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Washington State Occupational Health Indicators - Current Data (2006-ongoing)

Data from the Safety & Health Assessment & Research for Prevention (SHARP) program at L&I.
(SHARP Surveillance Report #80-11-2013)

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 2013 CSTE OHI data is being collected for 2010). 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 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.

Need more information?

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

Washington State Department of Labor and Industries

PO Box 44330

Olympia, WA 98504-4330

1-888-66-SHARP

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

<http://www.lni.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.lni.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.

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

	2006	2007	2008	2009	2010
Number of employed persons age 16 years or older.	3,168,000	3,270,000	3,286,000	3,216,000	3,180,000
Employment Demographics					
P1. Percentage of civilian workforce unemployed	5.0	4.6	5.3	9.9	10.2
P2. Percentage of civilian employment self-employed	7.6	7.2	7.4	7.6	7.6
P3. Percentage of civilian employment in part-time jobs	20.3	19.7	20.0	21.8	23.0
P4. Percentage of civilian employment by number of hours worked					
<40 hours	33.4	36.2	36.8	42.2	40.5
40 hours	37.8	36.4	36.8	34.1	35.7
41+ hours	28.8	27.4	26.4	23.7	23.8
P5. Percentage of civilian employment by sex					
Males	54.0	53.1	53.6	52.5	52.4
Females	46.0	46.9	46.4	47.5	47.6
P6. Percentage of civilian employment by age group					
16 to 17	1.9	1.5	1.4	1.1	1.0
18 to 64	95.4	95.3	95.0	95.3	95.2
65+	2.7	3.2	3.6	3.6	3.8
P7. Percentage of civilian employment by race					
White	84.0	84.1	85.0	84.2	84.6
Black	3.0	3.0	3.2	3.2	2.6
Other	13.0	12.9	11.8	12.5	12.8
P8. Percentage of civilian employment by Hispanic Origin	7.2	8.1	8.0	8.2	8.3
P9. Percentage of civilian employment by industry					
Construction					
Manufacturing - Durable goods					
Manufacturing - Non-durable goods					
Transportation and utilities					
Trade					
Finance/insurance/real estate					
Services					
Government					
Agriculture					
Post-2003 Industry Categories:					
Mining	0.1	0.2	0.1	0.2	0.1
Construction	7.6	8.5	8.7	7.4	6.6
Manufacturing - Durable goods	7.9	8.9	9.5	8.4	7.5
Manufacturing - Non-durable goods	3.1	3.1	2.6	2.4	3.0
Wholesale and Retail Trade	16.3	14.4	13.2	13.4	13.3
Transportation and utilities	5.3	5.4	5.6	5.1	4.7
Information	3.0	2.5	2.1	2.3	2.3
Financial activities	6.0	6.2	6.1	5.9	5.8
Professional and business services	10.7	10.4	11.7	12.0	12.8
Education and health services	18.9	19.2	19.9	20.2	20.8
Leisure and hospitality	8.7	8.8	7.8	9.2	9.8
Other services	5.2	4.9	4.6	4.8	4.4
Public administration	4.6	5.0	5.6	6.2	6.3
Agriculture and related	2.5	2.7	2.4	2.5	2.4
P10. Percentage of civilian employment by occupation					
Executive/administrative/managerial					
Professional specialty					
Technicians and related support					
Sales					
Administrative support including clerical					
Service occupations					
Precision production/craft/repair					
Transportation/material moving					
Handlers/equipment					
cleaners/helpers/laborers					
Farming/forestry/fishing					
Post-2003 Occupational Categories:					
Management, business and financial operations	15.5	15.3	16.6	15.9	15.7
Professional and related	21.7	22.3	22.3	23.5	24.6
Service	15.8	15.2	16.0	17.5	17.2
Sales and related	12.0	11.0	9.8	10.4	9.9
Office and administrative support	12.7	12.7	12.6	12.4	12.1
Farming/forestry/fishing	1.2	1.6	1.6	1.6	1.6
Construction and extraction	5.9	5.8	5.9	5.3	5.1
Installation, maintenance, and repair	3.5	4.1	4.2	3.1	3.2
Production	5.7	5.9	4.9	4.2	5.0
Transportation/material moving	6.1	6.0	6.2	6.0	5.7

	2006	2007	2008	2009	2010
Number of employed persons age 16 years or older.	3,168,000	3,270,000	3,286,000	3,216,000	3,180,000
Indicator 1 Nonfatal Occupational Injuries & Illness					
1.1 Number of Occ. Injuries & Illnesses	122,500	116,500	110,900	96,000	86,700
1.2 Rate of OI&I per 100,000 FTEs	6,600	6,100	5,600	5,100	4,800
1.3 Number of cases involving days away from work	40,100	37,700	35,900	31,300	28,700
1.4 Rate involving days away from work	2,200	2,000	1,800	1,700	1,600
1.5 Number involving >10 days away from work	14,700	15,610	14,770	12,930	12,660
Indicator 2 Work-related Hospitalizations					
2.1 Annual number of hospitalizations	5,424	5,435	5,266	5,203	5,200
2.2 Annual crude rate of hospitalizations / 100,000 employed persons age 16 or older	171.2	166.2	160.3	161.8	164
Indicator 3 Work-related Fatal Injuries					
3.1 Annual number of work-related traumatic fatalities	87	90	84	76	104
3.2 Annual crude fatality rate per 100,000 employed persons age 16 years or older	2.7	2.8	2.6	2.6	3.6
3.2B Annual crude fatality rate per 100,000 FTE (2007 on)*		2.9	2.7	2.6	3.6
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	140	160	240	110	70
4.2 Estimated annual incidence rate of amputations involving days away from work per 100,000 FTEs	8.0	8.0	12.0	6.0	4.0
Indicator 5 State workers' compensation claims for amputations with lost work-time					
Number of WA workers covered by state WC	2,781,000	2,857,000	2,817,000	2,697,000	2,667,000
5.1 Annual number of amputations filed with state workers' compensation	238	282	262	210	175
5.2 Annual incidence rate of amputations filed with state workers' comp per 100,000 workers covered by state workers' comp system	8.6	9.9	9.3	7.8	6.6
Indicator 6 Hospitalization for work-related burns					
6.1 Annual number of hospitalizations for work-related burns for persons age 16 years and over	60	90	78	62	70
6.2 Annual rate of hospitalization per 100,000 employed persons age 16 years or older	1.9	2.8	2.4	1.9	4
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	16,580	15,300	13,590	12,870	11,410
7.2 Estimated annual incidence rate of all MSDs involving days away from work per 100,000 FTEs	892	795	690	681	631
7.3 Estimated annual number of MSDs of the neck, shoulder, and upper extremity involving days away from work	5,060	4,240	3,800	3,860	4,000
7.4 Estimated annual incidence rate of MSDs of neck, shoulder & upper extremity involving days away from work per 100,000 FTE	272	221	193	204	222
7.5 Estimated annual number of carpal tunnel syndrome cases involving days away from work	990	430	470	430	560
7.6 Estimated annual incidence rate of CTS cases involving days away from work per 100,000 FTE	53	22	24	23	31
7.7 Estimated annual number of MSDs of the back involving days away from work	7,450	6,650	6,040	6,150	4,880
7.8 Estimated annual incidence rate of MSDs of the back involving days away from work per 100,000 FTE	401	345	307	325	270
Indicator 8 Carpal tunnel syndrome cases file with state workers' compensation					
Number of WA workers covered by state WC	2,781,000	2,857,000	2,817,000	2,697,000	2,667,000
8.1 Annual number of carpal tunnel syndrome cases filed with state workers' compensation	1,334	1,259	1,208	1,044	919
8.2 Annual incidence rate per 100,000 workers covered by state workers' compensation system	48.0	44.1	42.9	38.7	34.5

* 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.

	2006	2007	2008	2009	2010
Number of employed persons age 16 years or older.	3,168,000	3,270,000	3,286,000	3,216,000	3,180,000

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	586	569	577	502	470
9.1.2 Annual rate of hospitalization per million residents	185.0	174.0	109.3	93.6	86.8
9.1.3 Annual, age-standardized, rate of hospitalization per million residents	139.1	117.2	115.3	98.6	91.3
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	20	17	10	11	10
9.2.2 Annual rate of coal workers' pneumoconiosis hospitalizations per mil residents	6.3	5.2	1.9	2.1	1.8
9.2.3 Annual, age-standardized, rate of hospitalization per million residents	4.7	3.3	2.1	2.0	2.0
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	536	531	537	464	441
9.3.2 Annual rate of asbestosis hospitalizations per million residents	169.2	162.4	101.7	86.5	81.4
9.3.3 Annual, age-standardized, rate of asbestosis hospitalizations per mil residents	127.5	109.9	107.8	91.4	86.1
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	21	16	20	15	12
9.4.2 Annual rate of silicosis hospitalizations per million residents	6.6	4.9	3.8	2.8	2.2
9.4.3 Annual, age standardized, rate of silicosis hospitalizations per million residents	4.7	3.0	3.8	2.9	2.1
9.5 Hospital discharges with a prim or contr dx of ICD-9 code 503, 504 or 505 (other & unspec. Pneumoc)					
9.5.1 Annual number of other and unspecified pneumoconiosis hospital discharges	10	6	13	12	8
9.5.2 Annual rate of other and unspecified pneumoconiosis hosp per million residents	3.2	1.8	2.5	2.2	1.5
9.5.3 Annual, age standardized, rate of other and unspec hosp per million residents	2.2	1.2	2.4	2.3	1.4

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	50	82	67	71	
10.1.2 Annual total pneumoconiosis death rate per million residents**	9.7	15.8	12.7	13.2	
10.1.3 Annual age-standardized total pneumoconiosis death rate per million residents	8.6	16.7	13.3	14.1	
10.2 Deaths with underlying or contributing cause of death w/ IDC-10 code J60 (coal workers pneumoc)					
10.2.1 Annual number of coal workers' pneumoconiosis deaths	0	1	2	0	
10.2.2 Annual coal workers' pneumoconiosis 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	48	80	63	66	
10.3.2 Annual asbestosis death rate per mil residents	9.3	15.4	11.9	12.3	
10.3.3 Annual, age standardized, asbestosis death rate per mil residents	8.3	16.3	12.7	13.3	
10.4 Deaths with an underlying or contributing dx of ICD-10 code J62 (silicosis)					
10.4.1 Annual number of silicosis deaths	1	0	1	2	
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 & unspec pneumoc)					
10.5.1 Annual number of other and unspecified pneumoconiosis deaths	1	1	1	3	
10.5.2 Annual other and unspecified pneumoconiosis death rate per mil residents					
10.5.3 Annual, age stand, other & unspec pneumoconiosis death rate per mil resident					

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

	2006	2007	2008	2009	2010
Number of employed persons age 16 years or older.	3,168,000	3,270,000	3,286,000	3,216,000	3,180,000

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	77	100	106	95	101
11.2 Annual incidence rate of reported work-related pesticide poison cases per 100,000 employed persons age >=16 yr	2.4	3.1	3.2	3.0	3.2

Indicator 12 Incidence of malignant mesothelioma

12.1 Annual number of incident mesothelioma cases	94	87	86	81	103
12.2 Annual mesothelioma incidence rate per million residents	18.3	16.8	16.3	15.1	19
12.3 Annual, age standardized mesothelioma incidence rate per million residents	19.2	17.2	17.1	15.2	19.7

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)					
13.1.2 Annual prevalence rate per 100,000 employed persons					
13.1.3 Annual number of incident cases					
13.1.4 Annual incidence rate per 100,000 employed persons					

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	75	68	83	84	84
13.2.2 Annual prevalence rate per 100,000 employed persons	2.4	2.1	2.5	2.6	2.6
13.2.3 Annual number of incident cases	55	48	30	50	50
13.2.4 Annual incidence rate per 100,000 employed persons	1.7	1.5	0.9	1.5	1.5

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	17	11	11	13	13
13.3.2 Annual prevalence rate per 100,000 employed persons	0.5	0.3	0.3	0.4	0.4
13.3.3 Annual number of incident cases	16	7	8	11	11
13.3.4 Annual incidence rate per 100,000 employed persons	0.5	0.2	0.2	0.3	0.3

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	147,420	146,375	164,532	156,872	155,685
14.2 Percentage of employed persons in high morbidity risk NAICS industries	6.1	5.9	6.5	6.6	6.7

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	323,771	334,645	670,810	658,107	329,537
15.2 Percentage of employed person in high morbidity risk 1990 bureau of census occupations	10.1	10.1	20.3	20.5	14.5

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	466,700	494,571	542,411	491,070	316,303
16.2 Percentage of employed persons in high mortality risk industries	14.6	15	16.5	15.3	13.9
16.3 Number of employed persons in high mortality risk occupations	319,650	333,581	405,657	378,168	267,744
16.4 Percentage of employed persons in high mortality risk occupations	10.0	10.1	12.3	11.8	11.8

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

	2006	2007	2008	2009	2010
Number of employed persons age 16 years or older.	3,168,000	3,270,000	3,286,000	3,216,000	3,180,000

Indicator 17 Occupational safety and health professionals

17.1 Number of board-certified occupational medicine physicians (ABPM)	84	94	98	106	101
17.2 Rate of board-certified occupational medicine physicians (ABPM) per 100,000 employees	2.7	2.9	3.0	3.3	3.2
17.3 Number of members of American Col of Occ and Environ Med (ACOEM)	129	124	112	110	111
17.4 Rate of American College of Occ and Environ Med (ACOEM) membership per 100,000 employees	4.1	3.8	3.4	3.4	3.5
17.5 Number of American board-certified occupational health nurses (ABOHN) per 100,000 employees	109	102	102	102	94
17.6 Rate of board-certified occupational health nurses (ABOHN) per 100,000 employees	3.4	3.1	3.1	3.2	3.0
17.7 Number of members of American Association of Occupational Health Nurses (AAOHN)	109	104	95	82	N/A
17.8 Rate of American Association of Occupational Health Nurses (AAOHN) Membership per 100,000 employees	3.4	3.2	2.9	2.5	N/A
17.9 Number of board-certified industrial hygienists (ABIH)	281	277	293	303	312
17.10 Rate of board-certified industrial hygienists per 100,000 employees (ABIH)	8.9	8.5	8.9	9.4	9.8
17.11 Number of members of American Industrial Hygiene Association (AIHA)	270	234	237	245	237
17.12 Rate of American Industrial Hygiene Association (AIHA) membership per 100,000 employees	8.5	7.2	7.2	7.6	7.5
17.13 Number of board-certified safety health professionals (BCSP)	248	248	253	267	276
17.14 Rate of board certified safety health professionals (BCSP) per 100,000 employees	7.8	7.6	7.7	8.3	8.7
17.15 Number of members of American Society of Safety Engineers (ASSE)	924	815	824	695	743
17.16 Rate of American Society of Safety Engineers (ASSE) membership per 100,000 employees	29.2	24.9	25.1	21.6	23.4
17.17 Total number of safety and health professionals	2,154	1,998	2,014	1,910	
17.18 Rate of safety and health professionals per 100,000 employed persons >=16	68.0	61.1	61.3	59.4	

Indicator 18 OSHA enforcement activities

18.1 Annual number of establishments inspected by OSHA in all OSHA-covered sectors	7,082	6,370	6,300	8,062	6,946
18.2 Total number of establishments in the state	213,244	211,617	214,394	218,084	226,052
18.3 Estimated percentage of all establishments under OSHA jurisdiction & eligible for inspections inspected by OSHA	3.4	3.0	2.9	3.7	3.1
18.4 Annual number of employees whose work areas were inspected by OSHA	132,612	131,636	168,520	182,863	188,904
18.5 Estimated percentage of employees under OSHA jurisdiction eligible for inspection whose work areas inspected	4.8	4.6	5.8	6.6	6.9

Indicator 19 Workers' Compensation Awards

19.1 Total amount of workers' compensation benefits paid	\$ 1,926,644,000	\$ 1,994,598,000	\$ 2,192,885,000	\$ 2,312,186,000	\$ 2,308,748,000
19.2 Average amount of workers' compensation paid per covered worker	\$ 693	\$ 698	\$ 778	\$ 857	\$ 866

(New - 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	968	984	979	991
20.2 Annual crude rate of work-related surgical low back disorder hospitalization per 100,000 employed persons age 16 years or older	29.6	29.9	30.4	31.2
20.3 Annual number of work-related low back disorder hospitalizations for persons age 16 years or older	1,139	1,121	1,149	1,128
20.4 Annual crude rate of work-related low back disorder hospitalization per 100,000 employed persons age 16 years or older	34.8	34.1	35.7	35.5

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