

Nonfatal injuries and illnesses in State and local government workplaces in 2008

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Estimates of nonfatal workplace injuries and illnesses covering nearly 19 million State and local government workers show that these public sector employees experienced a significantly higher incidence of work-related injuries and illnesses in 2008 than did private industry employees. These findings are from the Survey of Occupational Injuries and Illnesses (SOII), which collected national data on State and local government workers for the first time in 2008.

The new data series begin to address the common criticism that the SOII lacked comprehensive national estimates of nonfatal work-related injuries and illnesses covering public sector workers. This report explores briefly the historical absence of these statistics and presents additional findings of these new data series for the 2008 survey year.

The Occupational Safety and Health Act of 1970¹—the OSH Act—was enacted by Congress “ . . . to provide for the general welfare, to assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources.”² Congress proposed to accomplish this, in part, by

- “ . . . authorizing the Secretary of Labor to establish man-

datory occupational safety and health standards applicable to businesses affecting interstate commerce . . .”³ and by

- “. . . providing for appropriate reporting procedures with respect to occupational safety and health which procedures will help achieve the objectives of this Act and accurately describe the nature of the occupational safety and health problem.”⁴

The OSH Act established responsibilities both for employers and for employees—briefly, that employers would provide a safe workplace in accordance with safety and health standards, and that employees would comply with the rules and regulations spelled out in the Act.⁵

The Act defines an employer as “. . . a person engaged in a business affecting commerce who has employees, but does not include the United States (not including the United States Postal Service) or any State or political subdivision of a State.”⁶ Hence, the OSH Act provided the mandate by which to collect and publish comprehensive statistics of workplace injuries and illnesses *among private industry employers* but did not provide the same mandate for the public sector.

In accordance with the OSH Act provision that “The Secretary shall compile accurate statistics on work injuries and illnesses . . .,”⁷ the Bureau of Labor Statistics (BLS), using data from the SOII, has published since the early 1970s estimates of nonfatal workplace injuries and illnesses *among private industry establishments*. Estimates of nonfatal work-related injuries and illnesses among public sector workers had

been available only for select States participating in the SOII program. Further, public sector estimates were available at varying levels of industry detail for each participating State. Together, these two things made impossible the tabulation of State and local government nonfatal injury and illness estimates at the national level.

To address this issue, the scope of the SOII was expanded with the 2008 survey to collect data from public sector establishments in all States⁸—voluntary for some, mandatory for others⁹—in order to obtain the data requisite for tabulating national estimates of nonfatal occupational injuries and illnesses among State and local government workers. The availability of estimates from the SOII for the 2008 survey year enables data users to identify, for the first time, potential workplace safety hazards among these public sector workers.

National public sector estimates are born

The prevalence of work-related injuries and illnesses among public sector workers at a national level had been unknown before the availability of estimates for the 2008 survey year. These estimates provide data users with the ability to determine the industries and occupations in which injuries and illnesses occur most frequently among State and local government workers; the reasons for these injuries and illnesses; and a metric by which to make informed decisions regarding plans or policies that help to ensure safe and healthful working conditions for this population of workers.

The level of detail of public sec-

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tor SOII estimates is much less comprehensive than that of the private sector, as public sector employees are concentrated in far fewer industries¹⁰ than their private sector counterparts. Therefore, SOII estimates within the public domain focus on industries with a known public demand for such data and also on industries with large numbers of employees.

For example, while manufacturing employment encompasses a vast spectrum within the private sector, this industry's employment is very limited within the public sector. As such, tabulation of public sector estimates for the manufacturing industry would make little sense. Conversely, industries such as police protection and fire protection, which exist primarily within the public domain and in which much interest has been shown, are included among national public sector estimates. Table 1 highlights the most-detailed industries for which estimates of nonfatal occupational injuries and illnesses are tabulated among State and local government workers.

Injury and illness experience within the public sector

Local government workers accounted for roughly 3 in 4 public sector workers in 2008¹¹ and local government workplaces were the site of nearly 8 in 10 public sector injuries and illnesses. (See table 2.) The incidence of injuries and illnesses was 6.3 cases per 100 full-time workers¹² for State and local government combined. However, local government workers as a whole experienced injuries and illnesses at a much higher rate than their State government counterparts—7.0 cases per 100 full-time workers compared with 4.7 cases.

High-profile industries in State and local government

Each year, data users utilize SOII estimates to compare their industry's injury and illness experience to that of other industries. However, there were common complaints from some who work in what they perceive as dangerous or high-risk public safety activities—such as police protection and fire protection—that SOII estimates for their industries were unavailable. The data for 2008—classified according to the 2002 North American Classification System (NAICS)—indicate that workers in local government fire protection (NAICS 922160) and police protection (NAICS 922120) experienced nonfatal injuries and illnesses at some of the highest rates among all workers—14.8 and 14.5 cases per 100 full-time workers, respectively. Local police protection experienced a rate of injuries and illnesses more than double that of their State police protection counterparts, whose rate was 5.9 cases per 100 workers.

Table 3 provides estimates of nonfatal occupational injuries and illnesses by type of case and shows that local government fire protection workers were more than 4 times as likely as all local government workers combined

to suffer an injury or illness on the job that results in days away from work. Local government employees in fire protection were also nearly 4 times more likely than all local government workers combined to experience respiratory illnesses.

Comparing private and public sector estimates—limitations

Industry composition and the distribution of employees across industries differ significantly between private industry and State and local government. Therefore, comparison of estimates in the same industries—for example, construction—should be done cautiously and with the knowledge that the industry makeup may contribute significantly to differences in estimates across these different worker populations.

Comparing private and public sector estimates by type of case

The incidence rate of total recordable cases of injuries and illnesses among public sector workers—6.3 cases per 100 full-time workers for State and local government combined—was significantly higher than the rate of 3.9 cases per 100 workers reported among private industry workplaces in

NAICS description	NAICS code	Group
Heavy and civil engineering construction.....	237	State and local government
Transit and ground passenger transportation....	485	Local government
Water, sewage, and other systems.....	2213	Local government
Elementary and secondary schools.....	6111	Local government
Colleges, universities, and professional schools.....	6113	State government
Hospitals.....	622	State and local government
Nursing and residential care facilities.....	623	State and local government
Police protection.....	92212	State and local government
Correctional institutions.....	92214	State government
Fire protection.....	92216	Local government

NOTE: Target estimation industries represent the most detailed industry level for which estimates were tabulated. Higher-level aggregate estimates may be available in addition to estimates at these detailed levels.

Table 2. Incidence rate and number of cases in State and local government, 2008

Industry	Employment ¹ (in thousands)	Incidence rate ²	Number of cases (in thousands)
State and local government.....	18,682.5	6.3	938.0
State government.....	4,841.6	4.7	196.8
Local government.....	13,840.9	7.0	741.2

¹ Employment data derived primarily from the Quarterly Census of Employment and Wages.
² Incidence rates represent the number of injuries and illnesses per 100 full-time workers and were calculated as (N/EH) x 200,000, where:
N = the number of injuries or illnesses;
EH = total hours worked by all employees; and
200,000 = base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year).

2008. As noted earlier, local government workers experienced a significantly higher rate of injuries and illnesses (7.0 cases) than that of State government workers (4.7 cases) and both of these groups reported rates higher than that of their private industry counterparts. Reasons for the variation in rates may include differences in industry mix and different distributions of large populations of employees in higher risk industries within these groups, as well as other factors.

Cases involving days away from work occurred at a lower rate among private sector workers (1.1 cases per 100 full-time workers), compared with State government workers (1.7 cases) and local government workers (1.9 cases), whose rates were not statistically different from one another. Conversely, the rate of cases involving days of job transfer or restriction was highest for the private sector—0.9 cases per 100 full-time workers—compared with 0.8 cases for local government workers and only 0.6 cases for State government workers.

Among “other recordable cases”—that is, cases which resulted in neither days away from work nor in job transfer or restriction but were still recordable per OSHA recordkeeping criteria—local government workers

experienced the highest rate among the three groups at 4.2 cases per 100 full-time workers. Private sector workers experienced the lowest incidence of “other recordable cases” with 1.9 cases per 100 full-time workers. State government workers reported 2.4 “other recordable cases” per 100 full-time workers.

Industry-level comparisons—private versus public sector

Because the industry mix differs greatly between the private and public sectors, few meaningful industry-to-industry comparisons can be made among these different worker populations. However, there are several industries where it might reasonably be assumed that valid comparisons can be made across these groups; these industries include hospitals, nursing and residential care facilities, and educational services.

Hospitals (NAICS 622). The incidence rate of injuries and illnesses among hospital workers was highest in State government at 11.9 cases per 100 full-time workers—more than one and a half times that experienced by hospital workers in either local government (7.3 cases) or private industry (7.6 cases), whose rates were not significantly different from each other.

While more detailed injury and illness estimates are not available for the different types of hospitals for each of these worker populations, one factor contributing to the difference in rates among State government, local government, and private sector hospital workers could be the types of hospitals at which they work. For example, the vast majority of private sector and local government hospital employees—93.8 and 99.3 percent, respectively—worked at general medical and surgical hospitals (NAICS 622110). In contrast, only half of all State government hospital employees worked in general medical and surgical hospitals, while another 40.9 percent of State government hospital employees worked at psychiatric and substance abuse hospitals (NAICS 622210).¹³

Nursing and residential care facilities (NAICS 623). State government nursing and residential care facilities reported 12.5 cases of injuries and illnesses per 100 full-time workers, compared with 9.5 and 8.4 cases for local government and private sector industries, respectively. It should be noted, however, that the difference between the incidence rates for nursing and residential care facilities in State and local government was not statistically significant.

The distribution of employment among different types of nursing and residential care facilities varies widely between the public and private sectors. For example, 73.7 percent of State government nursing and residential care facilities workers were employed in residential mental retardation, mental health and substance abuse facilities (NAICS 6232). By contrast, nearly the same proportion—73.6 percent—of local government nursing and residential care facilities workers were employed in

Table 3. Number and incidence rate of nonfatal occupational injuries and illnesses for local government by selected industry, 2008

Characteristic	Local government ¹		Fire protection		Police protection	
	Number (in thousands)	Rate ²	Number (in thousands)	Rate ²	Number (in thousands)	Rate ²
Injuries and Illnesses						
Total cases.....	741.2	7.0	26.2	14.8	61.8	14.5
Cases with days away from work, job transfer, or restriction..	290.0	2.7	17.5	9.9	23.1	5.4
Cases with days away from work ³	206.6	1.9	15.0	8.5	16.0	3.8
Cases with job transfer or restriction.....	83.4	.8	2.6	1.4	7.1	1.7
Other recordable cases.....	451.2	4.2	8.7	4.9	38.7	9.1
Injuries						
Total cases.....	685.2	6.5	23.6	13.4	56.0	13.2
Illnesses						
Total cases.....	56.1	52.8	2.6	144.5	—	—
Illness categories						
Skin disorders.....	10.7	10.1	.3	15.7	.3	7.8
Respiratory conditions.....	6.2	5.9	.4	22.5	.4	8.3
Poisoning.....	.5	.5	—	—	—	.9
Hearing loss.....	1.9	1.8	.1	4.3	—	.8
All other illness cases.....	36.7	34.6	1.8	101.5	—	—

¹ Excludes farms with fewer than 11 employees.

² Incidence rates represent the number of injuries and illnesses per 100 full-time workers (10,000 full-time workers for illness rates) and were calculated as (N/EH) X 200,000 (20,000,000 for illness rates) where:

N = number of injuries and illnesses;
 EH = total hours worked by all employees during the calendar year;
 200,000 = base for 100 full-time equivalent workers (working 40 hours

per week, 50 weeks per year); and
 20,000,000 = base for 10,000 full-time equivalent workers (working 40 hours per week, 50 weeks per year).

³ Days-away-from-work cases include those that result in days away from work with or without job transfer or restriction.

NOTE: Dashes indicate data do not meet publication guidelines.

nursing care facilities (NAICS 6231). The distribution of private industry nursing and residential care facilities workers was more varied when compared with State or local government—53.7 percent worked at nursing care facilities, 22.7 percent worked at community care facilities for the elderly (NAICS 6233), and 18 percent worked at residential mental retardation, mental and substance abuse facilities (NAICS 6232).¹⁴

Educational services (NAICS 611). Local government establishments in educational services reported an injury and illness incidence rate of 5.5 cases per 100 full-time workers; this was more than twice the rate reported for educational services workers in State government (2.6 cases) or private industry (2.3 cases). More detailed esti-

mates are not available for the different types of educational institutions among these groups.

One factor contributing to the differences in incidence rates for educational services workers, however, could be the distribution of employees among different types of educational establishments. For example, 85.2 percent of State educational services workers were employed at colleges and universities (NAICS 6113), with another 10.1 percent employed at junior colleges (NAICS 6112). By contrast, 93.2 percent of local government educational services workers were employed at elementary and secondary schools (NAICS 6111).

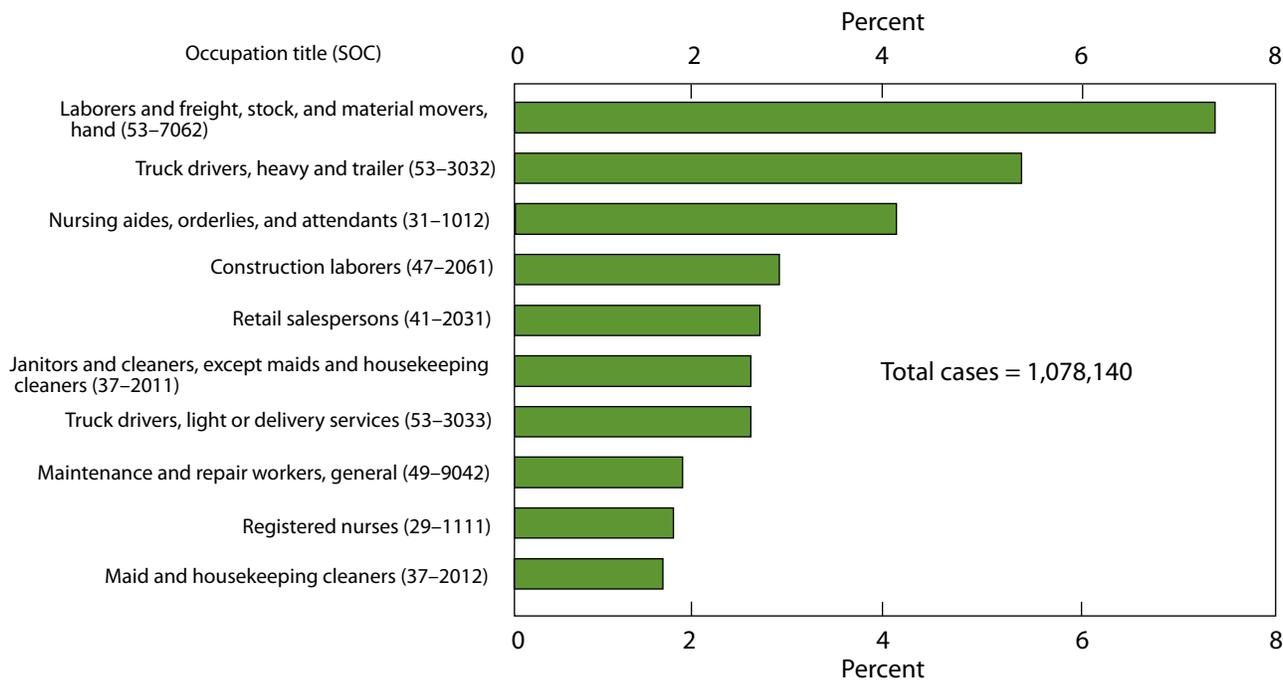
The distribution of educational services employees in private sector industries was more diverse. The largest share, 45.9 percent, worked

at private colleges and universities, but 27.7 percent worked at private elementary and secondary schools, and 12.4 percent worked at other schools and instruction (NAICS 6116)—for example, fine and performing arts schools, language schools, sport and recreation institutions, and automobile driving schools.¹⁵

Characteristics of cases that involved days away from work—public versus private sector

Detailed case circumstances and worker characteristics are collected for nonfatal injuries and illnesses that involved days away from work to recuperate beyond the day on which the injury or illness occurred. There were many similarities, as well as a few distinct differences, among the

Chart 1. Distribution of nonfatal injury and illness cases involving days away from work by occupation, private industry, 2008



NOTE: This chart presents the first ten occupations among a rank order list of all occupations in the private sector. BLS days-away-from-work data also include job transfer or restriction cases involving days away from work.

characteristics of days-away-from-work cases for public and private sector worker populations.

Nature, part, source, and event of injury or illness. Among each population of workers—State government, local government and private industry—roughly 4 in 10 cases that involved days away from work were the result of sprains and strains. The trunk was reported as the part of body affected in one-third of all days-away-from-work cases, with 60 percent of these trunk cases involving the back. Walking surfaces—floors, walkways, and ground surfaces—was the source reported in more than 1 in 5 cases that involved days away from work in private industry and in State and local government workplaces. One considerable difference regarding reported sources of injury or illness was that more than 1 in 5 cases (22.9

percent) involving days away from work in State government reported the source to be “person (other than injured or ill worker)”—often health care patients—compared with approximately 1 in 10 (11.4 percent) in local government and only 1 in 20 (5.7 percent) in private industry.

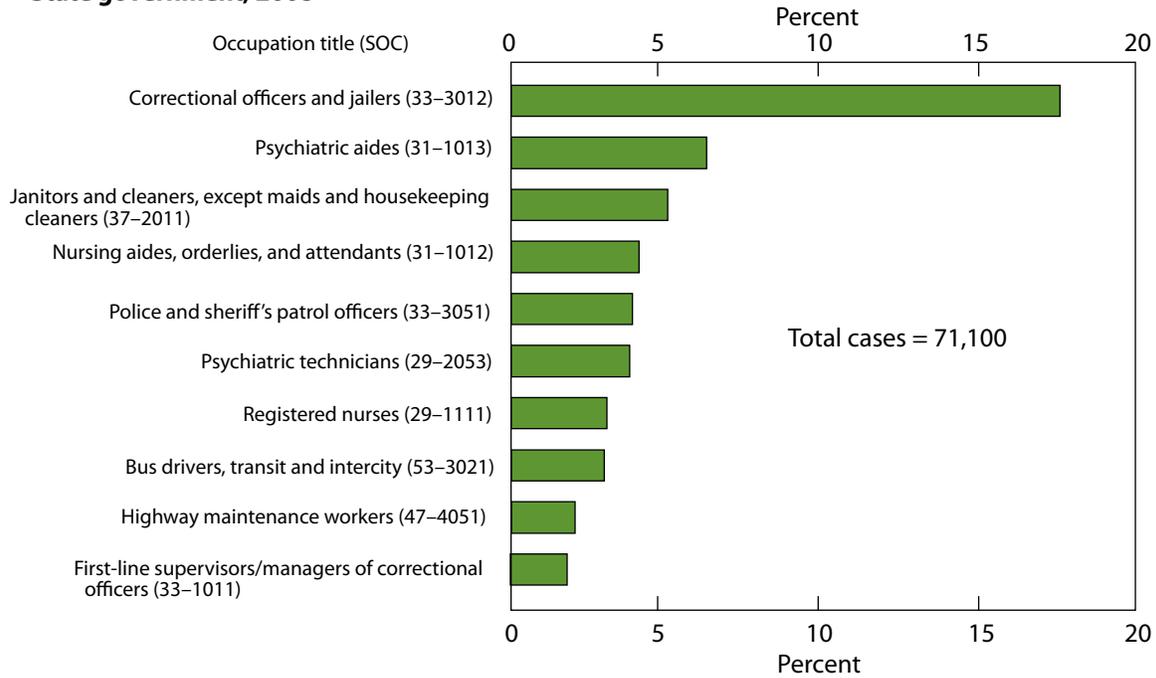
Several common events accounted for large percentages of cases involving days away from work among all three worker groups—State government, local government, and private sector workers. For the three groups combined, contact with objects and equipment accounted for 25.1 percent of cases of days away from work, overexertion accounted for 22.2 percent of the cases, and falls accounted for 21.4 percent.

In contrast to these common events or exposures which accounted for large percentages of injury and illness cases, assaults and violent acts (pri-

marily by persons) were reported as the event for 16.8 percent of all days-away-from-work cases among State government workers, compared with only 2.1 percent for private sector industries, and 6.5 percent for local government. Looked at another way, the rate of assaults and violent acts in State government workplaces—28.6 cases per 10,000 full-time workers—was nearly 12 times higher than the private sector rate (2.4 cases) and more than twice as high as the rate among local government workplaces (12.6 cases).

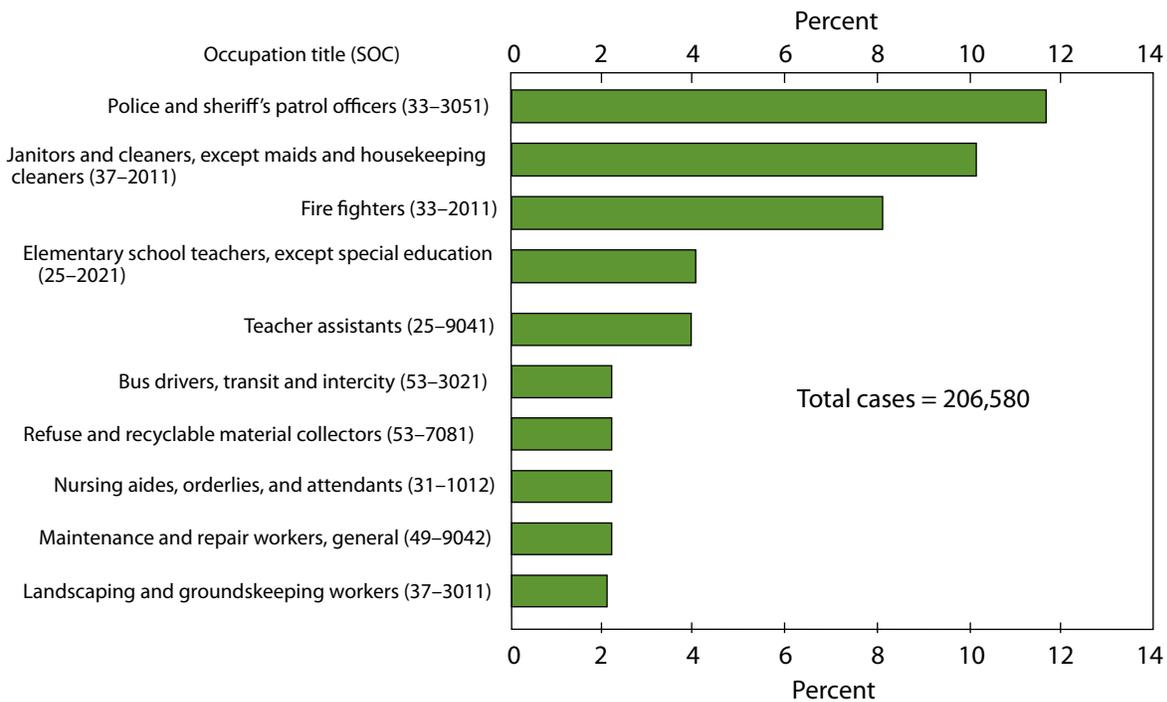
Notably, nearly 40 percent of the assaults and violent acts in State government workplaces occurred in hospitals, resulting in a rate of 153.9 cases per 10,000 full-time workers. By contrast, the rates of assaults and violent acts in private sector and local government hospitals were 8.0 cases and 14.2 cases per 10,000 workers,

Chart 2. Distribution of nonfatal injury and illness cases involving days away from work by occupation, State government, 2008



NOTE: This chart presents the first ten occupations among a rank order list of all occupations in the State government. BLS days-away-from-work data also include job transfer or restriction cases involving days away from work.

Chart 3. Distribution of nonfatal injury and illness cases involving days away from work by occupation, local government, 2008



NOTE: This chart presents the first ten occupations among a rank order list of all occupations in local government. BLS days-away-from-work data also include job transfer or restriction cases involving days away from work.

respectively. The difference between the rate for State hospitals and those for other worker populations may be related to the large proportion of State hospitals where mental health is a primary focus—40.9 percent of State hospitals were psychiatric and substance abuse hospitals.

Number of days away from work by worker population. Regardless of the worker population—private industry or State or local government—nearly 1 in 4 cases involving days away from work resulted in 31 or more days away from work. Another similarity across the three groups was median days away from work; injuries and illnesses in both private industry and State government resulted in a median of 8 days away from work, while those in local government resulted in a median of 9 days.

Length of absence from work

State government	
Median days.....	8
31 or more days.....	23.9
Local government	
Median days.....	9
31 or more days.....	24.5
Private sector industries	
Median days.....	8
31 or more days.....	26.0

Occupation. The types of occupations¹⁶ accounting for the largest proportion of injury and illness cases involving days away from work differ considerably among private industry, local government and State government, which may be a contributing factor to the differing injury and illness experiences among these worker populations. For example, laborers and freight, stock, and material movers, hand (Standard Occupation Code 53–7062) was the most common occupation reported for cases involving days away from work in private industry workplaces—accounting for 7.4 percent of reported

cases. (See chart 1.) By contrast, public safety occupations were commonly reported in the public sector; chart 2 shows that correctional officers and jailers (SOC 33–3012) accounted for 17.5 percent of cases involving days away from work in State government, while chart 3 shows that police and sheriff’s patrol officers (SOC 33–3051) accounted for 11.6 percent of the cases reported in local government.

Conclusion

The publication of estimates of non-fatal occupational injuries and illnesses among State and local government workers in 2008 both satisfies a demand for these data and addresses criticism that the Survey of Occupational Injuries and Illnesses excluded this large population of workers. These new data series are useful in understanding public sector injuries and illnesses in 2008, and their usefulness is likely to expand in the future as trends of injuries and illnesses among these worker populations can be explored and analyzed with the availability of additional years of data. In the meantime, this article highlights in broad strokes some of the key findings from these new estimates. □

Notes

¹ See http://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=oshact (visited February 7, 2011)

² “Occupational Safety and Health Act of 1970” (Public Law 91–596 84 STAT, Dec. 29, 1970), section 2(b), on the Internet at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=OSHACT&p_id=3356 (visited February 7, 2011).

³ *Ibid.*, section 2(b)(3), on the Internet at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=OSHACT&p_id=3356 (visited February 7, 2011).

⁴ *Ibid.*, section 2(b)(12), on the Internet at

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=OSHACT&p_id=3356 (visited February 7, 2011).

⁵ *Ibid.*, section 5, on the Internet at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=OSHACT&p_id=3359 (visited February 7, 2011).

⁶ *Ibid.*, section 3(5), on the Internet at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=OSHACT&p_id=3357 (visited February 7, 2011).

⁷ *Ibid.*, section 24(a), on the Internet at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=OSHACT&p_id=3378 (visited February 7, 2011.)

⁸ Data for public sector establishments in States lacking a participating SOII program are collected by BLS regional offices for use in tabulating national estimates. State-level estimates are not available for non-participating States, which included Colorado, Idaho, Mississippi, New Hampshire, Ohio, North Dakota, Pennsylvania, Rhode Island, and South Dakota in 2008. State participation in the SOII may vary by year.

⁹ The Occupational Safety and Health Act of 1970 mandates that *private industry establishments* must maintain records of their workplace injury and illness experience throughout the year and report those data upon request from authorized government representatives, including the BLS Survey of Occupational Injuries and Illnesses (SOII). Public sector establishments fall outside the scope of coverage mandated by the OSH Act. States operating their own safety and health programs pursuant to Section 18 of the OSH Act of 1970—encouraging States to develop and operate their own job safety and health programs—are required to cover public sector (State and local government) establishments. See <http://www.osha.gov/dcsp/osp/index.html> (visited February 10, 2011) for details regarding OSHA State plans, as well as a list of States currently operating a State safety and health plan in place of federal OSHA coverage.

¹⁰ Industry estimates for the 2008 Survey of Occupational Injuries and Illnesses are classified according to the 2002 North American Industry Classification System (NAICS).

¹¹ The Bureau of Labor Statistics collects and compiles data by industry for private industry and public sector employees for the Quarterly Census of Employment and Wages (QCEW). According to the QCEW, there were 14,212,311 local government employees and 4,642,650 State government employees in 2008. The QCEW database is available on the Internet at <http://data.bls.gov/pdq/querytool>.

Injuries and Illnesses

[jsp?survey=en](http://data.bls.gov/pdq/querytool.jsp?survey=en) (visited February 10, 2011).

¹² Incidence rates from the Survey of Occupational Injuries and Illnesses represent the number of injuries and illnesses per 100 full-time workers (or number of illnesses per 10,000 full-time workers) and were calculated as $(N/EH) \times 200,000$ where:

N = number of injuries and illnesses;

EH = total hours worked by all employees during the calendar year;

200,000 = base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year); and

20,000,000 = base for 10,000 equivalent full-time workers (working 40 hours per week, 50 weeks per year).

¹³ The distribution of employment for hospitals (NAICS 622) by type of hospital and public or private ownership was derived from the QCEW database at <http://data.bls.gov/pdq/querytool.jsp?survey=en> (visited February 10, 2011).

¹⁴ The distribution of employment for nursing and residential care facilities (NAICS 623) by type of facility and public or private ownership was derived from the QCEW data-

base at <http://data.bls.gov/pdq/querytool.jsp?survey=en> (visited February 10, 2011).

¹⁵ The distribution of employment for educational services (NAICS 611) by type of educational institution and public or private ownership was derived from the QCEW database at <http://data.bls.gov/pdq/querytool.jsp?survey=en> (visited February 10, 2011).

¹⁶ Occupations are classified according to the 2000 Standard Occupational Classification (SOC) System; for more information, see http://www.bls.gov/soc/major_groups.htm (visited January 27, 2011).