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Washington State Occupational Health Indicators - Current Data (2010-present)

Data from the Safety & Health Assessment & Research for Prevention (SHARP) program at L&I.
(SHARP Surveillance Report #80-11-2017)

Occupational Health Indicators

There are over 3 million workers in Washington State. Every year tens of thousands are injured or made ill on the job. These work-related injuries and illnesses have high human and economic costs, but can be prevented. Tracking these injuries and illnesses is the first step to understanding whether prevention methods are succeeding or need to be improved.

Washington State researchers at the Department of Labor and Industries worked with the Council of State and Territorial Epidemiologists (CSTE) Occupational Health workgroup to develop a set of measures to track occupational injuries and illnesses. These measures are called 'occupational health indicators' (OHI) and are compiled yearly (because of time for data to develop and become available, there is about a 3-year lag; for 2017 CSTE OHI data is being collected for 2014). They are meant to provide an overview and general assessment of the occupational health status of Washington State.

While more in-depth reports compiling and comparing several years of data are published at regular intervals by SHARP and CSTE, more recent information has not always been readily available. This report summarizes the data available from 2006 through the most currently available data, in an effort to make WA State OHI data available in more "real-time." As such, portions of the report may be left blank where data is not yet available (data sources differ in schedule), or there is no data (as with new indicators or new components of existing indicators).

For data from 2006-2014, please see the previous indicator report (#80-11-2013). This report was last updated in October 2016, and included provisional data.

For data from 2000-2005, please see the previous indicator report (#80-11-2011).

This document will be updated quarterly, or as data becomes available. Revisions will be noted.

Rates given are per 100,000 full-time equivalent employees (FTEs) unless otherwise noted.

A '(P)' denotes preliminary numbers.

Newest data appears in green.

Revisions appear in orange.

Need more information?

Safety and Health Assessment and Research for Prevention (SHARP) Program

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See the previous indicator report #80-11-2013 for earlier data.

http://www.ini.wa.gov/safety/research/files/wa_indicators_oct2016.pdf

See the previous indicator report #80-11-2011 for earlier data.

<http://www.ini.wa.gov/Safety/Research/Files/80112011WaOccHealthIndic.pdf>

See the technical notes in our report #80-4-2008 "Occupational Health Indicators for Washington State, 1997-2004" for more information on data sources, the indicators, and how the indicators are generated.

<http://www.ini.wa.gov/Safety/Research/Files/OccHealth/OccHealthReport2008.pdf>

See the CSTE website for further information about the development and selection of the Occupational Health Indicators, as well as the downloadable guide that contains the methodology for their calculation and information on changes to the indicators (e.g. data source, methods).

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

	2010	2011	2012	2013	2014	2015	2016	2017
Number of employed persons age 16 years or older.	3,180,000	3,127,000	3,184,000	3,221,000	3,269,000	3,338,000 (P)		

Employment Demographics

P1. Percentage of civilian workforce unemployed	10.2	9.4	8.3	7.0	6.3	5.6 (P)	4.9 (P)
P2. Percentage of civilian employment self-employed	7.6	7.1	7.6	6.5	6.1		
P3. Percentage of civilian employment in part-time jobs	23.0	22.4	21.8	20.0	20.1		
P4. Percentage of civilian employment by number of hours worked							
<40 hours	40.5	40.1	38.7	35.9	36		
40 hours	35.7	35.5	37.0	40.1	39.6		
41+ hours	23.8	24.4	24.3	24.0	24.4		
P5. Percentage of civilian employment by sex							
Males	52.4	52.6	53.3	53.5	53.3	53.8 (P)	
Females	47.6	47.4	46.7	46.5	46.7	46.2 (P)	
P6. Percentage of civilian employment by age group							
16 to 17	1.0	0.7	1.0	0.8	0.9	0.9 (P)	
18 to 64	95.2	94.9	94.2	94.6	94.1	93.6 (P)	
65+	3.8	4.5	4.8	4.6	5.1	5.4 (P)	
P7. Percentage of civilian employment by race							
White	84.6	84.5	81.7	82.2	81.8	81.0 (P)	
Black	2.6	2.7	3.3	3.0	3.3	3.8 (P)	
Other	12.8	12.8	15.0	14.8	14.9	15.2 (P)	
P8. Percentage of civilian employment by Hispanic Origin	8.3	7.9	9.0	9.7	10.8	12.4 (P)	
P9. Percentage of civilian employment by industry							
Post-2003 Industry Categories:							
Mining	0.1	<0.05	<0.05	0.1	0.1		
Construction	6.6	5.7	5.5	6.4	6.5		
Manufacturing - Durable goods	7.5	8.4	9.6	8.1	7.5		
Manufacturing - Non-durable goods	3.0	2.6	2.7	2.9	3.5		
Wholesale and Retail Trade	13.3	13.5	14.2	14.2	14.3		
Transportation and utilities	4.7	5.3	5.2	5.5	5.3		
Information	2.3	2.6	2.3	1.9	2.3		
Financial activities	5.8	5.5	5.0	5.9	5.9		
Professional and business services	12.8	11.9	12.2	13.0	12.8		
Education and health services	20.8	22.1	21.8	21.3	20.9		
Leisure and hospitality	9.8	9.8	9.4	10.0	9.1		
Other services	4.4	4.0	4.4	4.3	4.1		
Public administration	6.3	6.1	5.2	4.3	4.6		
Agriculture and related	2.4	2.3	2.5	2.3	2.8		
P10. Percentage of civilian employment by occupation							
Post-2003 Occupational Categories:							
Management, business and financial operations	15.7	16.4	16.1	16.9	17.2		
Professional and related	24.6	24.4	24.7	24.1	23.9		
Service	17.2	17.9	16.9	16.7	16.2		
Sales and related	9.9	9.6	10.6	9.9	9.9		
Office and administrative support	12.1	12.0	11.2	11.3	11.5		
Farming/forestry/fishing	1.6	1.4	1.4	1.4	1.6		
Construction and extraction	5.1	4.0	4.2	4.7	5.4		
Installation, maintenance, and repair	3.2	3.7	3.4	3.8	3.9		
Production	5.0	5.1	5.3	5	5.4		
Transportation/material moving	5.7	5.7	6.2	6.1	5.2		

	2010	2011	2012	2013	2014	2015	2016	2017
Number of employed persons age 16 years or older.	3,180,000	3,127,000	3,184,000	3,221,000	3,269,000	3,338,000(P)		
Indicator 1. Nonfatal Occupational Injuries & Illness								
1.1 Number of Occ. Injuries & Illnesses	86,700	89,300	89,300	91,100	90,000	90,700		
1.2 Rate of OI&I per 100,000 FTEs	4,800	4,900	4,800	4,800	4,600	4,400		
1.3 Number of cases involving days away from work	28,700	29,900	28,500	29,900	29,200	29,400		
1.4 Rate involving days away from work	1,600	1,600	1,500	1,600	1,500	1,400		
1.5 Number involving >10 days away from work	12,660	13,060	12,110	12,400	12,220	12,290		
Indicator 2. Work-related Hospitalizations								
2.1 Annual number of hospitalizations	5,200	5,012	4,747	4,258	3,707			
2.2 Annual crude rate of hospitalizations / 100,000 employed persons age 16 or older	164	160.3	149.1	132.2	113.4			
Indicator 3. Work-related Fatal Injuries								
3.1 Annual number of work-related traumatic fatalities	104	60	67	56	88	70 (P)		
3.2 Annual crude fatality rate per 100,000 employed persons age 16 years or older	3.6	1.9	2.1	1.7	2.7	2.1 (P)		
3.2B Annual crude fatality rate per 100,000 FTE (2007 on)*	3.6	2.1	2.3	1.9	2.9	2.2 (P)		
Indicator 4. Work-related amputations with days away from work reported by employers								
4.1 Estimated annual number of work-related amputations involving days away from work	70	320	70	70	90	120		
4.2 Estimated annual incidence rate of amputations involving days away from work per 100,000 FTEs	4.0	17.0	4.0	4.0	5.0	6.0		
Indicator 5. State workers' compensation claims for amputations with lost work-time								
Number of WA workers covered by state WC	2,667,000	2,707,000	2,751,000	2,820,000	2,899,000			
5.1 Annual number of amputations filed with state workers' compensation	175	194	195	228	211	240		
5.2 Annual incidence rate of amputations filed with state workers' comp per 100,000 workers covered by state workers' comp system	6.6	7.2	7.1	8.1	7.3			
Indicator 6. Hospitalization for work-related burns								
6.1 Annual number of hospitalizations for work-related burns for persons age 16 years and over	70	67	55	58	37			
6.2 Annual rate of hospitalization per 100,000 employed persons age 16 years or older	4	2.1	1.7	1.8	1.1			
Indicator 7. Work-related musculoskeletal disorders with days away from work reported by employers								
7.1 Estimated annual number of all MSDs involving days away from work	11,410	12,430	12,100	12,020	11,230			
7.2 Estimated annual incidence rate of all MSDs involving days away from work per 100,000 FTEs	631	679	649	630	568			
7.3 Estimated annual number of MSDs of the neck, shoulder, and upper extremity involving days away from work	4,000	3,620	3,470	3,910	3,510			
7.4 Estimated annual incidence rate of MSDs of neck, shoulder & upper extremity involving days away from work per 100,000 FTE	222	198	186	205	178			
7.5 Estimated annual number of carpal tunnel syndrome cases involving days away from work	560	480	320	260	190			
7.6 Estimated annual incidence rate of CTS cases involving days away from work per 100,000 FTE	31	26	17	14	10			
7.7 Estimated annual number of MSDs of the back involving days away from work	4,880	5,320	5,620	5,140	4,810			
7.8 Estimated annual incidence rate of MSDs of the back involving days away from work per 100,000 FTE	270	290	301	269	244			
Indicator 8. Carpal tunnel syndrome cases file with state workers' compensation								
Number of WA workers covered by state WC	2,667,000	2,707,000	2,751,000	2,820,000	2,899,000			
8.1 Annual number of carpal tunnel syndrome cases filed with state workers' compensation	919	829	787	663	631	611 (P)		
8.2 Annual incidence rate per 100,000 workers covered by state workers' compensation system	34.5	30.6	28.6	23.5	21.8			

* The denominator that the Bureau of Labor Statistics (BLS) uses to calculate fatality rates has changed over time from the number employed to hours worked. The new hours-based rates use the average number of employees at work and the average hours each employee works. To be consistent with the BLS, the denominator for fatal work-related injury rates for this indicator has changed from the number employed, as indicated in the Geographic Profiles, to the number of hours worked.

	2010	2011	2012	2013	2014	2015	2016	2017
Number of employed persons age 16 years or older.	3,180,000	3,127,000	3,184,000	3,221,000	3,269,000	3,338,000(P)		

Indicator 9. Hospitalizations from or with pneumoconiosis

9.1 Hospital discharges with a primary or contributing diagnosis of ICD-9-CM code 500-505 (total pneumoconiosis)

9.1.1 Annual number of hospital discharges	470	404	390	341	287
9.1.2 Annual rate of hospitalization per million residents	86.8	73.2	69.9	60.4	50.1
9.1.3 Annual, age-standardized, rate of hospitalization per million residents	91.3	76.2	70.2	59.2	48.2

9.2 Hosp discharges with a primary or contributing dx of ICD-9 code 500 (coal workers' pneumoc.)

9.2.1 Annual number of coal workers' pneumoconiosis hospital discharges	10	10	14	10	7
9.2.2 Annual rate of coal workers' pneumoconiosis hospitalizations per mil residents	1.8	1.8	2.5	1.8	1.2
9.2.3 Annual, age-standardized, rate of hospitalization per million residents	2.0	1.7	2.2	1.6	1.0

9.3 Hospital discharges with a primary or contributing dx of ICD-9 code 501 (asbestosis)

9.3.1 Annual number of asbestosis hospital discharges	441	373	361	312	266
9.3.2 Annual rate of asbestosis hospitalizations per million residents	81.4	67.6	64.7	55.3	46.4
9.3.3 Annual, age-standardized, rate of asbestosis hospitalizations per mil residents	86.1	70.9	65.6	53.9	44.5

9.4 Hospital discharges with a prim or contr dx of ICD-9 code 502 (silicosis)

9.4.1 Annual number of silicosis hospital discharges	12	11	10	9	9
9.4.2 Annual rate of silicosis hospitalizations per million residents	2.2	2.0	1.7	1.6	1.6
9.4.3 Annual, age standardized, rate of silicosis hospitalizations per million residents	2.1	2.0	1.6	1.6	1.6

9.5 Hospital discharges with a prim or contr dx of ICD-9 code 503, 504 or 505 (other & unsp. Pneumoc)

9.5.1 Annual number of other and unspecified pneumoconiosis hospital discharges	8	11	5	10	6
9.5.2 Annual rate of other and unspecified pneumoconiosis hosp per million residents	1.5	2	0.9	1.8	1.0
9.5.3 Annual, age standardized, rate of other and unsp. hosp per million residents	1.4	1.7	0.7	2.0	1.0

Indicator 10. Mortality from or with pneumoconiosis

10.1 Deaths w/ ICD-10 code of J60-J66 as underlying or contr cause of death (total Pneumo)

10.1.1 Annual number of total pneumoconiosis deaths	81	71	64	85	68
10.1.2 Annual total pneumoconiosis death rate per million residents**	14.9	12.9	11.5	15.1	11.9
10.1.3 Annual age-standardized total pneumoconiosis death rate per million residents	15.1	13.6	11.5	14.7	11.4

10.2 Deaths with underlying or contributing cause of death w/ ICD-10 code J60 (coal workers pneumoc)

10.2.1 Annual number of coal workers' pneumoconiosis deaths	2	1	0	0	1
10.2.2 Annual death rate per million residents					
10.2.3 Annual, age standardized, coal workers' pneumoconiosis death rate per million residents					

10.3 Deaths with an underlying or contr dx of ICD-10 code J61 (asbestosis)

10.3.1 Annual number of asbestosis deaths	76	68	62	82	65
10.3.2 Annual asbestosis death rate per mil residents	14.0	12.3	11.2	14.5	11.3
10.3.3 Annual, age standardized, asbestosis death rate per mil residents	14.3	13.1	11.2	14.3	10.9

10.4 Deaths with an underlying or contributing dx of ICD-10 code J62 (silicosis)

10.4.1 Annual number of silicosis deaths	2	2	2	1	0
10.4.2 Annual silicosis death rate per million residents					
10.4.3 Annual, age-standardized death rate per million residents					

10.5 Deaths with underlying or contr DX of ICD-10 code J63, J64, J65, J66 (other & unsp. pneumoc)

10.5.1 Annual number of other and unspecified pneumoconiosis deaths	1	0	0	3	2
10.5.2 Annual other and unspecified pneumoconiosis death rate per mil residents					
10.5.3 Annual, age stand, other & unsp. pneumoconiosis death rate per mil resident					

**Rates are only reported where there are ≥ 5 cases

	2010	2011	2012	2013	2014	2015	2016	2017
Number of employed persons age 16 years or older.	3,180,000	3,127,000	3,184,000	3,221,000	3,269,000	3,338,000(P)		
Indicator 11. Acute work-related pesticide-associated illness and injury report to poison control centers								
11.1 Annual number of reported work-related pesticide poisoning cases	101	91	85	81				
11.2 Annual incidence rate of reported work-related pesticide poison cases per 100,000 employed persons age >=16 yr	3.2	2.91	2.67	2.52				
Indicator 12. Incidence of malignant mesothelioma								
12.1 Annual number of incident mesothelioma cases	103	95	94	81				
12.2 Annual mesothelioma incidence rate per million residents	19	17.2	16.9	14.4				
12.3 Annual, age standardized mesothelioma incidence rate per million residents	19.7	17.3	16.6	13.4				
Indicator 13. Elevated blood lead levels among adults								
13.1 Persons age 16 years or older with a blood lead level of >=10 ug/dL †								
13.1.1 Annual number of residents with elevated blood lead levels (>=10 ug/dL)		227	191	212	212			
13.1.2 Annual prevalence rate per 100,000 employed persons		7.3	6	6.6	6.5			
13.1.3 Annual number of incident cases		103	109	120	106			
13.1.4 Annual incidence rate per 100,000 employed persons		3.3	3.4	3.7	3.2			
13.2 Persons age 16 years or older with a blood lead level of >= 25 ug/dL								
13.2.1 Annual number of residents with blood lead levels >= 25 ug/dL	84	67	65	53	42			
13.2.2 Annual prevalence rate per 100,000 employed persons	2.6	2.1	2.1	1.7	1.3			
13.2.3 Annual number of incident cases	50	21	29	23	23			
13.2.4 Annual incidence rate per 100,000 employed persons	1.5	0.7	0.9	0.7	0.7			
13.3 Persons age 16 years or older with a blood lead level of >= 40 ug/dL								
13.3.1 Annual number of residents with blood lead levels >= 40 ug/dL	13	10	24	10	13			
13.3.2 Annual prevalence rate per 100,000 employed persons	0.4	0.3	0.8	0.3	0.4			
13.3.3 Annual number of incident cases	11	3	16	5	7			
13.3.4 Annual incidence rate per 100,000 employed persons	0.3	0.1	0.5	0.2	0.2			
Indicator 14. Percentage of workers employed in industries at high risk for occupational morbidity								
14.1 Number of employed persons in high morbidity risk North American Industry Classification System (NAICS) industries	155,685	165,375	159,659	127,571	131,945			
14.2 Percentage of employed persons in high morbidity risk NAICS industries	6.7	7.0	6.8	5.2	5.2			
Indicator 15. Percentage of workers employed in occupations at high risk for occupational morbidity								
15.1 Number of employed persons in high morbidity risk 1990 bureau of census occupations	329,537	303,145	325,470	334,186	371,903	382,969		
15.2 Percentage of employed person in high morbidity risk 1990 bureau of census occupations	14.5	13.6	14.3	13.7	15.0	15.4		
Indicator 16. Percentage of workers employed in industries and occupations at high risk for occupational mortality								
16.1 Average number of employed persons in high mortality risk industries	316,303	376,458	384,315	419,771				
16.2 Percentage of employed persons in high mortality risk industries	13.9	14.6	14.5	15.2				
16.3 Number of employed persons in high mortality risk occupations	267,744	314,865	311,770	330,103				
16.4 Percentage of employed persons in high mortality risk occupations	11.8	12.2	11.7	11.9				

† This level of reporting has only started recently and no earlier data is available in WA

	2010	2011	2012	2013	2014	2015	2016	2017
Number of employed persons age 16 years or older.	3,180,000	3,127,000	3,184,000	3,221,000	3,269,000	3,338,000(P)		

Indicator 17. Occupational safety and health professionals ††

17.1 Number of board-certified occupational medicine physicians (ABPM)	101	N/A	102	N/A	111	110		
17.2 Rate of board-certified occupational medicine physicians (ABPM) per 100,000 employees	3.2	N/A	3.2	N/A	3.4	3.3		
17.3 Number of members of American Col of Occ and Environ Med (ACOEM)	111	N/A	118	113	108	141		
17.4 Rate of American College of Occ and Environ Med (ACOEM) membership per 100,000 employees	3.5	N/A	3.7	3.5	3.3	4.2		
17.5 Number of American board-certified occupational health nurses (ABOHN) per 100,000 employees	94	N/A	N/A	89	81	83		
17.6 Rate of board-certified occupational health nurses (ABOHN) per 100,000 employees	3.0	N/A	N/A	2.8	2.5	2.5		
17.7 Number of members of American Association of Occupational Health Nurses (AAOHN)	N/A	N/A	N/A	N/A	N/A	N/A		
17.8 Rate of American Association of Occupational Health Nurses (AAOHN) Membership per 100,000 employees	N/A	N/A	N/A	N/A	N/A	N/A		
17.9 Number of board-certified industrial hygienists (ABIH)	312	N/A	209	253	251	233		
17.10 Rate of board-certified industrial hygienists per 100,000 employees (ABIH)	9.8	N/A	6.6	7.9	7.7	7.0		
17.11 Number of members of American Industrial Hygiene Association (AIHA)	237	N/A	261	196				
17.12 Rate of American Industrial Hygiene Association (AIHA) membership per 100,000 employees	7.5	N/A	8.2	6.1				
17.13 Number of board-certified safety health professionals (BCSP)	276	N/A	319	331	350	367		
17.14 Rate of board certified safety health professionals (BCSP) per 100,000 employees	8.7	N/A	10	10.3	10.7	11.0		
17.15 Number of members of American Society of Safety Engineers (ASSE)	743	N/A	809	848	800	822		
17.16 Rate of American Society of Safety Engineers (ASSE) membership per 100,000 employees	23.4	N/A	25.4	26.3	24.5	24.6		
17.17 Total number of safety and health professionals		N/A	1,818	1,830	1,749	1,842		
17.18 Rate of safety and health professionals per 100,000 employed persons >=16		N/A	57.1	56.8	53.5	55.2		

Indicator 18. OSHA enforcement activities

18.1 Annual number of establishments inspected by OSHA in all OSHA-covered sectors	6,946	5,641	5,120	5,125				
18.2 Total number of establishments in the state	226,052	223,340	236,095	241,210				
18.3 Estimated percentage of all establishments under OSHA jurisdiction & eligible for inspections inspected by OSHA	3.1	2.5	2.3	2.1				
18.4 Annual number of employees whose work areas were inspected by OSHA	188,904	153,303	158,802	132,940				
18.5 Estimated percentage of employees under OSHA jurisdiction eligible for inspection whose work areas inspected	6.9	5.5	5.6	4.6				

Indicator 19. Workers' Compensation Awards

19.1 Total amount of workers' compensation benefits paid	\$2,308,748,000	\$2,316,713,000	\$2,311,697,000	\$2,331,783,000				
19.2 Average amount of workers' compensation paid per covered worker	\$866.00	\$855.82	\$840.31	\$826.87				

(Optional) Indicator 20. Low Back Disorder †††

20.1 Annual number of work-related surgical low back disorder hospitalizations for persons age 16 years or older	991	941	518	677	548			
20.2 Annual crude rate of work-related surgical low back disorder hospitalization per 100,000 employed persons age 16 years or older	31.2	30.1	16.3	21	16.8			
20.3 Annual number of work-related low back disorder hospitalizations for persons age 16 years or older	1,128	1,069	775	794	653			
20.4 Annual crude rate of work-related low back disorder hospitalization per 100,000 employed persons age 16 years or older	35.5	34.2	24.3	24.7	20			

†† Data is collected at one-point each year (snapshot) and numbers fluctuate. This indicator poses collection challenges and numbers may not be reliable.

††† New indicator, developed by WA State - collection started in 2010 and is optional for other states

	2010	2011	2012	2013	2014	2015	2016	2017
Number of employed persons age 16 years or older.	3,180,000	3,127,000	3,184,000	3,221,000	3,269,000	3,338,000(P)		

(Optional) Indicator 21. Asthma among Adults Caused or Made Worse by Work

21.1 Weighted estimate of the number of ever-employed adults with current asthma who report that their asthma was caused or made worse by exposures at work

	N/A	N/A	N/A	N/A	N/A	N/A		
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21.2 Estimated proportion of ever-employed adults with current asthma who report that their asthma was caused or made worse by exposures at work

	N/A	N/A	N/A	N/A	N/A	N/A		
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(New - Optional) Indicator 22. Work-Related Severe Traumatic Injury Hospitalizations

22.1 Annual Number of Work-Related Severe Traumatic Injury Hospitalizations

	460	443	434	428				
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22.2 Annual Rate of Work-Related Severe Traumatic Injury Hospitalizations (per 100,000 workers)

	14.5	14.2	13.6	13.3				
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