

Occupational injury and illness: new recordkeeping requirements

Changes to OSHA recordkeeping rules in 2002 resulted in new BLS data; comparing the old and new data series is challenging

William J. Wiatrowski

In 2002, the Occupational Safety and Health Administration (OSHA) implemented a number of changes in the definitions of injury and illness cases recorded by employers. The new definitions in turn resulted in changes in occupational injury and illness statistics provided by the Bureau of Labor Statistics (BLS). As an example, in one change, the old definition considered the application of a butterfly bandage to be medical treatment and a recordable case; the new definition considers such treatment to be first aid and not recordable. Using the new definitions, the BLS reported that there were 4.7 million nonfatal injuries and illnesses in private-industry workplaces in 2002, resulting in a rate of 5.3 cases per 100 equivalent full-time workers.¹ While these data follow the trend of declining cases and rates seen throughout the past decade, because of the change in definition they cannot be compared with data from prior years.

When the first data from 2002 were released in late 2003, the BLS cautioned readers of the differences between the 2002 data and data from previous years and discouraged year-to-year comparisons. Because employers were following the new rules when recording cases throughout 2002, there was no way that two sets of data (one maintained under the old rules, the other under the new rules) could be captured. Nonetheless, data users are interested in the relationship of 2002 data to data from past years. For example, among the questions they might want answered are, Did the 10-year trend of reduced injuries and illnesses continue in 2002? and What effect did the change in recordkeeping rules have on the data?

This article provides background on the BLS survey and the change in the recordkeeping rule. Both 2002 data and data from earlier years are examined to determine what patterns might be uncovered. While it will never be possible to identify the rate of change in injuries and illnesses

from 2001 to 2002, it may be possible to identify some patterns between the old and new data. These patterns may provide insight into how the change in recordkeeping affected estimates of occupational injuries and illnesses. With only 1 year of data under the new recordkeeping requirements, compared with 30 years under the old system, this analysis should be thought of as an initial attempt to identify patterns and trends. As more years of data collected under the new rules become available, patterns and trends are likely to become clearer.

Background

For more than 30 years, the BLS has been reporting on the number and rate of workplace injuries and illnesses, an activity that was mandated with the passage, in 1970, of the Occupational Safety and Health Act, according to which

the Secretary [of Labor] shall compile accurate statistics on work injuries and illnesses which shall include all disabling, serious, or significant injuries and illnesses, whether or not involving loss of time from work, other than minor injuries requiring only first aid treatment and which do not involve medical treatment, loss of consciousness, restriction of work or motion, or transfer to another job.²

BLS injury and illness data are collected strictly for statistical reporting purposes and undergo the confidentiality and data security screening that apply to all of the Agency's programs. These data collection and reporting activities are independent of the regulatory and inspection activities of OSHA. The two agencies and their activities are linked in many ways, however, including the definitions they

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use to identify injury and illness “cases”—that is, what counts as an occupational injury or illness.

Employers covered under the Occupational Safety and Health Act are required to maintain records of injuries and illnesses that meet OSHA definitions. This requirement is known as the “record-keeping rule.” Certain employers are required to maintain a recordkeeping log of injury and illness cases and, upon request, must make that log available to OSHA inspectors and supply the data contained in the log to the BLS. Other employers must maintain such a log only when they are selected to be part of the BLS survey. In either case, the data the BLS gathers meet the most recent definitions as specified in the OSHA recordkeeping rule. When the rule changes, BLS data change.³

The following introductory paragraph from the *Federal Register* notice regarding the change in recordkeeping provides the rationale for the change:

The Occupational Safety and Health Administration (OSHA) is revising its rule addressing the recording and reporting of occupational injuries and illnesses (29 CFR, parts 1904 and 1952), including the forms employers use to record those injuries and illnesses. The revisions to the final rule will produce more useful injury and illness records, collect better information about the incidence of occupational injuries and illnesses on a national basis, promote improved employee awareness and involvement in the recording and reporting of job related injuries and illnesses, simplify the injury and illness recordkeeping system for employers, and permit increased use of computers and telecommunications technology for OSHA recordkeeping purposes.⁴

The 2002 recordkeeping rule included many changes. For example, under the old rule, recurrences of injuries or illnesses after a 30-day period were recorded as separate cases. Under the new rule, a time frame is no longer specified. Accordingly, employers may now consider recurrences that are not brought on by a new event or exposure in the workplace to be the same case. In another example, the old rule considered the application of a butterfly bandage to be medical treatment and a recordable case; by contrast, the new rule considers such treatment to be first aid and not recordable. Intuitively, these two changes are likely to result in a decline in the number of recordable cases, but that is not the case for all the recordkeeping changes. For example, under the old rules, needle sticks were recorded only if they resulted in medical treatment; now needle sticks are recorded if there is the potential to be contaminated with another person’s blood, regardless of whether the affected person is or is not treated.

In its annual reports on occupational injuries and illnesses, the BLS has monitored the trend in injury and illness counts and rates. Both the actual number of cases and the rate of occupa-

tional injuries and illnesses generally have been declining over the past decade.⁵ (See chart 1 and table 1.) The wide variety of changes to the recordkeeping rule made it impossible for the BLS to compare the 2002 data with data from previous years.

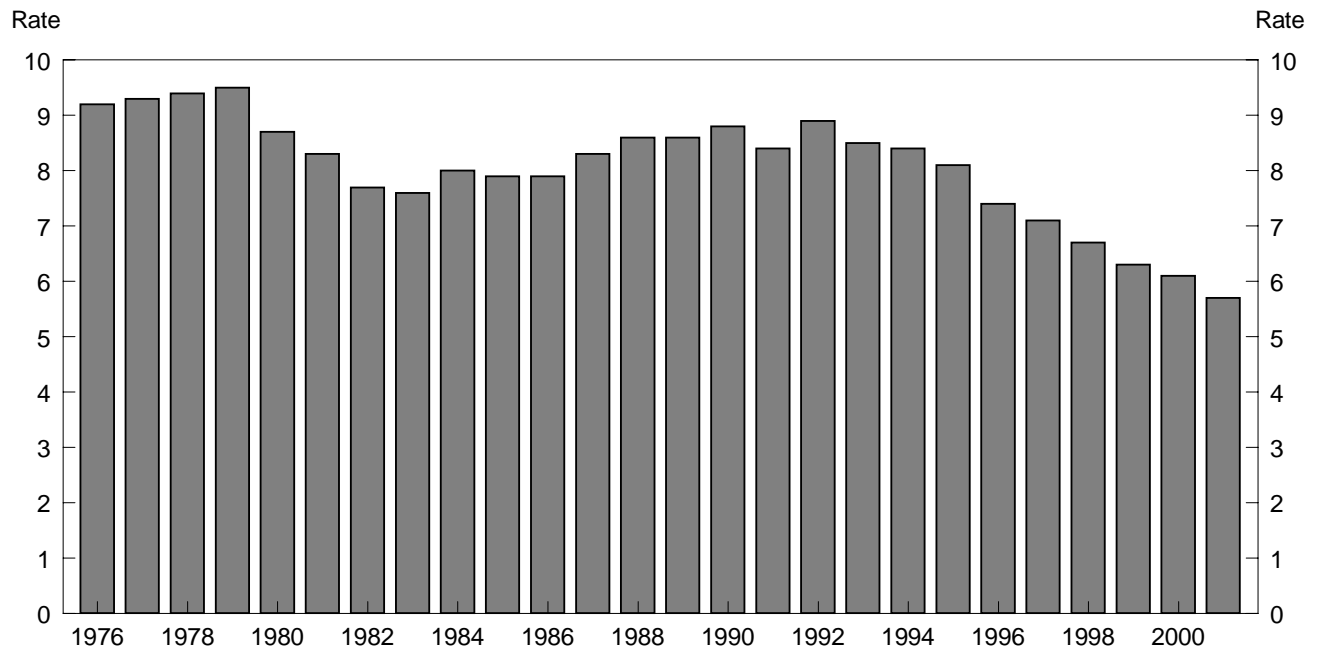
Survey of Occupational Injuries and Illnesses

Participation in the BLS Survey of Occupational Injuries and Illnesses is mandatory; indeed, the survey is the only Federally mandated one conducted by the BLS.⁶ The survey covers private-sector employers, regardless of the number of workers, with a few exceptions.⁷ Data also are available for State and local government workers in a number of States. Each year, the BLS selects a sample of employers covered under OSHA regulations, including those which must maintain a log of workplace injuries and illnesses under the OSHA rules and those which do not have such requirements, typically because of their small employment. At the end of the year prior to which data are to be recorded, all sampled establishments are notified of their selection for the survey and are provided instructions for maintaining injury and illness records. A year later, these establishments are contacted again and are asked to provide the BLS with data from the records they maintained over the past year. Among the data to be provided are information on employment and hours, a summary of the number of recordable cases, and detailed characteristics of cases that involve days away from work.

The BLS publishes two sets of national and State data based on information provided by employers.⁸ The first release of data contains summary estimates of the number and rate of injuries and illnesses by industry, with some details provided on the type of case, such as that resulting in a job transfer or restricted work activity. The second release contains details on the demographics of the injured or ill worker and the circumstances surrounding the case. This detailed information is available only for those cases which involve days away from work—one of the types of cases recorded by employers.

Table 1. Number of occupational injuries and illnesses, private industry, 1992–2001

[In millions]			
Year	Number of occupational injuries and illnesses	Number of occupational Injuries	Injuries as a percent of total
1992	6.7994	6.3420	93.3
1993	6.7374	6.2553	92.8
1994	6.7669	6.2522	92.4
1995	6.5754	6.0806	92.5
1996	6.2389	5.7999	93.0
1997	6.1456	5.7158	93.0
1998	5.9228	5.5309	93.4
1999	5.7072	5.3350	93.5
2000	5.6501	5.2876	93.6
2001	5.2156	4.8818	93.6

Chart 1. Incidence¹ of occupational injuries and illnesses, private industry, 1976–2001

¹The incidence is the number of injuries and illnesses per 100 full-time workers.

The survey began in 1971 and has produced annual data since 1972, with a major revision in 1992. That revision resulted in the inauguration of a separate program to track workplace fatalities: the Census of Fatal Occupational Injuries.⁹ The revision also introduced the current survey output of detailed characteristics of cases involving days away from work. Prior to that time, there was no comprehensive nationwide study of the details of injury and illness cases. Instead, a number of special studies were conducted that explored certain industries or certain types of injuries.¹⁰

The two Federal agencies

The BLS and the OSHA play very different roles with regard to worker safety, as indicated in the mission statement of each agency:

The Bureau of Labor Statistics (BLS) is the principal fact-finding agency for the Federal Government in the broad field of labor economics and statistics. . .BLS data must satisfy a number of criteria, including relevance to current social and economic issues, timeliness in reflecting today's rapidly changing economic conditions, accuracy and consistently high statistical quality, and impartiality in

both subject matter and presentation.¹¹

OSHA's mission is to assure the safety and health of America's workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health.¹²

The BLS is a nonpartisan statistical organization that provides data on a wide range of labor-related issues, including occupational safety and health. The agency does not have any regulatory or enforcement functions.

OSHA uses BLS data in setting standards and identifying areas of emphasis for inspection. The rate of injuries and illnesses in a specific industry, as published by the BLS, is used as a standard for targeting reductions in workplace injuries and as a benchmark for individual employers. For example, OSHA has as one of its goals to "reduce the rate of lost workday injuries and illnesses by at least 5 percent annually."¹³ Whether this goal has been met is determined with the use of BLS data. In addition, OSHA has established a number of cooperative programs to work with businesses and other organizations. Among these programs are the OSHA Voluntary Protection Programs, which use BLS data as a benchmark that participating employers must meet to be eligible for certain safe-worksite designations.¹⁴

BLS data

While the BLS has captured and reported on occupational injuries and illnesses since the early years of the 20th century, there were few standards in place regarding the reporting of occupational injury and illness data prior to the Occupational Safety and Health Act of 1970. The current BLS data series began soon after the Act was passed. Early revisions to the program reflected changes in industrial classifications and OSHA recordkeeping rules. The BLS survey was completely redesigned in 1992, the result of a detailed analysis of the existing program by the National Academy of Sciences.¹⁵ The redesign resulted in the separate collection of fatalities¹⁶ and the collection of detailed case characteristics. Despite these changes, the BLS has been able to produce a largely consistent data series showing the number of cases and the rate of occupational injuries and illnesses. That series ended with the 2001 data, although the rate of 5.3 injuries and illnesses per 100 full-time workers in 2002 is consistent with the trend seen in previous years.

But the inability to track total cases and incidence rates before and after the recordkeeping change does not mean that certain patterns in the injury and illness data cannot be explored. Patterns involving the types of cases or events leading to injury, among other characteristics, may provide some indication of the effect the revised recordkeeping rules had on employer reporting. For example, about 6 percent of reported occupational injury and illness cases in 2002 were illnesses, nearly identical to the proportion reported over the previous several years.

Injury and illness cases are divided into two broad categories: cases with days away from work, with a job transfer, or with a job restriction; and other recordable cases. Prior to 2002, cases were identified as either lost-workday cases or cases without lost workdays. Despite the change in case classification and definition, the division of cases between the two broad categories is generally consistent from 2000 to 2002, with about half of the cases falling into each of the categories. (In both 2000 and 2001, 49 percent of all cases were lost-workday cases, while in 2002, 53 percent of all cases were cases with days away from work, with a job transfer, or with a job restriction.)

In the past, data were recorded in such a way that information by type of case could be produced for injuries and illnesses combined or for each of those categories separately. The 2002 recordkeeping change eliminates the ability to produce separate case-type data either just for injuries or just for illnesses.

Industry data

Among most major industry groups, the number of cases involving days away from work exceeds the number involving a job transfer or job restriction, with the notable exception of manufacturing. In manufacturing in 2002, about 25 percent of cases involve days away from work, while 32 percent involve

a job transfer or job restriction. (The remaining cases generally involve medical treatment, but do not result in any time off, restricted duty, or transfer.) This difference specific to manufacturing continues a trend seen for the past several years, even before the change in recordkeeping rules. (See table 2.)

In 2002, there were six industries¹⁷ that recorded 100,000 or more cases of occupational injuries. This figure compares with nine such industries in 2000 and eight in 2001. (See table 3.) The lists of industries in each of the 3 years are similar. Indeed, the six industries with the greatest number of injuries were the same for the last 3 years, although not in the same order. Hospitals became the industry with the greatest number of injuries in 2002, surpassing eating and drinking places, which had been the industry with the highest count nearly every year since the BLS began presenting data in this way in the late 1980s. Among the six industries listed, there were variations in the numbers of cases between 2001 and 2002 that could be the result of recordkeeping changes. For example, hospitals may report more cases due to changes in reporting requirements related to needle sticks. Of course, the many recordkeeping changes may have affected specific industries in a variety of, and perhaps offsetting, ways.

As noted, illnesses as a proportion of total cases remained constant from 2001 to 2002, but the proportion in manufacturing dropped from 54 percent of all illness cases in 2001 to 44 percent in 2002. This change may be due to the recordkeeping changes that altered the types of illnesses reported. Prior to these changes, there were six specific types of illnesses, plus a category for "all other illnesses." In 2002 and beyond, there are three categories, plus "all other illnesses."¹⁸ (See chart 2.) With the elimination of a separate category for disorders associated with repeated trauma, the proportion of cases recorded as "all other illnesses" became the predominant type of illness.¹⁹

Shifts in employment and in hours worked in certain industries may influence the data on occupational injuries and illnesses. For example, hospitals had the greatest number of cases in 2002, surpassing eating and drinking places for the first time. The injury and illness rate in hospitals also was higher in 2002 than in 2001, but did not increase as much as the number of cases. This reversal suggests that the increase in injuries and illnesses in hospitals was not strictly a function of changes in employment. The opposite may be true with the change in the proportion of illnesses in manufacturing: manufacturing employment and hours worked declined between 2001 and 2002, which may have affected the proportion of illness cases in the industry.

Cases involving days away from work

Detailed case and demographic data are available only for those cases involving days away from work. Once again, the definition of a case differed from 2001 to 2002, as did the method used to

Table 2. Incidence¹ of occupational injuries and illnesses by industry and type of case, private industry, 2000–02

Industry and type of case	2000	2001	2002
Total	6.1	5.7	5.3
Cases with days away from work ²	1.8	1.7	1.6
Cases with restriction ³	1.2	1.1	1.2
Agriculture, forestry, and fishing			
Total	7.1	7.3	6.4
Cases with days away from work ² ..	2.5	2.7	2.1
Cases with restriction ³	1.1	.9	1.2
Mining			
Total	4.7	4.0	4.0
Cases with days away from work ² ..	2.4	1.8	2.0
Cases with restriction ³ .....	.6	.6	.7
Construction			
Total	8.3	7.9	7.1
Cases with days away from work ¹ ..	3.2	3.0	2.8
Cases with restriction ² .....	.9	.9	1.1
Manufacturing			
Total	9.0	8.1	7.2
Cases with days away from work ² ..	2.0	1.8	1.7
Cases with restriction ³	2.5	2.2	2.3
Transportation and public utilities			
Total	6.9	6.9	6.1
Cases with days away from work ² ..	3.1	3.0	2.7
Cases with restriction ³	1.1	1.3	1.3
Wholesale and retail trade			
Total	5.9	5.6	5.3
Cases with days away from work ² ..	1.7	1.6	1.6
Cases with restriction ³	1.0	1.0	1.1
Finance, insurance, and real estate			
Total	1.9	1.8	1.7
Cases with days away from work ² ..	.6	.6	.5
Cases with restriction ³ .....	.2	.2	.2
Services			
Total	4.9	4.6	4.6
Cases with days away from work ² ..	1.4	1.3	1.3
Cases with restriction ³ .....	.9	.8	.9

¹ The incidence of Injuries and illnesses represents the number of injuries and illnesses per 100 full-time workers and is calculated by multiplying the number of injuries and illnesses by the total hours worked by all employees during the calendar year. The result of this calculation is then divided by 200,000 (100 workers, times 40 hours per week, times 50 weeks per year) to determine the incidence.

² In 2000 and 2001, includes cases involving days away from work with or without restricted work activity. In 2002, includes cases involving days away from work with or without job transfer or restriction.

³ In 2000 and 2001, defined as cases with restricted work activity. In 2002, defined as cases with job transfer or restriction.

count the number of days away from work. Prior to 2002, days were counted as workdays away from work. In 2002 and subsequent years, the count is *calendar* days away from work.

For those cases with days away from work, demographic characteristics that are captured by the survey include sex, age, occupation, and other items. Characteristics of the injury or illness case include the nature of the injury or illness, the part of the body involved, the event that led to the injury or illness, and the source of the event. For example, an injury case with days

away from work involving a nurse who sprained her back while lifting a patient would have the following characteristics:

- Nature of disabling condition: sprain
- Part of body affected: back
- Event or exposure: lifting
- Source directly producing disability: patient

In addition, these characteristics can be used to construct a count of musculoskeletal disorders, which are defined as injuries or disorders of the muscles, nerves, tendons, joints, cartilage, or spinal discs. Musculoskeletal disorders are determined by the nature of the condition and the event or exposure leading to that condition.²⁰

Both the rate and the number of injury and illness cases involving days away from work under the previous recordkeeping definition have been declining steadily since the data were first collected in 1992. (See charts 3 and 4.) The data for 2002—1.4 million injury and illness cases involving at least 1 day away from work and a rate of 1.6 cases per 100 equivalent full-time workers—are consistent with the declining numbers over the previous decade. Moreover, the distribution of these cases by sex follows the same pattern as in the past: in 2002, 65 percent of cases involving at least 1 day away from work affected men, a number nearly identical to that for the previous 2 years. Furthermore, as in the past, men had a greater proportion of injuries and illnesses than their proportion of hours worked. The distribution of cases by age also was consistent between 2002 and prior years, with about three-quarters of the cases occurring among those aged 25–54 years. (See table 4.)

The occupation with the greatest number of injuries and illnesses involving days away from work in 2002 was truckdrivers, as it has been since 1993.²¹ As table 5 indicates, many of the occupations with the highest number of cases were the same in 2002 as they were in the 2 previous years, although there were changes in the order. Two occupations are among the list of the 10 occupations with the greatest numbers of injuries and illnesses for the first time in 2002: supervisors of sales workers and other sales workers (those not in a specific sales occupation, such as auto sales or apparel sales). The greater prevalence of injuries and illnesses among these sales occupations may be due to the recordkeeping change. For example, as of 2002, incidents that occur on work property before or after work, such as assaults or falls in a parking lot, are recordable cases.²² Conversely, two occupations previously among the top 10, but which fell just below that threshold in 2002, are cashiers and stock handlers. Workers in these occupations often suffer repetitive-motion injuries. The change in the recordkeeping requirement that eliminates the repeat recording of cases that recur after 30 days may have led to a decline in cases in these occupations.

The characteristics of injuries and illnesses incurred in 2002 were nearly identical to those from 2001. The most prevalent kind of injury was a sprain or strain, affecting 43 percent of all cases.

Table 3. Number of cases of nonfatal occupational injuries for industries with 100,000 or more cases, 2000–02

Industry	2000	2001	2002
Hospitals	259.5	265.7	296.1
Eating and drinking places	285.3	283.7	247.5
Nursing and personal care facilities	199.0	192.9	180.4
Grocery stores	180.1	175.1	154.5
Department stores	150.7	143.3	138.9
Trucking and courier services, except air ..	129.1	134.9	104.0
Air transportation, scheduled	127.2	116.3	–
Motor vehicles and equipment	124.6	102.7	–
Hotels and motels	101.0	–	–

NOTE: Industries are based on three-digit Standard Industrial Classification codes and are in order by the number of cases in 2002. Dash indicates industry did not have 100,000 or more cases in year shown.

Body parts affected most frequently were the trunk (specifically, the back), followed by both the upper and lower extremities. Sources of injuries and illnesses were widespread, with the most

prevalent involving floors, walkways, and ground surfaces; containers; and worker motion or position. Finally, the two events that were cited most often as leading to injury or illness were contacts with objects and equipment (such as being struck by an object) and overexertion (often due to lifting).

The number of assaults and violent acts, and their percentage of all events, was slightly greater in 2002 than in 2001, a result that may be due to the recording of events which occur prior to and after work on employer property, such as incidents in parking lots. (Looking beyond work-related incidents, overall rates of violent crime dropped from 2001 to 2002, as did robbery and assault rates.²³) By contrast, repetitive-motion events and their proportion of all events were down slightly, due perhaps to the lack of a specific category to capture disorders associated with repeated trauma or to the change in rules for recording repeated occurrences of an injury or illness. Musculoskeletal disorders continue to account for about 1 in 3 injury and illness cases involving days away from work, as they have consistently over the past decade. (See chart 5.)

Median days

One of the changes in the OSHA recordkeeping requirements was the way in which employers were to count the number of

Chart 2. Percent distribution of occupational illnesses by type, private industry, 2001–02

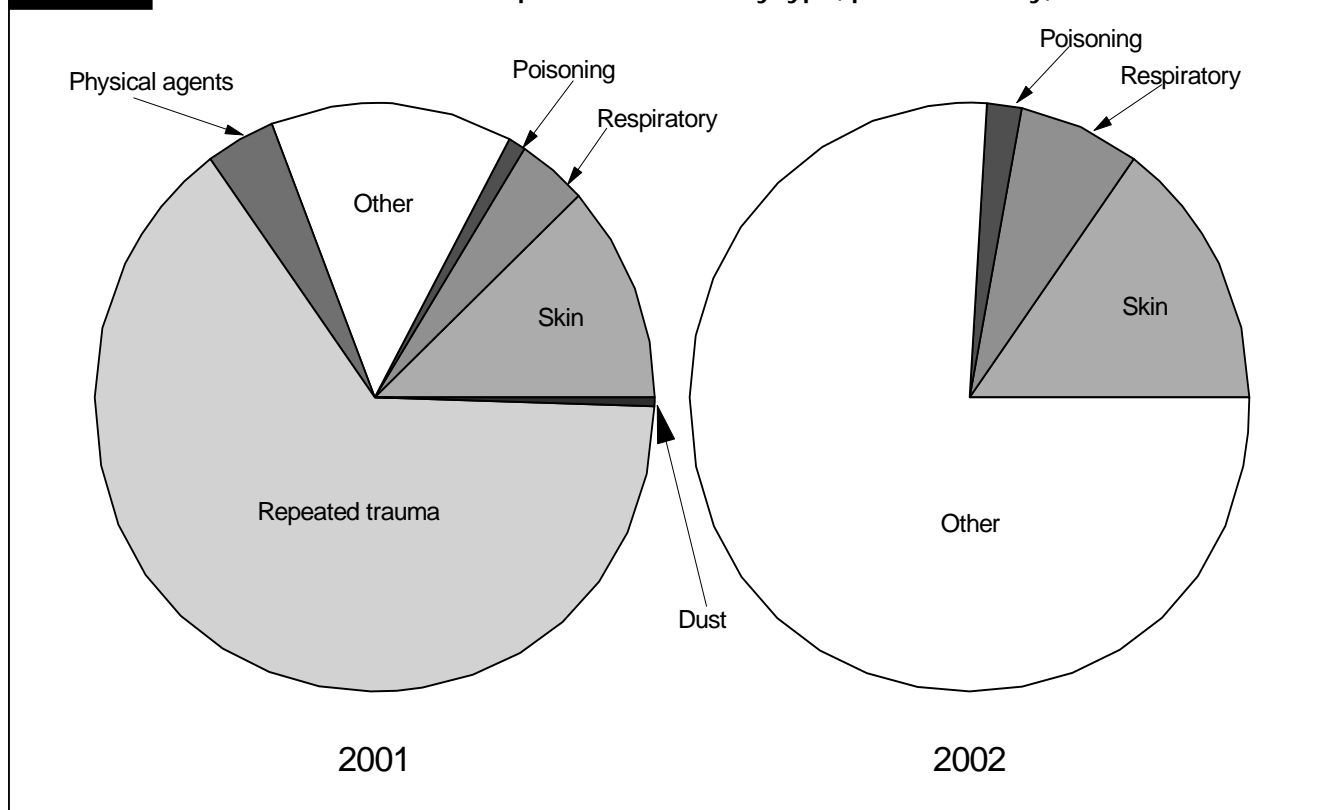


Chart 3. Number of occupational injuries and illnesses by selected types of cases, private industry, 1992–2001

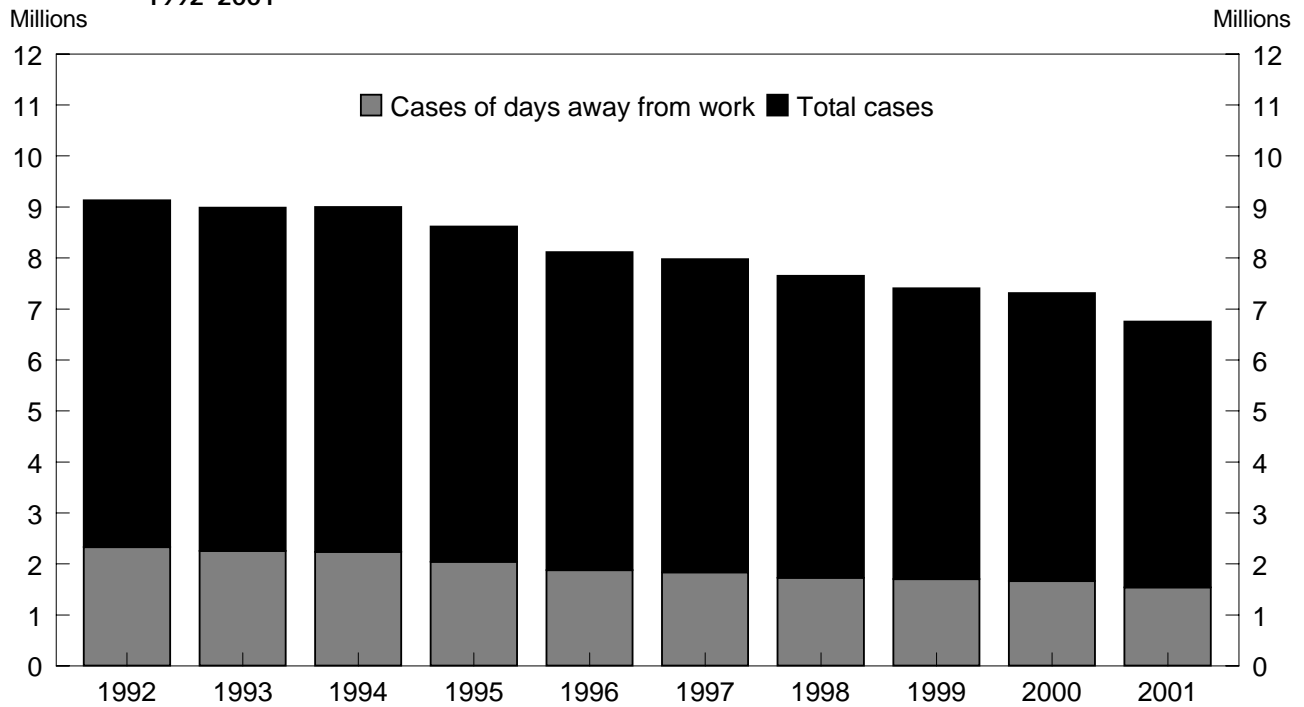
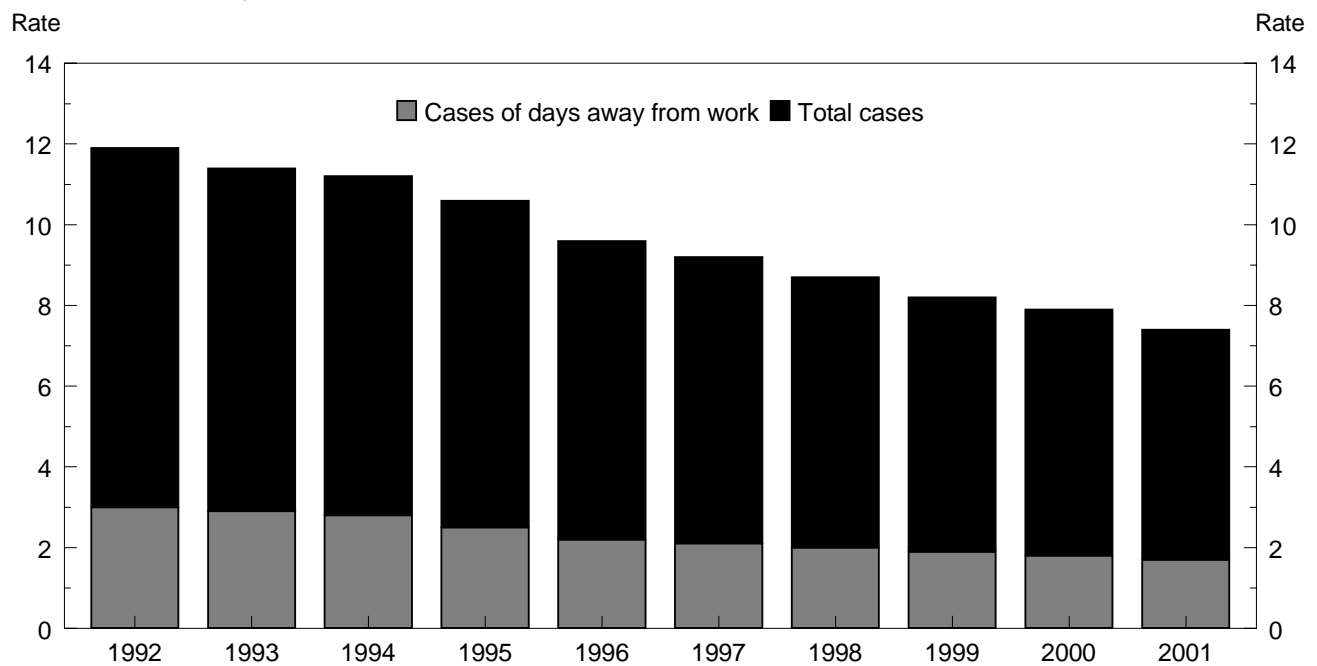


Chart 4. Incidence¹ of occupational injuries and illnesses by selected types of cases, private industry, 1992–2001



¹The incidence is the number of injuries and illnesses per 100 full-time workers.

Table 4. Percent distribution of occupational injuries and illnesses involving days away from work, by selected demographic characteristics, 2001 and 2002

Characteristic	2001	2002
Total	100.0	100.0
Men	65.7	64.8
Women	33.6	34.9
Age, years		
14-15 .....	.1	(¹)
16-19	2.9	2.7
20-24	11.2	11.1
25-34	25.3	25.0
35-44	28.5	27.9
45-54	20.5	21.2
55-64	8.8	10.0
65 and older	1.6	1.7

¹ Less than 0.1 percent.

days away from work. Previously, the count pertained to workdays. Beginning in 2002, the count applies to calendar days, a change intended to “ensure that a measure of the length of disability is available, regardless of the employee’s work schedule.”²⁴ This modification may have the effect of increasing the median number of days away from work recorded by the survey. For example, in the past, if an injury occurred on a Wednesday and the employee did not return to work until the following Tuesday, the employer would count 3 days away from work (Thursday, Friday, and Monday, assuming a standard 5-day workweek). Under the new guidelines, the employer would count 5 days (Thursday through Monday). This change may especially affect those individuals or occupations which do not work a standard workweek. For example, those aged 14 or 15 years may work only a few days per week, perhaps after school or on weekends. In 2000 and 2001, such workers who suffered an injury or illness that required time off from work had a median of 2 days away from work. In 2002, that median was 7 days, perhaps reflecting the count of calendar days between their times at work.

A closer look at occupations that are typically thought of as having irregular work hours or a large proportion of part-time workers shows that the change in recordkeeping rules regarding how days are counted may have affected different occupations in different ways. For example, waiters and waitresses who incurred injuries or illnesses involving days away from work were off the job for a median of 5 days in 2002, compared with 7 days in 2001. Cashiers, also a job with a large share of part-time workers, saw their median days away from work remain at 6 days from 2001 to 2002. These two examples suggest that other recordkeeping changes, aside from the method of counting days, are influencing the results.

Overall, the median number of days away from work was 7 in 2002. Between 1995 and 2001, the median was always 5 or 6 days. Chart 6 shows how the percent distribution of days has changed,

with the proportion at 31 days or more a few percentage points higher than in the past. Again, this effect may be the result of the change in recordkeeping rules.

The distribution of days away from work for truckdrivers and registered nurses provides an example of how the data have changed. The median number of days away from work for truckdrivers rose from 10 in 2001 to 13 in 2002. For registered nurses, the median rose from 4 days to 6 days, and those with a median number of days away from work greater than 10 rose from 30 percent to nearly 40 percent of all cases.

For injuries and illnesses requiring time off from work, the median number of days away from work increased between 2001 and 2002 for injuries and illnesses with a variety of characteristics. For example, cases of carpal tunnel syndrome led to a median 25 days away from work in 2001 and 30 days in 2002. Similarly, amputations led to a median 18 days away from work in 2001, compared with 26 days in 2002. In contrast, certain prevalent events leading to injuries or illnesses showed only slight increases in median days away from work: overexertion in lifting led to a median 8 days away from work in 2002, compared with 7 in 2001; and being struck by an object led to a median 5 days away from work in 2002, compared with 4 in 2001. The 1-day increase in these more frequently occurring events reflects the overall 1-day increase in the median for all cases with days away from work. Finally, the data on musculoskeletal disorders show a slight increase in the median number of days away from work, from 8 days in 2001 to 9 in 2002.

To compare or not to compare

The BLS has stated that the change in occupational injury and

Table 5. Occupations with the highest number of injury and illness cases involving days away from work, 2000-02

Occupation	Number of cases (in thousands)		
	2000	2001	2002
Truckdrivers	136.1	129.1	112.2
Nursing aides, orderlies, and attendants	74.2	71.0	79.0
Laborers, non-construction	87.0	68.9	76.6
Janitors and cleaners ...	40.7	38.6	42.0
Construction laborers ..	45.4	44.1	41.9
Assemblers	38.9	31.1	34.4
Carpenters	38.3	32.7	28.3
Supervisors and proprietors, sales	24.1	23.1	26.1
Cooks	27.8	27.8	24.7
Sales workers, other commodities	24.1	22.2	24.7
Cashiers	26.9	22.2	22.5
Registered nurses	24.5	24.7	21.9
Stock handlers and baggers	23.8	25.7	21.5

NOTE: Occupations are in order by the number of cases in 2002.

Chart 5. Number of occupational injuries and illnesses involving days away from work and those resulting in musculoskeletal disorders, private industry, 1992–2001

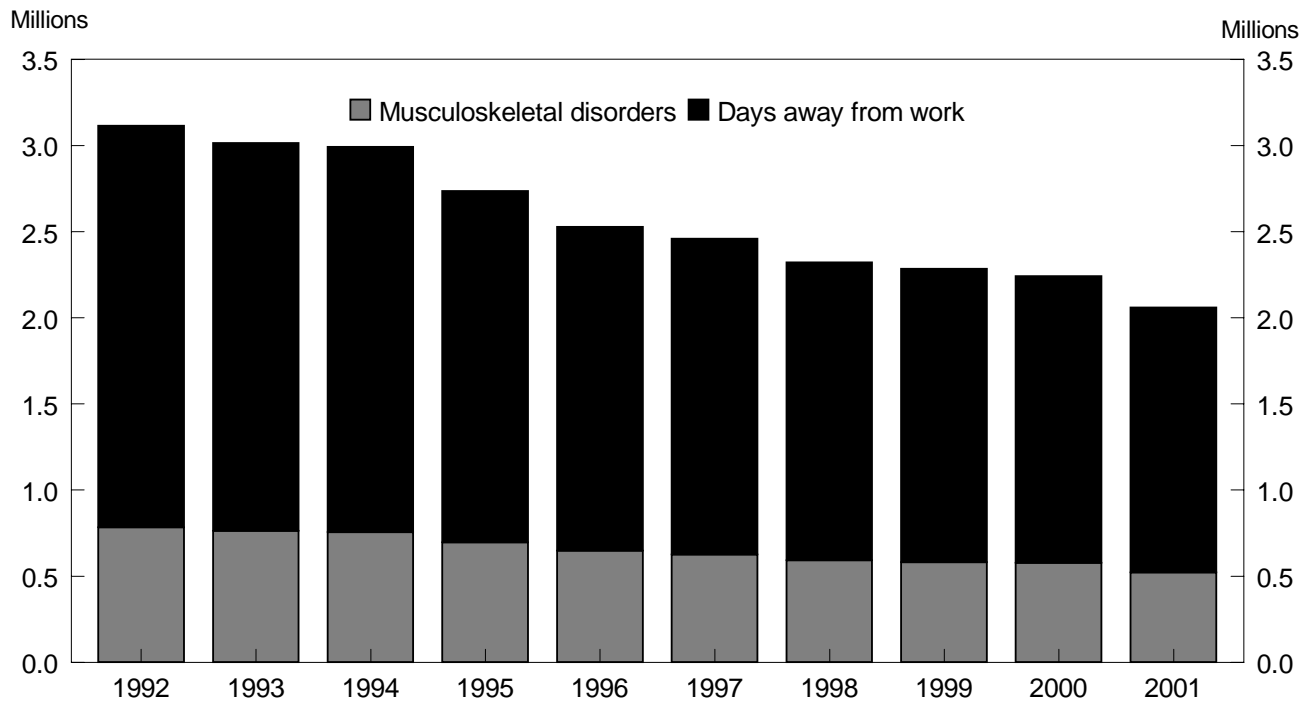
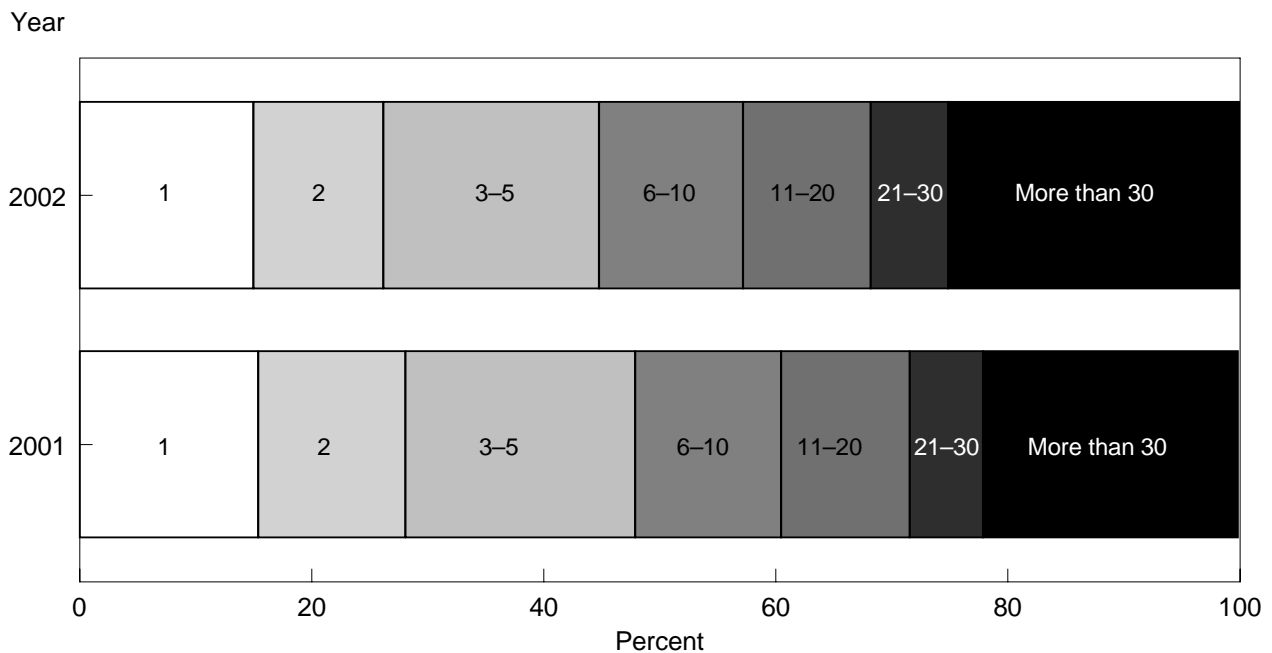


Chart 6. Percent distribution of days away from work, private industry, 2001 and 2002



illness recordkeeping requirements in 2002 resulted in a discontinuity in the data series and that comparisons with previous years should not be made. Nonetheless, data users are eager to track trends and to determine the effect of the recordkeeping changes. This article was written to provide some guidance for those users. Tracking trends will be difficult, because determining the exact effect of the recordkeeping changes is not possible. But with some careful analysis and some caveats, data users may be able to identify patterns. Specifically, users who are comparing the data for multiple years should keep the following suggestions in mind:

- Consider proportions, as well as counts.
- Consider multiple perspectives on the same data, such as industry and occupation.
- Consider specific recordkeeping changes and how they might have affected the particular industry, occupation,

worker, or injury/illness.

- Consider the *combination* of recordkeeping changes; some modifications may counteract others.
- Look for a continuation of long-run trends—patterns that developed for several years prior to and through 2001.
- Look for future trends as additional years of data become available.

The BLS Survey of Occupational Injuries and Illnesses will continue to report annually on the number and rate of incidents by type of case and industry, with detailed information on the characteristics of the workers and the incidents for cases involving days away from work.²⁵ As more years of data under the new recordkeeping requirements are accumulated, effects of the recordkeeping changes and trends may become more apparent. □

Notes

¹ See “Workplace Injuries and Illnesses in 2002,” U.S. Department of Labor news release 03-913, Dec. 18, 2003. Injury and illness rates represent the number of injuries and illnesses per 100 full-time workers and are calculated by multiplying the number of injuries and illnesses by the total hours worked by all employees during the calendar year. This result is then divided by 200,000 (100 workers, times 40 hours per week, times 50 weeks per year) to determine the rate per 100 equivalent full-time workers.

² Occupational Safety and Health Act of 1970, Public Law 91-596, section 24.

³ While the law does not actually specify that BLS data conform to the OSHA recordkeeping requirements, such a procedure allows for the efficient collection of data that in many cases are already being maintained by employers. In addition, by keeping the definitions consistent with OSHA requirements, the BLS guarantees that its data can be used by OSHA to monitor employers’ progress in improving occupational safety and health.

⁴ *Federal Register*, Jan. 19, 2001, p. 5916.

⁵ Changes to the program prior to 2002, including a major revision in 1992, affected the type and amount of data available, but did not change the basic definition of recordable cases of injuries and illnesses. Thus, data on the number and rate of occupational injuries and illnesses are consistent from 1972 through 2001.

⁶ The BLS produces measures of employment, unemployment, compensation, price change, and productivity, among other things. Participation in some of these data collection efforts is mandatory in certain States, while participation in the Survey of Occupational Injuries and Illnesses is mandated by the Federal Occupational Safety and Health Act of 1970.

⁷ The BLS Survey of Occupational Injuries and Illnesses is designed to cover *all* private-industry employers, not just those required by the Occupational Safety and Health Administration to maintain records. Farms with fewer than 11 workers are excluded. Data on railroads and on metal and nonmetal mining are not collected directly by the survey. Rather, they are provided to the BLS by the Federal Railway Administration and the Mine Safety and Health Administration, respectively.

⁸ The BLS occupational safety and health statistics programs are conducted in cooperation with the States, which jointly fund the programs. Those States participating in the survey—42 in 2002—together with the District of Columbia and three U.S. territories, collect sufficient data to produce State estimates. No State data on occupational injuries and illnesses are available for nonparticipating States.

⁹ The Census of Fatal Occupational Injuries uses multiple source documents to identify and verify work-related fatalities. Data published annually include demographic details, as well as information on the circumstances surrounding the fatality and on the occupation, industry, and geographic location of the worker. (See “National Census of Fatal Occupational Injuries in 2003,” U.S. Department of Labor news release 04-1830, Sept. 22, 2004. Additional data on occupational fatalities are available on the Internet at <http://www.bls.gov/iif/home.htm>, visited Sept. 30, 2004.)

¹⁰ For example, earlier BLS studies known as Work Injury Reports used data captured from injured workers to identify the circumstances surrounding specific types of injuries, such as falls from ladders or scaffolds. Another program, the Supplementary Data System, compiled case and demographic data from workers’ compensation reports in about 30 States.

¹¹ The BLS mission statement is taken from the BLS Internet site, <http://www.bls.gov/bls/blsmisn.htm>, visited Aug. 19, 2004.

¹² The OSHA mission statement is taken from the OSHA Internet site, <http://www.osha.gov>, visited Aug. 19, 2004.

¹³ See <http://www.osha.gov/StratPlanPublic/factsheet.pdf>, visited Aug. 19, 2004.

¹⁴ See <http://www.osha.gov/dcsp/vpp/index.html>, visited Aug. 19, 2004.

¹⁵ *Counting Injuries and Illnesses in the Workplace: Proposals for a Better System* (Washington, DC, National Academy Press, 1987). (See also Katharine G. Abraham, William L. Weber, and Martin E. Personick, “Improvements in the BLS health and safety statistical system,” *Monthly Labor Review*, April 1996, pp. 3-12.)

¹⁶ The redesign ended the practice of reporting workplace fatalities collected in the Survey of Occupational Injuries and Illnesses. Because fatalities are rare events, collecting information on them through a sample survey did not provide reliable data. In place of the previous survey, the Census of Fatal Occupational Injuries was introduced to capture workplace fatalities.

¹⁷ Industry data are based on the three-digit Standard Industrial Classification code.

¹⁸ For 2004 and beyond, a fourth specific illness category—hearing loss—was added to the recordkeeping requirement.

¹⁹ Despite the elimination of the specific illness category for disorders associated with repeated trauma, the BLS Survey of Occupational Injuries and Illnesses continues to provide some amount of data on similar conditions. For cases that involve days away from work, the survey records repetitive-motion injuries and illnesses, as well as musculoskeletal disorders.

²⁰ Work-related musculoskeletal disorders include cases in which the nature of the injury or illness is sprains, strains, tears; back pain, hurt back; soreness, pain, hurt, except the back; carpal tunnel syndrome; hernia; or musculoskeletal system and connective tissue diseases and disorders when the event or exposure leading to the injury or illness is bodily reaction/bending, climbing, crawling, reaching, twisting; overexertion; or repetition. Cases of Raynaud's phenomenon, tarsal tunnel syndrome, and herniated

spinal discs are not included: although these cases may be considered musculoskeletal disorders, the survey classifies them into categories that also include cases that do not involve musculoskeletal disorders.

²¹ In 1992, the first year that detailed occupation data were collected, nonconstruction laborers were the occupation with the greatest number of injuries and illnesses involving days away from work, with truckdrivers second. Since 1993, truckdrivers have had the greatest number of cases involving days away from work each year.

²² Prior to 2002, incidents in parking lots and recreation facilities were presumed not to be work related. Under the new rules, only motor vehicle accidents in parking lots are presumed not to be work related.

²³ Information on overall crime statistics are from the U.S. Department of Justice, Bureau of Justice Statistics. (See <http://www.ojp.usdoj.gov/bjs/glance/viort.htm>, visited Oct. 14, 2004.

²⁴ *Federal Register*, Jan. 19, 2001, p. 5969.

²⁵ Beginning with data for 2003, the survey will use the North American Industry Classification System to classify industries and the Standard Occupational Classification System to classify occupations. Prior to 2003, the survey used the Standard Industrial Classification System and the Bureau of the Census Occupational Classification System, respectively. This change will result in another break in series among specific industries and occupations, but not for the overall private-industry data.

APPENDIX: Recordkeeping under the OSHA regulations

Employer recordkeeping requirements

The Occupational Safety and Health Act of 1970 requires the Secretary of Labor to issue regulations requiring employers to maintain accurate records of, and make periodic reports on, work-related deaths, injuries, and illnesses. The Occupational Safety and Health Administration (OSHA) maintains those regulations, known as the employer recordkeeping requirements. Employers not exempt from OSHA's recordkeeping requirements must prepare and maintain records of work-related injuries and illnesses as follows:

- Use the Log of Work-Related Injuries and Illnesses (Form 300) to list injuries and illnesses and to track days away from work, work or motion restrictions, and transfers to another job.
- Use the Injury and Illness Report (Form 301) to record supplementary information about recordable cases. A workers' compensation or insurance form may be used if it contains the same information.
- Use the Summary (Form 300A) to show totals for the year in each category. The Summary is posted from February 1 to April 30 of each year.

Recordkeeping is a critical part of an employer's safety and health efforts for several reasons:

- Keeping track of work-related injuries and illnesses can help prevent them in the future.
- Using injury and illness data helps identify problem areas. The more the employer knows, the better the employer can identify and correct hazardous workplace conditions.
- The employer can better administer company safety and health

programs with accurate records.

- As employee awareness about injuries, illnesses, and hazards in the workplace improves, workers are more likely to follow safe work practices and report workplace hazards. OSHA compliance officers can rely on the information thus reported to help them properly identify and focus on particular types of injuries and illnesses. The agency also asks about 80,000 establishments each year to report information directly to OSHA, which uses the information as part of its site-specific inspection-targeting program. The Bureau of Labor Statistics also uses injury and illness records as source data for its Annual Survey of Occupational Injuries and Illnesses, which shows nationwide and industrywide safety and health trends.¹

Changes to the recordkeeping requirement

Among the changes in the OSHA recordkeeping rule are the following:

- changes in coverage
- changes in the OSHA forms
- changes in the recording criteria for determining the work relationship
- the elimination of different recording criteria for injuries and illnesses

Exhibit A-1 offers a look at the old and new recordkeeping rules. This listing of an employer's obligations under OSHA's recordkeeping rule is not comprehensive. (See 29 CFR Part 1904 and other parts of that instruction for details pertaining to all recordkeeping obligations.)

Changes in types of cases

Exhibit A-1. Changes to OSHA recordkeeping requirement from 2001 to 2002

Old rule, through 2001	New rule, 2002 and beyond
Forms (§1904.29)	
OSHA 200, Log and Summary; OSHA 101, Supplemental Record	OSHA 300, Log; OSHA 300 A: Summary; OSHA 301, Incident Report
Work related (§1904.5)	
<p>Any aggravation of a preexisting condition by a workplace event or exposure makes the case work related.</p> <p>Exceptions to the presumption of a work relationship:</p> <ol style="list-style-type: none"> 1. Member of the general public 2. Symptoms arising on premises and due totally to outside factors 3. Parking lot/recreational facility 	<p>Significant aggravation of a preexisting condition by a workplace event or exposure makes the case work related.</p> <p>Exceptions to the presumption of a work relationship:</p> <ol style="list-style-type: none"> 1. Member of the general public 2. Symptoms arising on premises and due totally to outside factors 3. Voluntary participation in wellness program 4. Eating, drinking, and preparing one's own food 5. Personal tasks outside working hours 6. Personal grooming, self-medication, self-infliction 7. Motor vehicle accident in parking lot or access road during commute 8. Cold or flu 9. Mental illness, unless the employee voluntarily presents a medical opinion stating that he or she has a mental illness that is work related.
New case (§1904.6)	
<p>New event or exposure; new case</p> <p>30-day rule for cumulative trauma disorders</p>	<p>Aggravation of a case in which signs or symptoms have not resolved is a continuation of the original case.</p> <p>No such criteria</p>
General recording criteria (§1904.7)	
<p>All work-related illnesses are recordable.</p> <p>Restricted work activity occurs if the employee</p> <ol style="list-style-type: none"> 1. Cannot work a full shift 2. Cannot perform all of his or her normal job duties, defined as any duty the employee would be expected to perform throughout the calendar year <p>Restricted work activity limited to the day of injury makes the case recordable.</p> <p>Day counts:</p> <p>Count workdays</p> <p>No cap on count</p>	<p>Work-related illnesses are recordable if they meet the general recording criteria.</p> <p>Restricted work activity occurs if the employee</p> <ol style="list-style-type: none"> 1. Cannot work a full shift 2. Cannot perform all of his or her routine job functions, defined as any duty the employee regularly performs at least once a week <p>Restricted work activity limited to the day of injury does not make the case recordable.</p> <p>Day counts:</p> <p>Count calendar days</p> <p>180-day cap on count</p>

Exhibit A-1. Continued—changes to OSHA recordkeeping requirement from 2001 to 2002

Old rule, through 2001	New rule, 2002 and beyond
<p>Medical treatment does not include</p> <ol style="list-style-type: none"> 1. Visits to a medical doctor for observation only 2. Diagnostic procedures 3. First aid <p>First-aid list in Bluebook¹ is a list of examples and is not comprehensive.</p> <p>Two doses of a prescription medicine qualifies as medical treatment.</p> <p>Any dosage of over-the-counter medicine qualifies as first aid</p> <p>Two or more hot or cold treatments qualifies as medical treatment.</p> <p>Drilling a nail qualifies as medical treatment.</p> <p>Applying a butterfly bandage or an adhesive skin closure qualifies as medical treatment.</p> <p>Recordable nonminor injuries:</p> <ol style="list-style-type: none"> 1. Fractures 2. Second- and third-degree burns 	<p>Medical treatment does not include</p> <ol style="list-style-type: none"> 1. Visits to a medical doctor for observation and counseling only 2. Diagnostic procedures (including the administration of prescription medication for diagnostic purposes) 3. First aid <p>First-aid list in the regulation is comprehensive. Any other procedure is a medical treatment.</p> <p>One dose of a prescription medicine qualifies as medical treatment.</p> <p>An over-the-counter medicine at prescription strength qualifies as medical treatment.</p> <p>Any number of hot or cold treatments qualifies as first aid.</p> <p>Drilling a nail qualifies as first aid.</p> <p>Applying a butterfly bandage or an adhesive skin closure qualifies as first aid.</p> <p>Recordable significant diagnosed injuries or illnesses:</p> <ol style="list-style-type: none"> 1. Fractures 2. Punctured eardrums 3. Cancer 4. A chronic irreversible disease
Specific disorders	
<p>Hearing loss: Federal enforcement for a 25-dB shift in hearing from original baseline</p> <p>Needle sticks and sharps injuries are recorded only if the case results in medical treatment, days away from work, days of restricted work, or seroconversion.</p> <p>All medical removal² procedures that are under the provisions of other OSHA standards are recordable.</p> <p>A positive skin test for tuberculosis is recordable when it is known to be a workplace exposure to active tuberculosis disease. In five industries, the presumption is of a work relationship.</p>	<p>Beginning January 1, 2003, record all work-related cases of hearing loss that meet <i>both</i> of the following conditions on the same audiometric test for either ear:</p> <ol style="list-style-type: none"> 1. The employee has experienced a standard threshold shift <i>and</i> 2. The employee's total hearing level is 25 dB or more above audiometric zero (averaged at 2,000, 3,000, and 4,000 Hz) in the same ear(s) affected by the standard threshold shift. <p>Beginning January 1, 2004, a separate hearing-loss column appears on the OSHA 300 Log.</p> <p>Needle sticks and sharps injuries that may be contaminated with another person's blood or with infectious material are recorded.</p> <p>All medical removal² procedures that are under the provisions of other OSHA standards are recordable.</p> <p>A positive skin test for tuberculosis is recordable when it is known to be a workplace exposure to active tuberculosis disease. There is no presumption of a work relationship in any industry.</p>

Exhibit A-1. Continued—changes to OSHA recordkeeping requirement from 2001 to 2002

Old rule, through 2001	New rule, 2002 and beyond
Other issues	
<p>The employer must enter the employee's name on all cases.</p> <p>Employees have access to the entire log, including names; they do not have access to supplementary form OSHA 101.</p> <p>Employers must report all work-related fatalities to OSHA.</p> <p>The employer, or the employee who supervised the preparation of the log and summary, can certify the annual summary.</p> <p>The employer must post the annual summary during the month of February.</p> <p>Employers need not inform employees regarding how they are to report an injury or illness.</p>	<p>The employer must enter "Privacy Cases," rather than the employee's name, and must keep a separate list of the case number and corresponding names.</p> <p>Employees and their authorized representatives have access to the entire log, including names. Employees have access to their own Incident Reports (OSHA 301). Authorized representatives have access to a portion of all OSHA 301's.</p> <p>Employers need not report fatalities resulting from motor vehicle accidents on public streets or highways that do not occur in a construction zone.</p> <p>A company executive must certify the annual summary.</p> <p>The employer must post the annual summary anytime from February 1 to April 30.</p> <p>Employers must inform each employee regarding how he or she is to report an injury or illness.</p>
<p>¹ <i>Recordkeeping Guidelines for Occupational Injuries and Illnesses</i> (OMB no. 1220-0229).</p> <p>² Medical removal is the required removal of an employee from a work location when certain criteria are met (for example, the</p>	<p>amount of lead in the blood reaches a specific level).</p> <p>SOURCE: U.S. Department of Labor, Occupational Safety and Health Administration; on the Internet at http://www.osha.gov/recordkeeping/RKside-by-side.html, visited Sept. 30, 2004.</p>

Exhibit A-2. Designation of types of occupational injury and illness cases under the OSHA recordkeeping rules, 2001 and 2002

2001 and prior years	2002 and future years
<p>Total injury and illness cases</p> <p>Lost-workday cases</p> <p> Cases with days away from work¹</p> <p> Cases with restricted work activity only</p> <p>Cases without lost workdays</p> <p>Total injuries</p> <p>Lost-workday cases</p> <p> Cases with days away from work¹</p> <p> Cases with restricted work activity only</p> <p>Cases without lost workdays</p> <p>Total illnesses</p> <p>Lost-workday cases</p> <p> Cases with days away from work¹</p> <p> Cases with restricted work activity only</p> <p>Cases without lost workdays</p>	<p>Total injury and illness cases</p> <p>Cases with days away from work, with a job transfer, or with restricted work activity</p> <p> Cases with days away from work²</p> <p> Cases with a job transfer or restricted work activity</p> <p>Other recordable cases</p> <p>Total injuries</p> <p>Total illnesses</p>

¹ May include days of restricted work activity, as well as days away from work.

² May include days with a job transfer or with restricted work activity, as well as days away from work.

In 2001 and previous years, the type of occupational injury and illness case was recorded separately for total injuries and illnesses, for injuries only, and for illnesses only. This kind of separate calculation resulted in the ability to tabulate detailed case-type information for each of the three categories. Beginning in 2002,

case-type data are recorded only once, which limits the amount of detail that can be tabulated. Exhibit A-2 indicates the available data by type of case before and after the recordkeeping change.

Note to the appendix

¹ The source of the preceding information is the Occupational Safety and Health Administration, U.S. Department of Labor. (See the OSHA notice in the *Federal Register*, Jan. 19, 2001, p. 5916; and OSHA Fact

Sheet: Highlights of OSHA's Recordkeeping Rule. Links to these documents are available on the Internet at <http://www.osha.gov/recordkeeping/index.html>, visited Aug. 19, 2004.