

# California Occupational Health Indicators

Annual measures of worker health and safety  
for years 2006 – 2011



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## Introduction

Every year, thousands of California workers are injured on the job or become ill as a result of health hazards at work. These work-related injuries and illnesses result in substantial human and economic costs. California's workers' compensation benefits paid in 2011 alone totaled \$10.5 billion. As large as this figure is, it represents only a fraction of the indirect and direct costs of work-related injuries and illnesses annually. Work-related injuries and illnesses can be prevented. Having the data necessary to understand the problem is the first step.

A health indicator is a numerical value or statistic that helps us measure the state of health. Indicators can be tracked over time to tell us whether our health is getting better or worse, and they can be compared with other regional or national values. Using indicators over time can help us to track our progress toward improving health. This report includes Occupational Health Indicator data from 2006 through 2011. Data from subsequent years will be added to the Occupational Health Branch (OHB) website as they become available.

OHB worked with several other states and the National Institute for Occupational Safety and Health to develop a set of Occupational Health Indicators. These Indicators are used to measure work-related injuries, illnesses, exposures, or factors that can influence occupational health. Each Indicator was selected because it is important to public health and can be calculated using a data source that is readily available for most states.

OHB shares California Occupational Health Indicator data with interested parties, other states, and the federal government. We help other states learn to use the Occupational Health Indicators by partnering with them and maintaining detailed "how-to" guides on how to generate the Indicators. Finally, we use the Indicators and further analyses of these data sources to guide our efforts to prevent workplace injury and illness in California.

### **NOTE: Corrections made to OHIs from Hospital Discharge Data.**

In February 2014, OHB became aware that Office of Statewide Health Planning and Development (OSHPD) "Public Use" Hospital Discharge data files do not include all hospitalizations. OSHPD does this to ensure that individuals cannot be identified where the number of cases is small. As a result, OHB must instead use the "Non-Public" Hospital Discharge data for generation of Occupational Health Indicators (OHIs).

We have recalculated the four OHIs that rely on Hospital Discharge data: Work-Related Hospitalizations (2000 – 2010); Hospitalizations for Work-Related Burns (2000 – 2010); Pneumoconiosis Hospitalizations (2000 – 2010); and Hospitalizations for Work-Related Lower Back Disorders (2007 – 2010).

The updated numbers now appear on our website. If you have used or quoted the numbers for California's Hospitalization OHIs prior to February 2014, please note this change.

# California Employment Demographics Profile

California Employment Demographics	Year						U.S.
	2006	2007	2008	2009	2010	2011	2011
Employed persons in millions	16.9	17.2	17.0	16.2	15.9	16.2	139.9
Percentage of civilian workforce unemployed	4.8	5.3	7.1	11.3	12.2	11.6	8.9
Percentage of civilian employment self-employed	10.2	9.9	9.3	8.8	9.4	9.1	6.8
Percentage of civilian employment in part-time jobs	17.0	17.2	18.5	20.6	21.4	21.3	19.5
Percentage of civilian employment by number of hours worked							
<40 hours	31.0	31.4	33.4	38.6	36.5	36.2	35.3
40 hours	44.9	45.4	44.1	41.0	43.1	43.1	40.8
41+ hours	24.1	23.2	22.5	20.4	20.4	20.7	23.9
Percentage of civilian employment by sex							
Males	55.7	55.6	55.3	54.3	54.5	55.1	53.1
Females	44.3	41.4	44.7	45.7	45.5	44.9	46.9
Percentage of civilian employment by age group							
16 to 17 years	1.1	1.1	0.9	0.6	0.7	0.6	1.0
18 to 64 years	95.5	95.7	95.4	95.3	95.3	95.1	94.3
65+ years	3.3	3.2	3.7	4.1	4.0	4.4	4.8
Percentage of civilian employment by race							
White	78.1	77.9	78.3	78.1	77.5	77.7	82.0
Black	5.7	5.6	5.8	5.7	5.5	5.3	10.8
Other	16.3	16.5	16.0	16.1	16.9	17.0	7.2
Percentage of civilian employment by Hispanic origin	32.5	33.7	33.5	33.2	34.1	35.0	14.5

Data Source: U.S. Bureau of Labor Statistics Current Population Survey Geographic Profiles of Employment and Unemployment

California Employment Demographics	Year						U.S.
	2006	2007	2008	2009	2010	2011	2011
Percentage of civilian employment by industry							
Mining	0.2	0.1	0.1	0.1	0.2	0.2	0.6
Construction	8.6	8.5	7.6	6.4	6.2	6.2	6.5
Manufacturing: Durable goods	6.7	6.8	7.1	6.8	6.5	6.5	6.4
Manufacturing: Nondurable goods	3.6	3.6	3.9	3.5	3.5	3.3	3.8
Wholesale and retail trade	14.8	14.1	13.8	13.8	14.1	13.9	14.1
Transportation and utilities	4.5	4.7	5.0	4.7	4.7	4.9	5.1
Information	3.0	3.1	3.2	3.3	3.0	3.1	2.3
Financial activities	7.5	7.4	6.9	6.7	6.7	6.4	6.7
Professional and business services	12.5	12.7	12.1	12.2	12.4	13.5	11.3
Education and health services	18.6	19.5	19.9	21.1	21.3	20.9	22.8
Leisure and hospitality	9.0	8.5	9.0	9.6	9.5	9.2	9.1
Other services	5.2	4.9	5.4	5.4	5.4	5.0	4.8
Public administration	4.2	4.3	4.3	4.6	4.5	4.7	4.9
Agriculture	1.8	1.8	1.9	1.7	2.1	2.2	1.6

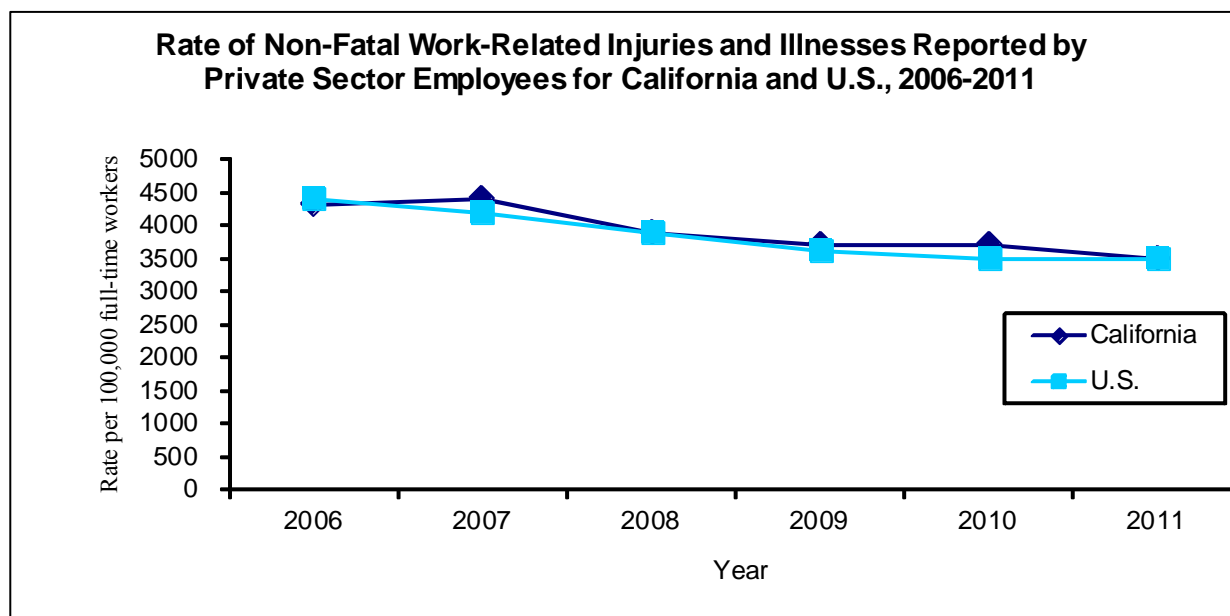
Data Source: U.S. Bureau of Labor Statistics Current Population Survey Geographic Profiles of Employment and Unemployment

California Employment Demographics	Year						U.S.
	2006	2007	2008	2009	2010	2011	2011
Percentage of civilian employment by occupation							
Management, business, and financial operations	15.9	15.6	16.0	16.0	15.7	15.7	15.4
Professional and related occupations	20.0	20.9	21.6	22.2	22.5	22.3	22.1
Service occupations	16.4	16.3	17.1	18.2	18.2	17.7	17.7
Sales and related occupations	12.5	12.1	11.4	11.5	11.5	11.2	11.0
Office and administrative support	13.1	12.9	12.6	12.5	12.6	12.7	12.7
Farming, forestry, fishing	1.3	1.3	1.3	1.1	1.4	1.5	0.7
Construction and extraction	6.8	6.8	5.8	4.9	4.7	4.8	5.1
Installation, maintenance, and repair	3.4	3.2	3.2	3.1	3.1	3.1	3.5
Production	5.2	5.3	5.5	5.0	5.1	5.3	5.8
Transportation, material moving	5.5	5.5	5.6	5.4	5.2	5.7	5.9

Data Source: U.S. Bureau of Labor Statistics Current Population Survey Geographic Profiles of Employment and Unemployment

## Non-Fatal Work-Related Injuries and Illnesses Reported by Employers

Thousands of workers are injured each day in the United States. The U.S. Bureau of Labor Statistics (BLS) Annual Survey of Occupational Injuries and Illnesses provides an estimate of non-fatal occupational injury and illness rates based on a nationwide survey of a sample of employer establishments. It is well recognized that the Annual Survey has a number of limitations and underestimates the full extent of the problem. Occupational diseases are difficult to identify and are not well documented in the Annual Survey. There is also evidence that injuries are underreported. In addition, the survey excludes some public sector workers, the self-employed, household workers, and workers on farms with fewer than 11 employees.



Rate and Number of Non-Fatal Work-Related Injuries and Illnesses Reported by Private Sector Employers for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Rate per 100,000 Full-Time Workers	4,300	4,400	3,900	3,700	3,700	3,500	3,500
Number of Injuries and Illnesses	473,700	477,000	411,700	365,400	351,000	335,600	2,986,500

Data Source: U.S. Bureau of Labor Statistics Annual Survey of Occupational Injuries and Illnesses

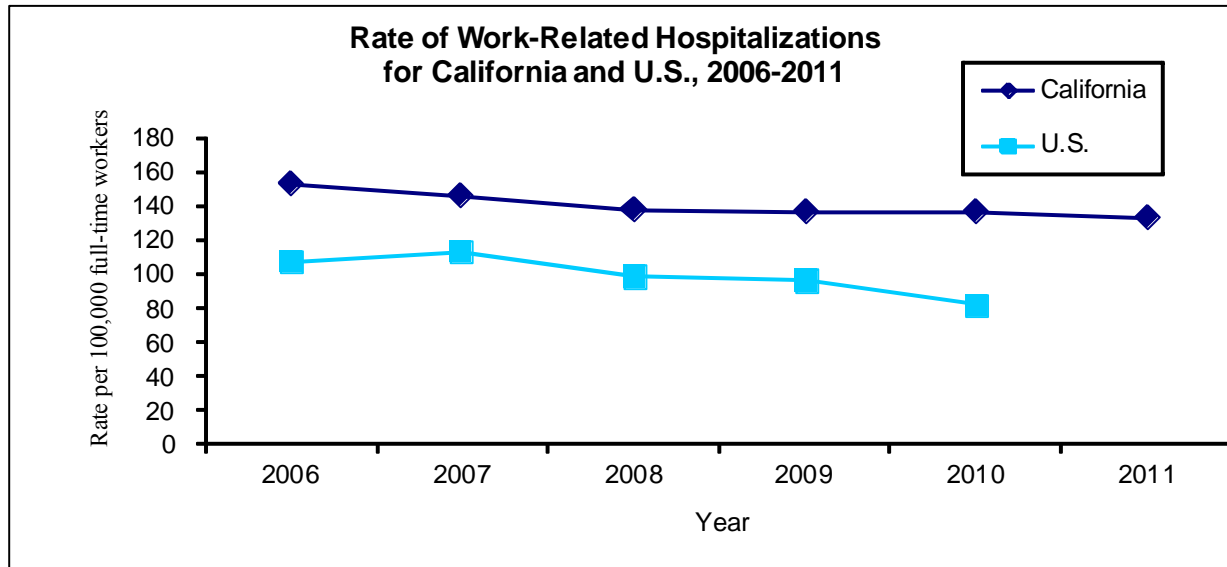


Rate and Number of Non-Fatal Work-Related Injuries and Illnesses Reported by Private Sector Employers for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Incidence Rate of Injuries and Illnesses Involving Days Away From Work per 100,000 Full-Time Workers	1,200	1,200	1,100	1,000	1,100	1,000	1,100
Number of Injuries and Illnesses Involving Days Away From Work	131,700	131,600	118,800	103,500	102,500	99,400	908,300
Number of Injuries and Illnesses Involving More Than 10 Days Away From Work	63,630	62,610	57,700	52,900	53,570	54,910	414,800

Data Source: U.S. Bureau of Labor Statistics Annual Survey of Occupational Injuries and Illnesses

## Work-Related Hospitalizations

Workers who are hospitalized due to injuries and illnesses caused by work suffer some of the most serious and costly adverse work-related health outcomes. Hospital discharge data from non-federal acute care hospitals are used to calculate the number of work-related hospitalizations per year by counting the individuals whose care was paid for by workers' compensation. Since many people with work-related illnesses and injuries do not file for workers' compensation, or are not covered by workers' compensation (e.g., self-employed individuals), the true numbers of hospitalizations due to a work-related injury or illness are likely to be undercounted. Most identified work-related hospitalizations are for treatment of musculoskeletal disorders or acute injuries, rather than illnesses.

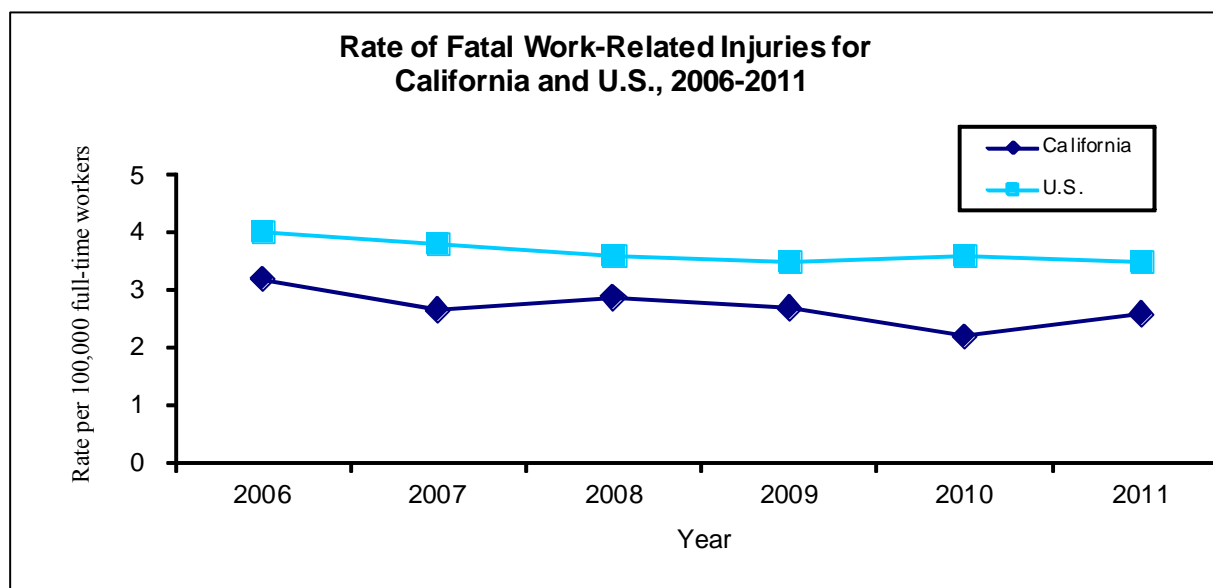


Rate and Number of Work-Related Hospitalizations for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Rate per 100,000 Full-Time Workers	152.5	146.1	138.0	135.7	137.1	133.3	N/A
Number of Hospitalizations	25,926	25,125	23,529	21,965	21,898	21,643	N/A

Data Sources: Office of Statewide Health Planning and Development Non-Public Hospital Discharge Data, U.S. Bureau of Labor Statistics Current Population Survey

## Fatal Work-Related Injuries

In 2011, over 4,600 U.S. workers died from injuries at work – approximately 13 workers per day. To identify risk factors for fatal injuries and better protect workers, data are gathered on the characteristics of workplace fatalities. The U.S. Bureau of Labor Statistics conducts the Census of Fatal Occupational Injuries (CFOI), using multiple data sources to count every work-related fatality. A fatal work-related injury is defined as an injury occurring at work that results in death. CFOI includes deaths from non-intentional injuries (falls, electrocutions, acute poisonings, motor vehicle crashes during travel for work (but not while commuting)), and intentional injuries (homicides, suicides) that occurred at work. Heart attacks and strokes are considered illnesses and excluded from CFOI. CFOI counts fatalities based on the state where the fatal incident occurred. Seven states, including California, have programs that track and investigate work-related fatalities; see [www.cdph.ca.gov/programs/ohb-face](http://www.cdph.ca.gov/programs/ohb-face).

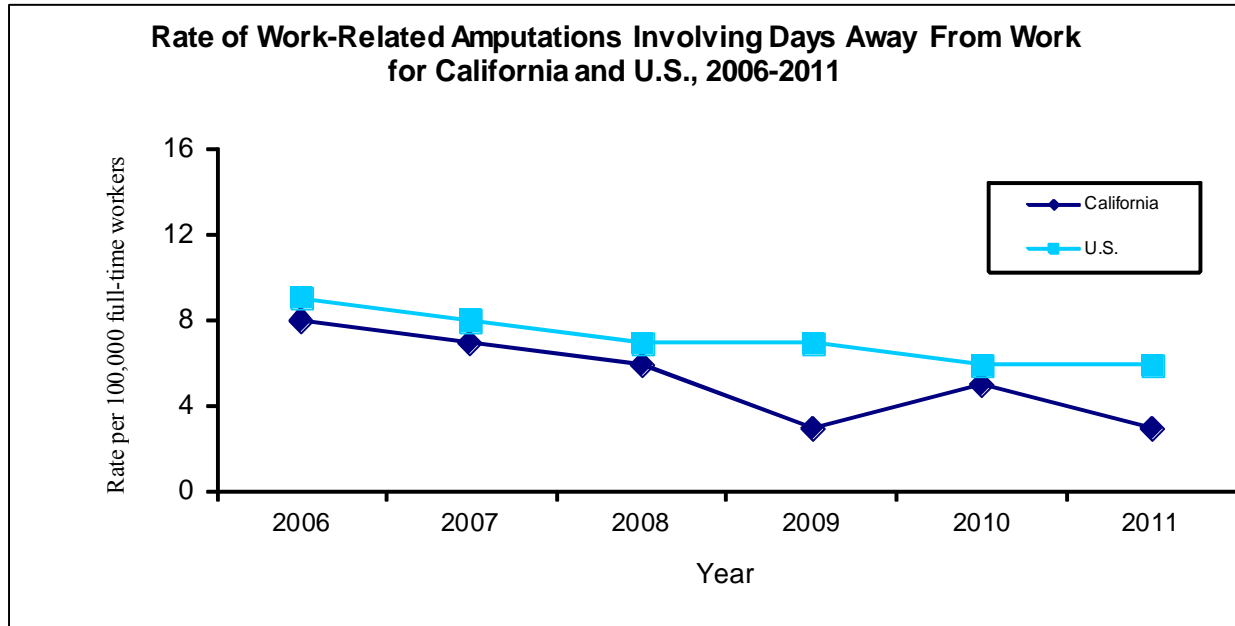


Rate and Number of Fatal Work-Related Injuries for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Rate per 100,000 Full-Time Workers	3.2	2.7	2.9	2.7	2.2	2.6	3.5
Number of Fatal Work-Related Injuries	537	461	465	409	326	390	4,693

Data Sources: U.S. Bureau of Labor Statistics Census of Fatal Occupational Injuries, U.S. Bureau of Labor Statistics Current Population Survey

## Amputations Reported by Employers

Amputations are severe injuries that can result in a worker being unable to perform his or her original job, resulting in reduced earning potential or permanent disability. An amputation is defined as full or partial loss of a protruding body part – an arm, hand, finger, leg, foot, toe, ear, or nose. The most common work-related amputation involves a finger. The U.S. Bureau of Labor Statistics Annual Survey of Occupational Injuries and Illnesses provides yearly estimates of the number and rate of work-related amputations that involve at least one day away from work. The Annual Survey may underestimate the number of amputations due to underreporting and exclusion of certain groups of workers. See also the Indicator “Amputations Identified in State Workers’ Compensation Systems”.

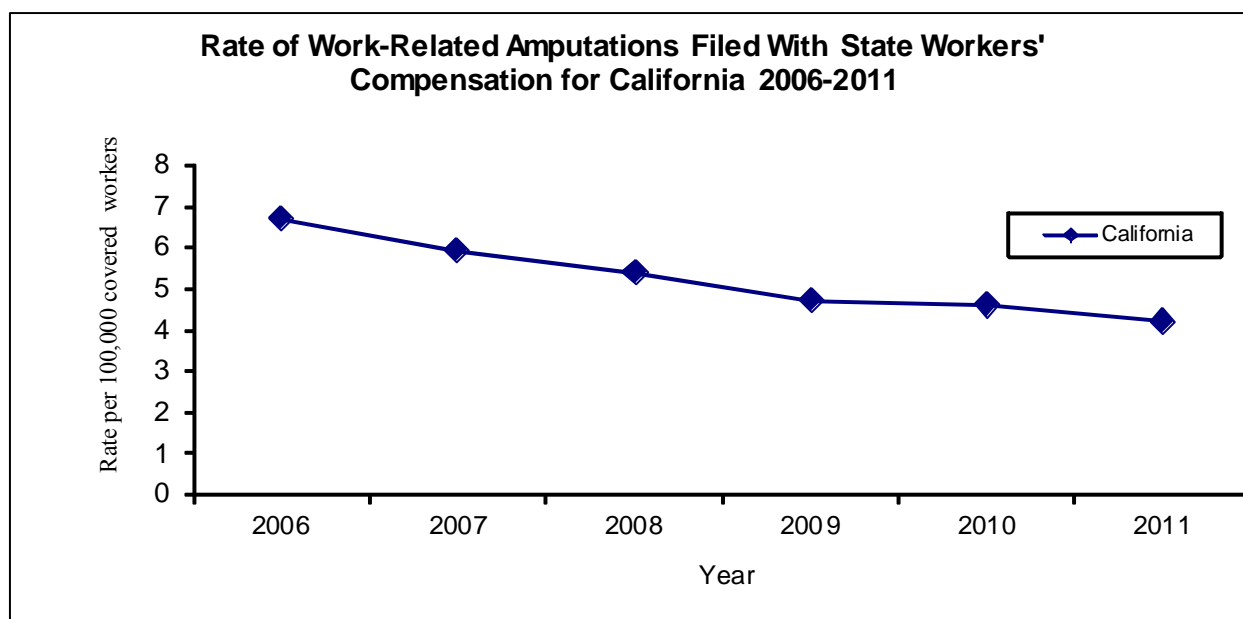


Rate and Number of Work-Related Amputations Involving Days Away From Work for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Rate per 100,000 Full-Time Workers	8.0	7.0	6.0	3.0	5.0	3.0	6.0
Number of Amputations With Days Away From Work	920	760	630	340	470	310	5,000

Data Source: U.S. Bureau of Labor Statistics Annual Survey of Occupational Injuries and Illnesses

# Amputations Identified in State Workers' Compensation Systems

Amputations are severe injuries that can result in a worker being unable to perform his or her original job, resulting in reduced earning potential or permanent disability. An amputation is defined as full or partial loss of a protruding body part – an arm, hand, finger, leg, foot, toe, ear, or nose. The most common work-related amputation involves a finger. The California Workers' Compensation Information System is used to identify claims filed for amputation injuries, including lost time and medical claims. The number of amputations may be undercounted, since some workers are not covered by workers' compensation, and some workers who are eligible do not file for workers' compensation. Because of differences among state workers' compensation systems, national data are not available for this Indicator. See also the Indicator "Amputations Reported by Employers".

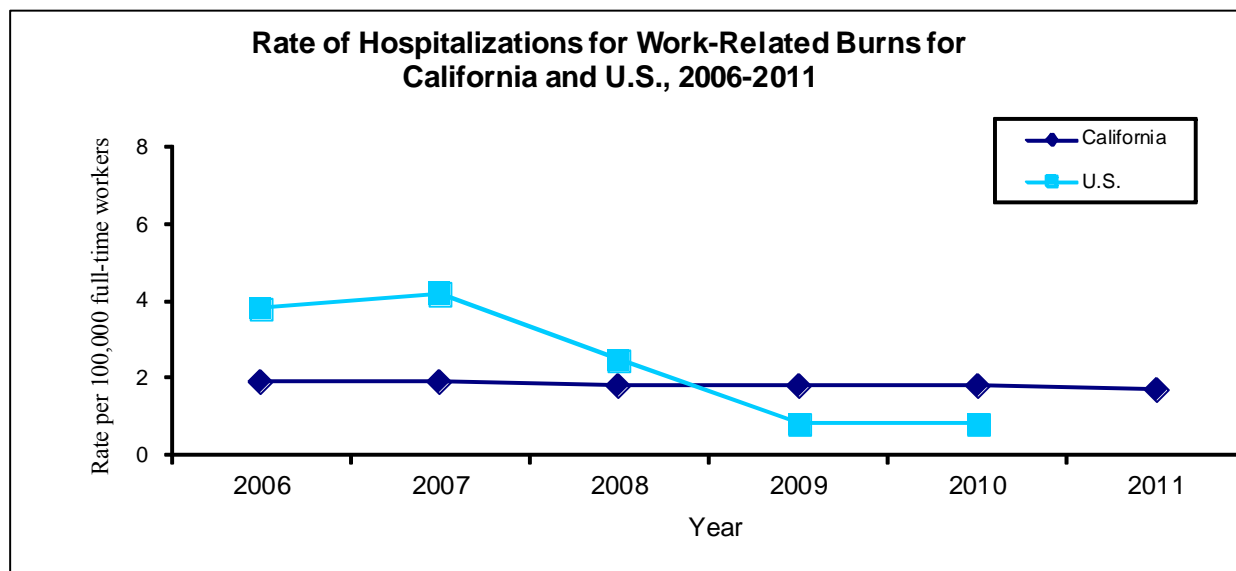


Rate and Number of Work-Related Amputations Filed with State Workers' Compensation for California, 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Rate per 100,000 Covered Workers	6.7	5.9	5.4	4.7	4.6	4.2	N/A
Number of Work-Related Amputations	1,022	915	821	671	646	596	N/A

Data Sources: California Workers' Compensation Information System, National Academy of Social Insurance (NASI)

## Hospitalizations for Work-Related Burns

Work-related burns can be painful and disabling injuries and are among the most expensive to treat. They are the most common cause of work-related hospitalization for young workers, who are employed in large numbers by the food service industry. Burns include injuries to tissues caused by contact with dry heat (fire), moist heat (steam), chemicals, electricity, friction, or radiation. Hospital discharge data from non-federal acute care hospitals are used to identify burn hospitalizations that are paid for by workers' compensation. The number of hospitalizations for work-related burns is likely to be undercounted, since not all workers are eligible for workers' compensation, and there may be inaccuracies in identifying payment source.

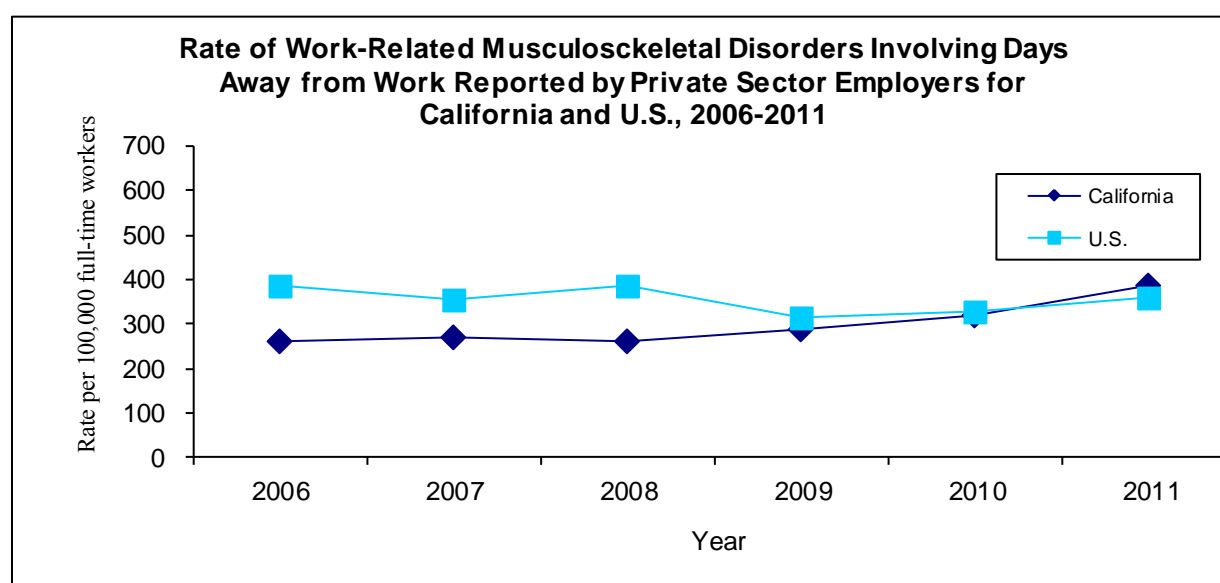


Rate and Number of Work-Related Burns for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Rate per 100,000 Full-Time Workers	1.9	1.9	1.8	1.8	1.8	1.7	N/A
Number of Hospitalizations for Work-Related Burns	319	324	314	288	287	274	N/A

Data Sources: Office of Statewide Health Planning and Development Non-public Hospital Discharge Data (see note page 2), U.S. Bureau of Labor Statistics Current Population Survey

## Musculoskeletal Disorders Reported by Employers

Work-related musculoskeletal disorders (MSDs) are some of the most common and costly work-related health problems. MSDs are injuries or disorders of muscles, tendons, nerves, ligaments, joints, or spinal discs that are caused or aggravated by work activities. These injuries can significantly impact the ability of workers to perform their job and affect quality of life both on and off the job. The majority of cases involve the back, neck, shoulders, or upper extremities. The U.S. Bureau of Labor Statistics Annual Survey of Occupational Injuries and Illnesses provides yearly estimates of work-related MSDs with days away from work. The Annual Survey may underestimate the true number of MSDs due to underreporting and exclusion of certain groups of workers. Furthermore, workers with MSDs may be treated by their personal health care provider and not report these injuries to their employer, or they may develop the disorder after leaving the employment responsible. See also the Indicators “Carpal Tunnel Syndrome Cases Identified in State Workers’ Compensation Systems” and “Hospitalizations for Work-Related Lower Back Disorders”.



Rate and Number of Work-Related Musculoskeletal Disorders Involving Days Away From Work Reported by Private Sector Employers for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Incidence Rate per 100,000 Full-Time Workers	262	268	262	286	317	385	359
Number of Work-Related MSDs	28,530	29,170	27,950	28,570	30,220	36,640	309,940

Data Source: U.S. Bureau of Labor Statistics Annual Survey of Occupational Injuries and Illnesses

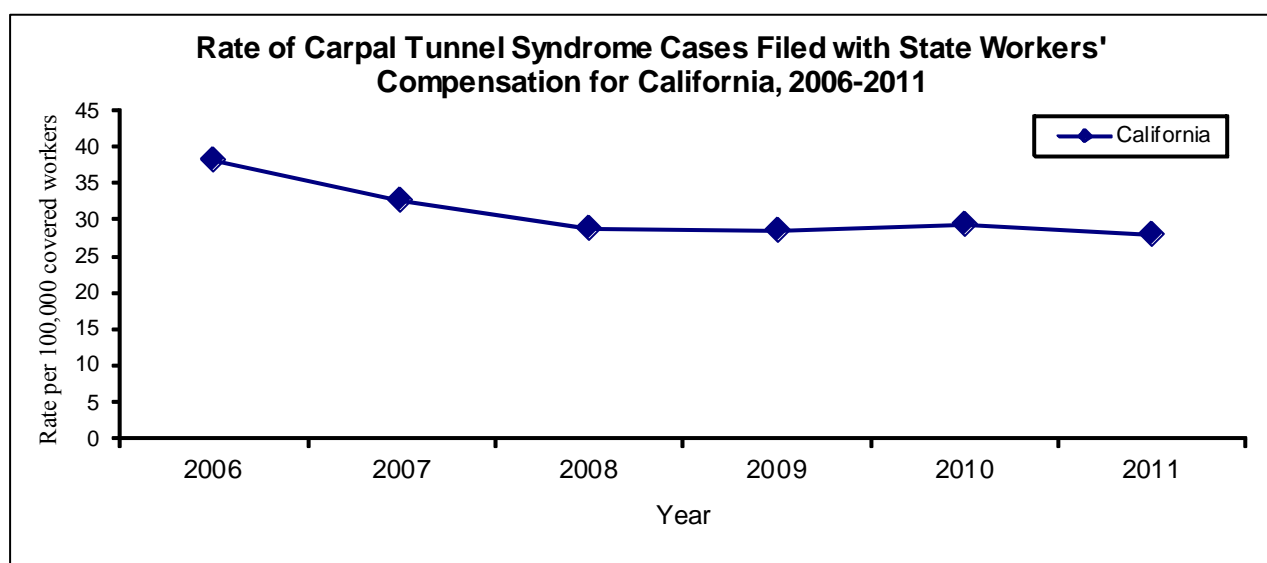
Rate and Number of Work-Related Musculoskeletal Disorders Involving Days Away From Work Reported by Private Sector Employers for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Incidence Rate of MSD Cases Involving the Neck, Shoulder, and Upper Extremities per 100,000 Full-Time Workers	64	80	69	79	106	126	107
Number of MSDs of the Neck, Shoulder, and Upper Extremities	7,080	8,620	7,420	7,840	10,210	12,080	92,120
Incidence Rate of Carpal Tunnel Syndrome Cases per 100,000 Full-Time Workers	9.0	15.0	9.0	9.0	11.0	11.0	10.0
Number of Carpal Tunnel Syndrome Cases	950	1,630	970	880	1000	1,070	8,290
Incidence Rate of MSD Cases Involving the Back per 100,000 Full- Time Workers	138	133	140	135	140	160	155
Number of MSD Cases Involving the Back	15,010	14,480	14,890	13,480	13,320	15,290	133,670

Data Source: U.S. Bureau of Labor Statistics Annual Survey of Occupational Injuries and Illnesses



## Carpal Tunnel Syndrome Cases Identified in State Workers' Compensation Systems

Carpal tunnel syndrome (CTS) is a painful and disabling condition that occurs when the median nerve through the wrist is compressed. Symptoms range from burning, tingling, or numbness in the fingers to difficulty gripping or holding objects. Workplace factors that may cause or aggravate CTS include direct trauma, repetitive forceful motions or awkward postures of the hands, and use of vibrating tools or equipment. Tracking work-related CTS can guide prevention efforts and identify contributing factors. The California Workers' Compensation Information System is used to identify claims filed for CTS, including lost time and medical claims. Since many workers do not file claims and some employees are excluded from workers' compensation, the number may be an undercount. Because of differences among state workers' compensation systems, national data are not available for this Indicator. See also the Indicator "Musculoskeletal Disorders Reported by Employers".

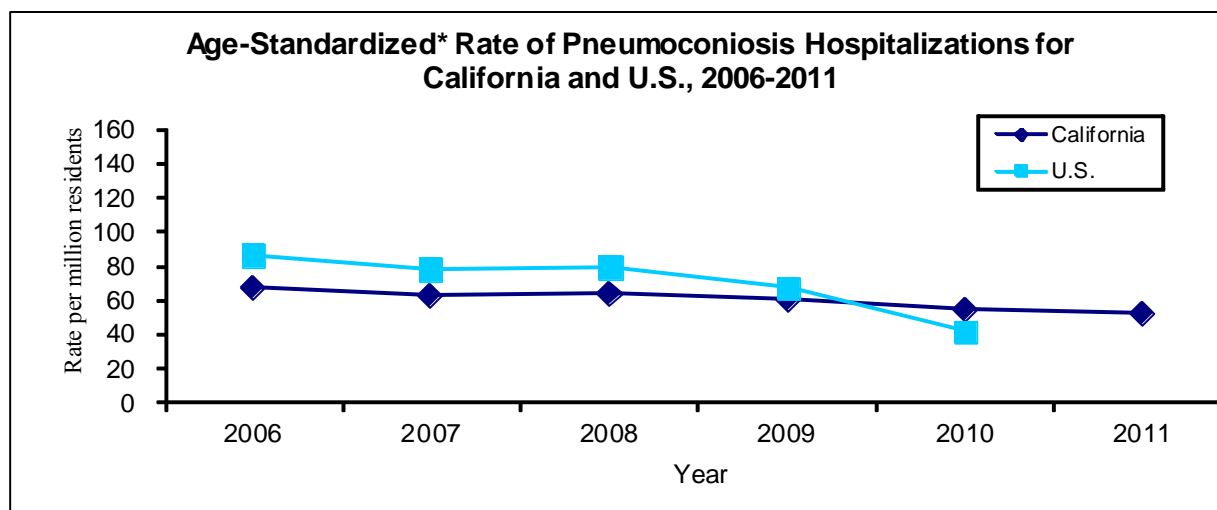


Rate and Number of Carpal Tunnel Syndrome Cases Filed with State Workers' Compensation for California, 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Rate per 100,000 Covered Workers	38.2	32.5	28.8	28.4	29.3	27.9	N/A
Number of CTS Cases Filed	5,824	4,998	4,385	4,085	4,148	3,993	N/A

Data Sources: California Workers' Compensation Information System, National Academy of Social Insurance (NASI)

## Pneumoconiosis Hospitalizations

Pneumoconiosis is a term for lung diseases caused by the inhalation of mineral dust, nearly always in a work setting. Most cases of pneumoconiosis develop only after many years of exposure to agents such as asbestos or coal dust; thus they are usually diagnosed in older individuals. These diseases are incurable and may ultimately result in death. Types of pneumoconioses include silicosis, asbestosis, and coal workers' pneumoconiosis. Hospital discharges with primary or contributing diagnoses of any of the types of pneumoconiosis are used to calculate the number of hospitalizations among persons aged 15 or older. These data probably underestimate pneumoconiosis cases because not all workers with that condition are hospitalized. Furthermore, patients may be hospitalized with pneumoconiosis in a state other than where they acquired it. Since pneumoconioses are generally diagnosed long after exposure to the causative agent, current hospitalizations may not reflect current occupational conditions. See also the Indicator "Pneumoconiosis Mortality".



Age-Standardized* Rate and Number of Pneumoconiosis Hospitalizations for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Age-Standardized* Rate of Total Pneumoconiosis Hospitalizations per Million Residents	67.1	63.1	64.2	61.0	55.2	53.2	N/A
Number of Pneumoconiosis Hospitalizations	1,684	1,629	1,680	1,627	1,507	1,492	N/A

\* Age-standardized rates provide an estimate of what the rates of each condition would be if the age distribution in California were the same as the age distribution in the U.S. as a whole; this allows comparison between states.

Data Sources: Office of Statewide Health Planning and Development Non-Public Hospital Discharge Data, U.S. Bureau of Labor Statistics Current Population Survey

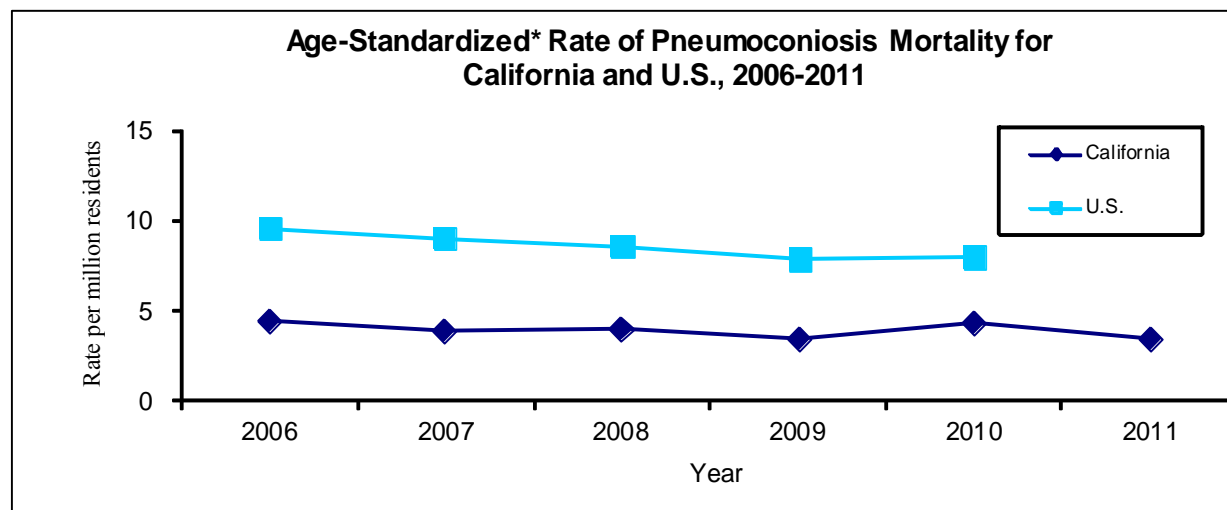
Age-Standardized* Rate and Number of Coal Worker Pneumoconiosis, Asbestosis, Silicosis, and Unspecified Pneumoconiosis Hospitalizations for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Age-Standardized* Rate of Coal Worker Pneumoconiosis Hospitalizations per Million Residents	3.9	3.6	3.3	3.1	2.2	2.5	N/A
Number of Coal Worker Pneumoconiosis Hospitalizations	99	99	90	84	63	73	N/A
Age-Standardized* Rate of Asbestosis Hospitalizations per Million Residents	58.6	55.5	56.1	53.5	49.7	46.4	N/A
Number of Asbestosis Hospitalizations	1,465	1,424	1,461	1,423	1,351	1,293	N/A
Age-Standardized* Rate of Silicosis Hospitalizations per Million Residents	3.2	2.4	3.3	2.4	1.7	2.6	N/A
Number of Silicosis Hospitalizations	84	63	88	65	48	78	N/A
Age-Standardized* Rate of Unspecified Pneumoconiosis Hospitalizations per Million Residents	1.3	1.6	1.5	2.0	1.6	1.7	N/A
Number of Unspecified Pneumoconiosis Hospitalizations	36	43	41	55	45	48	N/A

\* Age-standardized rates provide an estimate of what the rates of each condition would be if the age distribution in California were the same as the age distribution in the U.S. as a whole; this allows comparison between states.

Data Sources: Office of Statewide Health Planning and Development Non-Public Hospital Discharge Data, U.S. Bureau of Labor Statistics Current Population Survey

# Pneumoconiosis Mortality

Pneumoconiosis is term for lung diseases caused by the inhalation of mineral dust, nearly always in a work setting. Most cases of pneumoconiosis develop only after many years of exposure to agents such as asbestos or coal dust; thus they are usually diagnosed in older individuals. These diseases are incurable and may ultimately result in death. Types of pneumoconioses include silicosis, asbestosis, and coal workers' pneumoconiosis. Death certificates are used to estimate the number of deaths due to pneumoconiosis or with pneumoconiosis as a contributing factor. The causes of death on death certificates may be recorded or coded inaccurately or incompletely, resulting in an underestimate of mortality due to pneumoconiosis. In addition, workers with these conditions may remain undiagnosed or die of other causes. See also the Indicator "Pneumoconiosis Hospitalizations".



Age-Standardized Mortality Rate and Number of Pneumoconiosis Deaths for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Age-Standardized* Rate of Total Pneumoconiosis Mortality per Million Residents	5.1	4.2	4.0	3.4	4.3	3.4	N/A
Number of Pneumoconiosis Deaths	129	110	115	91	119	95	N/A

\* Age-standardized rates provide an estimate of what the rates of each condition would be if the age distribution in California were the same as the age distribution in the U.S. as a whole; this allows comparison between states.

Data Sources: California Department of Public Health Vital Records, U.S. Census Bureau Population Estimates

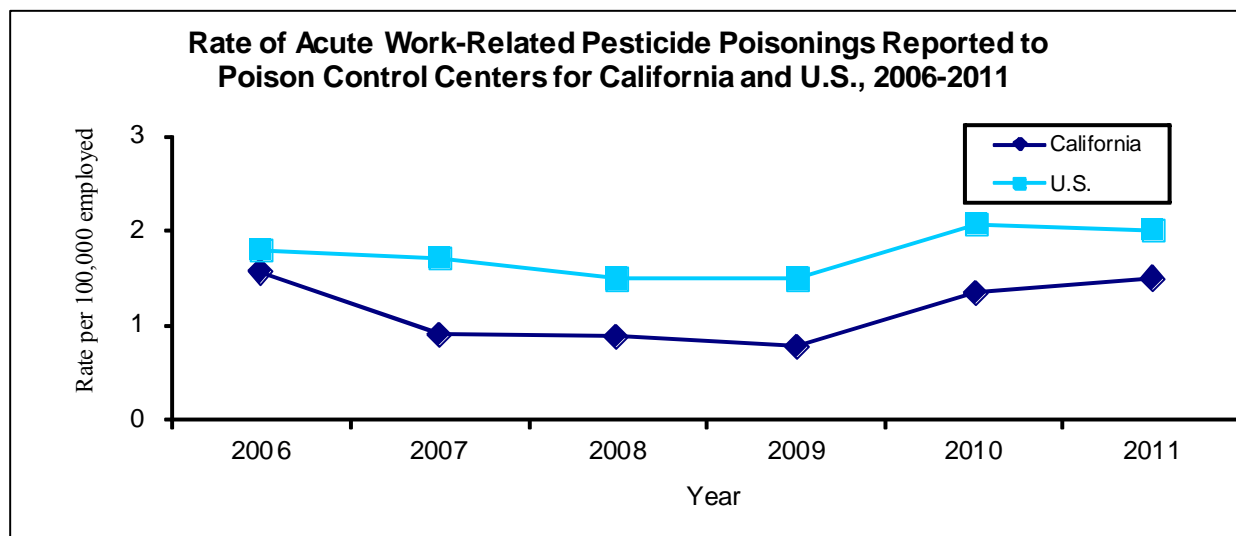
Rate and Number of Coal Worker Pneumoconiosis, Asbestosis, Silicosis, and Unspecified Pneumoconiosis Deaths for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Age-Standardized* Rate of Coal Worker Pneumoconiosis Mortality per Million Residents	0.3	0.2	N/A	0.2	0.4	0.3	N/A
Number of Coal Worker Pneumoconiosis Deaths	8	6	<5	6	12	9	N/A
Age-Standardized* Rate of Asbestosis Mortality per Million Residents	4.5	3.4	3.6	3.1	3.8	2.8	N/A
Number of Asbestosis Deaths	113	97	103	81	102	79	N/A
Age-Standardized* Rate of Silicosis Mortality per Million Residents	N/A	0.2	0.2	N/A	N/A	N/A	N/A
Number of Silicosis Deaths	<5	6	5	<5	<5	<5	N/A
Age-Standardized* Rate of Unspecified Pneumoconiosis Mortality per Million Residents	0.2	N/A	0.2	N/A	N/A	N/A	N/A
Number of Unspecified Pneumoconiosis Deaths	5	<5	5	<5	<5	<5	N/A

\* Age-standardized rates provide an estimate of what the rates of each condition would be if the age distribution in California were the same as the age distribution in the U.S. as a whole; this allows comparison between states.

Data Sources: California Department of Public Health Vital Records, U.S. Census Bureau Population Estimates

## Acute Work-Related Pesticide Poisonings Reported to Poison Control Centers

According to the U.S. EPA, between 20,000 and 40,000 workers are poisoned by pesticides each year. Agricultural workers and pesticide applicators are at greatest risk for the more severe pesticide poisonings. Some of these cases are reported to poison control centers (PCCs), which gather information about the exposed worker and the pesticide. Calls to PCCs have been estimated to capture only approximately 10% of acute work-related pesticide illness cases. Twelve states, including California, have active programs that track acute occupational pesticide illness using additional data sources; see <http://www.cdph.ca.gov/programs/ohsep/Pages/Pesticide.aspx>. These data do not reflect adverse health effects in workers related to chronic, long-term exposure to pesticides.



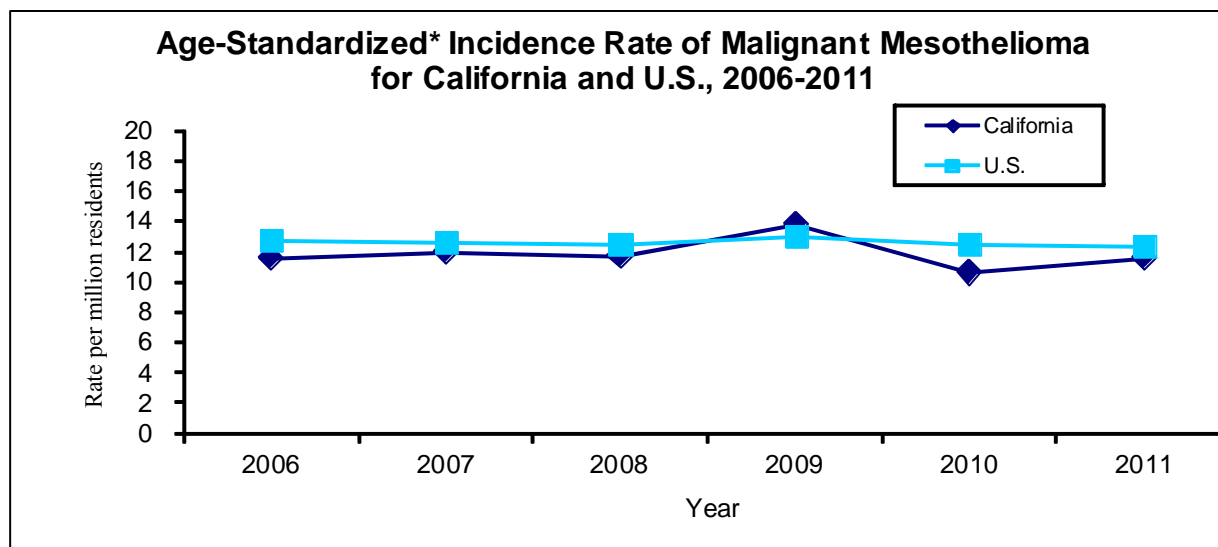
Rate and Number of Acute Work-Related Pesticide Poisonings Reported to Poison Control Centers for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010*	2011*	2011
Rate per 100,000 Employed	1.6	0.9	0.9	0.8	1.4	1.5	2.0
Number of Work-Related Pesticide Poisonings	264	155	151	128	217	244	2,833

\*Data before 2010 should not be compared with data from 2010 and later. Unlike the later data the pre-2010 data do not include cases involving intentional misuse of a pesticide, and those exposed to one of the following pesticide types: disinfectant industrial cleaner; bromine water/shock treatment; chlorine water/shock treatment; other type of insecticide/pesticide; or unknown type of insecticide/pesticide.

Data Source: American Association of Poison Control Centers (AAPCC), U.S. Bureau of Labor Statistics Current Population Survey

## Incidence of Malignant Mesothelioma

Mesothelioma is a rare but highly fatal cancer of the thin membranes surrounding the chest cavity or abdominal cavity. The only well-established risk factor for mesothelioma is exposure to asbestos fibers. Prior asbestos exposure, primarily in the workplace, has been reported in 62 to 85 percent of all mesothelioma cases. Mesothelioma is a disease of long latency, typically with 20-40 years between exposure and onset of disease. The California Cancer Registry collects data on newly diagnosed cancer cases. Since some cases of mesothelioma are not due to work-related exposure, and Cancer Registry completeness varies, these data may over- or underestimate the true incidence of work-related malignant mesothelioma.



Age-Standardized* Incidence Rate and Number of Malignant Mesothelioma Cases for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Age-Standardized* Rate of Malignant Mesothelioma per Million Residents	11.5	11.9	11.7	13.8	10.6	11.5	12.4
Number of Malignant Mesothelioma Cases	297	309	311	373	292	332	3108

\* Age-standardized rates provide an estimate of what the rates of each condition would be if the age distribution in California were the same as the age distribution in the U.S. as a whole; this allows comparison between states.

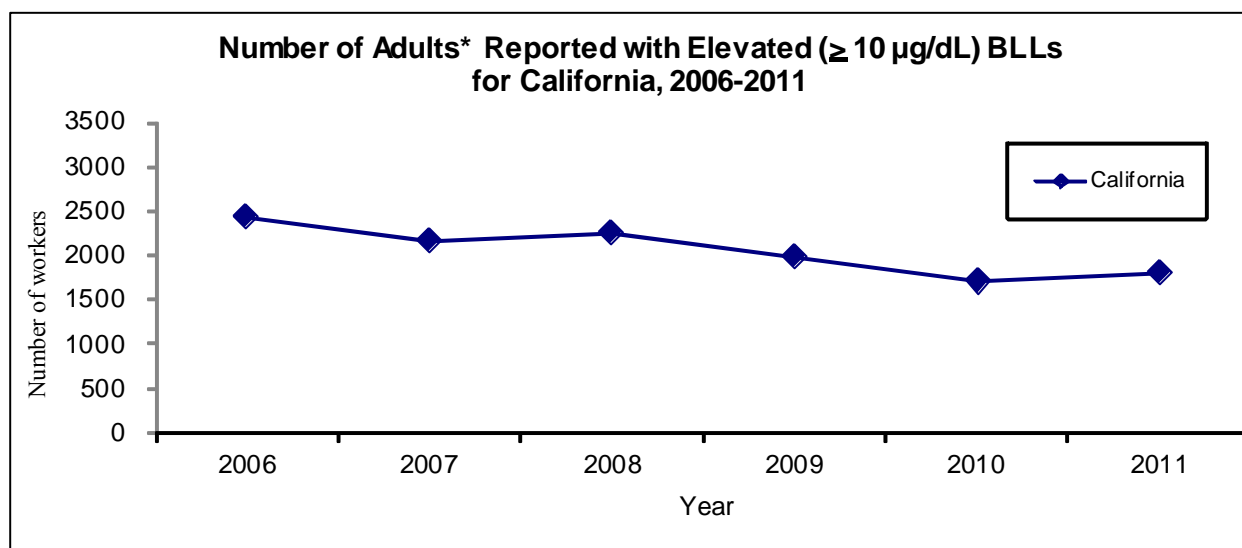
Data Sources: State of California Cancer Registry, U.S. Census Bureau Population Estimates

## Elevated Blood Lead Levels Among Adults

Despite being a well-known and preventable illness, lead poisoning remains a significant problem for many adults in California. Most lead exposure in adults is from the workplace. Lead exposure at work occurs in a variety of industries, and overexposure to lead can cause anemia, nervous system or kidney damage, high blood pressure, decreased fertility, and miscarriage. Lead from work can also be brought home on a worker's clothing or shoes, and can cause health damage to family members.

The blood lead level (BLL) is the best biological indicator of recent lead exposure, and most states require laboratories to report BLL results. A BLL of 10 ug/dL is considered “elevated,” and the Healthy People 2020 goal is to reduce the proportion of adults with BLLs above this level. Cal/OSHA requires that employers regularly monitor the BLLs of lead-exposed workers. New information about health effects at lower BLLs shows that workers are not adequately protected under the current OSHA standards, which are based on health information that is over 30 years old.

The true number of Californians with elevated BLLs is likely even greater than reported, as not all employers in lead-using workplaces provide the required BLL testing. Approximately 34 states, including California, have active programs that track adult BLLs; see [www.cdph.ca.gov/programs/OLPPP](http://www.cdph.ca.gov/programs/OLPPP).



\* Because determining whether BLLs are work-related can be difficult, this Indicator reports BLLs in all adults, not just workers.

Data Sources: State of California Occupational Lead Poisoning Prevention Program (OLPPP), U.S. Bureau of Labor Statistics Current Population Survey



Rate and Number of Elevated Blood Lead Levels Among Adults for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Number of Residents with Elevated Blood Lead Levels $\geq 10$ $\mu\text{g/dL}$	2,435	2,157	2,244	1,982	1,716	1,787	N/A
Prevalence Rate of Elevated Blood Lead Levels $\geq 10$ $\mu\text{g/dL}$ Among Adults per 100,000 employed	14.4	12.5	13.2	12.2	10.7	11.0	N/A
Number of Residents with Elevated Blood Lead Levels $\geq 25$ $\mu\text{g/dL}$	367	350	370	318	236	228	N/A
Prevalence Rate of Elevated Blood Lead Levels $\geq 25$ $\mu\text{g/dL}$ Among Adults per 100,000 employed	2.2	2.0	2.2	2.0	1.5	1.4	N/A

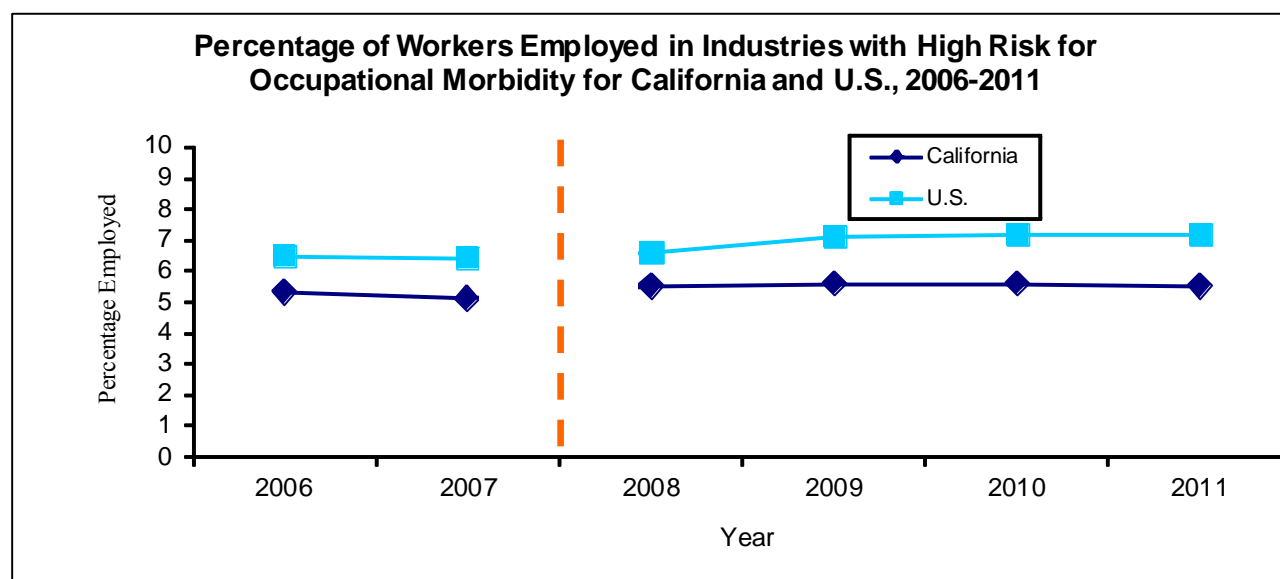
Data Sources: State of California Occupational Lead Poisoning Prevention Program (OLPPP),  
U.S. Bureau of Labor Statistics Current Population Survey

Rate and Number of Elevated Blood Lead Levels Among Adults for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Number of Residents with Elevated Blood Lead Levels $\geq 40$ $\mu\text{g/dL}$	58	45	69	45	36	34	N/A
Prevalence Rate of Elevated Blood Lead Levels $\geq 40$ $\mu\text{g/dL}$ Among Adults per 100,000 employed	0.3	0.3	0.4	0.3	0.2	0.2	N/A

Data Sources: State of California Occupational Lead Poisoning Prevention Program (OLPPP),  
U.S. Bureau of Labor Statistics Current Population Survey

## Workers Employed in Industries with High Risk for Occupational Morbidity

Workers in certain industries (such as meat packing plants, foundries, and nursing homes) sustain non-fatal injuries and illnesses (morbidity) at much higher rates than the overall workforce. The proportion of the workforce employed in these industries varies by state. This variation can help explain differences in injury and illness rates among states. Industries with injury and illness rates more than twice the national rate for all private-sector industries are counted based on the U.S. Bureau of Labor Statistics Annual Survey of Occupational Injuries and Illnesses (these high risk industries are updated every five years). The U.S. Census Bureau County Business Patterns is used to count the number of persons employed in the high risk industries. This Indicator reports the percentage of all employed persons 16 and older who work in the high risk industries. The high risk industries identified for the U.S. overall may differ from the highest risk industries in a given state.



Data Sources: U.S. Bureau of Labor Statistics Annual Survey of Occupational Injuries and Illnesses, U.S. Census Bureau County Business Patterns

Percentage and Number of Workers Employed in Industries With High Risk for Morbidity for California and U.S., 2006-2011							
Year	California						U.S.
	2006 <sup>1</sup>	2007 <sup>1</sup>	2008 <sup>2</sup>	2009 <sup>2</sup>	2010 <sup>2</sup>	2011 <sup>2</sup>	2011 <sup>2</sup>
Percentage of Workers Employed in Industries With High Risk for Morbidity	5.3	5.1	5.5	5.6	5.6	5.6	7.2
Number of Workers Employed in Industries With High Risk for Morbidity	711,603	703,543	758,719	714,562	698,383	707,002	8,159,146

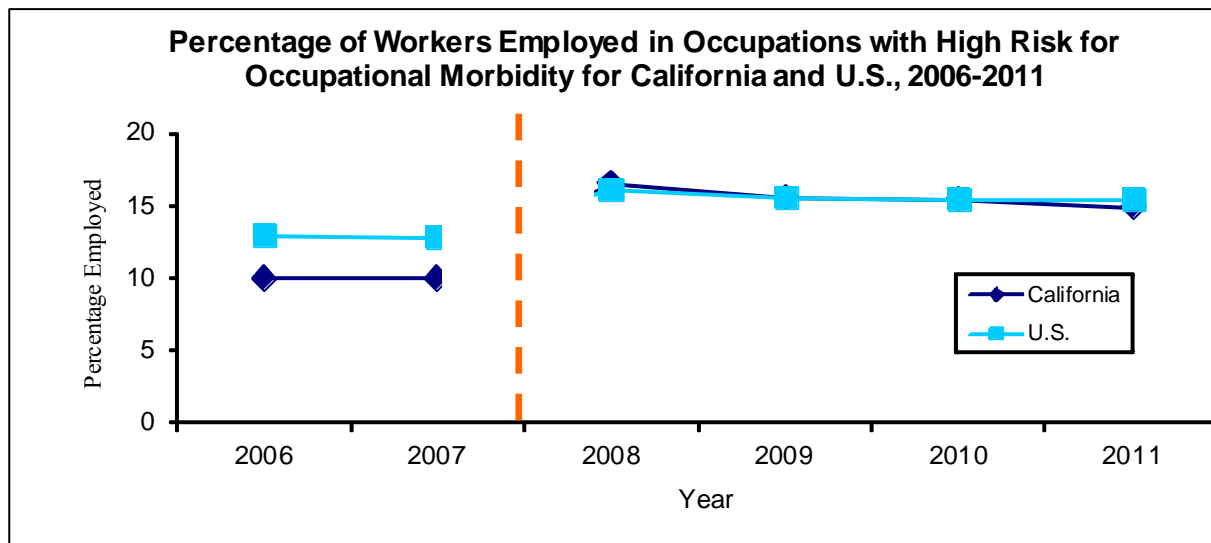
<sup>1</sup>Technical note: The 37 high risk industries selected for this Indicator had injury and illness rates greater than 10 cases per 100 full-time workers - more than twice the overall national injury and illness rates, as estimated by the U.S. Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses, 2003.

<sup>2</sup>Technical note: The 55 high risk industries selected for this Indicator had injury and illness rates greater than 7.8 cases per 100 full-time workers - more than twice the overall national injury and illness rates, as estimated by the U.S. Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses, 2008.

Data Sources: U.S. Bureau of Labor Statistics Annual Survey of Occupational Injuries and Illnesses, U.S. Census Bureau County Business Patterns

## Workers Employed in Occupations with High Risk for Occupational Morbidity

Workers in certain occupations (such as machine operators, truck drivers, and construction laborers) sustain non-fatal injuries and illnesses (morbidity) at much higher rates than the overall workforce. The proportion of the workforce employed in these occupations varies by state. This variation can help explain differences in injury and illness rates among states. Occupations with injury and illness rates more than 2.5 times the national rate for all private-sector occupations are counted based on the U.S. Bureau of Labor Statistics (BLS) Annual Survey of Occupational Injuries and Illnesses (these high risk occupations are updated every five years). The BLS Current Population Survey is used to count the number of people employed in the high risk occupations. This Indicator reports the percentage of all employed persons 16 and older who work in the high risk occupations. The high risk occupations identified for the U.S. overall may differ from the highest risk occupations in a given state.



Data Sources: U.S. Bureau of Labor Statistics Annual Survey of Occupational Injuries and Illnesses, U.S. Bureau of Labor Statistics Current Population Survey

Percentage and Number of Workers Employed in Occupations With High Risk for Morbidity for California and U.S., 2006-2011							
Year	California						U.S.
	2006 <sup>1</sup>	2007 <sup>1</sup>	2008 <sup>2</sup>	2009 <sup>2</sup>	2010 <sup>2</sup>	2011 <sup>2</sup>	2011 <sup>2</sup>
Percentage of Workers Employed in Occupations With High Risk for Morbidity	10.1	10.1	16.5	15.6	15.5	14.9	15.4
Number of Workers Employed in Occupations With High Risk for Morbidity	1,705,230	1,737,065	2,063,163	1,848,720	1,740,331	1,723,133	16,854,012

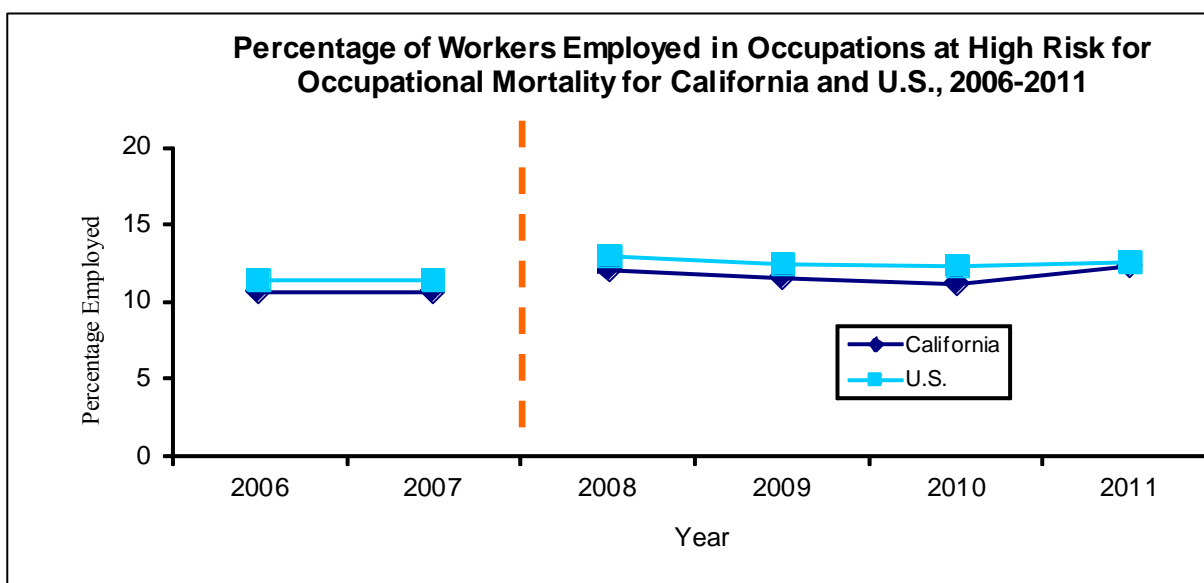
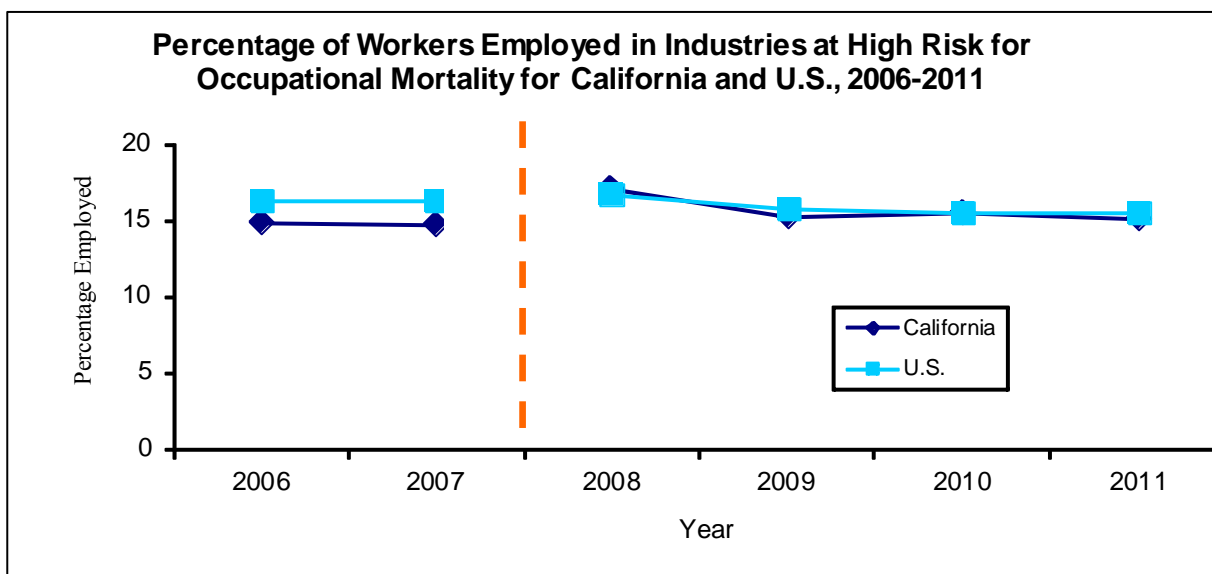
<sup>1</sup>Technical note: The 83 high risk occupations selected for this Indicator had injury and illness rates that exceed 2.6 cases per 100 full-time workers – twice the overall national injury and illness rates, as estimated by the U.S. Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses, 2003.

<sup>2</sup>Technical note: The 61 high risk occupations selected for this Indicator had injury and illness rates that exceed 2.2 cases per 100 full-time workers – twice the overall national injury and illness rates, as estimated by the U.S. Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses, 2008.

Data Sources: U.S. Bureau of Labor Statistics Annual Survey of Occupational Injuries and Illnesses, U.S. Bureau of Labor Statistics Current Population Survey

## Percentage of Workers Employed in Industries and Occupations at High Risk for Occupational Mortality

Workers in certain industries and occupations sustain fatal injuries (mortality) at much higher rates than the overall workforce. The proportion of the workforce employed in these industries and occupations varies by state. This variation can help explain differences in injury mortality rates among states. Industries and occupations with high risk for occupational mortality (death) are identified from data reported to the Census of Fatal Occupational Injuries, and are updated every five years. Industries with high risk for mortality include logging, construction, and taxi service; occupations include agricultural work and motor vehicle operators. This Indicator reports the percentage of all employed persons 16 and older who work in the high risk industries and occupations. The high risk occupations identified for the U.S. overall may differ from the highest risk occupations in a given state.



Data Sources: U.S. Bureau of Labor Statistics Annual Survey of Occupational Injuries and Illnesses, U.S. Census Bureau Current Population Survey

Percentage and Number of Workers Employed in Industries and Occupations With High Risk for Mortality for California and U.S., 2006-2011							
Year	California						U.S.
	2006 <sup>1</sup>	2007 <sup>1</sup>	2008 <sup>2</sup>	2009 <sup>2</sup>	2010 <sup>2</sup>	2011 <sup>2</sup>	2011 <sup>2</sup>
Percentage of Workers Employed in Industries With High Risk for Mortality	14.8	14.7	17.1	15.3	15.5	15.1	15.5
Number of Workers Employed in Industries With High Risk for Mortality	2,494,970	2,537,260	2,498,429	2,124,625	2,104,412	2,216,492	18,426,657
Percentage of Workers Employed in Occupations With High Risk for Mortality	10.6	10.6	12.1	11.5	11.2	12.3	12.5
Number of Workers Employed in Occupations With High Risk for Mortality	1,782,899	1,819,352	1,766,964	1,599,795	1,522,748	1,801,602	14,868,463

<sup>1</sup>Technical note: The 30 industries selected for this Indicator had fatality rates greater than 9.5 per 100,000 workers in 2003 – more than double the national rate, which was 4.0 per 100,000 workers – according to the U.S. Bureau of Labor Statistics Census of Fatal Occupational Injuries. The 57 occupations selected had fatality rates greater than 9.5 per 100,000 workers.

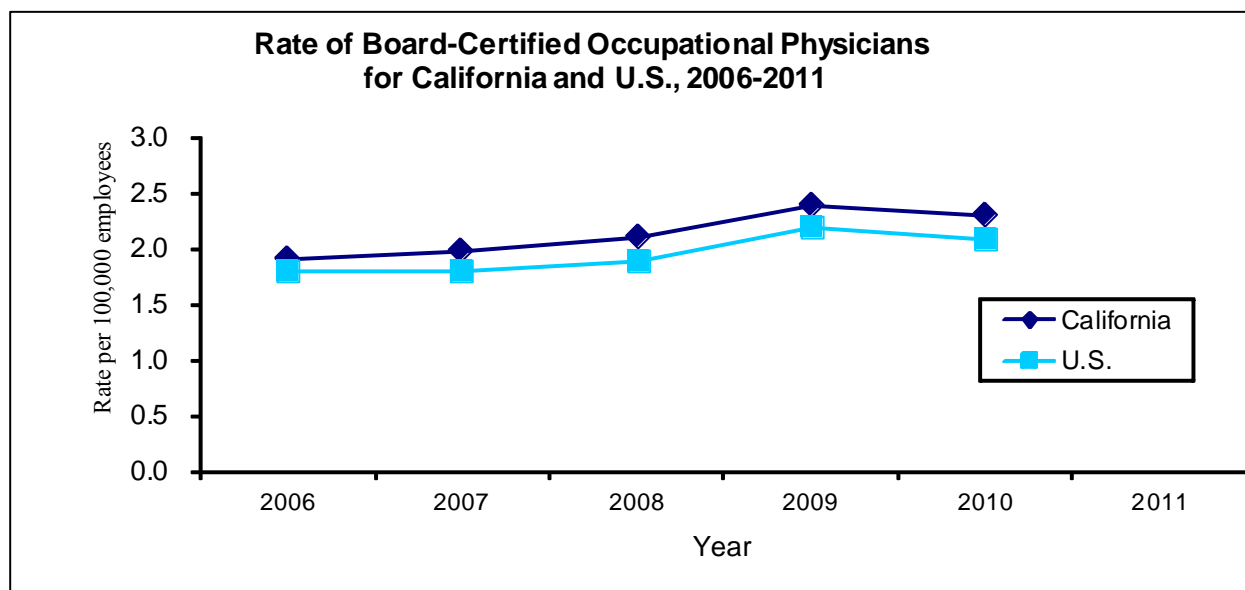
<sup>2</sup>Technical note: The 40 industries selected for this Indicator have fatality rates greater than 7.5 deaths per 100,000 workers or higher, and employed approximately 20.6 million workers (16.6% of the private sector employment), but account for 64% of the occupational fatalities in 2008. The 62 occupations selected for this Indicator have fatality rates of 7.5 deaths per 100,000 workers or higher. These occupations account for approximately 16.1 million workers in the U.S. (13% of the private sector employment), but 66% of the occupational fatalities in 2008.

Data Sources: U.S. Bureau of Labor Statistics Annual Survey of Occupational Injuries and Illnesses, U.S. Census Bureau Current Population Survey



## Occupational Safety and Health Professionals

Occupational safety and health professionals share the common goal of identifying hazardous conditions or practices in the workplace and helping employers reduce the risks imposed by such conditions. It is important to assess the availability of such personnel to implement services to prevent work-related injury and illness. The number of these professionals can be estimated by the number of board-certified professionals in occupational medicine and nursing, industrial hygiene, and safety and by the membership of related professional associations. These figures do not account for other occupational health specialties such as fire prevention and ergonomics, and some of the individuals counted may not work full time in occupational safety and health or may perform only research and not provide services to workers. The rate of occupational safety and health professionals per 100,000 employed persons is also calculated.



Data Sources: American Board of Preventive Medicine, Annual roster of members of ACOEM, American Board of Occupational Health Nurses Directory, AAOHN member directory, American Board of Industrial Hygiene, AIHA member directory, BCSP member directory, ASSE member directory, U.S. Bureau of Labor Statistics Current Population Survey

Rate and Number of Board-Certified Occupational Safety and Health Professionals for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Rate of Board-Certified Occupational Physicians per 100,000 Employees	1.9	2.0	2.1	2.4	2.3	N/A	N/A
Number of Board-Certified Occupational Physicians	324	342	362	387	374	N/A	N/A
Rate of ACOEM <sup>1</sup> Membership per 100,000 employees	2.9	2.6	2.7	2.7	2.6	N/A	N/A
Number of ACOEM <sup>1</sup> Members	491	454	455	440	421	N/A	N/A

<sup>1</sup> American College of Occupational and Environmental Medicine

Data Sources: American Board of Preventive Medicine, Annual roster of members of ACOEM, American Board of Occupational Health Nurses Directory, AAOHN member directory, American Board of Industrial Hygiene, AIHA member directory, BCSP member directory, ASSE member directory, U.S. Bureau of Labor Statistics Current Population Survey

Rate and Number of Board-Certified Occupational Safety and Health Professionals for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Rate of Board-Certified Occupational Health Registered Nurses per 100,000 Employees	2.9	2.3	2.3	2.4	2.4	N/A	N/A
Number of Board-Certified Occupational Health Registered Nurses	491	392	389	394	382	N/A	N/A
Rate of AAOHN <sup>1</sup> Membership per 100,000 Employees	3.1	2.9	2.8	2.6	N/A	N/A	N/A
Number of AAOHN <sup>1</sup> Members	518	495	470	414	N/A	N/A	N/A

<sup>1</sup> American Association of Occupational Health Nurses

Data Sources: American Board of Preventive Medicine, Annual roster of members of ACOEM, American Board of Occupational Health Nurses Directory, AAOHN member directory, American Board of Industrial Hygiene, AIHA member directory, BCSP member directory, ASSE member directory, U.S. Bureau of Labor Statistics Current Population Survey

Rate and Number of Board-Certified Occupational Safety and Health Professionals for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Rate of Board-Certified Industrial Hygienists per 100,000 Employees	5.1	4.9	5.0	5.5	5.5	N/A	N/A
Number of Board-Certified Industrial Hygienists	859	853	859	883	876	N/A	N/A
Rate of AIHA <sup>1</sup> Membership per 100,000 employees	7.0	6.1	5.7	5.8	5.3	N/A	N/A
Number of AIHA <sup>1</sup> Members	1,181	1,054	974	947	853	N/A	N/A

<sup>1</sup>American Industrial Hygiene Association

Data Sources: American Board of Preventive Medicine, Annual roster of members of ACOEM, American Board of Occupational Health Nurses Directory, AAOHN member directory, American Board of Industrial Hygiene, AIHA member directory, BCSP member directory, ASSE member directory, U.S. Bureau of Labor Statistics Current Population Survey

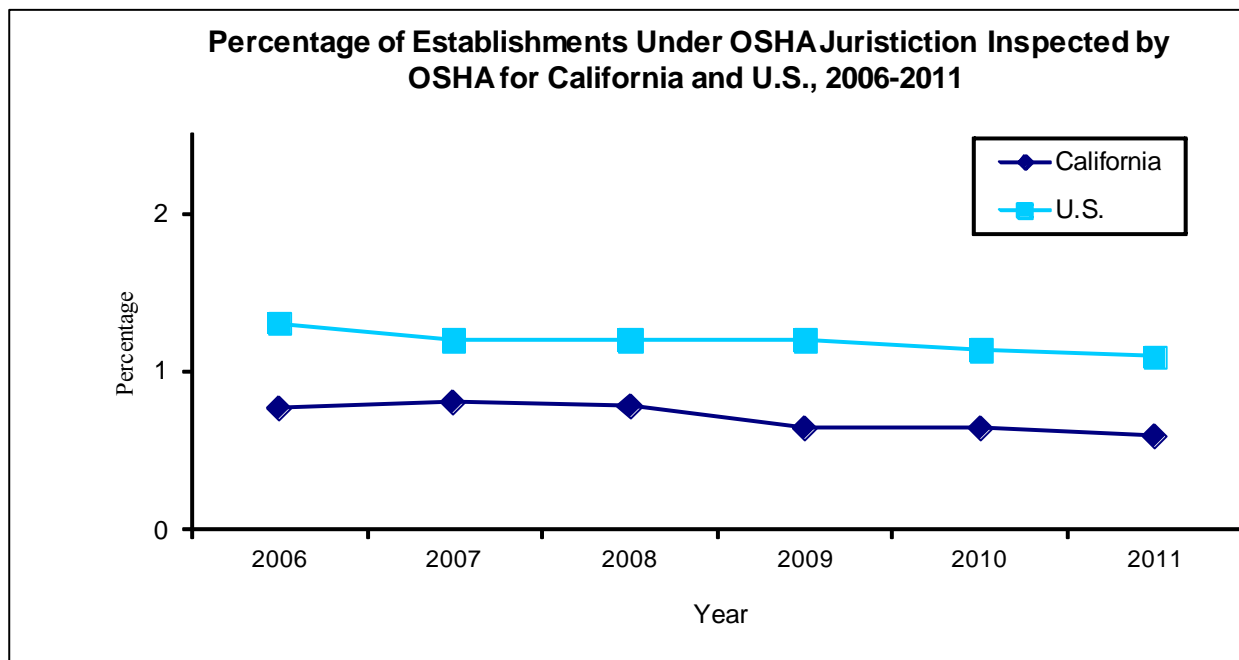
Rate and Number of Board-Certified Occupational Safety and Health Professionals for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Rate of Board-Certified Safety Professionals per 100,000 Employees	6.1	6.1	6.2	6.8	7.1	N/A	N/A
Number of Board-Certified Safety Professionals	1,034	1,045	1,049	1,099	1,135	N/A	N/A
Rate of ASSE <sup>1</sup> Membership per 100,000 Employees	17.6	17.0	17.7	16.9	17.8	N/A	N/A
Number of ASSE <sup>1</sup> Members	2,979	2,924	3,016	2,739	2,838	N/A	N/A

<sup>1</sup>American Society of Safety Engineers

Data Sources: American Board of Preventive Medicine, Annual roster of members of the ACOEM, American Board of Occupational Health Nurses Directory, AAOHN member directory, American Board of Industrial Hygiene, AIHA member directory, BCSP member directory, ASSE member directory, U.S. Bureau of Labor Statistics Current Population Survey

## OSHA Enforcement Activities

In California, the Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA), enforces health and safety standards in most workplaces, while the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) covers some workplaces such as federal facilities. This Indicator provides a measure of the numbers and proportions of workers and worksites covered by inspections conducted by Cal/OSHA and Federal OSHA. Since OSHA programs perform activities other than enforcement, such as education and voluntary compliance assistance, these figures may not reflect the full benefit provided by OSHA activities. The numbers may be slightly overestimated since OSHA may inspect one establishment more than once in a year.



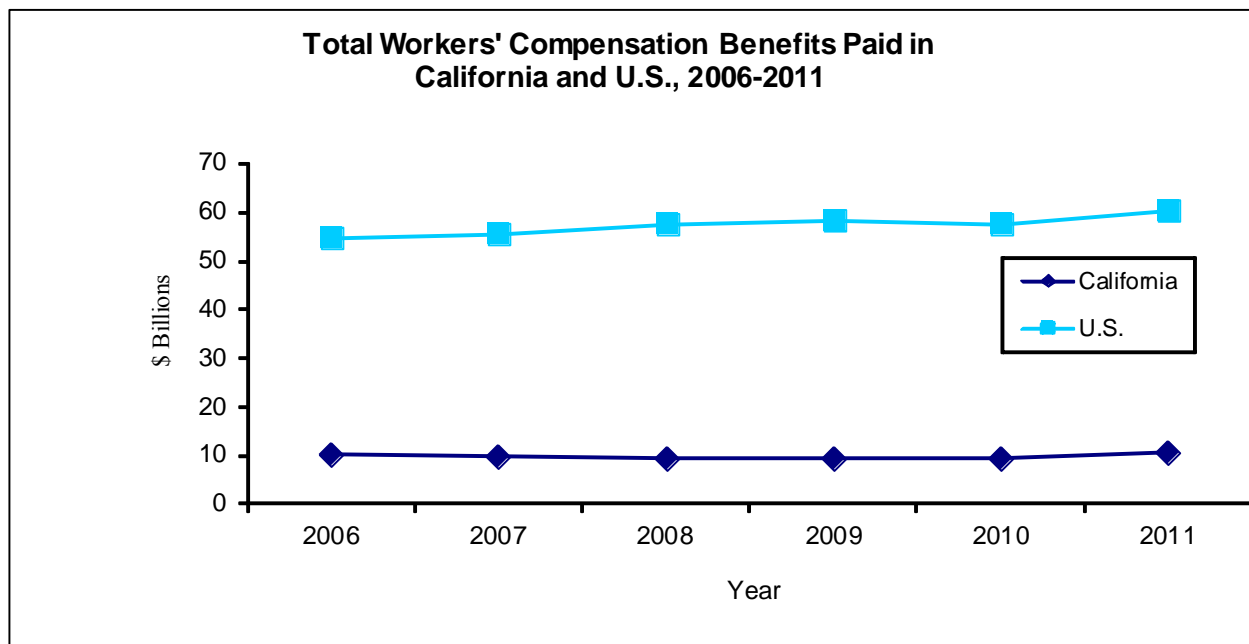
Data Sources: U.S. Department of Labor Occupational Safety and Health Administration Inspection Reports, U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages

Percentage and Number of Establishments Under OSHA Jurisdiction, Inspected, and Employees Whose Work Areas Were Inspected by OSHA for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Percentage of Establishments Under OSHA Jurisdiction Inspected by OSHA	0.8	0.8	0.8	0.6	0.7	0.6	1.1
Number of Establishments Inspected by OSHA	9,838	10,522	10,307	8,593	8,679	8,352	93,231
Number of Establishments Under OSHA Jurisdiction	1,264,465	1,277,722	1,311,176	1,324,123	1,330,247	1,376,363	8,686,344
Number of Employees Whose Work Areas Were Inspected by OSHA	450,849	538,217	471,173	436,084	430,496	477,033	3,799,759
Estimated Percentage of Employees Under OSHA Jurisdiction Whose Work Areas Were Inspected	2.9	3.5	3.1	3.0	3.0	3.3	3.6

Data Sources: U.S. Department of Labor Occupational Safety and Health Administration Inspection Reports, U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages

## Workers' Compensation Awards

State workers' compensation programs were developed to provide guaranteed compensation for work-related injuries or illnesses while limiting the liability exposure of employers. Workers' compensation provides benefits to partially replace lost wages, pay for medical expenses associated with an injury or illness, and provide survivor benefits in the case of a death. The total dollar amount of benefits paid annually is calculated using data from the National Academy of Social Insurance, which also provides the number of workers covered by workers' compensation. This Indicator also reports the average amount paid per worker if the total cost is averaged over all workers covered by the workers' compensation system. While the amount of benefits paid helps define the direct financial cost of work-related injuries and illnesses, it does not reflect their true burden. Indirect costs to the employer and worker are not taken into account. In addition, some workers who are eligible for benefits do not file. Finally, several types of workers may not be covered by state workers' compensation systems, including the self-employed, domestic workers, federal employees, and railroad, longshore, and maritime workers.



Data Source: National Academy of Social Insurance (NASI)



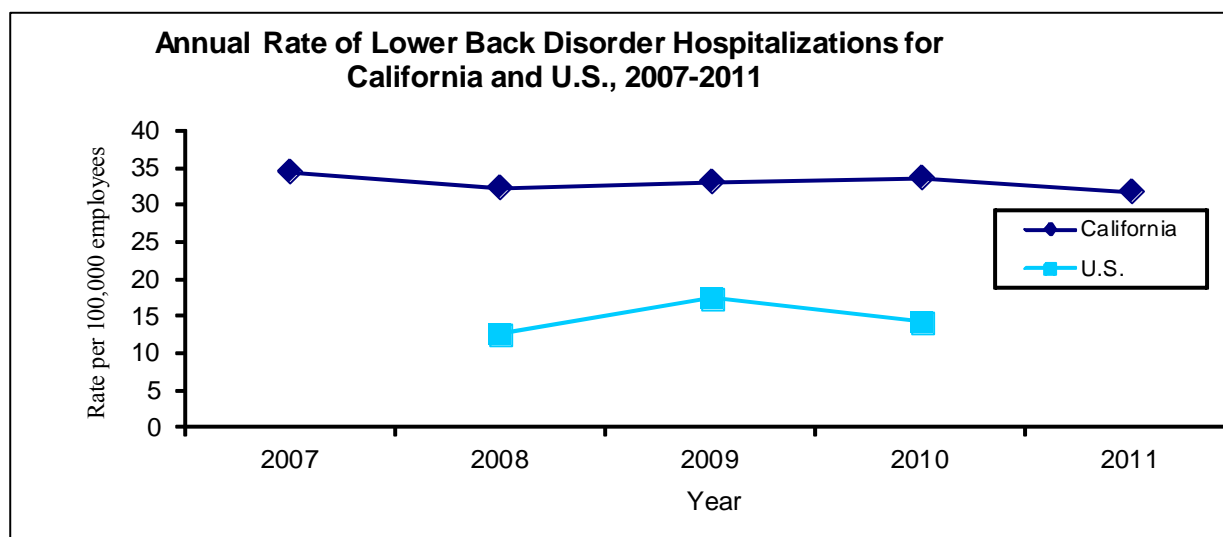
Total Workers' Compensation Benefits Paid and Average per Covered Worker for California and U.S., 2006-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Total Amount of Workers' Compensation Benefits Paid in Billions	\$10.1	\$9.9	\$9.4	\$9.3	\$9.4	\$10.5	\$60.2
Average Amount of Workers' Compensation Benefits Paid per Covered Worker <sup>1</sup>	\$665	\$644	\$618	\$648	\$663	\$732	\$478

<sup>1</sup> All workers in the state who are eligible for compensation should they sustain work-related injuries or illnesses are considered "covered" workers.

Data Source: National Academy of Social Insurance (NASI)

## Hospitalizations for Work-Related Lower Back Disorders

Hospitalizations for work-related lower back disorders have serious and costly effects, from high medical bills to reduced work performance and lost productivity. Lower back pain is a common disorder among the general population. An estimated two-thirds of lower back disorder cases are related to work activities. Hospital discharge data from non-federal acute care hospitals are used to identify lower back disorder hospitalizations that are paid for by workers' compensation. The number of hospitalizations for work-related lower back disorders is likely to be undercounted, since not all workers are eligible for workers' compensation, and there may be inaccuracies in identifying payment source. This new Indicator was developed by the states and added starting in 2007.



Incidence Rate and Number of Hospitalizations for Work-Related Lower Back Disorders for California and U.S., 2007-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Rate of Work-Related Lower Back Disorder Hospitalizations per 100,000 Employees	N/A	34.4	32.3	33.1	33.5	31.6	N/A
Number of Work-Related Lower Back Disorder Hospitalizations	N/A	5,909	5,506	5,364	5,359	5,124	N/A

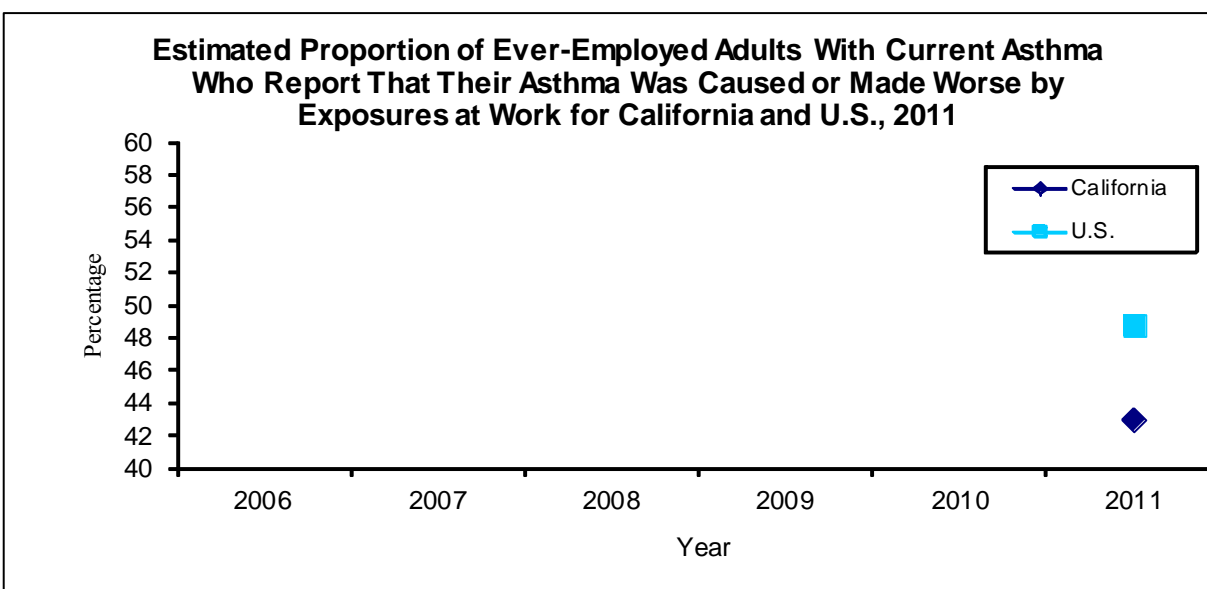
Data Sources: Office of Statewide Health Planning and Development Non-Public Hospital Discharge Data, U.S. Bureau of Labor Statistics Current Population Survey

Incidence Rate and Number of Hospitalizations for Work-Related Lower Back Disorders for California and U.S., 2007-2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Rate of Work-Related Surgical Lower Back Disorder Hospitalizations per 100,000 Employees	N/A	27.5	26.2	27.3	27.3	23.2	N/A
Number of Work-Related Surgical Lower Back Disorder Hospitalizations	N/A	4,727	4,468	4,416	4,359	3,763	N/A

Data Sources: Office of Statewide Health Planning and Development Non-Public Hospital Discharge Data, U.S. Bureau of Labor Statistics Current Population Survey

## Work-related Asthma

Asthma is a chronic inflammatory condition of the airways that affects over 21 million adults nationwide. Symptoms can include wheezing, shortness of breath, coughing, and chest tightness and can lead to significant disability. Work-related asthma (WRA) refers to asthma that is associated with conditions in the workplace, and can include new disease in workers, as well as exacerbations of current disease. While WRA is preventable, there is substantial evidence that WRA is under-recognized and underdiagnosed. The Behavioral Risk Factor Surveillance System (BRFSS) is a nationwide telephone health survey of adults that collects data about asthma and many other health outcomes and behaviors. Some states conduct the Asthma Call-back Survey, an in-depth follow-up component of the BRFSS to collect additional information from respondents who report an asthma diagnosis. The survey includes questions that allow us to estimate the number and percentage of people with asthma in a state who have work-related asthma. Because it is a telephone survey in limited languages, it may exclude some individuals from participating, and data are subject to the bias of a self-reported asthma diagnosis. This new Indicator was developed by the states and added starting in 2011.



Data Source: Behavioral Risk Factor Surveillance System (BRFSS) Asthma Call Back Survey (ACBS) respondents.

Asthma Among Adults Caused or Made Worse by Work for California and U.S., 2011							
Year	California						U.S.
	2006	2007	2008	2009	2010	2011	2011
Weighted Estimate of the Number of Ever-Employed Adults With Current Asthma Who Report That Their Asthma Was Caused or Made Worse By Exposures at Work	N/A	N/A	N/A	N/A	N/A	1,033,035	7,201,961
Estimated Proportion of Ever-Employed Adults With Current Asthma Who Report That Their Asthma Was Caused or Made Worse By Exposures at Work	N/A	N/A	N/A	N/A	N/A	42.5	48.8

Data Sources: Office of Statewide Health Planning and Development Non-Public Hospital Discharge Data, U.S. Bureau of Labor Statistics Current Population Survey

## Indicator data resources

Occupational Health Indicators: A Guide for Tracking Occupational Health Conditions and Their Determinants – “how-to” guide for states on generating Occupational Health Indicators (Council of State and Territorial Epidemiologists/CSTE, updated 2015)

[http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/PDFs/2015\\_Ed\\_of\\_OHI\\_Guidance\\_Manual.pdf](http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/PDFs/2015_Ed_of_OHI_Guidance_Manual.pdf)

Council of State and Territorial Epidemiologists (CSTE) Occupational Health Indicators – website that provides other states’ and national data

<http://www.cste.org/group/OHIndicators>

Data Sources Used to Calculate Occupational Health Indicators – adapted from 2005 CSTE report

<http://www.cdph.ca.gov/programs/ohsep/Documents/DataSourceDescription.pdf>

Guidelines for State Occupational Public Health Programs – National Institute for Occupational Safety and Health (NIOSH)-CSTE document (2008)

<http://www.cdc.gov/niosh/docs/2008-148/pdfs/2008-148.pdf>

Indicators for Occupational Health Surveillance – MMWR article (Centers for Disease Control, 2007)

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5601a1.htm>

NIOSH Workplace Data and Statistics Gateway – NIOSH data website

<http://www.cdc.gov/niosh/data/>

NIOSH Workplace Health and Safety tracking publications and resources – NIOSH website

<http://www.cdc.gov/niosh/topics/surveillance/survpubs.html>

Occupational Health Indicators from 13 Pilot States for 2000 – CSTE report (2005)

<http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/OccupationalHealth/CSTEOHIndicators.pdf>

State-based Occupational Health Surveillance Clearinghouse – NIOSH website listing state publications, including Indicators reports

<http://wwwn.cdc.gov/niosh-survapps/statedocs/>