Occupational Health Indicators

Surveillance indicators allow a state to compare its health or risk status with that of other states, evaluate trends over time, and guide priorities for prevention and intervention efforts. This document presents 22 indicators that describe the occupational health status of the working population. The indicators presented represent the consensus view of state and NIOSH representatives, and are intended as advisory to the states.

I. **Occupational injury and illness indicators** (*15 indicators*). These are indicators using occupational injury and illness data sources that are available in the majority of states. Three of these indicators (i, ii and iii) are published annually by the Bureau of Labor Statistics (BLS) at the national level.

A. Occupational morbidity
   i. Non-fatal work-related injuries and illnesses reported by employers
   ii. Work-related amputations with days away from work reported by employers
   iii. Work-related musculoskeletal disorders with days away from work reported by employers
   iv. Work-related hospitalizations
   v. Hospitalizations from work-related burns
   vi. Hospitalizations from or with pneumoconiosis
   vii. Acute work-related pesticide-associated illnesses and injury reported to poison control centers
   viii. Incidence of malignant mesothelioma
   ix. Work-related low back disorder hospitalizations
   x. State workers' compensation claims for amputations with lost work-time
   xi. State workers' compensation claims for carpal tunnel syndrome with lost work-time
   xii. Asthma among adults caused or made worse by work
   xiii. Work-related severe traumatic injury hospitalizations
B. Occupational Mortality
   i. Fatal work-related injuries
   ii. Mortality from or with pneumoconiosis

II. **National and state-level occupational exposure and hazard indicators** (*4 indicators).* These indicators use occupational exposure data or hazard data sources that are consistently collected between states and at the national level. These would include laboratory screening result for exposures such as blood lead, number of workers employed in industries or occupations with high rates of work-related injuries or acute traumatic fatalities.

A. Elevated blood lead levels among adults
B. Percentage of workers employed in industries at high risk for occupational morbidity
C. Percentage of workers employed in occupations at high risk for occupational morbidity
D. Percentage of workers employed in industries and occupations at high risk for occupational mortality

III. **National and state-level occupational intervention indicators** (*2 indicators*). These indicators use data sources related to interventions that are consistently collected between states and at the national level. These would include occupational health professionals working within a state, the number of OSHA inspections conducted within a state.

A. Occupational safety and health professionals
B. OSHA enforcement activities

IV. **State-specific socio-economic indicators** (*1 indicator*). This indicator uses occupational injury and illness economic data sources that are primarily state-specific. The only indicator available at this time is for state workers' compensation awards.

A. Worker's Compensation Awards

Website view (www.cste.org):

Indicator 1

Indicator | 2000 Data | 2001 Data | 2002 Data | 2003 Data | 2004 Data | 2005 Data

Indicator 1: Non-Fatal Injuries and Illnesses Reported by Employers

- Estimated annual number and rate of work-related injuries and illnesses among private sector workers
- Estimated annual number and rate of work-related injuries and illnesses involving days away from work
- Estimated annual number of injuries and illnesses involving more than 10 days away from work

Data Source: Bureau of Labor Statistics' Annual Survey of Occupational Injuries and Illnesses

Work-related injuries are generally defined as injuries that result from single events such as falls, being struck or crushed by objects, electric shocks, or assaults. Work-related illnesses, such as asthma, silicosis and carpal tunnel syndrome, typically occur as the result of longer-term exposure to hazardous chemicals, physical hazards (e.g., radiation, noise), or repeated stress or strain at work. Infectious diseases also can be caused by workplace exposures. It is more difficult to track work-related illnesses than injuries because many of the conditions also can be caused by non-occupational factors. Also, many work-related illnesses take a long time to develop and may not appear until many years after the individuals have left employment.

The Bureau of Labor Statistics' (BLS) Annual Survey of Occupational Injuries and Illnesses (Annual Survey) provides yearly estimates of the numbers and incidence rates of work-related injuries and illnesses at national and state levels. Information is collected from a nationwide sample of employers on all work-related injuries and illnesses that result in death, lost work-time, medical treatment other than first aid, loss of consciousness, restriction of work activity, or transfer to another job.

While the Annual Survey is a valuable source of information about work-related injuries and illnesses, it is well recognized that it has a number of limitations and underestimates the full extent of the burden. Excluded from the national estimates provided by the Annual Survey are public sector workers, the self-employed, household workers, and workers on farms with fewer than 11 employees. Together these sectors comprise approximately 21% of the U.S. workforce.[1] Occupational diseases are not well documented in the Annual Survey and there is evidence that injuries are underreported[2,3]. It is also subject to sampling error. Additional data sources used in generating other occupational health indicators in this report provide important supplementary information that, together with the Annual Survey, creates a more complete picture of occupational health in the states.

[1] Leigh JP et al. An estimate of the US government's undercount of nonfatal occupational injuries. *J Occup and Environ. Med.* 2004; 46 (No. 1)
[2] Conway H, Svenson J. Occupational injury and illness rates,1992-1996: why they fell. *Mon Labor Rev.*1998; 121(11)36-58.
[3] Azaroff LS, Levenstein C, Wegman DH. Occupational Injury and Illness Surveillance: Conceptual Filters Explain Underreporting. *AJPH.* 2002;92(9):1421-1429.

Back to Occupational Indicators

Data view:

Table 1. Number of Non-Fatal Work-Related Injuries and Illnesses Reported by Private Sector Employers by State and U.S., 2005

	CA	CT	FL	IA	KY	LA	MA	ME	MI	NJ	NM	NY	OK	OR	TX	WA	WI	US
All cases of work-related injuries and illnesses	503,700	59,000	246,300	64,300	75,900	40,300	93,000	28,900	161,700	104,400	22,400	176,500	47,300	59,200	246,000	109,900	109,900	4,214,200
Cases involving days away from work	141,300	19,200	67,300	14,700	21,900	13,200	37,400	6,800	37,900	38,200	7,000	83,400	14,000	19,100	69,300	36,400	32,000	1,234,700
Cases involving more than 10 days away from work	66,430	8,090	27,640	5,470	9,660	6,030	14,820	2,600	16,700	16,800	2,830	40,101	7,170	7,340	32,800	14,080	12,070	522,180

[1] The rates published by the Bureau of Labor Statistics (BLS) are the number of injury and illness cases per 100 FTEs. The rates presented here, which are cases per 100,000 FTEs, were derived by multiplying BLS published rates by 1,000. These converted rates are not as precise as those that would be calculated from the raw Annual Survey data.

Data Sources: Bureau of Labor Statistics' Annual Survey of Occupational Injuries and Illnesses

Figure 1. Rate of Non-Fatal Work-Related Injuries and Illnesses Reported by Private Sector Employers by State and U.S., 2005