

# California Occupational Health Indicators

Annual measures of worker health and safety  
for years 2008-2013



March 2017

[Occupational Health Indicators  
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## Acknowledgments

# Cal-OSHA Reporter<sup>®</sup>

A WEEKLY PUBLICATION FOR THE OCCUPATIONAL SAFETY AND HEALTH COMMUNITY

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This report provides important data about the California workforce and the key “indicators” or measures of how the work environment affects their health status. While overall rates of work-related fatalities and injuries have continued to decrease in California over the past six years, there clearly is much more work to be done to reduce the burden and cost to workers, their families, and communities. Among the findings in this report:

- Annually, more than 100,000 California workers lose work time after being injured at work, and about 20,000 are hospitalized.
- In 2013, 396 workers died from injuries sustained on the job, and Hispanic workers accounted for 49% of the deaths. Many of these deaths are preventable through improvements in workplace safety programs.
- Over 1.7 million California workers are employed in high-risk occupations where the rate of work-related injuries is more than twice the overall rate for U.S. industries.
- Nearly 950,000 working adults report that their asthma was caused or made worse by their exposures at work, representing a significant opportunity to reduce the overall burden of asthma.
- Over 350 workers are diagnosed with mesothelioma, and about 200 die of mesothelioma and asbestosis each year – a legacy of the decades-old hazard of exposure to asbestos dust.
- Over 1,800 workers have blood lead levels at or above 10 micrograms per deciliter, increasing their risk of kidney and heart disease, high blood pressure, and cognitive damage.

The California Department of Public Health’s Occupational Branch – partnering with industry, labor, academic institutions, health and safety professionals, Cal/OSHA, and many others – strives to reduce hazards in California workplaces and prevent work-related injuries and illnesses. We welcome your collaboration as we move forward together in this effort.

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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 2013 alone totaled \$12.1 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 2008 through 2013. 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 (NIOSH) 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. States, NIOSH, and the Council of State and Territorial Epidemiologists (CSTE) develop and pilot new Indicators periodically for national adoption. Some states create additional State-specific Indicators such as California's new "Fatal Injuries Among Hispanic/Latino Workers" Indicator.

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.
	2008	2009	2010	2011	2012	2013	2013
Employed persons in millions	17.0	16.2	15.9	16.2	16.6	17.0	143.9
Percentage of civilian workforce unemployed	7.1	11.3	12.2	11.6	10.4	8.9	7.4
Percentage of civilian employment self-employed	9.3	8.8	9.4	9.1	9.0	9.0	6.5
Percentage of civilian employment in part-time jobs	18.5	20.6	21.4	21.3	21.1	20.9	19.2
Percentage of civilian employment by number of hours worked							
<40 hours	33.4	38.6	36.5	36.2	35.8	34.3	33.7
40 hours	44.1	41.0	43.1	43.1	43.3	44.5	42.3
41+ hours	22.5	20.4	20.4	20.7	20.8	21.2	24.0
Percentage of civilian employment by sex							
Males	55.3	54.3	54.5	55.1	54.8	54.6	53.0
Females	44.7	45.7	45.5	44.9	45.2	45.4	47.0
Percentage of civilian employment by age group							
16 to 17 years	0.9	0.6	0.7	0.6	0.5	0.5	1.0
18 to 64 years	95.4	95.3	95.3	95.1	94.7	94.7	93.6
65+ years	3.7	4.1	4.0	4.4	4.8	4.9	5.3
Percentage of civilian employment by race							
White	78.3	78.1	77.5	77.7	75.5	74.7	80.2
Black	5.8	5.7	5.5	5.3	5.3	5.2	11.2
Other	16.0	16.1	16.9	17.0	19.2	20.1	8.6
Percentage of civilian employment by Hispanic origin							
	33.5	33.2	34.1	35.0	35.9	35.9	15.6

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

California Employment Demographics	Year						U.S.
	2008	2009	2010	2011	2012	2013	2013
Percentage of civilian employment by industry							
Mining	0.1	0.1	0.2	0.2	0.2	0.3	0.7
Construction	7.6	6.4	6.2	6.2	6.3	6.3	6.4
Manufacturing: Durable goods	7.1	6.8	6.5	6.5	6.3	6.5	6.5
Manufacturing: Nondurable goods	3.9	3.5	3.5	3.3	3.8	3.4	3.8
Wholesale and retail trade	13.8	13.8	14.1	13.9	13.6	13.4	13.7
Transportation and utilities	5.0	4.7	4.7	4.9	4.7	4.7	5.2
Information	3.2	3.3	3.0	3.1	2.7	2.7	2.1
Financial activities	6.9	6.7	6.7	6.4	6.4	6.8	6.8
Professional and business services	12.1	12.2	12.4	13.5	13.9	13.9	11.7
Education and health services	19.9	21.1	21.3	20.9	21.3	20.9	22.6
Leisure and hospitality	9.0	9.6	9.5	9.2	9.7	9.6	9.4
Other services	5.4	5.4	5.4	5.0	5.1	5.2	5.0
Public administration	4.3	4.6	4.5	4.7	4.6	4.4	4.7
Agriculture	1.9	1.7	2.1	2.2	1.9	1.9	1.5

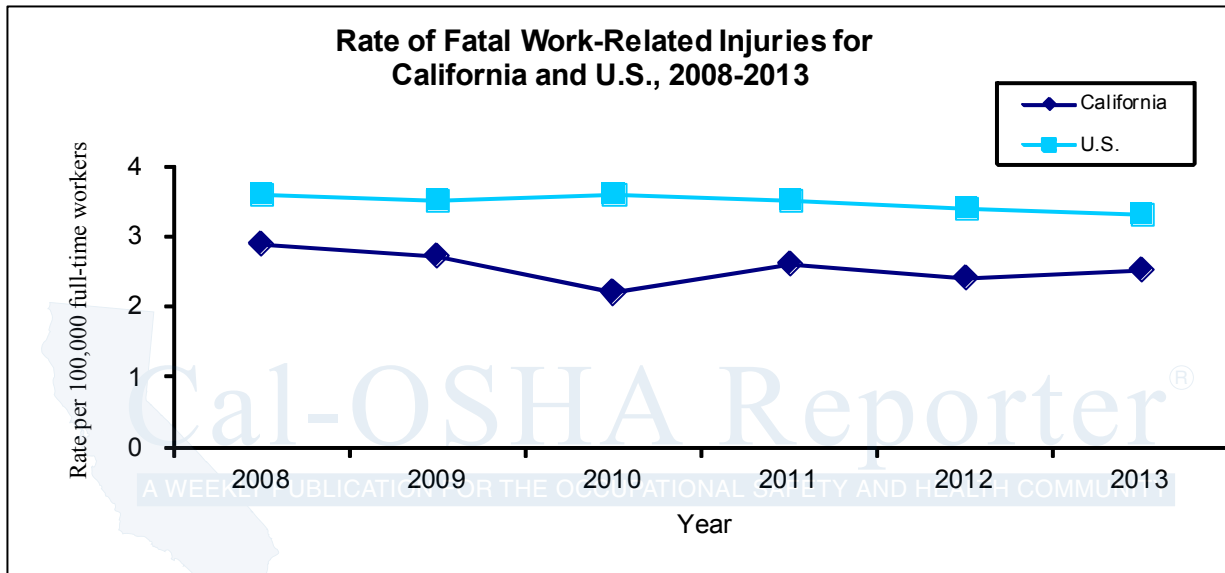
Data Source: U.S. Bureau of Labor Statistics Current Population Survey Geographic Profiles of Employment and Unemployment

California Employment Demographics	Year						U.S.
	2008	2009	2010	2011	2012	2013	2013
Percentage of civilian employment by occupation							
Management, business, and financial operations	16.0	16.0	15.7	15.7	17.2	16.5	15.8
Professional and related occupations	21.6	22.2	22.5	22.3	22.1	22.6	22.2
Service occupations	17.1	18.2	18.2	17.7	18.2	18.6	18.0
Sales and related occupations	11.4	11.5	11.5	11.2	10.6	10.9	10.9
Office and administrative support	12.6	12.5	12.6	12.7	12.2	11.8	12.4
Farming, forestry, fishing	1.3	1.1	1.4	1.5	1.3	1.3	0.7
Construction and extraction	5.8	4.9	4.7	4.8	4.7	4.7	5.0
Installation, maintenance, and repair	3.2	3.1	3.1	3.1	3.0	2.9	3.4
Production	5.5	5.0	5.1	5.3	5.0	5.1	5.7
Transportation, material moving	5.6	5.4	5.2	5.7	5.6	5.6	6.1

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

## Fatal Work-Related Injuries

Each day in the U.S., approximately 13 workers die from injuries at work. 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 are excluded. Seven states, including California, have programs that investigate work-related fatalities. To learn more about the California Fatality Assessment and Control Evaluation (FACE) Program, see the [FACE website](http://www.cdph.ca.gov/face) at [www.cdph.ca.gov/face](http://www.cdph.ca.gov/face).

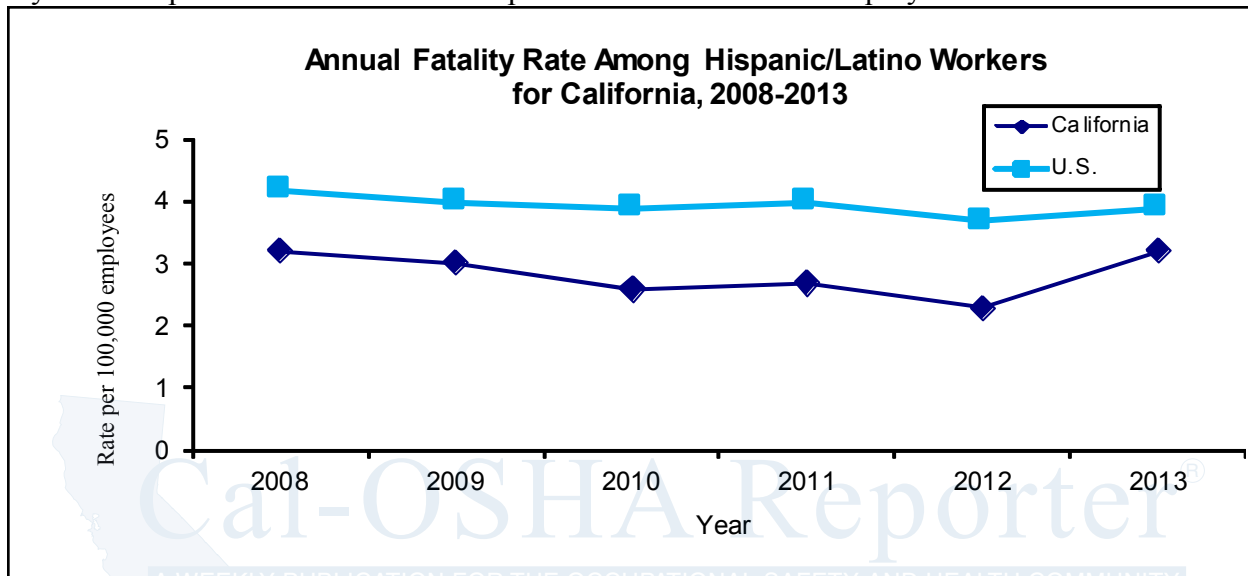


Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Rate per 100,000 Full-Time Workers	2.9	2.7	2.2	2.6	2.4	2.5	3.3
Number of Fatal Work-Related Injuries	465	409	326	390	375	396	4,585

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

## Fatal Injuries Among Hispanic/Latino Workers

Hispanic/Latino workers continue to be at increased risk of dying on the job. These vulnerable workers have a disproportionate rate of injuries, illnesses, and fatalities in the workplace largely because they work in dangerous industries, may be particularly vulnerable due to their immigration status, and may be subject to employer exploitation. Many are foreign-born, do not speak English, and are not informed about their rights on the job. The U.S. Census Bureau defines ‘Hispanic or Latino’ as a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race. This Indicator was developed by the Occupational Health Branch as part of its focus on health equity.



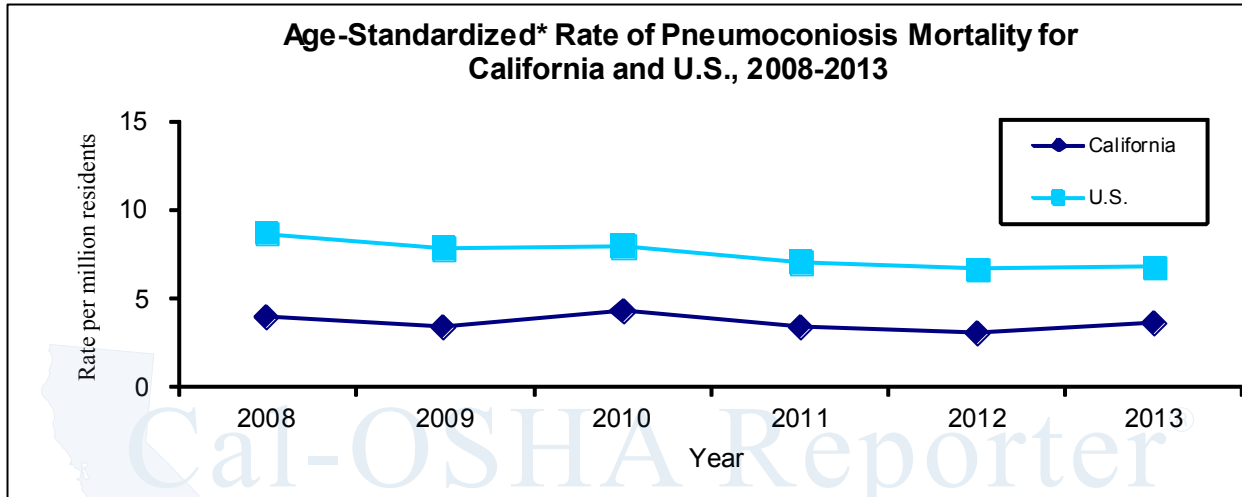
**Incidence Rate and Number of Fatalities Among Hispanic/Latino Workers for California, 2008-2013**

Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Rate of Work-Related Fatalities Among Hispanics per 100,000 Hispanic /Latino Employees	3.2	3.0	2.6	2.7	2.3	3.2	3.9
Number of Work-Related Fatalities Among Hispanics/Latinos	180	161	142	154	137	194	817

Data Sources: Not an official product of the Census of Fatal Occupational Injuries (CFOI). Rates were calculated using data from CFOI for the number of fatalities, and a count of workers taken from Table 14, Employment status of the civilian noninstitutionalized population, by sex, age, race, Hispanic or Latino ethnicity, and marital status, from the [Geographic Profile of Employment and Unemployment, Estimates for States](http://www.bls.gov/opub/gp/pdf/gp13_14.pdf). ([http://www.bls.gov/opub/gp/pdf/gp13\\_14.pdf](http://www.bls.gov/opub/gp/pdf/gp13_14.pdf))

## 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".



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Age-Standardized Mortality Rate and Number of Pneumoconiosis Deaths for California and U.S., 2008-2013							
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Age-Standardized* Rate of Total Pneumoconiosis Mortality per Million Residents	4.0	3.4	4.3	3.4	3.1	3.6	6.8
Number of Pneumoconiosis Deaths	115	91	119	95	91	97	1,859

\* 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

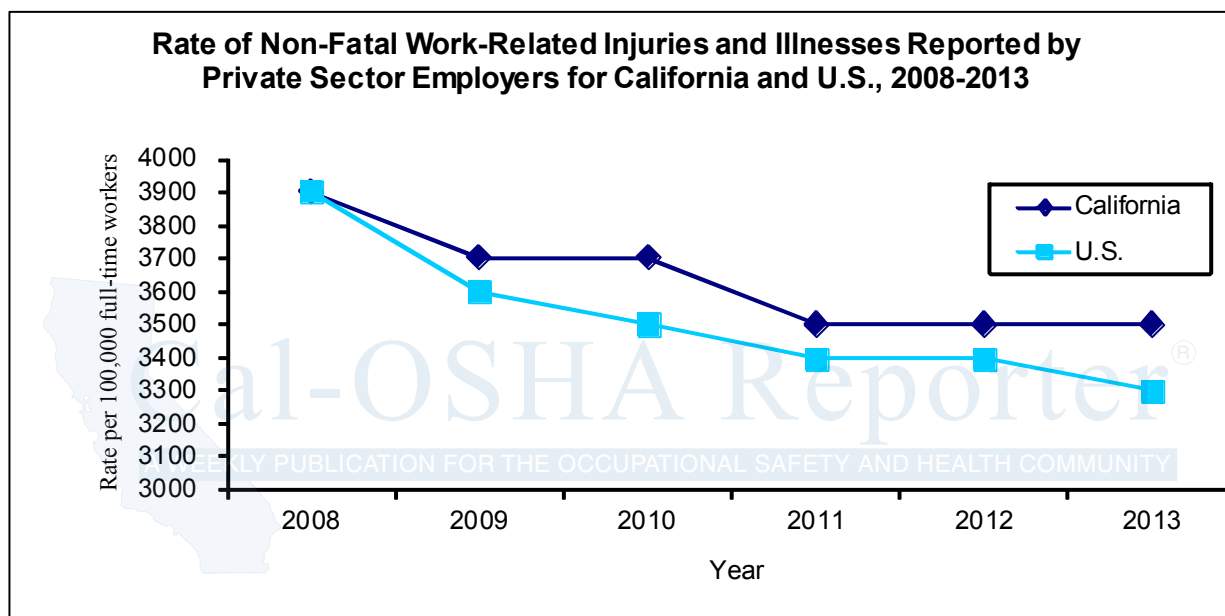
Rate and Number of Coal Worker Pneumoconiosis, Asbestosis, Silicosis, and Unspecified Pneumoconiosis Deaths for California and U.S., 2008-2013							
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Age-Standardized* Rate of Coal Worker Pneumoconiosis Mortality per Million Residents	N/A	0.2	0.4	0.3	0.4	0.3	1.2
Number of Coal Worker Pneumoconiosis Deaths	<5	6	12	9	13	8	361
Age-Standardized* Rate of Asbestosis Mortality per Million Residents	3.6	3.1	3.8	2.8	2.4	3.0	4.5
Number of Asbestosis Deaths	103	81	102	79	69	79	1,229
Age-Standardized* Rate of Silicosis Mortality per Million Residents	0.2	N/A	N/A	N/A	0.3	0.3	0.3
Number of Silicosis Deaths	5	<5	<5	<5	8	7	111
Age-Standardized* Rate of Unspecified Pneumoconiosis Mortality per Million Residents	0.2	N/A	N/A	N/A	N/A	N/A	0.5
Number of Unspecified Pneumoconiosis Deaths	5	<5	<5	<5	1	N/A	170

\* 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

## 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., 2008-2013							
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Rate per 100,000 Full-Time Workers	3,900	3,700	3,700	3,500	3,500	3,500	3,300
Number of Injuries and Illnesses	411,700	365,400	351,000	335,600	345,400	360,500	3,007,300

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

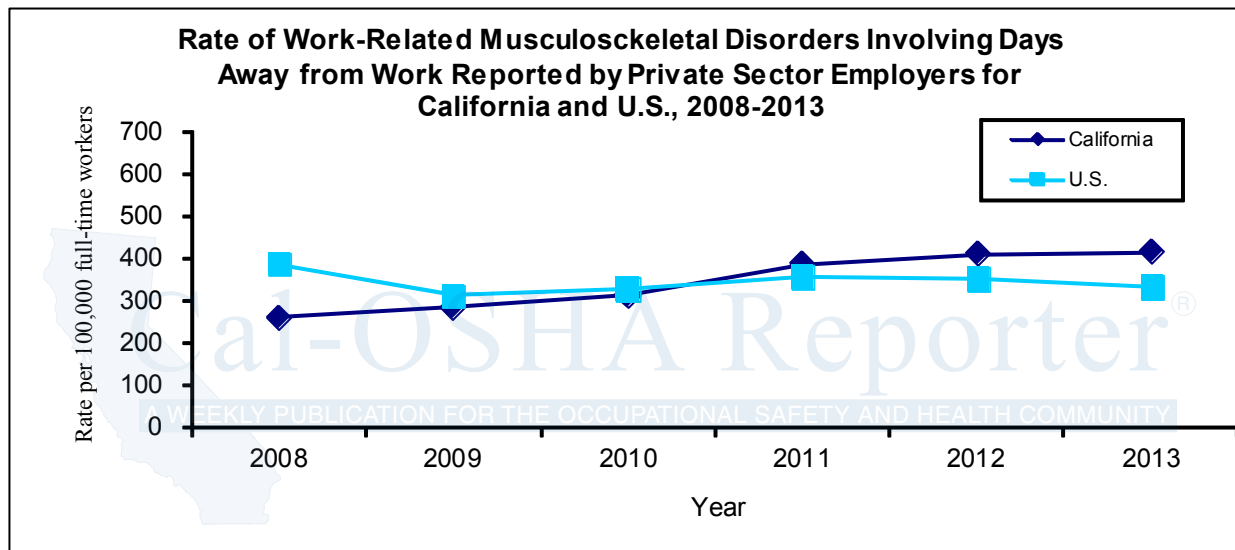


Rate and Number of Non-Fatal Work-Related Injuries and Illnesses Reported by Private Sector Employers for California and U.S., 2008-2013							
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Incidence Rate of Injuries and Illnesses Involving Days Away From Work per 100,000 Full-Time Workers	1,100	1,000	1,100	1,000	1,100	1,100	999
Number of Injuries and Illnesses Involving Days Away From Work	118,800	103,500	102,500	99,400	105,000	113,100	917,090
Number of Injuries and Illnesses Involving More Than 10 Days Away From Work	57,700	52,900	53,570	54,910	57,060	58,700	420,410

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

## 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”.



Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Incidence Rate per 100,000 Full-Time Workers	262	286	317	385	409	415	335
Number of Work-Related MSDs	27,950	28,570	30,220	36,640	40,220	42,840	307,640

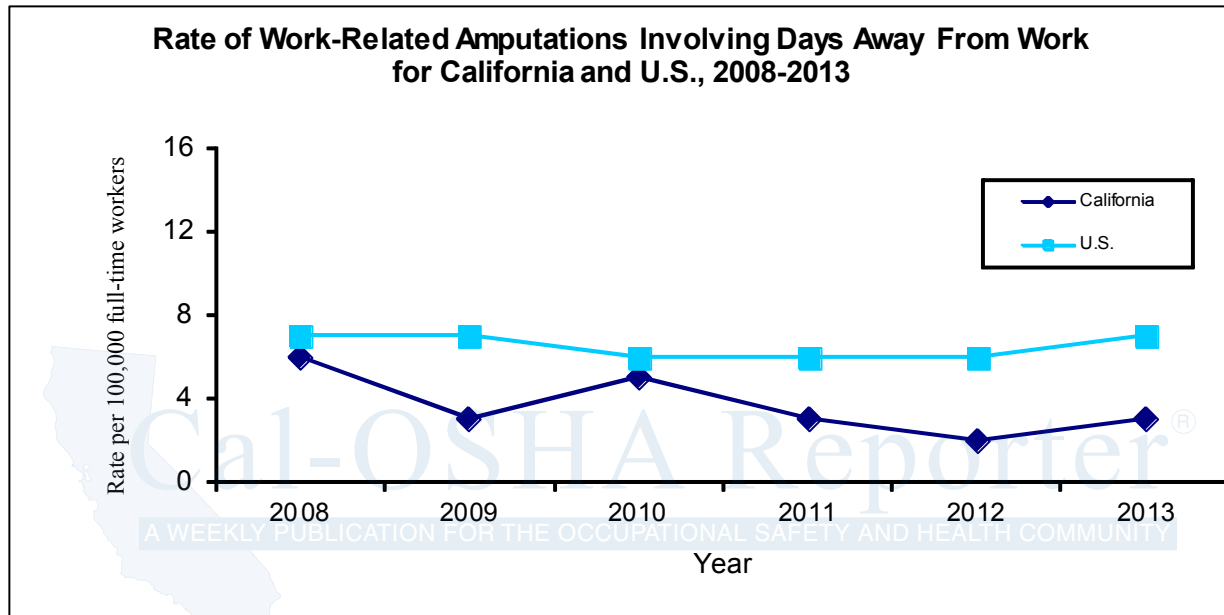
Data Source: U.S. Bureau of Labor Statistics Annual Survey of Occupational Injuries and Illnesses

Rate and Number of Work-Related Musculoskeletal Disorders Involving Days Away From Work Reported by Private Sector Employers for California and U.S., 2008-2013							
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Incidence Rate of MSD Cases Involving the Neck, Shoulder, and Upper Extremities per 100,000 Full-Time Workers	69	79	106	126	131	144	103
Number of MSDs of the Neck, Shoulder, and Upper Extremities	7,420	7,840	10,210	12,080	12,820	14,850	94,620
Incidence Rate of Carpal Tunnel Syndrome Cases per 100,000 Full-Time Workers	9.0	9.0	11.0	11.0	10.0	12.0	7.0
Number of Carpal Tunnel Syndrome Cases	970	880	1000	1,070	950	1,230	6,440
Incidence Rate of MSD Cases Involving the Back per 100,000 Full- Time Workers	140	135	140	160	164	150	137
Number of MSD Cases Involving the Back	14,890	13,480	13,320	15,290	16,130	15,510	126,070

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

## 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”.

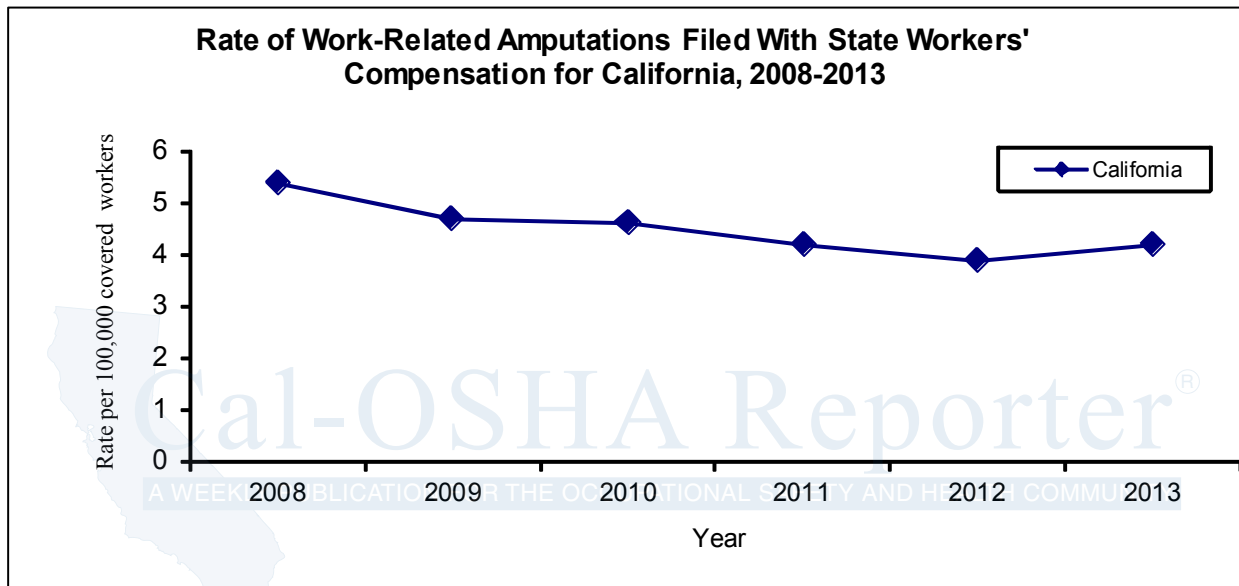


Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Rate per 100,000 Full-Time Workers	6.0	3.0	5.0	3.0	2.0	3.0	7.0
Number of Amputations With Days Away From Work	630	340	470	310	200	310	6,160

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".

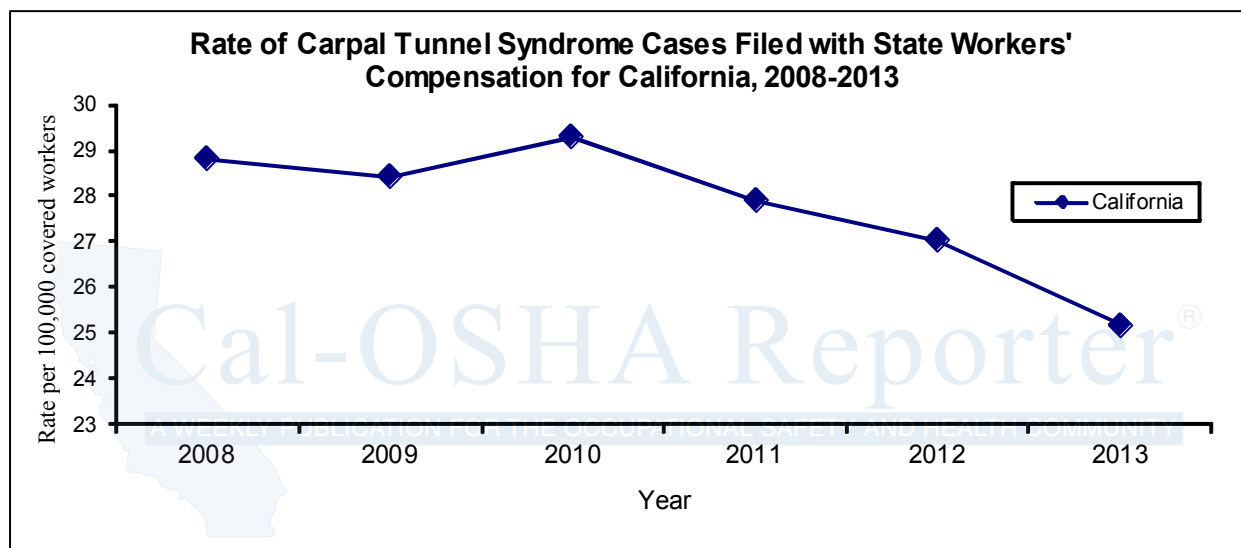


Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Rate per 100,000 Covered Workers	5.4	4.7	4.6	4.2	3.9	4.2	N/A
Number of Work-Related Amputations	821	671	646	596	567	630	N/A

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

## 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".

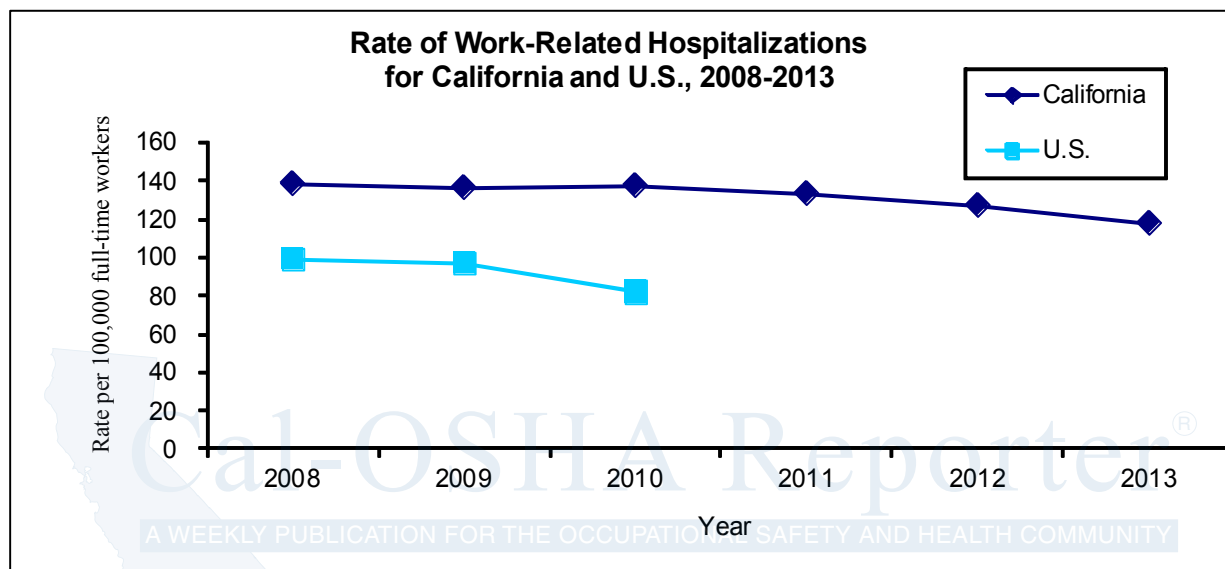


Rate and Number of Carpal Tunnel Syndrome Cases Filed 2008-2013							
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Rate per 100,000 Covered Workers	28.8	28.4	29.3	27.9	27.0	25.2	N/A
Number of CTS Cases Filed	4,385	4,085	4,148	3,993	3,960	3,812	N/A

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

## 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.

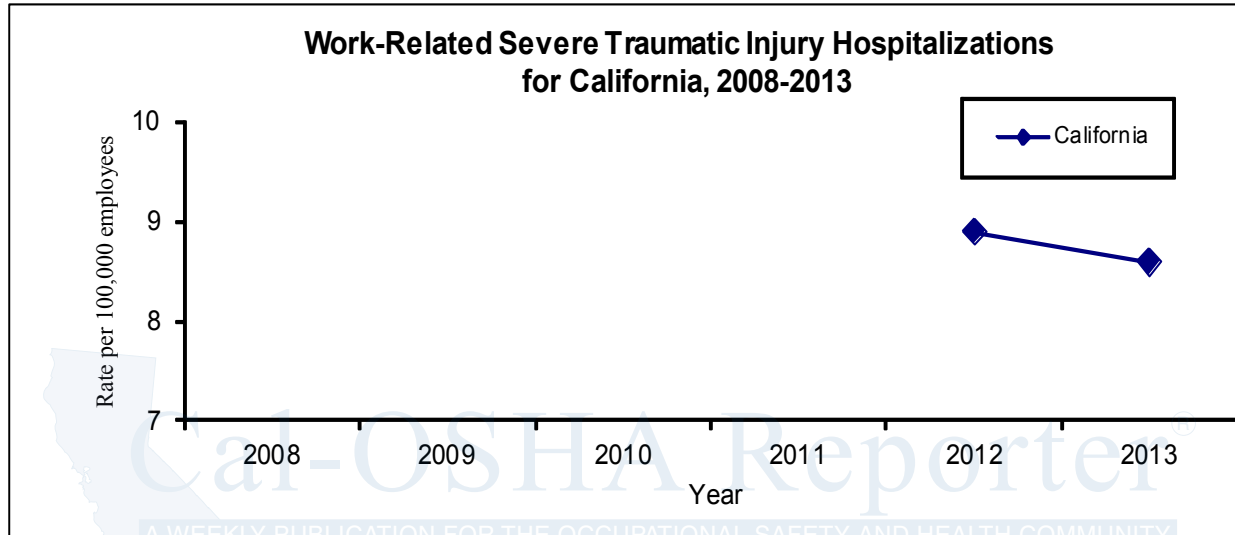


Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Rate per 100,000 Full-Time Workers	138.0	135.7	137.1	133.3	127.2	117.4	N/A
Number of Hospitalizations	23,529	21,965	21,898	21,643	21,063	19,952	N/A

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 Severe Traumatic Injury Hospitalizations

Workers who are hospitalized due to severe traumatic injuries 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 severe traumatic work-related injury hospitalizations per year by counting the individuals whose care was paid for by workers' compensation. Many of these incidents are preventable and can result in costly, permanent and disabling injuries with long-term disability. Cal/OSHA requires employers to immediately report to the nearest District Office any case of serious work-related injury, defined as involving a hospital stay for more than 24 hours. This Indicator was developed by the states and added starting in 2012.



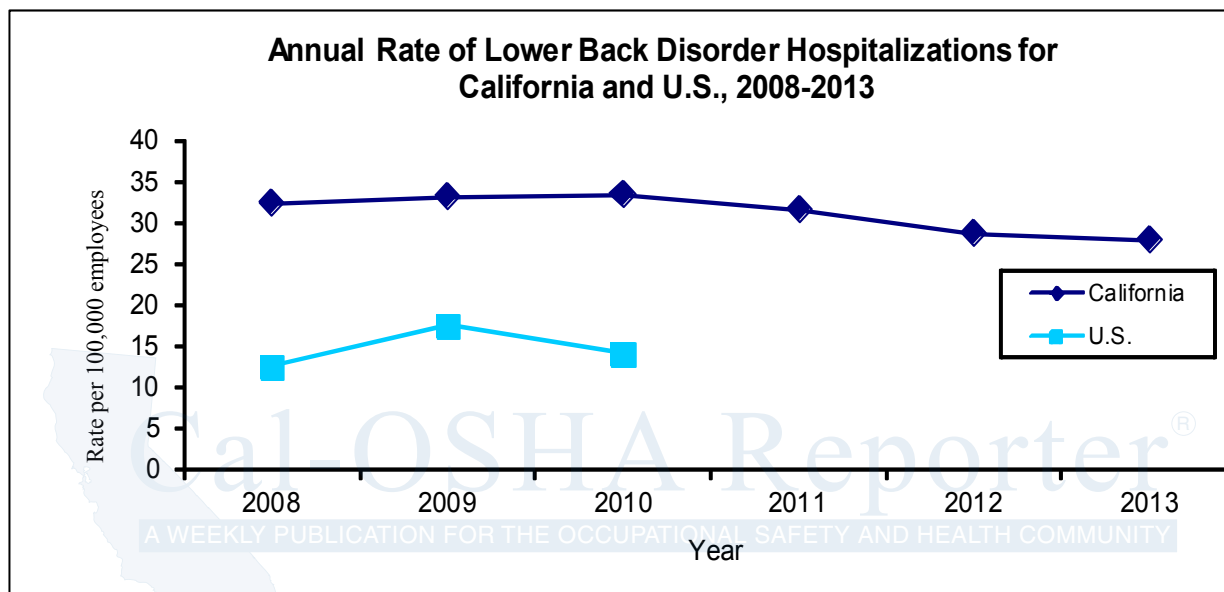
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Rate of Work-Related Severe Traumatic Injury Hospitalizations per 100,000 Employees	N/A	N/A	N/A	N/A	8.9	8.6	N/A
Number of Work-Related Severe Traumatic Injury Hospitalizations	N/A	N/A	N/A	N/A	1,475	1,469	N/A

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



## 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 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., 2008-2013							
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Rate of Work-Related Lower Back Disorder Hospitalizations per 100,000 Employees	32.3	33.1	33.5	31.6	28.7	27.9	N/A
Number of Work-Related Lower Back Disorder Hospitalizations	5,506	5,364	5,359	5,124	4,750	4,741	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

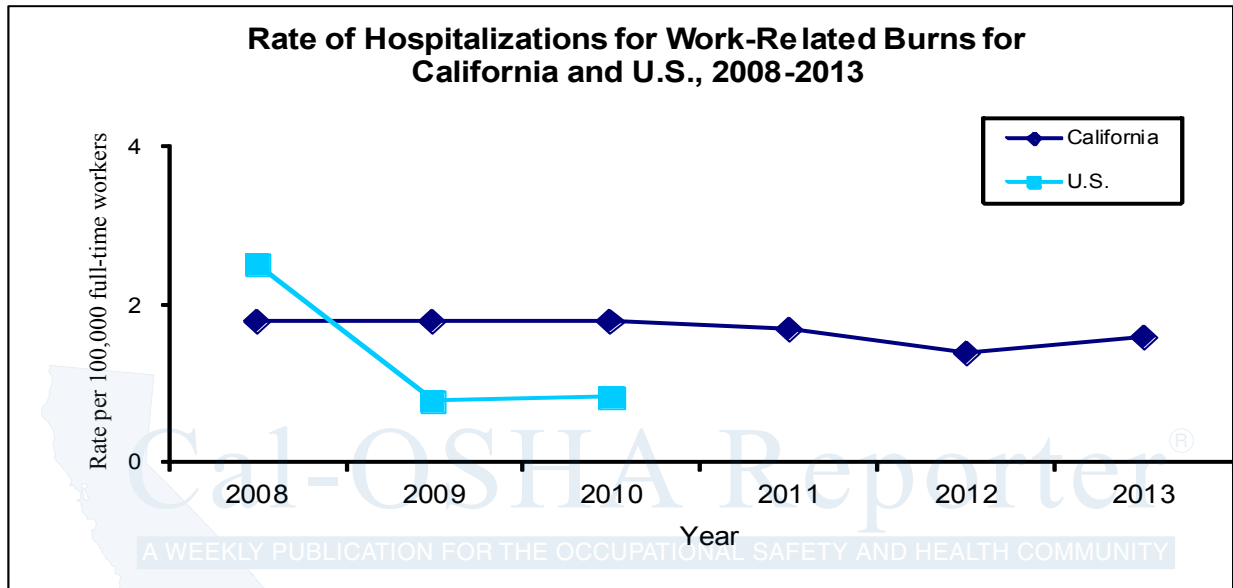
Incidence Rate and Number of Hospitalizations for Work-Related Lower Back Disorders for California and U.S., 2008-2013							
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Rate of Work-Related Surgical Lower Back Disorder Hospitalizations per 100,000 Employees	26.2	27.3	27.3	23.2	22.9	23.5	N/A
Number of Work-Related Surgical Lower Back Disorder Hospitalizations	4,468	4,416	4,359	3,763	3,790	3,993	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

## 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.

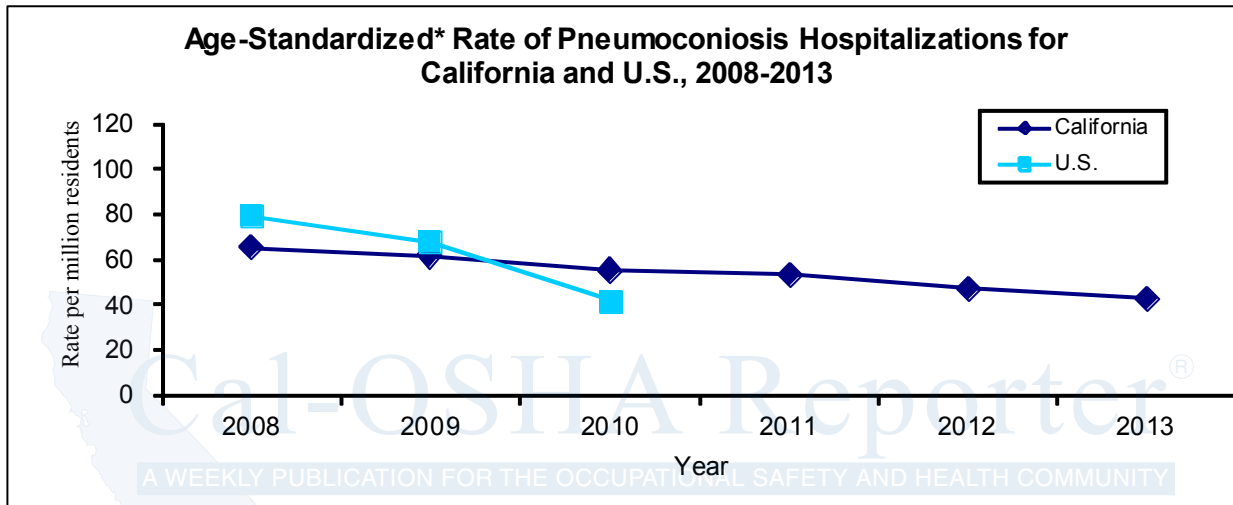


Rate and Number of Work-Related Burns for California and U.S., 2008-2013							
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Rate per 100,000 Full-Time Workers	1.8	1.8	1.8	1.7	1.4	1.6	N/A
Number of Hospitalizations for Work-Related Burns	314	288	287	274	238	266	N/A

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

## 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".



Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Age-Standardized* Rate of Total Pneumoconiosis Hospitalizations per Million Residents	64.2	61.0	55.2	53.2	47.0	43.0	N/A
Number of Pneumoconiosis Hospitalizations	1,680	1,627	1,507	1,492	1,371	1,287	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

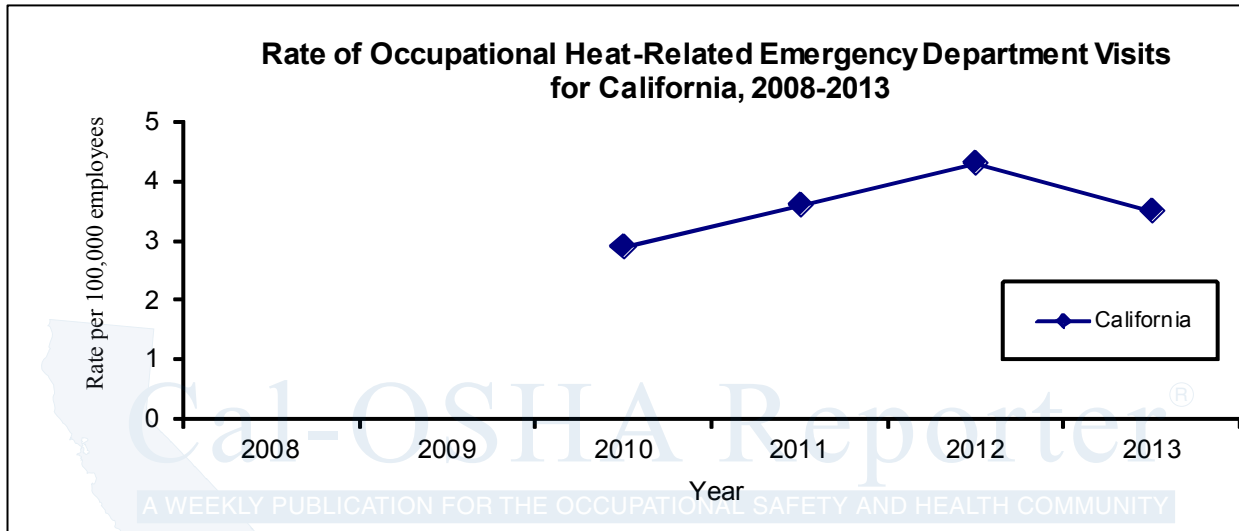
Age-Standardized* Rate and Number of Coal Worker Pneumoconiosis, Asbestosis, Silicosis, and Unspecified Pneumoconiosis Hospitalizations for California and U.S., 2008-2013							
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Age-Standardized* Rate of Coal Worker Pneumoconiosis Hospitalizations per Million Residents	3.3	3.1	2.2	2.5	2.3	1.6	N/A
Number of Coal Worker Pneumoconiosis Hospitalizations	90	84	63	73	69	51	N/A
Age-Standardized* Rate of Asbestosis Hospitalizations per Million Residents	56.1	53.5	49.7	46.4	40.6	37.4	N/A
Number of Asbestosis Hospitalizations	1,461	1,423	1,351	1,293	1,184	1,113	N/A
Age-Standardized* Rate of Silicosis Hospitalizations per Million Residents	3.3	2.4	1.7	2.6	2.8	2.4	N/A
Number of Silicosis Hospitalizations	88	65	48	78	84	73	N/A
Age-Standardized* Rate of Unspecified Pneumoconiosis Hospitalizations per Million Residents	1.5	2.0	1.6	1.7	1.1	1.6	N/A
Number of Unspecified Pneumoconiosis Hospitalizations	41	55	45	48	34	50	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

# Occupational Heat-Related Emergency Department Visits

Many workers – such as those in agriculture, construction, and firefighting – are at risk of heat-related illness that can range from mild heat stress to death. Occupational heat-related illness can be prevented with adequate hydration, acclimatization, shade, and rest breaks. In California, all employers with outdoor workers are required to comply with [Cal/OSHA’s heat illness prevention standard](http://www.dir.ca.gov/dosh/heatillnessinfo.html), Title 8 CCR Section 3395 (<http://www.dir.ca.gov/dosh/heatillnessinfo.html>). Often only the more serious heat-related illnesses may require an emergency room visit; there are many more cases of occupational heat-related illness that are seen by other outpatient health care providers or may not seek medical attention. This Indicator was developed by the states and added starting in 2010.

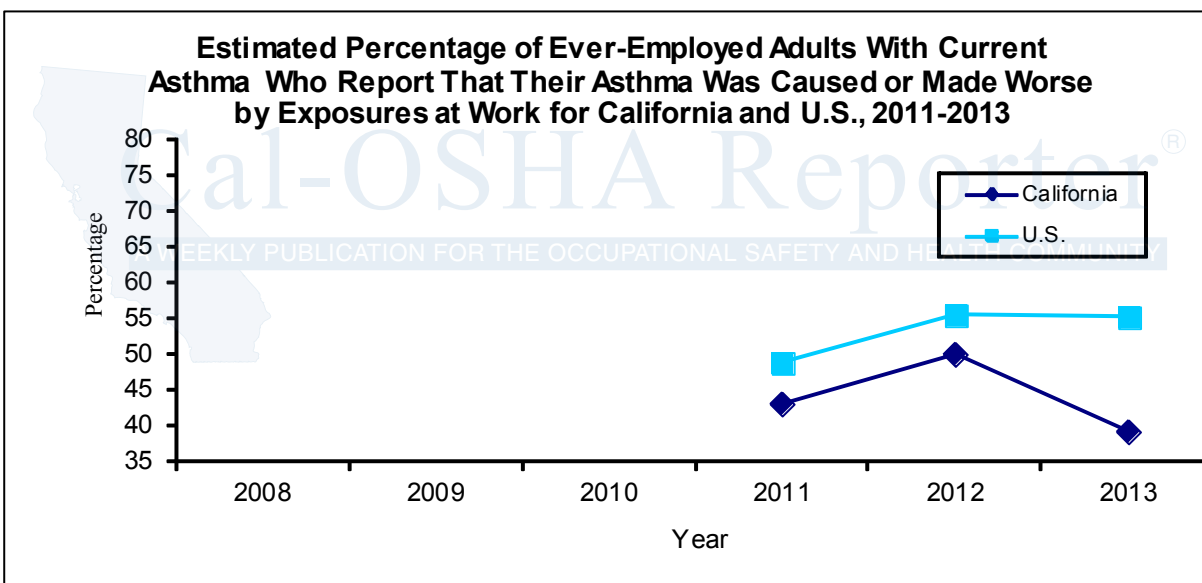


Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Rate of Occupational Heat-Related Emergency Department Visits per 100,000 Employees	N/A	N/A	2.9	3.6	4.3	3.5	N/A
Number of Occupational Heat-Related Emergency Department Visits	N/A	N/A	459	579	705	595	N/A

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 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.

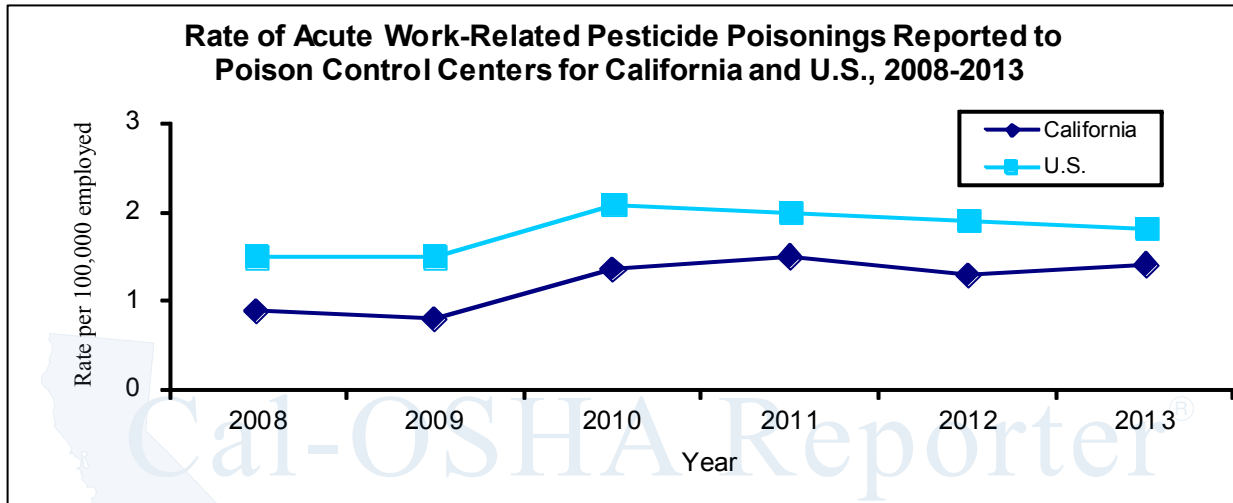
Asthma Among Adults Caused or Made Worse by Work for California and U.S., 2011-2013							
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Weighted Estimate of the Number of Ever-Employed Adults With Current Asthma Who Report That Their Asthma Was Caused or Made Worse By Exposures at Work	N/A	N/A	N/A	1,033,035	1,390,066	946,014	10,438,354
Estimated Percentage 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	43	50	39	55 <sup>®</sup>

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



## 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 the [Occupational Pesticide Illness Prevention Program website](http://www.cdph.ca.gov/pesticides) (<http://www.cdph.ca.gov/pesticides>). These data do not reflect adverse health effects in workers related to chronic, long-term exposure to pesticides.



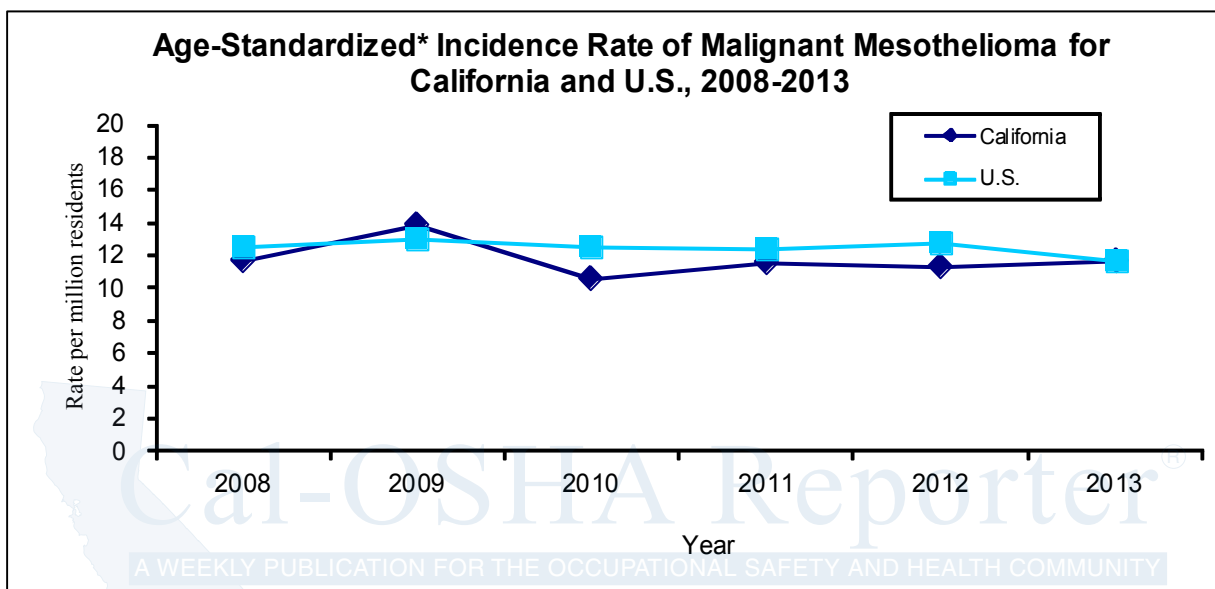
Rate and Number of Acute Work-Related Pesticide Poisonings Reported to Poison Control Centers for California and U.S., 2008-2013							
Year	California						U.S.
	2008	2009	2010*	2011*	2012*	2013*	2013
Rate per 100,000 Employed	0.9	0.8	1.4	1.5	1.3	1.4	1.8
Number of Work-Related Pesticide Poisonings	151	128	217	244	217	229	2,631

\*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.



Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Age-Standardized* Rate of Malignant Mesothelioma per Million Residents	11.7	13.8	10.6	11.5	11.3	11.6	11.7
Number of Malignant Mesothelioma Cases	311	373	292	332	330	362	3,114

\* 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.

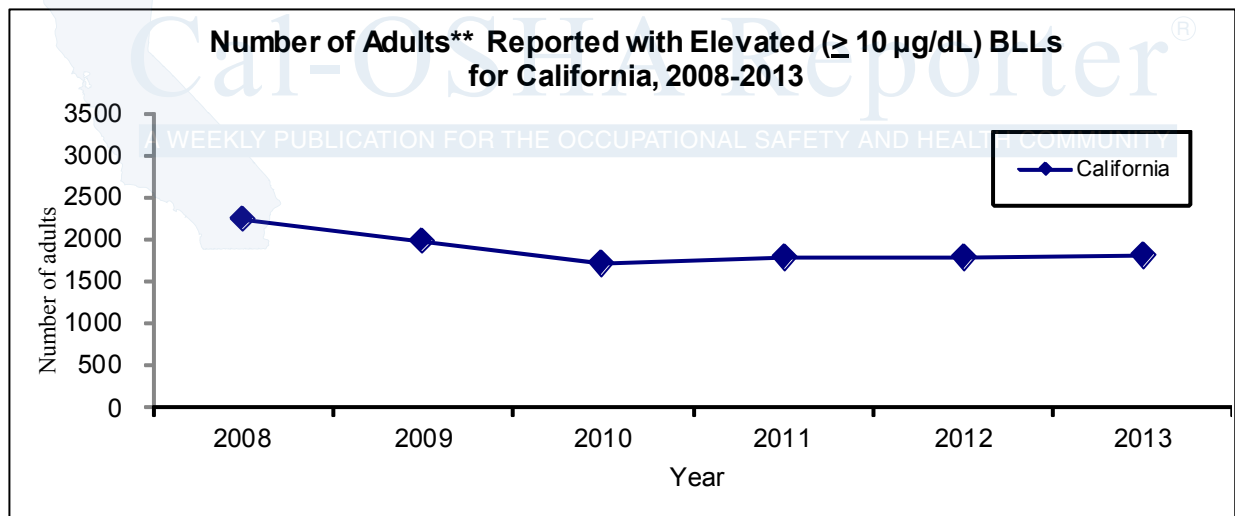
Data Sources: State of California Cancer Registry, U.S. Census Bureau Population Estimates

## 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 5  $\mu\text{g}/\text{dL}$  is now considered "elevated", and the current Healthy People 2020 goal is to reduce the proportion of adults with BLLs at or above 10  $\mu\text{g}/\text{dL}$ .\* 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 30 states, including California, have active programs that track adult BLLs; see the [Occupational Lead Poisoning Prevention Program website](http://www.cdph.ca.gov/olppp) (<http://www.cdph.ca.gov/olppp>).



\*In 2015, the National Institute for Occupational Safety and Health lowered its definition of "elevated BLL" to 5  $\mu\text{g}/\text{dL}$  due to emerging science on health effects at lower BLLs.

\*\* 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., 2008-2013							
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Number of Residents with Elevated Blood Lead Levels $\geq 10$ $\mu\text{g/dL}$	2,244	1,982	1,716	1,787	1,789	1,803	18,036
Prevalence Rate of Elevated Blood Lead Levels $\geq 10$ $\mu\text{g/dL}$ Among Adults per 100,000 employed	13.2	12.2	10.7	11.0	10.8	6.1	19.0
Number of Residents with Elevated Blood Lead Levels $\geq 25$ $\mu\text{g/dL}$	370	318	236	228	220	191	4,836
Prevalence Rate of Elevated Blood Lead Levels $\geq 25$ $\mu\text{g/dL}$ Among Adults per 100,000 employed	2.2	2.0	1.5	1.4	1.3	0.6	4.9

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

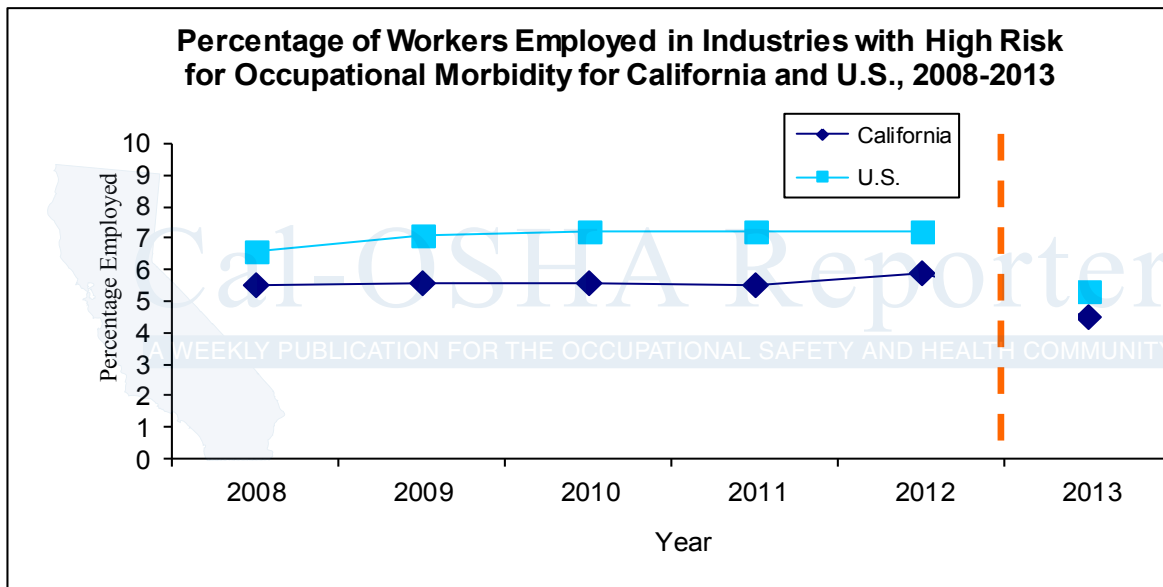
Rate and Number of Elevated Blood Lead Levels Among Adults for California and U.S., 2008-2013							
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Number of Residents with Elevated Blood Lead Levels $\geq 40 \mu\text{g/dL}$	69	45	36	34	31	23	N/A
Prevalence Rate of Elevated Blood Lead Levels $\geq 40 \mu\text{g/dL}$ Among Adults per 100,000 employed	0.4	0.3	0.2	0.2	0.2	0.1	N/A

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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., 2008-2013							
Year	California						U.S.
	2008 <sup>1</sup>	2009 <sup>1</sup>	2010 <sup>1</sup>	2011 <sup>1</sup>	2012 <sup>1</sup>	2013 <sup>2</sup>	2013 <sup>2</sup>
Percentage of Workers Employed in Industries With High Risk for Morbidity	5.5	5.6	5.6	5.6	5.9	4.5	5.3
Number of Workers Employed in Industries With High Risk for Morbidity	758,719	714,562	698,383	707,002	768,995	601,448	6,409,798

<sup>1</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.

<sup>2</sup>Technical note: In 2014, 54 industries had occupational injury and illness rates of more than double the national rate, or 6.4 cases per 100 full-time workers or higher. For this Indicator (2013-2017), these industries are classified as high risk industries and they accounted for 6.3 million workers in the United States (5.3% of the private sector non-farm wage and salary employment).

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 twice 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., 2008-2013							
Year	California						U.S.
	2008 <sup>1</sup>	2009 <sup>1</sup>	2010 <sup>1</sup>	2011 <sup>1</sup>	2012 <sup>1</sup>	2013 <sup>2</sup>	2013 <sup>2</sup>
Percentage of Workers Employed in Occupations With High Risk for Morbidity	16.5	15.6	15.5	14.9	16.5	13.8	15.4
Number of Workers Employed in Occupations With High Risk for Morbidity	2,063,163	1,848,720	1,740,331	1,723,133	1,991,205	1,714,465	18,002,277

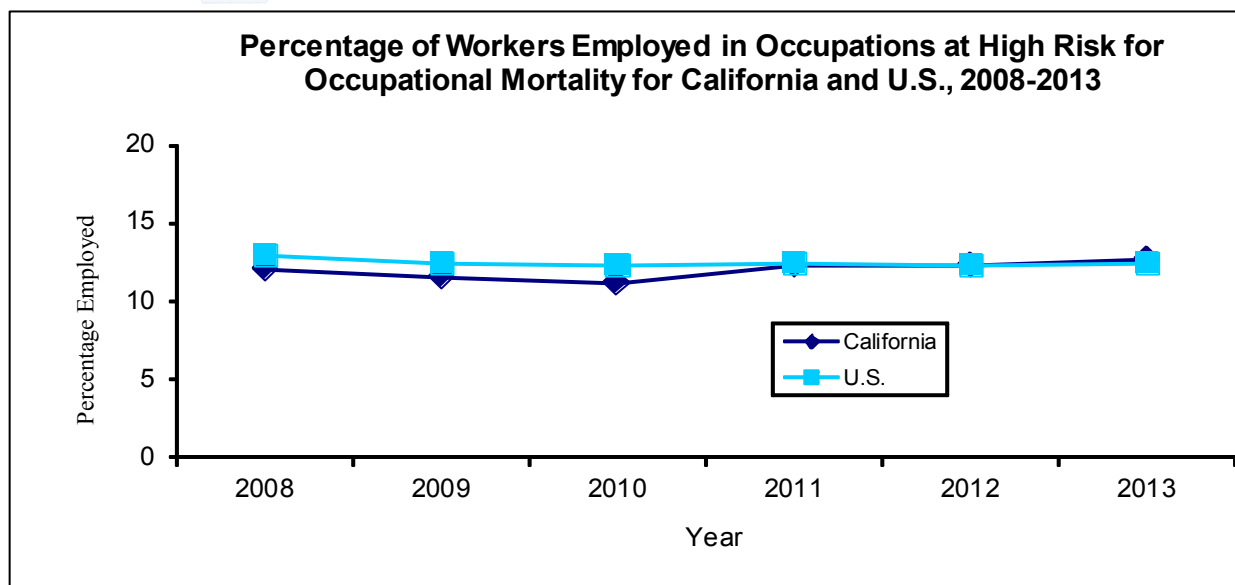
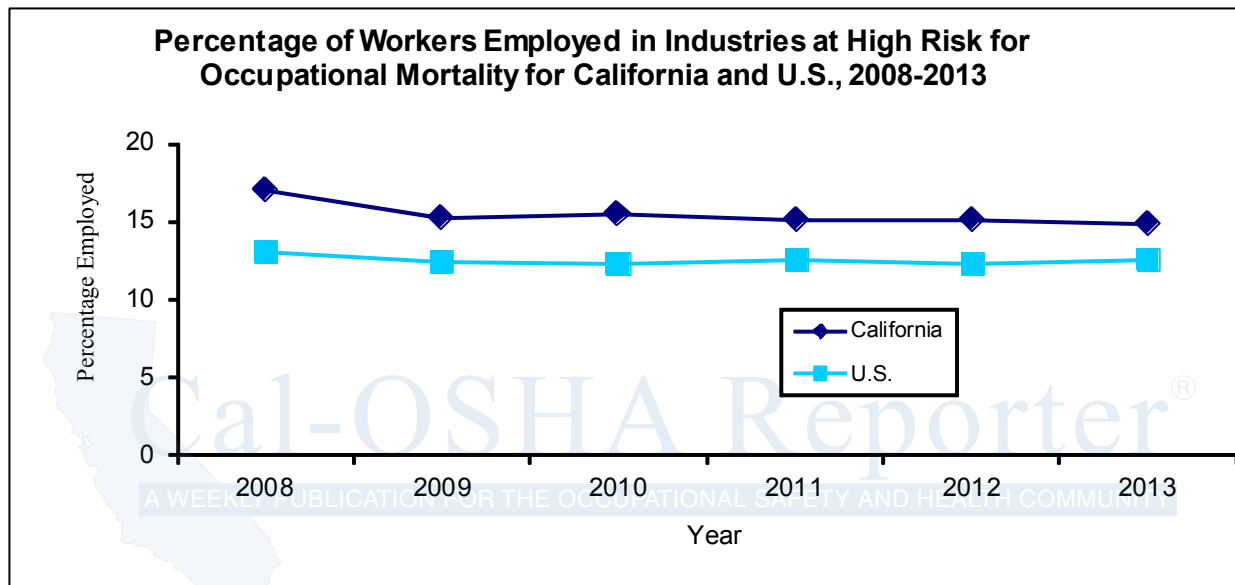
<sup>1</sup>Technical note: The 61 high risk occupations selected for this Indicator had injury and illness rates that exceed 2.2 cases per 100 full-time workers – twice the overall national injury and illness rates, as estimated by the U.S. Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses, 2008.

<sup>2</sup>Technical note: The 49 high risk occupations selected for this Indicator (2013-2017) had private sector injury and illness rates that exceed 1.9 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, 2014.

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

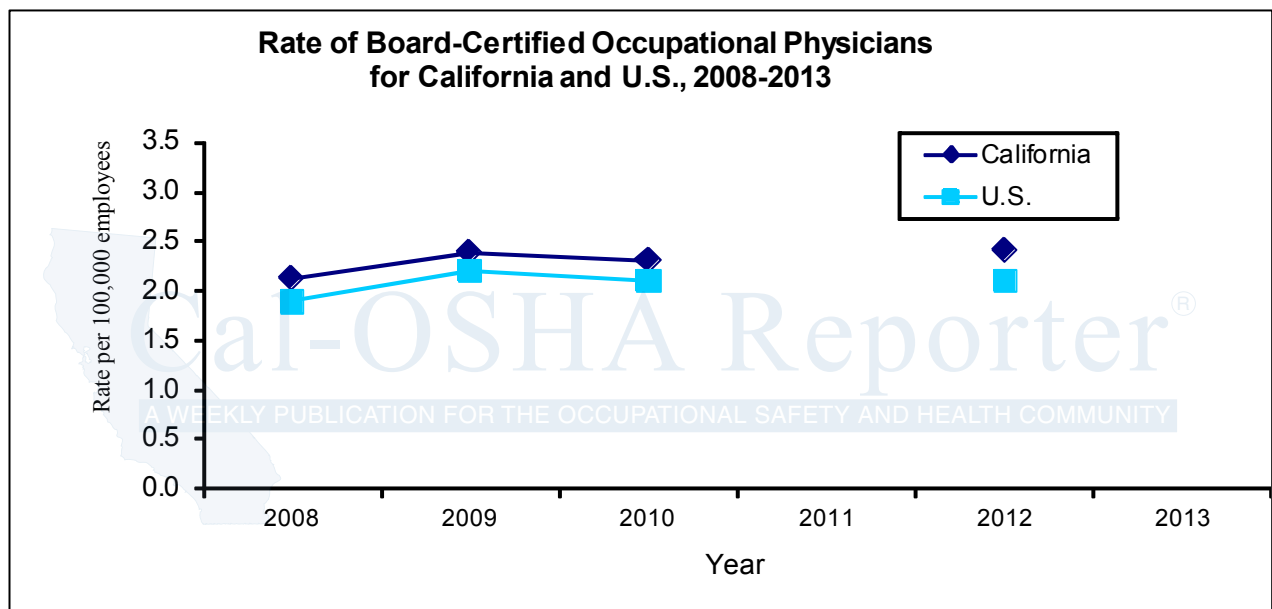
Percentage and Number of Workers Employed in Industries and Occupations With High Risk for Mortality for California and U.S., 2008-2013							
Year	California						U.S.
	2008 <sup>1</sup>	2009 <sup>1</sup>	2010 <sup>1</sup>	2011 <sup>1</sup>	2012 <sup>1</sup>	2013 <sup>1</sup>	2013 <sup>1</sup>
Percentage of Workers Employed in Industries With High Risk for Mortality	17.1	15.3	15.5	15.1	15.1	14.9	15.4
Number of Workers Employed in Industries With High Risk for Mortality	2,498,429	2,124,625	2,104,412	2,216,492	2,136,617	2,164,870	19,070,007
Percentage of Workers Employed in Occupations With High Risk for Mortality	12.1	11.5	11.2	12.3	12.3	12.7	12.5
Number of Workers Employed in Occupations With High Risk for Mortality	1,766,964	1,599,795	1,522,748	1,801,602	1,741,726	1,851,941	15,442,987

<sup>1</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 65 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., 2008-2013							
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Rate of Board-Certified Occupational Physicians per 100,000 Employees	2.1	2.4	2.3	N/A	2.4	N/A	N/A
Number of Board-Certified Occupational Physicians	362	387	374	N/A	N/A	N/A	N/A
Rate of ACOEM <sup>1</sup> Membership per 100,000 employees	2.7	2.7	2.6	N/A	2.6	2.4	2.6
Number of ACOEM <sup>1</sup> Members	455	440	421	N/A	N/A	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., 2008-2013**

Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Rate of Board-Certified Occupational Health Registered Nurses per 100,000 Employees	2.3	2.4	2.4	N/A	N/A	1.9	3.1
Number of Board-Certified Occupational Health Registered Nurses	389	394	382	N/A	N/A	N/A	N/A
Rate of AAOHN <sup>1</sup> Membership per 100,000 Employees	2.8	2.6	N/A	N/A	1.6	N/A	N/A
Number of AAOHN <sup>1</sup> Members	470	414	N/A	N/A	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., 2008-2013							
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Rate of Board-Certified Industrial Hygienists per 100,000 Employees	5.0	5.5	5.5	N/A	3.5	4.1	4.0
Number of Board-Certified Industrial Hygienists	859	883	876	N/A	N/A	N/A	N/A
Rate of AIHA <sup>1</sup> Membership per 100,000 employees	5.7	5.8	5.3	N/A	5.1	3.9	4.3
Number of AIHA <sup>1</sup> Members	974	947	853	N/A	N/A	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., 2008-2013							
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Rate of Board-Certified Safety Professionals per 100,000 Employees	6.2	6.8	7.1	N/A	7.3	7.2	9.5
Number of Board-Certified Safety Professionals	1,049	1,099	1,135	N/A	N/A	N/A	N/A
Rate of ASSE <sup>1</sup> Membership per 100,000 Employees	17.7	16.9	17.8	N/A	17.7	18.4	22.9
Number of ASSE <sup>1</sup> Members	3,016	2,739	2,838	N/A	N/A	N/A	N/A

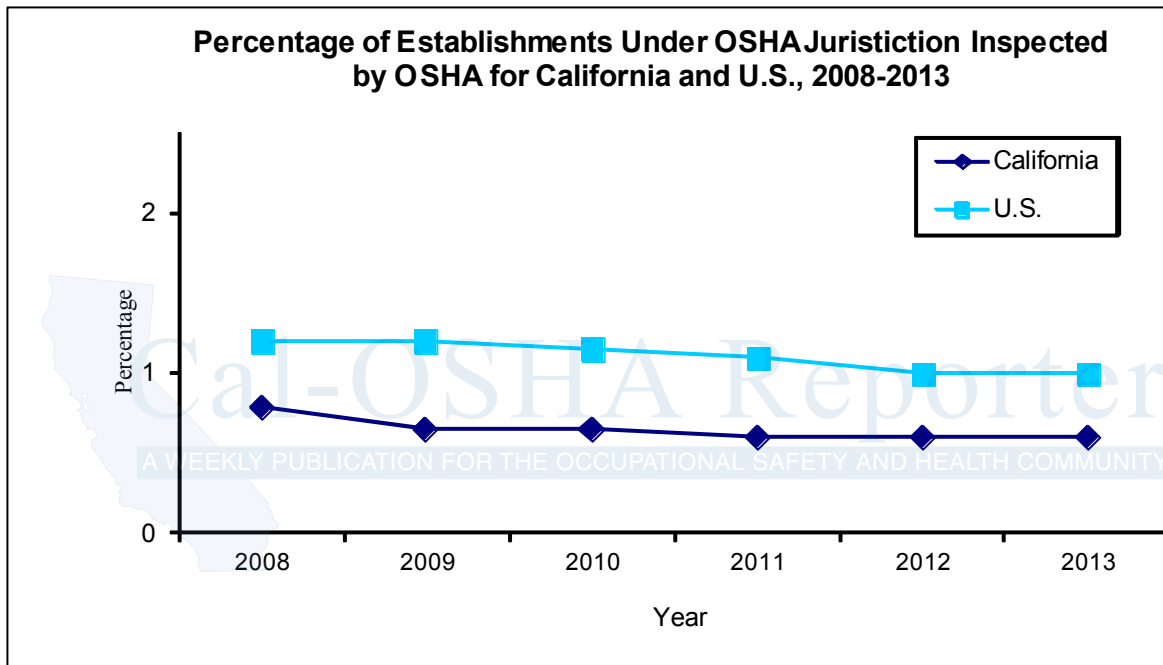
<sup>1</sup>American Society of Safety Engineers

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.



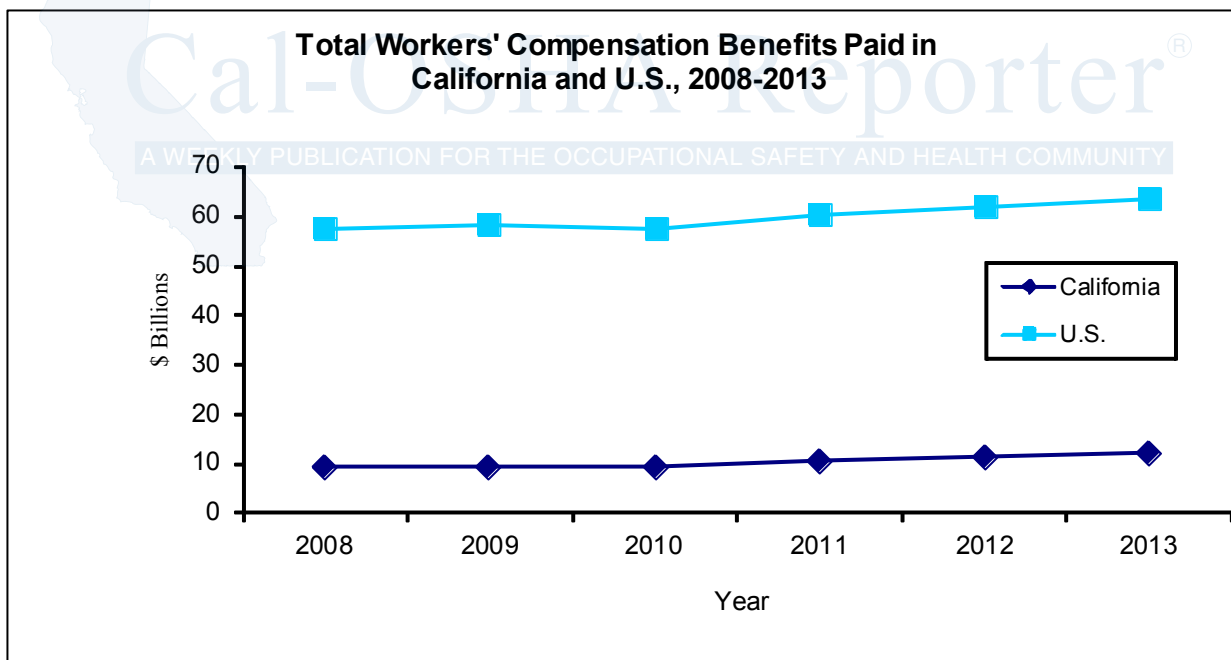
Data Sources: U.S. Department of Labor Occupational Safety and Health Administration Inspection Reports, U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages

Percentage and Number of Establishments Under OSHA Jurisdiction, Inspected, and Employees Whose Work Areas Were Inspected by OSHA for California and U.S., 2008-2013							
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Percentage of Establishments Under OSHA Jurisdiction Inspected by OSHA	0.8	0.6	0.7	0.6	0.6	0.6	1.0
Number of Establishments Inspected by OSHA	10,307	8,593	8,679	8,352	8,097	7,608	88,239
Number of Establishments Under OSHA Jurisdiction	1,311,176	1,324,123	1,330,247	1,376,363	1,333,259	1,330,007	8,818,558
Number of Employees Whose Work Areas Were Inspected by OSHA	471,173	436,084	430,496	477,033	428,493	338,435	3,301,630
Estimated Percentage of Employees Under OSHA Jurisdiction Whose Work Areas Were Inspected	3.1	3.0	3.0	3.3	2.9	2.2	3.0

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

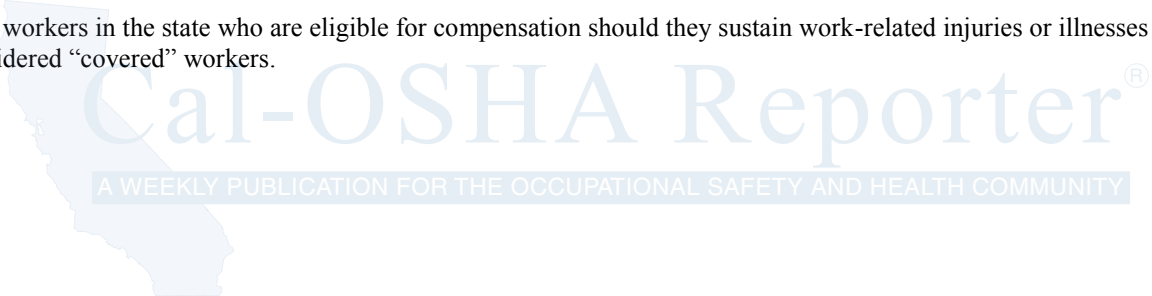
State workers' compensation programs were developed to provide guaranteed compensation for work-related injuries or illnesses while limiting the liability exposure of employers. Workers' compensation provides benefits to partially replace lost wages, pay for medical expenses associated with an injury 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., 2008-2013							
Year	California						U.S.
	2008	2009	2010	2011	2012	2013	2013
Total Amount of Workers' Compensation Benefits Paid in Billions	\$9.4	\$9.3	\$9.4	\$10.5	\$11.5	\$12.1	\$63.6
Average Amount of Workers' Compensation Benefits Paid per Covered Worker <sup>1</sup>	\$618	\$648	\$663	\$732	\$784	\$799	\$491

<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)

## 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 2016)  
([http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/OHIndicators2/2016\\_Version\\_OHI\\_Guidance\\_Ma.pdf](http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/OHIndicators2/2016_Version_OHI_Guidance_Ma.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  
(<https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/OHB/CDPH%20Document%20Library/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/>)