the data for audits conducted from 2005 to 2007, and found that when inspectors interviewed workers, 72 percent of the time they did not interview the full number of workers recommended by the audit procedures. OSHA headquarters officials told us that, although the records audit procedures do not direct inspectors to substitute other workers to interview when the workers originally selected are unavailable, they always instruct inspectors to do so during records audit training. However, OSHA does not conduct all of the records audit training inspectors receive, and several of the inspectors we interviewed said they had not received this training.

#### Lack of Timeliness in Conducting Interviews with Workers Can Affect Their Usefulness

Interviewing workers might provide information to help inspectors evaluate the accuracy and completeness of employer-provided data; however, the lack of timeliness in conducting the interviews can affect their usefulness. Some inspectors told us that because OSHA does not conduct records audits until about 2 calendar years after the injuries and illnesses are recorded, inspectors rarely learn about underrecorded injuries or illnesses from the interviews. Because of this lag, inspectors told us many workers are no longer employed at the worksite and those who remain may be unable to remember the injury or illness. OSHA officials said the lag exists because, after the end of the calendar year in which the injury or illness is recorded, it takes OSHA a full year to collect the data and up to 9 additional months to conduct the records audits. For example, in early 2008, OSHA selected the ODI worksites for the calendar year 2007 injury and illness data. OSHA then spent a year collecting the data from employers. After collecting the data, OSHA selected worksites for records audits in early 2009, and generally gave inspectors until the end of September to complete the audits. As a result, if a worker was injured in January 2007, OSHA might not examine the employer's records or interview the worker about the injury until the summer or fall of 2009—2½ years after the injury occurred. Figure 4 depicts the timeline for the process and the activities performed. In comparison, it takes BLS approximately 10 months to both collect and report the SOII data; however, BLS does not conduct follow-up verifications like OSHA's records audits.

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<sup>14</sup> GAO, *Occupational Safety and Health: Changes Needed in the Combined Federal-State Approach*, [GAO/HEHS-94-10](#) (Washington, D.C.: Feb. 28, 1994).



Source: GAO analysis of information provided by OSHA.

**Figure 4. Timeline for Collecting and Auditing Employers' Injury and Illness Records**

OSHA's ODI Universe Excludes Eight High Hazard Industries

Worksites under eight high hazard industries cannot be selected for records audits or targeted for OSHA's enforcement and compliance activities, because OSHA has not updated its list of high hazard industries included in the ODI universe since 2002. OSHA has neither a formal written policy on how or when to update the list of industries included in the ODI, nor clear documentation that explains the original construction of the ODI or its subsequent updates. We first reported on OSHA's lack of documentation for its ODI industry selection process in 1998.<sup>15</sup> By not updating its high hazard industry list using the most recent BLS SOII data, we found that OSHA is excluding eight high hazard industries that had an average DART rate of 4.2, which is higher than twice the national average or greater, for the three most recent years, from 2005 to 2007. Industries excluded include amusement parks, industrial launderers, and general rental centers (see table 3). As a result, worksites in these industries are precluded from being selected for OSHA's records audits and they are unlikely to be targeted by OSHA for inspections, outreach, and technical assistance. Table 3 shows the industries excluded from the ODI universe.

<sup>15</sup>GAO, *Occupational Safety and Health: Efforts to Obtain Establishment-Specific Data on Injuries and Illnesses*, [GAO-98-122](#) (Washington, D.C.: May 22, 1998).

**Table 3. Industries That Would be High Hazard if OSHA Updated Its ODI Universe**

NAICS code <sup>a</sup>	Industry
22133	Steam and air-conditioning supply
483113	Coastal and Great Lakes freight transportation
53212	Truck, utility trailer, and RV (recreational vehicle) rental and leasing
5323	General rental centers
7131	Amusement parks and arcades
71392	Skiing facilities
812331	Linen supply
812332	Industrial launderers

Source: GAO analysis of DOL data.

<sup>a</sup>NAICS = North American Industry Classification System.

OSHA officials told us they have not updated the high hazard list because an agency regulation requires them to use the Standard Industrial Classification (SIC) system to classify industries, rather than the North American Industry Classification System (NAICS) industry codes currently used by BLS to report injury and illness rates. Prior to 2003, both OSHA and BLS used the SIC codes to classify industries. OSHA officials said they would like to switch to the NAICS codes, but they stated it is not currently an agency priority to pursue the regulatory change required to do so. In addition to a regulatory change, switching to NAICS would require OSHA to re-evaluate the criteria it uses to define industries as high hazard because in 2002, OSHA switched from using the LWDII rate to the DART rate for measuring workers' injuries and illnesses.<sup>16</sup> Because the LWDII and DART are not exactly comparable, OSHA would have to identify a DART rate that is comparable to its LWDII rate of 5.0, which was the criterion OSHA used in 2002 to define a high hazard industry. According to our analysis, the results of which we confirmed through discussions with OSHA officials, a 4.2 DART rate is comparable to a 5.0 LWDII rate.

BLS Does Not Verify Employer-Reported Data in the SOII, but Has Undertaken Actions to Improve the Quality and Completeness of the Data

BLS is not required to verify the accuracy of the data employers record on their OSHA forms; however, BLS has acknowledged limitations to the survey and has taken steps to improve it. BLS uses the SOII to report national, industry-wide injury and illness data, and policymakers and employers rely on the data to understand national trends in worker safety and health. The SOII only includes injury and illness data provided by employers. In contrast, BLS reports monthly employment statistics with data from employers on the number of jobs and from households on the number of people employed. A number of studies have compared the BLS data on injuries and illnesses to data collected from other sources, such as workers' compensation, hospital discharge data, and medical records.<sup>17</sup> These studies found discrepancies between the number of

<sup>16</sup>The DART rate is calculated using the same formula as the LWDII rate; however, the rates do not count the exact same injuries and illnesses.

<sup>17</sup>SM Marsh, SJ Derk, and LL Jackson, "Nonfatal Occupational Injuries and Illnesses Among Workers Treated in Hospital Emergency Departments—United States, 2003," *Morbidity and Mortality Weekly Report*, vol. 55, no. 16 (2006); Rosenman, et al., "How Much Work-Related Injury and Illness is Missed by the Current National Surveillance System?," *Journal of Occupational and Environmental Medicine*,

injuries and illnesses reported in the SOII and the information in the other data sets. Some researchers have also criticized the scope of the SOII, noting, for example, that the 14.7 percent of all workers in 1999 who were government workers and the 7.3 percent of all workers who were self-employed were not included in the SOII.<sup>18</sup>

In response to questions about the accuracy of the employer-reported SOII data, BLS has taken several actions designed to improve the quality and completeness of the data. For example, to address concerns about the survey's limited scope, BLS expanded the SOII for its 2008 survey to include data on state and local government workers in all states and conducted a quality assurance study to verify that employers correctly transcribed information from their 2006 OSHA logs onto BLS's SOII survey forms. BLS also interviewed employers to determine how they record injury and illness data on the OSHA and workers' compensation forms. The aim of this effort was to identify cases where employers reported an injury or illness to the state's Workers' Compensation program, but did not record the cases on the OSHA log, despite the fact that the injury or illness was an OSHA-recordable case. In addition, in a 2009 research study, BLS examined discrepancies between the number of workplace injuries and illnesses reported in states' workers' compensation databases and in the SOII to address concerns about data accuracy. From the research, BLS identified some factors associated with discrepancies between the SOII and workers' compensation data, and is continuing to conduct research to identify additional potential factors. BLS stated that some of the discrepancies arose from cases that were compensable, but in which workers had no days away from work, and cases that entered workers' compensation after the end of the year, but did appear in the BLS data.

In addition to the actions it has already taken, BLS is planning to explore the use of other data sets to improve the quality of the SOII data. For example, BLS officials told us they plan to support the work of the National Institute for Occupational Safety and Health to explore the use of occupational injury and illness data collected by emergency departments to help identify gaps in the SOII data.<sup>19</sup> The emergency department data could be particularly important because they would capture injuries and illnesses for self-employed workers, who are currently excluded from the SOII. In addition, since these data are reported by hospitals and not employers, they could help BLS identify underrecorded injuries and illnesses. Finally, BLS is planning to work with the Council of State and Territorial Epidemiologists to evaluate the quality of the SOII data for certain injuries such as amputations and carpal tunnel syndrome.<sup>20</sup> BLS has issued grants to three

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vol. 48, no. 4 (2006); J. Paul Leigh, James P. Marcin, and Ted R. Miller, "An Estimate of the U.S. Government's Undercount of Nonfatal Occupational Injuries," *Journal of Occupational and Environmental Medicine*, vol. 46, no. 1 (2004).

<sup>18</sup>Leigh, Marcin, and Miller, "An Estimate of the U.S. Government's Undercount of Nonfatal Occupational Injuries," *Journal of Occupational and Environmental Medicine*, vol. 46, no. 1 (2004).

<sup>19</sup>The National Institute for Occupational Safety and Health (NIOSH), part of the Centers for Disease Control and Prevention within the Department of Health and Human Services, is the federal agency responsible for conducting research and making recommendations to prevent workplace injuries and illnesses. One of the research projects that NIOSH is conducting is the national surveillance of nonfatal occupational injuries using the National Electronic Injury Surveillance System (NEISS). This project collects nationally representative, timely, nonfatal occupational injury surveillance data by using a sample of U.S. hospital emergency departments through NEISS.

<sup>20</sup>The Council of State and Territorial Epidemiologists is a professional organization of public health epidemiologists working in state, territorial, or local health departments, and individuals from federal health agencies or academia. It works to establish more effective relationships among states and other health agencies and provides technical advice and assistance to partner organizations.

states to evaluate the possibility of using multiple sources of data to enumerate the quality of the SOII for certain injuries such as amputations and carpal tunnel syndrome.

## **Occupational Health Practitioners and Stakeholders Cited Worker and Employer Disincentives as Primary Factors That May Affect Accuracy of Injury and Illness Data**

Disincentives that influence workers' decisions to report and employers' decisions to record work-related injuries and illnesses are primary factors that may affect the accuracy of the data, according to occupational safety and health practitioners and stakeholders. They also reported that a lack of understanding of OSHA's recordkeeping requirements by those responsible for recording injuries and illnesses may affect the accuracy of the data.

### Various Disincentives May Discourage Workers from Reporting and Employers from Recording Injuries and Illnesses

Occupational safety and health stakeholders we interviewed and occupational health practitioners we surveyed told us that primary factors affecting the accuracy of injury and illness data include disincentives that affect workers' decisions to report work-related injuries and illnesses and employers' decisions to record them. Stakeholders most often cited workers' fear of job loss and other disciplinary actions as disincentives that can affect workers' decisions to report injuries and illnesses. Occupational health practitioners concurred: 67 percent reported observing worker fear of disciplinary action for reporting an injury or illness, and 46 percent said that this fear of disciplinary action has at least a minor impact on the accuracy of employers' injury and illness records. Workers' fear of disciplinary actions may be compounded by policies at some worksites that require workers to undergo mandatory drug testing following incidents resulting in reported injuries or illnesses, regardless of any evidence of drug use. Several labor representatives described mandatory drug testing policies as a disincentive that affects workers' decisions to report injuries and illnesses, and 67 percent of health practitioners reported they were aware of this practice at the worksites where they treated workers in 2008.

Stakeholders also said employers' safety incentive programs can serve as disincentives for workers reporting injuries and illnesses. These programs reward workers when their worksites have few recordable injuries or illnesses. One-half of the health practitioners who responded to our survey reported they were aware of incentive programs at the worksites where they treated workers in 2008. Safety incentive programs are designed to promote safe behavior by workers, and 72 percent of health practitioners reported that these programs motivate workers to work in a safe manner. However, some stakeholders said these programs can discourage workers from reporting injuries and illnesses; more than three-quarters of health practitioners said they believed workers sometimes avoid reporting work-related injuries and illnesses as a result. Stakeholders also said that in addition to missing the chance to win prizes for themselves, workers who report injuries and illnesses may risk ruining their coworkers' chances of winning such prizes.

Various disincentives may also discourage employers from recording workers' injuries and illnesses. Stakeholders told us employers are concerned about the impact of higher injury and illness rates on their workers' compensation costs. Several researchers and labor representatives said that because employers' workers' compensation premiums increase with higher injury and illness rates, employers may be reluctant to record injuries and illnesses. They also said businesses sometimes hire independent contractors to avoid the requirement to record workers' injuries and illnesses because they are not required to record them for self-employed

individuals.<sup>21</sup> Stakeholders also told us employers may not record injuries and illnesses because having high injury and illness rates can affect their ability to compete for contracts for new work. The injury and illness rate for worksites in certain industries, such as construction, affects some employers' competitiveness in bidding on the same work.

Disincentives that discourage workers from reporting and employers from recording injuries and illnesses may also result in pressure on occupational health practitioners to treat workers in a manner that avoids the OSHA requirement to record injuries and illnesses. From our survey, we found that more than one-third of health practitioners were asked by company officials or workers to provide treatment that resulted in an injury or illness not being recorded, but also was not sufficient to properly treat the injury or illness. For example, in some cases, practitioners stated that employers may seek out alternative diagnoses if the initial diagnosis would result in a recordable injury or illness. One practitioner said that an injured worker's manager took the worker to multiple providers until the manager found one who would certify that treatment of the injury required only first aid, which is not a recordable injury. Fifty-three percent of the health practitioners reported that they experienced pressure from company officials to downplay injuries or illnesses, and 47 percent reported that they experienced this pressure from workers. Further, 44 percent of health practitioners stated that this pressure had at least a minor impact on whether injuries and illnesses were accurately recorded, and 15 percent reported it had a major impact. In some cases, this pressure may be related to the employers' use of incentive programs. Of those experiencing pressure from workers, 61 percent reported they were aware of incentive programs at the worksites where they treated workers (see fig. 5). In comparison, of the practitioners who reported not experiencing pressure from workers in 2008, 41 percent reported being aware of incentive programs at the worksites where they treated workers.

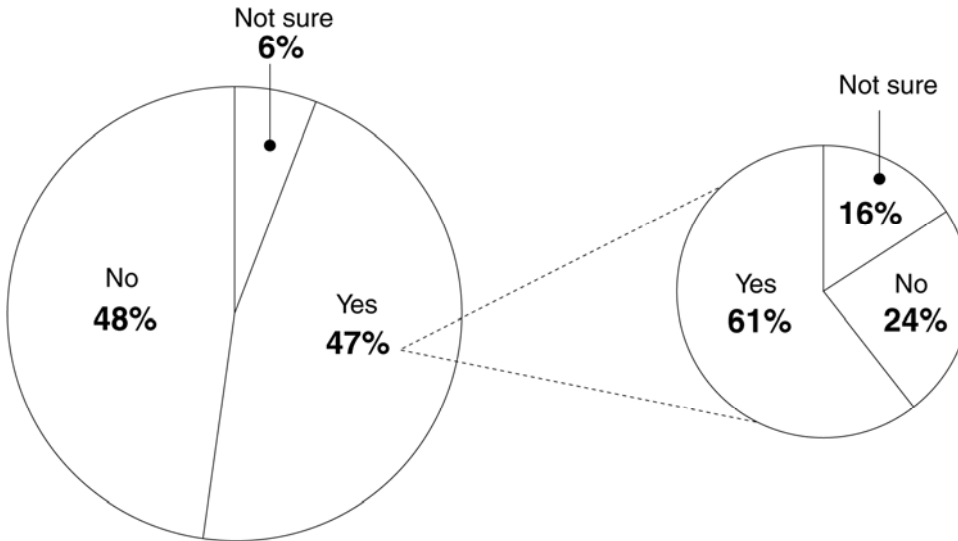
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<sup>21</sup>However, under DOL regulations, if an employer supervises a contractor's employee on a day-to-day basis, the employer must record the employee's injury or illness. 29 C.F.R. § 1904.31(b)(3).



**Did you experience pressure from workers to downplay injuries or illnesses in 2008?**

**Did any of the worksites where you treated workers in 2008 have incentive programs?**



Source: GAO analysis of occupational health practitioner survey data.

**Figure 5. Pressure from Workers to Downplay Injuries and Illnesses and Awareness of Incentive Programs**

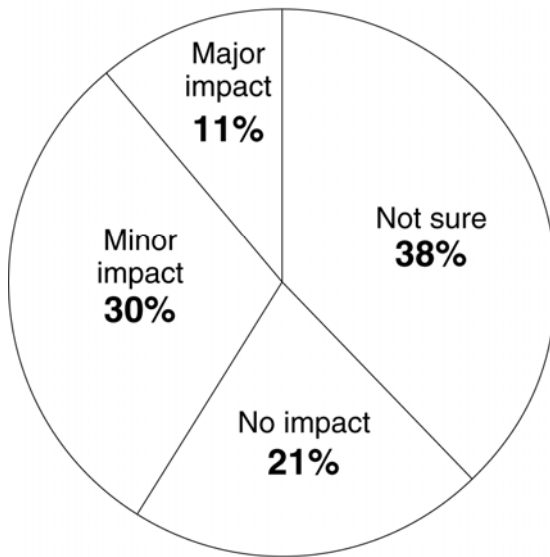
An OSHA official told us that OSHA does not have an official policy on incentive programs or practices that may affect workers' decisions to report injuries and illnesses, but it has authority under the OSH Act to discourage inaccurate reporting by employers. The official stated that, under a planned National Emphasis Program, OSHA will explore the possible impact that incentive programs have on workers' decisions to report injuries and illnesses. To address disincentives that may affect employers' decisions to accurately record injuries and illnesses, the official stated OSHA can issue citations or fine employers when recordkeeping violations are found.

Lack of Understanding of OSHA's Recordkeeping Requirements and Other Factors May Also Affect the Accuracy of Injury and Illness Data

Several stakeholders and nearly all of the OSHA inspectors we interviewed said that the lack of understanding of OSHA's recordkeeping requirements by the individuals charged with recording injuries and illnesses affects the accuracy of the injury and illness data. Forty-one percent of occupational health practitioners reported that misinterpretation of OSHA's recordkeeping requirements by company officials has an impact on whether injuries and illnesses are accurately recorded (see fig. 6). Several researchers and a representative from a labor organization with whom we spoke said that inaccuracies in recording injuries and illnesses can result from a lack of understanding of the differences between OSHA's recordkeeping requirements and the eligibility criteria for workers' compensation claims. They stated that some individuals charged with maintaining employers' OSHA logs erroneously think that the criteria for recording injuries and illnesses are the same as the eligibility criteria for filing workers' compensation claims. Therefore, they may be less likely to record injuries and illnesses that are not compensable

through the workers' compensation system. In addition, some stakeholders said they thought the lack of understanding among those recording injuries and illnesses was likely worse in smaller companies with fewer resources than larger companies, which have a greater capacity for providing recordkeeping training.

**What impact does misinterpretation of recordkeeping requirements by company officials have on records accuracy?**



Source: GAO analysis of occupational health practitioner survey data.

**Figure 6. Reported Impact of Misinterpretation of Recordkeeping Requirements on Records Accuracy**

OSHA provides a number of tools to assist employers in understanding its recordkeeping requirements. For example, the form employers use to record injuries and illnesses—the OSHA injury and illness log—provides examples of which injuries and illness must be recorded and how to record them. OSHA also posts guidance and frequently asked questions about its recordkeeping requirements on its Web site. In addition, OSHA officials told us employers with recordkeeping questions can phone officials in OSHA headquarters and area offices, or e-mail questions to OSHA via its Web site. They also said they have considered creating an online tool to help employers quickly and easily determine whether to record specific injuries and illnesses on their logs.

Stakeholders also discussed additional factors that may affect the accuracy of employers' data, including weaknesses in OSHA's enforcement efforts and the difficulty of determining whether some illnesses are work related. Several stakeholders pointed to weaknesses in OSHA's enforcement efforts as a reason for inaccuracies in employers' injury and illness data. For example, some stakeholders noted that OSHA's enforcement of recordkeeping practices has diminished in recent years. Two stakeholders said OSHA's enforcement capabilities could be

strengthened with additional resources. Another factor a few researchers cited that could affect the accuracy of injury and illnesses data is that illnesses, particularly those with long latency periods, are less likely to be reported by workers and recorded by employers than injuries. They explained that, for many of these illnesses, it is difficult to prove they were caused by work-related activities.

## **Conclusions**

Workers are entitled to safe and healthful workplaces, and it is DOL's responsibility to track the safety and health of the nation's workplaces and ensure that employers take steps to minimize workers' risks of injuries and illnesses. Accurate injury and illness records are important because they assist Congress, researchers, OSHA, BLS, and other agencies in describing the nature and extent of occupational safety and health problems. These records are also vital to helping employers and workers identify and correct safety and health problems in the workplace. In addition, these records help OSHA evaluate programs, allocate resources, and set and enforce safety and health standards. Without accurate records, employers engaged in hazardous activities can avoid inspections because OSHA bases many of its safety inspections on work-related injury and illness rates.

Because injury and illness data are so vital, it is important that OSHA and BLS take steps to ensure that the data are as accurate as possible. First, OSHA inspectors must take advantage of opportunities to verify the accuracy and completeness of employer-provided records by interviewing workers who may be aware of injuries and illness that may not have been recorded by employers. It is also important that OSHA conduct its records audits as soon as possible after it collects employers' injury and illness data to maximize the usefulness of information collected from worker interviews. In addition, it is imperative that employers understand which injuries and illnesses should be recorded under OSHA's recordkeeping standards. Finally, although BLS has taken steps to improve the quality of the injury and illness data it collects, these actions will not address all of the concerns regarding the accuracy of the injury and illness data that BLS collects and reports. As these data are the only comprehensive source of national data on workers' injuries and illnesses, it will be important for BLS to follow through on its efforts.

## **Recommendations**

To improve OSHA's efforts to verify the accuracy of employer-provided injury and illness data, the Secretary of Labor should direct the Assistant Secretary for OSHA to take the following three actions:

- require inspectors to interview workers during the records audits to obtain information on injuries or illnesses and substitute other workers when those initially selected for interviews are not available;
- minimize the amount of time between the date injuries and illnesses are recorded by employers and the date they are audited by OSHA; and
- update the list of high hazard industries used to select worksites for records audits and target inspections, outreach, and technical assistance.

- To improve the accuracy of the data recorded by employers on workers' injuries and illnesses, the Secretary of Labor should direct the Assistant Secretary for OSHA to
- increase education and training provided to employers to help them determine which injuries and illnesses should be recorded under the recordkeeping standards, such as providing assistance to employers via the online tool that OSHA is considering.

## **Agency Comments and Our Evaluation**

We provided a draft of our report to the Secretary of Labor for comment. We received written comments from the Acting Assistant Secretary for OSHA. OSHA and BLS also provided technical comments, which we incorporated in the report as appropriate.

OSHA agreed with all of our recommendations and stated that it would move forward to implement them. To address the first two recommendations, OSHA stated that it would require inspectors to interview employees during records audits and develop policies to conduct record audits inspections in a timely fashion. For the third recommendation, OSHA stated that it would pursue rulemaking at the earliest possible date to update the industry coverage of the recordkeeping rule from the SIC system to NAICS, which would ensure that records audits include emerging high-risk industries. To address our fourth recommendation, OSHA stated that it would supplement its current educational outreach and develop a Web-based tool to assist employers in meeting the requirements of OSHA's recordkeeping regulations. OSHA also informed us that it implemented a National Emphasis Program (NEP) on Recordkeeping on October 1, 2009. The purpose of the NEP is to identify and correct recordkeeping inaccuracies and complement BLS's efforts to investigate factors accounting for differences in the number of workplace injuries and injuries estimated by BLS and other data sources.