

2017 Occupational Health Indicators, Florida

The following document contains a listing of the Florida Occupational Health Indicators (OHI) for the year 2017 based on recommendations by the Council of State and Territorial Epidemiologists (CSTE), in association with the National Institute for Occupational Safety and Health (NIOSH). The OHI are calculated and reported annually, but due to data availability are delayed by three years (i.e., data reported in 2020 are from 2017). Florida does not collect all data that is required to calculate the OHI. Florida reports on 20 of a total of 25 OHI (plus state employment demographics).

Below is a comprehensive listing of the OHI, along with Florida’s reporting status (“Yes” for OHI that Florida reports all or partial sub-indicators for, and “N/A” for OHI not available as Florida does not collect the necessary data). Clicking the Indicator Title will link directly to that OHI.

#	Indicator Title	Collected
	Profile: Employment Demographics	Y
1	Non-Fatal Work-Related Injuries and Illnesses Reported by Employers	N/A
2	Work-Related Hospitalizations	Y
3	Fatal Work-Related Injuries	Y
4	Work-Related Amputations with Days Away from Work Reported by Employers	N/A
5	State Workers’ Compensation Claims for Amputations with Lost Work-Time	Y
6	Hospitalizations for Work-Related Burns	Y
7	Work-Related Musculoskeletal Disorders (MSDs) with Days Away from Work Reported by Employers	N/A
8	State Workers’ Compensation Claims for Carpal Tunnel Syndrome With Lost Work-Time	Y
9	Hospitalizations from or with Pneumoconiosis	Y
10	Mortality from or with Pneumoconiosis	Y
11	Acute Work-Related Pesticide-Associated Illness and Injury Reported to Poison Control Centers	Y
12	Incidence of Malignant Mesothelioma, Ages 15 and Older	Y
13	Elevated Blood Lead Levels (BLL) Among Adults	Y
14	Percentage of Workers Employed in Industries at High Risk for Occupational Morbidity	Y
15	Percentage of Workers Employed in Occupations at High Risk for Occupational Morbidity	Y
16	Percentage of Workers Employed in Industries and Occupations at High Risk for Occupational Mortality	Y
17	Occupational Safety and Health Professionals	N/A
18	Occupational Safety and Health Administration (OSHA) Enforcement Activities	Y
19	Workers’ Compensation Awards	Y
20	Work-Related Low Back Disorder Hospitalizations**	Y
21	Asthma Among Adults Caused or Made Worse by Work	Y

22	Work-Related Severe Traumatic Injury Hospitalizations**	N/A
23	Influenza Vaccination Coverage Among Hospital Care Personnel	Y
24	Occupational Heat-Related Emergency Department (ED) Visits**	Y
25	Hospitalizations for or with Occupational Eye Injuries	Y

On the following pages, you will find the 2017 results for each OHI that Florida reports as well as the significance of the indicator, limitations of the indicator, and the data sources.

Profile: Employment Demographics

Number of Employed Persons, 16 Years and Older		9,713,000
Percentage of civilian workforce unemployed		4.1
Percentage of civilian employment self-employed		5.3
Percentage of civilian employment in part-time jobs		17.2
Percentage of civilian employment by number of hours worked		
	0 to 39 hours	31.9
	40 hours	48.1
	41+ hours	20.0
Percentage of civilian employment by sex		
	Males	52.6
	Females	47.4
Percentage of civilian employment by age group		
	16 to 17	0.9
	18 to 64	92.0
	65 and over	7.2
Percentage of civilian employment by race		
	White	78.7
	Black	16.1

	Other	5.2
Percentage of civilian employment by Hispanic Origin		
		26.9
Percentage of civilian employment by industry		
	Mining and Logging	Less than 0.05
	Construction	7.5
	Manufacturing: Durable Goods	3.4
	Manufacturing: Nondurable Goods	1.7
	Wholesale and Retail Trade	15.3
	Transportation and Utilities	5.6
	Information	2.0
	Financial Activities	8.1
	Professional and Business Services	13.7
	Education and Health Services	20.4
	Leisure and Hospitality	11.5
	Other Services (except Public Administration)	5.8
	Public Administration	3.9
	Agriculture and Related Industries	0.9
Percentage of civilian employment by occupation		
	Management, Business, and Financial Operations	15.8
	Professional and Related Occupations	20.6
	Service	20.0
	Sales and Related Occupations	12.5
	Office and Administrative Support	12.3
	Farming, Fishing, and Forestry	0.5
	Construction and Extraction	5.7
	Installation, Maintenance, and Repair	3.4
	Production	3.4
	Transportation and Material Moving	5.9
Percentage of civilian employment by union membership		
	Union members	5.6
	Represented by a union	6.6

*The Other Services (except Public Administration) sector comprises establishments engaged in providing services not specifically provided for elsewhere in the classification system. Establishments in this sector are primarily engaged in activities, such as equipment and machinery repairing, promoting or administering religious activities, grantmaking, advocacy, and providing dry cleaning and laundry services, personal care services, death care services, pet care services, photofinishing services, temporary parking services, and dating services.

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

Significance: Work-related injuries and illnesses are preventable, and control of occupational hazards is the most effective means of prevention. Estimating the burden and tracking these injuries can help target prevention programs and activities. Information on reported cases can be used to identify contributory factors and to develop improved or new prevention strategies or regulations to protect workers.

1.1 Estimated Annual Total Number of Work-Related Injuries and Illnesses	Data not available
1.2 Estimated Annual Total Work-Related Injuries and Illness Incidence Rate (per 100,000 full-time equivalents [FTEs])	Data not available
1.3 Estimated Annual Total Number of Cases Involving Days Away From Work	Data not available
1.4 Estimated Annual Total Incidence Rate for Cases Involving Days Away From Work (per 100,000 FTEs)	Data not available
1.5 Estimated Annual Total Number of Cases Involving More Than 10 Days Away From Work	Data not available

Limitations of Indicator: Employers are required to record events that resulted in death, loss of consciousness, days away from work, restricted work activity or job transfer, or medical treatment beyond first aid, or a significant injury or illness diagnosed by a physician or other licensed health care professional. Limitations to this indicator include impacts from employer reporting compliance and the accuracy and completeness of the reports. Variations also occur regarding employer utilization of restricted or light duty for injured workers as a means of eliminating or decreasing the number of days an injured worker is away from work, which impacts reporting. Employers may not be aware of work-related conditions for which employees obtained medical care from their personal health care providers, or for conditions that have long latencies and are diagnosed after an employee leaves their employment. The industries for which data are available also vary among states, primarily due to the differences in industry concentration and sample size from one state to the next. As a result, it is not recommended to compare numbers or rates between state or national data. Because of regulation and reporting changes, time series comparisons may be subject to data breaks.

Data Resources: Annual Bureau of Labor Statistics (BLS) Survey of Occupational Injuries and Illnesses (SOII)
<https://www.bls.gov/opub/hom/soii/home.htm>.

Indicator 2: Work-Related Hospitalizations

Significance: Individuals hospitalized with work-related injuries and illnesses have some of the most serious and costly work-related adverse health outcomes. Tracking of these significant adverse health effects should be undertaken to document the burden of occupational injuries and illnesses, to design, target, and evaluate the impact of prevention efforts over time, and to identify previously recognized settings in which workers may continue to be at high risk.

2.1 Annual Number of Inpatient Work-Related Hospitalizations	7,748
2.2 Annual Rate of Inpatient Work-Related Hospitalization (per 100,000 workers)	79.8

Limitations of Indicator: Inpatient hospital discharge records are only available for non-federal, acute care hospitals. Individuals hospitalized for work-related injuries and illnesses represent less than 10 percent of all workers who receive workers' compensation. The majority of individuals with work-related illnesses and many others with injuries do not file for workers' compensation. Additionally, self-employed individuals such as farmers and independent contractors, federal employees, railroad or longshore and maritime workers are not covered by state workers' compensation systems. Attribution of payer in hospital discharge may not be accurate. Data between states may not be comparable due to the differences in states' workers' compensation programs.

Data Resources: Florida Agency for Healthcare Administration (AHCA) inpatient hospital discharge data and BLS Current Population Survey Data

Indicator 3: Fatal Work-Related Injuries

Significance: Multiple factors and risks contribute to work-related fatalities, including workplace/process design, work organization, worker characteristics, economics, and other social factors. Surveillance of work-related fatalities can identify new hazards and case clusters, leading to the development of new interventions and the development of new or revised regulations to protect workers.

3.1 Annual Number of Fatal Work-Related Injuries	299
3.2 Annual Fatality Rate (per 100,000 FTEs)	3.3

Limitations of Indicator: Fatalities of people younger than 16 may be included in the numerator but are not included in the denominator, since employment statistics are only available for those 16 years of age and older. Because the numbers of deaths among those less than 16 in any one state are small, these numbers are not broken out in the BLS tables and often do not meet the BLS publication criteria. Also, the Census of Fatal Occupational Injuries (CFOI) reports data on work-related fatalities by the state in which the fatal incident occurred, which is not necessarily the state of death or the state of residence. The denominator used for calculating rates is based on residence, thus rates may overestimate risk for a state if the fatal incidents involved victims who were out of state residents. Likewise, rates may be underestimated if fatal incidents occurred in other states. Deaths among military personnel and volunteers are included in the numerator but not the denominator. The BLS uses a different methodology to calculate fatal work-related injury rates from what CSTE presents. As a result, rates calculated using this indicator methodology may differ from the BLS published rates.

Data Resources: CFOI and BLS Current Population Survey Data

Indicator 4: Work-Related Amputations with Days Away from Work Reported by Employers

Significance: Work-related amputations are a preventable serious injury, and control of occupational hazards is the most effective means of prevention. Estimating the burden and tracking these injuries can help target prevention programs and activities. Information on reported cases can be used to identify contributing factors and to develop improved or new prevention strategies or regulations to protect workers.

4.1 Estimated Annual Number of Work-Related Amputations Involving Days Away from Work	Data not available
4.2 Estimated Annual Incidence Rate of Work-Related Amputations Involving Days Away from Work (per 100,000 FTEs)	Data not available

Limitations of Indicator: Employers are required to record events that resulted in death, loss of consciousness, days away from work, restricted work activity or job transfer, or medical treatment beyond first aid, or a significant injury or illness diagnosed by a physician or other licensed health care professional. Limitations to this indicator include impacts from employer reporting compliance and the accuracy and completeness of the reports. Variations also occur regarding employer utilization of restricted or light duty for injured workers as a means of eliminating or decreasing the number of days an injured worker is away from work, which impacts reporting. Employers may not be aware of work-related conditions for which employees obtained medical care from their personal health care providers, or for conditions that have long latencies and are diagnosed after an employee leaves their employment. The industries for which data are available also vary among states, primarily due to the differences in industry concentration and sample size from one state to the next. As a result, it is not recommended to compare numbers or rates between state or national data. Because of regulation and reporting changes, time series comparisons may be subject to data breaks.

Data Resources: Annual BLS SOII <https://www.bls.gov/opub/hom/soii/home.htm>.

Indicator 5: State Workers' Compensation Claims for Amputations with Lost Work-Time

Significance: Work-related amputations are preventable, and control of occupational hazards is the most effective means of prevention. Estimating the burden and tracking these injuries can help target prevention programs and activities. Information on reported cases can be used to identify contributory factors and to develop improved or new prevention strategies or regulations to protect workers.

5.1 Annual Number of Amputation Cases with Lost Work-Time Filed with State Workers' Compensation System	228
5.2 Annual Incidence Rate of Amputation Cases with Lost Work-Time Filed with State Workers' Compensation System (per 100,000 covered workers)	2.8

Limitations of Indicator: Differences in the availability of data (i.e., for lost time cases only versus all medical benefits cases) and eligibility criteria between states indicate that data for this condition should be used to evaluate trends within a state but not to make state-to-state comparisons. Since the adoption of the Occupational Injury and Illness Classification System (OIICS) 2.01 in 2011, the BLS cautions users against directly comparing Event, Source, Secondary Source, Part, and Nature case characteristic codes from 1992-2010 to data from 2011 onward. Information about the original OIICS coding structure as well as the new OIICS 2.01 coding structure is available here: <http://www.bls.gov/iif/oshoiics.htm>. However, some users may feel that the definitions for Nature of Injury 'Amputations' are similar enough between the coding structures for their needs.

Data Resources: Florida Division of Workers' Compensation and the National Academy of Social Insurance (NASI)

Indicator 6: Hospitalizations for Work-Related Burns

Significance: Although hospitalized burns are unusual events, they are painful, disabling, and expensive to treat. Many work-related burns result in significant disfigurement. In addition, burns are the most common cause of work-related hospitalization for young workers.

6.1 Annual Number of Inpatient Hospitalizations for Work-Related Burns	170
6.2 Annual Rate of Inpatient Hospitalizations for Work-Related Burns (per 100,000 workers)	1.8

Limitations of Indicator: Individuals hospitalized for work-related injuries and illnesses represent less than 10 percent of all workers who receive workers' compensation. The majority of individuals with work-related illnesses and many others with injuries do not file for workers' compensation. Additionally, self-employed individuals such as farmers and independent contractors, federal employees, railroad or longshore and maritime workers are not covered by state workers' compensation systems. Attribution of payer in hospital discharge may not be accurate. Data between states may not be comparable due to differences in states' workers' compensation programs.

Data Resources: Florida AHCA inpatient hospital discharge data and BLS Current Population Survey Data

Indicator 7: Work-Related Musculoskeletal Disorders (MSDs) with Days Away from Work Reported by Employers

Significance: Work-related musculoskeletal disorders are preventable, and control of occupational hazards is the most effective means of prevention. Estimating the burden and tracking these injuries helps target prevention programs and activities. Information on reported cases can be used to identify contributory factors and develop improved or new prevention strategies or regulations to protect workers.

7.1 Estimated Annual Number of All MSDs Involving Days Away from Work	Data not available
7.2 Estimated Annual Incidence Rate of All MSDs Involving Days Away from Work (per 100,000 FTEs)	Data not available
7.3 Estimated Annual Number of MSDs of the Neck, Shoulder & Upper Extremities Involving Days Away from Work	Data not available
7.4 Estimated Annual Incidence Rate of MSDs of Neck, Shoulder, and Upper Extremities Involving Days Away from Work (per 100,000 FTEs)	Data not available
7.5 Estimated Annual Number of Carpal Tunnel Syndrome Cases Involving Days Away from Work	Data not available
7.6 Estimated Annual Incidence Rate of Carpal Tunnel Syndrome Cases Involving Days Away from Work (per 100,000 FTEs)	Data not available
7.7 Estimated Annual Number of MSDs of the Back Involving Days Away from Work	Data not available
7.8 Estimated Annual Incidence Rate of MSDs of the Back Involving Days Away from Work (per 100,000 FTEs)	Data not available

Limitations of Indicator: Employers are required to follow OSHA regulations for recording work-related cases of injuries and illnesses. Cases are recordable if they result in death, loss of consciousness, days away from work, restricted work activity or job transfer, or medical treatment beyond first aid. Employers are only required to report the detailed case characteristics (e.g., nature of

the disabling condition, body part affected, and event and source producing the condition) when the injury or illness results in at least one day away from work beyond the day of injury or onset of illness. Employers do not always record all relevant events. Also, employers are often unaware of work-related conditions for which employees have obtained medical care from their personal healthcare providers, as well as conditions that have long latencies and develop or worsen long after the workplace exposure. MSD-related cases, for instance, may develop too late for inclusion in the SOII's collection of data or maybe reported less frequently to the SOII because of greater difficulty in determining whether or not they are work-related.

Data Resources: Annual BLS SOII

Indicator 8: State Workers' Compensation Claims for Carpal Tunnel Syndrome with Lost Work-Time

Significance: Carpal tunnel syndrome is preventable, and control of occupational hazards is the most effective means of prevention. Estimating the burden and tracking carpal tunnel syndrome can help target prevention programs and activities. Information on reported cases can be used to identify contributory factors and to develop improved or new prevention strategies or regulations to protect workers.

8.1 Annual Number of Carpal Tunnel Syndrome Cases with Lost Work-Time Filed with State Workers' Compensation System	3,780
8.2 Annual Incidence Rate of Carpal Tunnel Syndrome Cases with Lost Work-Time Filed with State Workers' Compensation System (per 100,000 covered workers)	47.2

Limitations of Indicator: Differences in the availability of data (i.e., for lost time cases only versus medical benefits cases) and eligibility criteria between states indicate that data for this condition should be used to evaluate trends within a state but not to make state-to-state comparisons.

Data Resources: Florida Division of Workers' Compensation and the National Academy of Social Insurance (NASI)

Indicator 9: Hospitalizations from or with Pneumoconiosis

Significance: Pneumoconiosis frequency varies geographically being largely determined by local industrial activities and migration of affected individuals. Control of occupational dust exposure is the single most effective means of preventing pneumoconiosis. Tracking of pneumoconiosis is essential for measuring progress towards the elimination of the disease, as well as for targeting prevention and disease management programs.

9.1.1 Annual Number of Inpatient Hospital Discharges for Total Pneumoconiosis	1,117
9.1.2 Annual Rate of Inpatient Hospital Discharges for Total Pneumoconiosis (per 1,000,000 residents)	63.8
9.1.3 Annual Age-Standardized Rate of Inpatient Hospital Discharges for Total Pneumoconiosis (per 1,000,000 residents)	45.7
9.2.1 Annual Number of Inpatient Hospital Discharges for Coal Workers' Pneumoconiosis	70
9.2.2 Annual Rate of Inpatient Hospital Discharges for Coal Workers' Pneumoconiosis (per 1,000,000 residents)	4.0
9.2.3 Annual Age-Standardized Rate of Inpatient Hospital Discharges for Coal Workers' Pneumoconiosis (per 1,000,000 residents)	2.9
9.3.1 Annual Number of Inpatient Hospital Discharges for Asbestosis	902
9.3.2 Annual Rate of Inpatient Hospital Discharges for Asbestosis (per 1,000,000 residents)	51.5
9.3.3 Annual Age-Standardized Rate of Inpatient Hospital Discharges for Asbestosis (per 1,000,000 residents)	35.5
9.4.1 Annual Number of Inpatient Hospital Discharges for Silicosis	58

9.4.2 Annual Rate of Inpatient Hospital Discharges for Silicosis (per 1,000,000 residents)	3.3
9.4.3 Annual Age-Standardized Rate of Inpatient Hospital Discharges for Silicosis (per 1,000,000 residents)	2.6
9.5.1 Annual Number of Inpatient Hospital Discharges for Other and Unspecified Pneumoconiosis	87
9.5.2 Annual Rate of Inpatient Hospital Discharges for Other and Unspecified Pneumoconiosis (per 1,000,000 residents)	5.0
9.5.3 Annual Age-Standardized Rate of Inpatient Hospital Discharges for Other and Unspecified Pneumoconiosis (per 1,000,000 residents)	4.7

Limitations of Indicator: Pneumoconiosis are typically diseases of long latency, current incidence is not necessarily indicative of current exposure, and it may be many years before reductions in occupational exposures affect the number of hospitalizations.

Data Resources: Florida Agency for Healthcare Administration (AHCA) inpatient hospital discharge data and the Bureau of the Census Year 2000 U.S. Standard population

Indicator 10: Mortality from or with Pneumoconiosis

Significance: Pneumoconiosis frequency varies geographically being largely determined by local industrial activities and migration of affected individuals. Control of occupational dust exposure is the single most effective means of preventing pneumoconiosis. Tracking of pneumoconiosis is essential for tracking progress towards elimination of the disease, as well as for targeting prevention and disease management programs.

10.1.1 Annual Number of Total Pneumoconiosis Deaths	97
10.1.2 Annual Total Pneumoconiosis Death Rate (per 1,000,000 residents)	5.6
10.1.3 Annual Age-Standardized Total Pneumoconiosis Death Rate (per 1,000,000 residents)	3.8
10.2.1 Annual Number of Coal Workers' Pneumoconiosis Deaths	6
10.2.2 Annual Coal Workers' Pneumoconiosis Death Rate (per 1,000,000 residents)	0.3
10.2.3 Annual Age-Standardized Coal Workers' Pneumoconiosis Death Rate (per 1,000,000 residents)	0.2
10.3.1 Annual Number of Asbestosis Deaths	86
10.3.2 Annual Asbestosis Death Rate (per 1,000,000 residents)	4.9
10.3.3 Annual Age-Standardized Asbestosis Death Rate (per 1,000,000 residents)	3.3
10.4.1 Annual Number of Silicosis Deaths	<5

10.4.2 Annual Silicosis Death Rate (per 1,000,000 residents)	*
10.4.3 Annual Age-Standardized Silicosis Death Rate (per 1,000,000 residents)	*
10.5.1 Annual Number of Other and Unspecified Pneumoconiosis Deaths	<5
10.5.2 Annual Other and Unspecified Pneumoconiosis Death Rate (per 1,000,000 residents)	*
10.5.3 Annual Age-Standardized Other and Unspecified Pneumoconiosis Death Rate (per 1,000,000 residents)	*

Limitations of Indicator: Pneumoconiosis are typically chronic diseases with a long latency (pre-clinical period), current incidence is not necessarily indicative of current exposures, and it may be several years before reductions in exposures affect mortality. State of residence of the decedent may not have been the state of exposure.

Data Resources: Florida Department of Health, Bureau of Vital Statistics and the Bureau of the Census Year 2000 U.S. Standard population

Indicator 11: Acute Work-Related Pesticide-Associated Illness and Injury Reported to Poison Control Centers

Significance: Workers who handle pesticides are at increased risk for exposure. Poison Control Centers (PCCs) are important sources of reports of acute poisonings and chemical exposures. These data can be useful to target prevention. The type of data collected is comparable across states due to the uniformity in case handling by PCCs.

11.1 Annual Number of Reported Work-Related Pesticide Poisoning Cases	119
11.2 Annual Incidence Rate of Reported Work-Related Pesticide Poisoning Cases (per 100,000 workers)	1.2

Limitations of Indicator: PCCs capture only a small proportion of acute occupational pesticide related illness cases, an estimated 10%. PCCs do not systematically collect information on industry and occupation; however, cases associated with occupational exposures can be identified.

Data Resources: Poison Control Center (PCC) data and BLS Current Population Survey Data

Indicator 12: Incidence of Malignant Mesothelioma, Ages 15 and Older

Significance: Malignant mesothelioma, while relatively rare, is a fatal cancer largely attributable to workplace exposure to asbestos. Tracking of malignant mesothelioma should be undertaken to document the burden of occupational disease, to design, target, and evaluate the impact of prevention efforts over time, and to identify previously unrecognized settings in which workers may continue to be at risk of asbestos exposure.

12.1 Annual Number of Incident Mesothelioma Cases	207
12.2 Annual Mesothelioma Incidence Rate (per 1,000,000 residents)	11.8
12.3 Annual Age-Standardized Mesothelioma Incidence Rate (per 1,000,000 residents)	8.2

Limitations of Indicator: Not all cases of malignant mesothelioma are caused by occupational exposures. Because cancer is a disease of long latency, current incidence is not indicative of current exposures and it may be many years before reductions in occupational exposures affect incidence. State of residence of the decedent may not have been the state of exposure.

Data Resources: Florida Cancer Data System (FCDS) and the Bureau of the Census Year 2000 US Standard population

Indicator 13: Elevated Blood Lead Levels (BLL) Among Adults

Significance: Among adults, lead poisoning is a persistent, mainly occupational, health issue that continues to be an important public health problem. The most reliable test for recent exposure is the BLL. The federal OSHA lead standards, enacted to protect workers from lead-associated health effects, require BLL monitoring for employees who meet exposure criteria. The standards are based on medical information that is now more than 40 years old and are not protective against the adverse health effects of lead. Lower medical removal protection (MRP) recommendations have been proposed to protect workers against the adverse health effects of both acute and cumulative lead exposures. Several states along with federal OSHA are in the process of revising their lead regulations to include lower MRP levels. It is important to note that the average BLL for the adult general population is less than 1 µg/dL.

13.1.1 Annual Number of Residents with Elevated Blood Lead Levels (≥ 5 µg/dL)	1,794
13.1.2 Annual Prevalence Rate of Blood Lead Levels (≥ 5 µg/dL) (per 100,000 workers)	18.5
13.1.3 Annual Number of Incident Cases with Elevated Blood Lead Levels (≥ 5 µg/dL)	1,031
13.1.4 Annual Incidence Rate of Blood Lead Levels (≥ 5 µg/dL) (per 100,000 workers)	11
13.2.1 Annual Number of Residents with Elevated Blood Lead Levels (≥ 10 µg/dL)	780
13.2.2 Annual Prevalence Rate of Blood Lead Levels (≥ 10 µg/dL) (per 100,000 workers)	8.0
13.2.3 Annual Number of Incident Cases with Elevated Blood Lead Levels (≥ 10 µg/dL)	419
13.2.4 Annual Incidence Rate of Blood Lead Levels (≥ 10 µg/dL) (per 100,000 workers)	4.3
13.3.1 Annual Number of Residents with Elevated Blood Lead Levels (≥ 25 µg/dL)	186

13.3.2 Annual Prevalence Rate of Blood Lead Levels (≥ 25 $\mu\text{g}/\text{dL}$) (per 100,000 workers)	1.9
13.3.3 Annual Number of Incident Cases with Elevated Blood Lead Levels (≥ 25 $\mu\text{g}/\text{dL}$)	86
13.3.4 Annual Incidence Rate of Blood Lead Levels (≥ 25 $\mu\text{g}/\text{dL}$) (per 100,000 workers)	0.9
13.4.1 Annual Number of Residents with Elevated Blood Lead Levels (≥ 40 $\mu\text{g}/\text{dL}$)	51
13.4.2 Annual Prevalence Rate of Blood Lead Levels (≥ 40 $\mu\text{g}/\text{dL}$) (per 100,000 workers)	0.5
13.4.3 Annual Number of Incident Cases with Elevated Blood Lead Levels (≥ 40 $\mu\text{g}/\text{dL}$)	28
13.4.4 Annual Incidence Rate of Blood Lead Levels (≥ 40 $\mu\text{g}/\text{dL}$) (per 100,000 workers)	0.3

Limitations of Indicator: BLLs reflect the contributions of acute external exposure to lead as well as the release of internal bone lead stores into the blood. For persons without significant lead body burden, a BLL is a good indicator of recent (preceding 3-5 weeks) external lead exposure. For persons with significant body burden, a single BLL may not be an accurate indicator of recent external exposure, as lead is also being released into the blood from bone stores.

Data Resources: Reports of elevated BLLs from Florida public health laboratories and BLS Current Population Survey Data – Geographic Profile of Employment and Unemployment (denominator)

Indicator 14: Percentage of Workers Employed in Industries at High Risk for Occupational Morbidity

Significance: Work-related injuries and illnesses are preventable, and control of occupational hazards is the most effective means of prevention. Concentrating on high-risk industries for non-fatal injuries and illnesses helps prioritize limited resources.

14.1 Number of Employed Persons in High Morbidity Risk North American Industry Classification System (NAICS) Industries	415,545
14.2 Percentage of Employed Persons in High Morbidity Risk NAICS Industries	5.0

Limitations of Indicator: It is possible that some new employers are not counted in the U.S. Bureau of the Census County Business Patterns (CBP) mid-March survey. In addition, differences in regional industrial practices may cause the ranking of high-risk industries within a specific State to differ from those identified from national data. The industries for which data are available also vary among states, primarily due to the differences in industry concentration and sample size from one state to the next; as a result, it is not recommended to compare numbers or rates between state or national data.

Data Resources: U.S. Bureau of the Census County Business Patterns (CBP)

Indicator 15: Percentage of Workers Employed in Occupations at High Risk for Occupational Morbidity

Significance: Work-related injuries and illnesses are preventable, and control of occupational hazards is the most effective means of prevention. Concentrating on high-risk occupations for non-fatal injuries and illnesses helps prioritize limited resources.

15.1 Number of Employed Persons in High Morbidity Risk Bureau of the Census (BOC) Occupations	1,074,244
15.2 Percentage of Employed Persons in High Morbidity Risk BOC Occupations	14.4

Limitations of Indicator: Differences in regional industrial practices may cause the ranking of high-risk occupations within a specific state or industry to differ from those identified from national data. The industries for which data are available also vary among states, primarily due to the differences in industry concentration and sample size from one state to the next; as a result, it is not recommended to compare numbers or rates between state or national data.

Data Resources: BLS Current Population Survey Data

Indicator 16: Percentage of Workers Employed in Industries and Occupations at High Risk for Occupational Mortality

Significance: Multiple factors and risks contribute to work-related fatalities, including workplace and process design, work organization, worker characteristics, economics and other social factors. Surveillance of work-related fatalities can identify new hazards and case clusters, leading to the development of new interventions and development of new or revised regulations to protect workers. Concentrating on high-risk industries and occupations for fatalities helps prioritize limited resources.

16.1 Number of Employed Persons in High Mortality Risk Bureau of Census (BOC) Industries	1,373,258
16.2 Percentage of Employed Persons in High Mortality Risk BOC Industries	15.9
16.3 Number of Employed Persons in High Mortality Risk BOC Occupations	1,046,594
16.4 Percentage of Employed Persons in High Mortality Risk BOC Occupations	12.1

Limitations of Indicator: Differences in regional industrial practices may cause the ranking of high-risk industries and occupations within a specific state to differ from those identified from national data. State industry rates are not comparable to other states because of the large differences in the industry composition of employment by state.

Data Resources: BLS Current Population Survey Data

Indicator 17: Occupational Safety and Health Professionals

Significance: Work-related injuries and illnesses are preventable. It is important to determine if there are sufficient trained personnel to implement occupational health preventive services.

17.1.1 Number of Board-Certified Occupational Medicine Physicians	Data not available
17.1.2 Rate of Board-Certified Occupational Medicine Physicians (per 100,000 employees)	Data not available
17.2.1 Number of American College of Occupational and Environmental Medicine (ACOEM) Members	Data not available
17.2.2 Rate of American College of Occupational and Environmental Medicine (ACOEM) Members (per 100,000 employees)	Data not available
17.3.1 Number of Board-Certified Occupational Health Nurses	Data not available
17.3.2 Rate of Board-Certified Occupational Health Nurses (per 100,000 employees)	Data not available
17.4.1 Number of American Association of Occupational Health Nurse (AAOHN) Members	Data not available
17.4.2 Rate of American Association of Occupational Health Nurse (AAOHN) Members (per 100,000 employees)	Data not available
17.5.1 Number of Board-Certified Industrial Hygienists	Data not available
17.5.2 Rate of Board-Certified Industrial Hygienists (per 100,000 employees)	Data not available

17.6.1 Number of American Industrial Hygiene Association (AIHA) Members	Data not available
17.6.2 Rate of American Industrial Hygiene Association (AIHA) Members (per 100,000 employees)	Data not available
17.7.1 Number of Board-Certified Safety Health Professionals (BCSP)	Data not available
17.7.2 Rate of Board-Certified Safety Health Professionals (BCSP) (per 100,000 employees)	Data not available
17.8.1 Number of American Society of Safety Engineers (ASSE) Members	Data not available
17.8.2 Rate of American Society of Safety Engineers (ASSE) Members (per 100,000 employees)	Data not available

Limitations of Indicator: Other important occupational health specialties such as fire prevention, health physicists, ergonomists are not included.

Data Resources: American Board of Preventive Medicine (ABPM) diplomates database (abprevmed.org). (#1,2) Annual roster of members of the ACOEM (acoem.org). (#3,4) American Board of Occupational Health Nurses Directory (aboehn.org). (#5,6) Annual roster of members of the AAOHN member directory (aaohn.org). (#7,8) American Board of Industrial Hygiene (abih.org). (#9,10) AIHA member directory (aiha.org). (#11,12) BCSP member directory (bcsp.org). (#13,14) ASSE member directory (www.assp.org/membership). (#15,16) BLS Current Population Survey Data.

Indicator 18: OSHA Enforcement Activities

Significance: The measures of frequency for this indicator may approximate the added health and safety benefits and protections felt by workers as a result of their worksites being inspected.

18.1 Annual Number of Employer Establishments Inspected by OSHA	2,298
18.2 Number of OSHA-Covered Establishments that are Eligible for OSHA Inspection (EXCLUDING MINES & FARMS)	665,925
18.3 Percentage of OSHA-Covered Establishments Eligible for Inspection that were Inspected by OSHA	0.3
18.4 Annual Number of Employees Whose Work Areas were Inspected by OSHA	52,307
18.5 Number of OSHA-Covered Employees (EXCLUDING MINERS & FARMERS)	7,520,233
18.6 Percentage of OSHA-Covered Employees Eligible for Inspection Whose Work Areas were Inspected by OSHA	0.7

Limitations of Indicator: This indicator measures only enforcement activity, not other measures of OSHA activity such as education and compliance assistance. Because OSHA may conduct multiple inspections of the same establishment during the calendar year, the percent of establishments inspected may be slightly overestimated. In addition, if OSHA conducts multiple inspections of the same worksite during the year, the number of workers covered by OSHA inspections may be over counted. In federal OSHA states and some OSHA state plan states, OSHA does not inspect farms with 10 or fewer employees. Agricultural establishments are excluded from the denominator in this indicator except for a few states; therefore, the percentages of establishments and employees covered may be overestimated in states that do inspect smaller farms.

Data Resources: OSHA annual reports of total inspections conducted, and the number of workers covered by these inspections. BLS data on Covered Employers and Wages (commonly referred to as the ES-202/QCEW data <http://www.bls.gov/cew/home.htm>) for the number of workers employed and establishments in the public and private sectors.

Indicator 19: Workers' Compensation Awards

Significance: Workers' compensation awards are reviewed to establish whether the reported medical condition is work-related. Accepted awards represent known work-related injuries and illnesses, and often more severe cases. The total and average amounts of benefits paid estimate the burden of these events, which can help justify prevention programs and activities.

19.1 Total Amount of Workers' Compensation Benefits Paid	\$3,431,599,000
19.2 Average Amount of Workers' Compensation Benefits Paid (per covered worker)	\$429

Limitations of Indicator: This is a gross indicator of the burden of occupational injury and illness. It does not include human, noneconomic costs nor all the economic costs associated with occupational injuries and illnesses. These data are more appropriate for evaluating trends within a state rather than comparisons between states because of differences in wages and medical costs, the compensation determination, industry types and risks, and policies on permanent disability payments. Even within a state, changes in policies, wages and medical care expenses must be considered.

Data Resources: National Academy of Social Insurance (www.nasi.org/)

Indicator 20: Work-Related Low Back Disorder Hospitalizations**

Significance: Hospitalizations for work-related back disorders have serious and costly effects including high direct medical costs, significant functional impairment and disability, high absenteeism, reduced work performance, and lost productivity. Well-recognized prevention efforts can be implemented for high risk job activities and reduce the burden of work-related low back disorders.

20.1 Annual Number of Work-Related Surgical Low Back Disorder Hospitalizations	Annual rate unable to be calculated
20.2 Annual Rate of Work-Related Surgical Low Back Disorder Hospitalizations (per 100,000 workers)	Annual rate unable to be calculated
20.3 Annual Number of Work-Related Low Back Disorder Hospitalizations	Annual rate unable to be calculated

20.4 Annual Rate of Work-Related Low Back Disorder Hospitalizations (per 100,000 workers)	Annual rate unable to be calculated
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Limitations of Indicator: Hospital discharge records are only available for non-federal, acute care hospitals. Many individuals with work-related injuries do not file for workers' compensation or fail to recognize work as the cause of their injury. Additionally, self-employed individuals such as farmers and independent contractors, federal employees, railroad or longshore and maritime workers are not covered by state workers' compensation systems. The expected payer on hospital discharge records may not be accurate and reflect the actual payer. Data between states may not be comparable due to differences in benefit adequacy in states' workers' compensation programs. Trends in the use of outpatient surgical centers may limit the interpretation of this indicator. The indicator utilizes only the first seven diagnosis and four procedure code fields to include and exclude cases. Many states have more diagnosis and procedure code fields that could be used to include and exclude cases. The indicator excludes patients hospitalized outside their state of residence.

Data Resources: Florida Agency for Healthcare Administration (AHCA) inpatient hospital discharge data and the BLS Current Population Survey Data

Indicator 21: Asthma Among Adults Caused or Made Worse by Work

Significance: Work-related asthma is preventable but often goes undiagnosed by physicians. Research has shown that work-related asthma can have adverse effects on the worker, including increased morbidity, adverse socioeconomic impacts and difficulty getting and sustaining work. Estimating the burden of asthma caused or made worse by work can help target prevention programs and activities.

21.1b 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	629,379
21.2b Estimated proportion of ever-employed adults with current asthma who report that their asthma was caused or made worse by exposures at work	53.5

Limitations of Indicator: The data represents a population-based estimate of asthma caused or made worse by work and are subject to measurement, nonresponse and sampling errors. The indicator does not distinguish between new-onset asthma and work-aggravated asthma. The Asthma Call Back Survey began new weighting methods in 2011 and the wording and order of questions changed in 2012, therefore any trend analysis would need to be restricted to 2012 forward. States using landline only versus landline and cellphone methodology do not have comparable estimates.

Data Resources: Behavioral Risk Factor Surveillance System (BRFSS) Asthma Call-Back Survey

Indicator 22: Work-Related Severe Traumatic Injury Hospitalizations**

Significance: Acute work-related trauma is a leading cause of death and disability among U.S. workers. Changes in hospitalization practices and workers' compensation coverage/reporting may increasingly reduce capture of minor injuries but have little effect on severe injuries. Use of a severity threshold can decrease the impact of changing utilization and service delivery patterns on observed injury trends [Cryer and Langley 2008; NCHS 2004]. When hospitalization data are used to calculate occupational injury trends in the absence of severity restriction, observed trends are biased downward [Sears, et al. 2014]. Accurate characterization of injury trends is critical to understanding how we are doing as a nation with regard to occupational injury prevention.

22.1 Annual Number of Work-Related Inpatient Hospitalizations for Severe Traumatic Injury	Annual rate unable to be calculated
22.2 Annual Rate of Work-Related Inpatient Hospitalizations for Severe Traumatic Injury (per 100,000 workers)	Annual rate unable to be calculated

Limitations of Indicator: Hospital discharge records are only available for non-federal, acute care hospitals. Many individuals with work-related injuries do not file for workers' compensation or fail to recognize work as the cause of their injury. Additionally, self-employed individuals such as farmers and independent contractors, federal employees, railroad or longshore and maritime workers are not covered by state workers' compensation systems. The expected payer on hospital discharge records may not be accurate and may not reflect the actual payer. Data between states may not be comparable due to the differences in states' workers' compensation programs. The indicator excludes patients hospitalized outside their state of residence. Severe traumatic injury hospitalizations are based only on first listed ICD-9-CM diagnoses (following STIPDA/Safe States Alliance Consensus Recommendations, 2007) that have been estimated to have an Abbreviated Injury Scale (AIS) severity of 3 or above. As a result, some severe traumatic injuries will not be counted.

Data Resources: Florida Agency for Healthcare Administration (AHCA) inpatient hospital discharge data and the BLS Current Population Survey Data

Indicator 23: Influenza Vaccination Coverage Among Hospital Care Personnel

Significance: Influenza has long been recognized as a significant cause of morbidity and mortality, especially among vulnerable populations. Healthcare personnel (HCP) are an important source of influenza transmission in the healthcare setting (Perex-Padilla 2009; Wicker 2009; Bertin 2010). HCP can serve as vectors for influenza because they are at risk for acquiring influenza from patients and for transmitting it to patients, and because they often come to work when ill (Talbot 2005; Talbot 2010; Pavia 2010; Wilde 1999). Nosocomial influenza outbreaks in healthcare facilities result in longer stays and greater mortality for patients (Cunney 2000; Bridges 2003; Weinstock 2000) and missed work for HCP (Wilde 1999). Higher influenza vaccination coverage among HCP is associated with reductions in nosocomial influenza among hospitalized patients (Weinstock 2000; Salgado 2004) and nursing home residents (Hayward 2006; Potter 1997; Lemaitre 2009). Influenza vaccination of HCP is also associated with decreased all-cause mortality among nursing home residents (Carman 2000). Therefore, the Centers for Disease Control and Prevention (CDC) recommends that all HCP receive the seasonal influenza vaccine annually to protect themselves and their patients (Fiore 2010).

The seasonal influenza vaccine is highly effective in healthy, younger adults, which include many healthcare personnel. Therefore, vaccination campaigns in this group can be simple, safe, and cost-effective (Pavia 2010). However, overall poor performance in healthcare personnel vaccination has been demonstrated repeatedly. From 1998-2005, influenza vaccination coverage among HCP peaked at 43% (Lu 2008). During the 2008-2009 influenza season, the National Health Interview Survey measured HCP influenza vaccination at 53% nationally (CDC 2011). Seasonal influenza vaccination coverage among HCP during the 2009-2010 influenza season reached 62%. However, all of these estimates are substantially lower than the Healthy People 2020 goal of 90% influenza vaccination coverage among HCP.

23.1 Pooled Proportion of Hospital Care Personnel Influenza Vaccination Coverage in Acute Care Hospitals (2016–2017 influenza season)	77.5
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Limitations of Indicator: Calculation of overall mean influenza vaccination coverage for all facilities will not provide specific information on significant predictors for vaccination coverage for each group of HCP.

Data Resources: State-based National Healthcare Safety Network (NHSN) user groups and/or mandatory reporting systems; National NHSN data covered under State-CDC data use agreement; State-specific aggregate NHSN data provided by CDC

Indicator 24: Occupational Heat-Related Emergency Department (ED) Visits

Significance: Minimal epidemiological information about occupational heat-related morbidity is available. Tracking occupational heat-related illnesses using the Emergency Department (ED) data will establish a baseline for occupational epidemiologists to understand the magnitude of the disease burden in the population and support implementation and evaluation of prevention measures.

24.1 Annual Number of Emergency Department Visits for Occupational Heat-Related Illness	525
24.2 Annual Rate of Emergency Department Visits for Occupational Heat-Related Illness (per 100,000 workers)	5.4

Limitations of Indicator: The number of diagnostic fields in ED records varies by state, and the utilization of EDs varies geographically. The majority of individuals with work-related illnesses and injuries do not file for workers' compensation. Self-employed individuals such as farmers and independent contractors, federal employees, railroad, longshore, and maritime workers are not covered by state workers' compensation systems. Out-of-state workers are not captured. Attribution of payer in ED discharge may not be accurate. Data between states may not be comparable due to the differences in states' workers' compensation programs. Further, the effectiveness of identifying work-relatedness through Ecodes will vary by Ecode usage within each medical facility.

Data Resources: Florida Agency for Healthcare Administration (AHCA) ED visits data and the BLS Current Population Survey Data

Indicator 25: Hospitalizations for or with Occupational Eye Injuries

Significance: Occupational eye injuries are common yet preventable. In severe cases, ocular trauma can lead to lifetime disability. Although protective eyewear can reduce the risk of eye injury, identifying additional risk factors for eye injuries is integral to preventing them [Blackburn, 2012]. Estimating the burden of occupational eye injuries and associated risk factors can help target prevention activities.

25.1 Annual Number of Inpatient Hospitalizations for or with Occupational Eye Injuries	122
25.2 Annual Rate of Inpatient Hospitalizations for Occupational Eye Injuries (per 100,000 employed persons)	1.3

Limitations of Indicator: This indicator likely underestimates the burden of work-related eye injuries. It excludes patients hospitalized outside their state of residence. Additionally, the indicator only counts hospitalizations in which workers' compensation was listed as the primary payer on the discharge record. Many workers with work-related illnesses and injuries do not file for workers' compensation, and many types of workers are not eligible for workers' compensation. Although the indicator likely undercounts work-related eye injuries, some of the cases it captures may be hospitalizations for head injuries (affecting the eyes) that may not have been preventable by standard precautions against eye injuries.

Data Resources: Florida Agency for Healthcare Administration (AHCA) inpatient hospital discharge data and the BLS Current Population Survey Data

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