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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 #80-12-2019)

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 meant to provide an overview and general assessment of the occupational health status of Washington State.

CSTE publishes OHI data annually, but does not necessarily include the most up-to-date data. Generally, the OHI data on the CSTE website lag the publication year by 3 years (for example, OHI data for year 2014 are not published on the CSTE website until late 2017). In an effort to make WA State OHI data available in more "real-time", this report summarizes the data available from 2010 through the most currently available data. Because data sources differ in publication schedules, portions of the report may be blank where data are not yet available.

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

(P) denotes preliminary numbers.

(R) denotes a revision.

Newest data appears in **blue bold font**.

A dashed vertical line between years of data indicates a break in series, generally due to changes in coding systems.

"NA" indicates data not available.

For data from 2000-2010, please see the indicator report #80-11-2011.

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

For technical notes and details on data sources, case definitions and methods, see indicator report #80-4-2008 "Occupational Health Indicators for Washington State, 1997-2004".

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

For information about the development and selection of the Occupational Health Indicators, as well as the downloadable guide that contains the methodology, see the CSTE website.

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

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

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of employed persons age ≥ 16 years	3,180,000	3,127,000	3,184,000	3,221,000	3,269,000	3,354,000	3,449,000	3,546,000 (P)		
Employment Demographics										
P1. Percentage of civilian workforce unemployed	10.2	9.4	8.3	7.0	6.3	6.0	5.5			
P2. Percentage of civilian employment self-employed	7.6	7.1	7.6	6.5	6.1	6.1	6.0			
P3. Percentage of civilian employment in part-time jobs	23.0	22.4	21.8	20.0	20.1	19.8	19.3			
P4. Percentage of civilian employment by number of hours worked										
<40 hours	40.5	40.1	38.7	35.9	36	36.9	34.9			
40 hours	35.7	35.5	37.0	40.1	39.6	36.9	38.6			
41+ hours	23.8	24.4	24.3	24.0	24.4	26.2	26.4			
P5. Percentage of civilian employment by sex										
Males	52.4	52.6	53.3	53.5	53.3	53.8	52.8			
Females	47.6	47.4	46.7	46.5	46.7	46.2	47.2			
P6. Percentage of civilian employment by age group										
16 to 17	1.0	0.7	1.0	0.8	0.9	1.0	1.2			
18 to 64	95.2	94.9	94.2	94.6	94.1	93.6	93.7			
65+	3.8	4.5	4.8	4.6	5.1	5.4	5.1			
P7. Percentage of civilian employment by race										
White	84.6	84.5	81.7	82.2	81.8	81.0	80.7			
Black	2.6	2.7	3.3	3.0	3.3	3.8	4.1			
Other	12.8	12.8	15.0	14.8	14.9	15.2	15.3			
P8. Percentage of civilian employment by Hispanic Origin	8.3	7.9	9.0	9.7	10.8	12.4	12.1			
P9. Percentage of civilian employment by industry										
Post-2003 Industry Categories:										
Mining	0.1	<0.05	<0.05	0.1	0.1	0.3	0.2			
Construction	6.6	5.7	5.5	6.4	6.5	6.6	6.3			
Manufacturing - Durable goods	7.5	8.4	9.6	8.1	7.5	7.1	6.9			
Manufacturing - Non-durable goods	3.0	2.6	2.7	2.9	3.5	3.5	3.2			
Wholesale and Retail Trade	13.3	13.5	14.2	14.2	14.3	14.0	14.8			
Transportation and utilities	4.7	5.3	5.2	5.5	5.3	5.2	5.2			
Information	2.3	2.6	2.3	1.9	2.3	2.5	2.0			
Financial activities	5.8	5.5	5.0	5.9	5.9	5.1	5.6			
Professional and business services	12.8	11.9	12.2	13.0	12.8	12.9	13.9			
Education and health services	20.8	22.1	21.8	21.3	20.9	20.8	20.8			
Leisure and hospitality	9.8	9.8	9.4	10.0	9.1	8.9	9.3			
Other services	4.4	4.0	4.4	4.3	4.1	4.3	4.8			
Public administration	6.3	6.1	5.2	4.3	4.6	5.0	4.0			
Agriculture and related	2.4	2.3	2.5	2.3	2.8	4.0	2.9			
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	16.8	18.9			
Professional and related	24.6	24.4	24.7	24.1	23.9	25.0	24.4			
Service	17.2	17.9	16.9	16.7	16.2	16.1	16.3			
Sales and related	9.9	9.6	10.6	9.9	9.9	9.2	9.6			
Office and administrative support	12.1	12.0	11.2	11.3	11.5	10.8	10.7			
Farming/forestry/fishing	1.6	1.4	1.4	1.4	1.6	2.5	1.6			
Construction and extraction	5.1	4.0	4.2	4.7	5.4	4.6	4.3			
Installation, maintenance, and repair	3.2	3.7	3.4	3.8	3.9	4.1	3.0			
Production	5.0	5.1	5.3	5	5.4	4.9	5.0			
Transportation/material moving	5.7	5.7	6.2	6.1	5.2	6.0	6.2			

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of employed persons age ≥ 16 years	3,180,000	3,127,000	3,184,000	3,221,000	3,269,000	3,354,000	3,449,000	3,546,000 (P)		
Indicator 1. Nonfatal Occupational Injuries and Illness Reported by Employers										
1.1 Number of occupational injuries and illnesses reported by employers	86,700	89,300	89,300	91,100	90,000	90,700	89,200	86,600		
1.2 Rate of occupational injuries and illnesses per 100,000 FTE	4,800	4,900	4,800	4,800	4,600	4,400	4,300	4,000		
1.3 Number of cases involving days away from work	28,700	29,900	28,500	29,900	29,200	29,400	27,000	29,300		
1.4 Rate of cases involving days away from work per 100,000 FTE	1,600	1,600	1,500	1,600	1,500	1,400	1,300	1,300		
1.5 Number involving >10 days away from work	12,660	13,060	12,110	12,400	12,220	12,290	9,880	11,620		
Indicator 2. Work-related Hospitalizations										
2.1 Annual number of work-related hospitalizations	5,200	5,012	4,747	4,258	3,707	3,367	3,074	3,082		
2.2 Annual rate of hospitalizations per 100,000 employed persons	164	160.3	149.1	132.2	113.4	100.9	89.1	86.9 (P)		
Indicator 3. Work-related Fatal Injuries										
3.1 Annual number of work-related traumatic fatalities	104	60	67	56	88	70	78	84		
3.2 Annual fatality rate per 100,000 employed persons	3.6	1.9	2.1	1.7	2.7	2.1	2.3	2.4		
3.2B Annual fatality rate per 100,000 FTE	3.6	2.1	2.3	1.9	2.9	2.2	2.4	2.5		
Indicator 4. Work-related amputations with days away from work reported by employers¹										
4.1 Estimated annual number of work-related amputations involving days away from work	70	320	70	70	90	120	160	90		
4.2 Estimated rate of amputations involving days away from work per 100,000 FTE	4.0	17.0	4.0	4.0	5.0	6.0	8.0	4		
Indicator 5. State workers' compensation claims for amputations with lost work-time										
Number of WA workers covered by state workers' comp system	2,667,000	2,707,000	2,751,000	2,820,000	2,899,000	3,049,000	3,141,000			
5.1 Number of workers' comp claims for amputations with lost work-time	175	194	195	228	211	240	230 (P)			
5.2 Rate workers' comp claims for amputations with lost work-time per 100,000 workers covered by state workers' comp system	6.6	7.2	7.1	8.1	7.3	7.9	7.3 (P)			
Indicator 6. Hospitalization for work-related burns²										
6.1 Number of hospitalizations for work-related burns	70	67	55	58	37	51	45	33		
6.2 Rate of hospitalizations for work-related burns per 100,000 employed persons	4	2.1	1.7	1.8	1.1	1.5	1.3	0.9 (P)		
Indicator 7. Work-related musculoskeletal disorders (MSD) with days away from work reported by employers¹										
7.1 Estimated number of all MSD cases involving days away from work	11,410	12,430	12,100	12,020	11,230	10,900	9,660	10,970		
7.2 Estimated incidence rate of all MSD involving days away from work per 100,000 FTE	631	679	649	630	568	527	467	504		
7.3 Estimated number of MSD of the neck, shoulder, and upper extremity involving days away from work	4,000	3,620	3,470	3,910	3,510	3,060	3,490	3,270		
7.4 Estimated incidence rate of MSDs of neck, shoulder & upper extremity involving days away from work per 100,000 FTE	222	198	186	205	178	149	169	150		
7.5 Estimated number of carpal tunnel syndrome (CTS) cases involving days away from work	560	480	320	260	190	150	350	180		
7.6 Estimated incidence rate of CTS cases involving days away from work per 100,000 FTE	31	26	17	14	10	7	17	8		
7.7 Estimated number of MSD of the back involving days away from work	4,880	5,320	5,620	5,140	4,810	4,870	3,820	4,580		
7.8 Estimated incidence rate of MSD of the back involving days away from work per 100,000 FTE	270	290	301	269	244	236	184	210		
Indicator 8. State workers' compensation claims for carpal tunnel syndrome (CTS) with lost work-time										
Number of WA workers covered by state workers' comp system	2,667,000	2,707,000	2,751,000	2,820,000	2,899,000	3,049,000	3,141,000			
8.1 Number of workers' comp claims for carpal tunnel syndrome (CTS) with lost work-time	919	829	787	663	631	611	531 (P)			
8.2 Rate of workers' comp claims for CTS per 100,000 workers covered by state workers' comp system	34.5	30.6	28.6	23.5	21.8	20.0	16.9 (P)			

¹Series break between 2010 and 2011 reflect change in OIICS codes from version 1 version 2.

²Series breaks around 2015 reflect the nation's transition from version ICD-9 to ICD-10 in October 2015.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of employed persons age ≥ 16 years	3,180,000	3,127,000	3,184,000	3,221,000	3,269,000	3,354,000	3,449,000	3,546,000 (P)		

Indicator 9. Hospitalizations from or with pneumoconiosis^{1,2}

9.1 Hospital discharges with a primary or contributing diagnosis of total pneumoconiosis

9.1.1 Number of hospital discharges	470	404	390	341	287	220	179
9.1.2 Rate of hospitalizations per million residents	86.8	73.2	69.9	60.4	50.1	41.6	30.2
9.1.3 Rate of hospitalizations, age-standardized	91.3	76.2	70.2	59.2	48.2	36.8	28.5

9.2 Hospital discharge with a primary, contributing diag of coal workers' pneumoconiosis

9.2.1 Number of hospital discharges	10	10	14	10	7	<10	<10
9.2.2 Rate of hospitalizations per mil residents	1.8	1.8	2.5	1.8	1.2	S	S
9.2.3 Rate of hospitalizations, age-standardized	2.0	1.7	2.2	1.6	1.0	S	S

9.3 Hospital discharges with a primary or contributing diagnosis of asbestosis

9.3.1 Number of hospital discharges	441	373	361	312	266	200	154
9.3.2 Rate of hospitalizations per million residents	81.4	67.6	64.7	55.3	46.4	37.8	26
9.3.3 Rate of hospitalizations, age-standardized	86.1	70.9	65.6	53.9	44.5	33.3	24.4

9.4 Hospital discharges with a primary or contributing diagnosis of silicosis

9.4.1 Number of hospital discharges	12	11	10	9	9	<10	<10
9.4.2 Rate of hospitalizations per million residents	2.2	2.0	1.7	1.6	1.6	S	S
9.4.3 Rate of hospitalizations, age-standardized	2.1	2.0	1.6	1.6	1.6	S	S

9.5 Hospital discharges with a primary or contributing diag of other pneumoconiosis

9.5.1 Number of hospital discharges	8	11	5	10	6	<10	12
9.5.2 Rate of hospitalizations per million residents	1.5	2	0.9	1.8	1.0	S	2.0
9.5.3 Rate of hospitalizations, age-standardized	1.4	1.7	0.7	2.0	1.0	S	1.7

Indicator 10. Mortality from or with pneumoconiosis¹

10.1 Deaths with pneumoconiosis as underlying or contributing cause

10.1.1 Number of deaths	81	71	64	85	68	64
10.1.2 Death rate per million residents	14.9	12.9	11.5	15.1	11.9	10.9
10.1.3 Death rate, age standardized	15.1	13.6	11.5	14.7	11.4	10.5

10.2 Deaths with coal workers pneumoconiosis as underlying or contributing cause

10.2.1 Number of deaths	2	1	0	0	1	0
10.2.2 Death rate per million residents						
10.2.3 Death rate, age standardized						

10.3 Deaths with asbestosis as underlying or contributing cause

10.3.1 Number of deaths	76	68	62	82	65	62
10.3.2 Death rate per million residents	14.0	12.3	11.2	14.5	11.3	10.6
10.3.3 Death rate, age standardized	14.3	13.1	11.2	14.3	10.9	10.1

10.4 Deaths with silicosis as underlying or contributing cause

10.4.1 Number of deaths	2	2	2	1	0	3
10.4.2 Death rate per million residents						
10.4.3 Death rate, age standardized						

10.5 Deaths with other pneumoconiosis as underlying or contributing cause

10.5.1 Number of deaths	1	0	0	3	2	0
10.5.2 Death rate per million residents						
10.5.3 Death rate, age standardized						

Indicator 11. Acute work-related pesticide-associated illness and injury reported to poison control centers

11.1 Number of case of work-related pesticide poisoning

11.1 Number of case of work-related pesticide poisoning	101	91	85	81	77	91
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11.2 Rate of work-related pesticide poisoning cases per 100,000 employed persons

11.2 Rate of work-related pesticide poisoning cases per 100,000 employed persons	3.2	2.91	2.7	2.5	2.4	2.7
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Indicator 12. Incidence of malignant mesothelioma

12.1 Number of incident mesothelioma cases

12.1 Number of incident mesothelioma cases	103	95	94	81	96	92
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12.2 Rate of incident mesothelioma cases per million residents

12.2 Rate of incident mesothelioma cases per million residents	19	17.2	16.9	14.4	16.8	15.8
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12.3 Rate of incident mesothelioma cases per million residents, age standardized

12.3 Rate of incident mesothelioma cases per million residents, age standardized	19.7	17.3	16.6	13.4	15.8	15.1
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¹Series breaks around 2015 reflect the nation's transition from version ICD-9 to ICD-10 in October 2015.

²Data suppressed (S) when cases <10.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
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Number of employed persons age ≥ 16 years 3,180,000 3,127,000 3,184,000 3,221,000 3,269,000 3,354,000 3,449,000 3,546,000 (P)

Indicator 13. Elevated blood lead levels among persons age 16 years or older ("Adults")¹

13.1 Adults with a blood lead level (BLL) ≥10 ug/dL

13.1.1 Number of adults with BLL ≥10 ug/dL	NA	227	191	212	212	147	185	217
13.1.2 Prevalence rate per 100,000 employed persons	NA	7.3	6	6.6	6.5	4.4	5.4	6.1 (P)
13.1.3 Number of incident cases	NA	103	109	120	106	74	98	106
13.1.4 Incidence rate per 100,000 employed persons	NA	3.3	3.4	3.7	3.2	2.2	2.8	3.0 (P)

13.2 Adults with a blood lead level (BLL) ≥25 ug/dL

13.2.1 Number of adults with BLL ≥ 25 ug/dL	84	67	65	53	42	30	25	35
13.2.2 Prevalence rate per 100,000 employed persons	2.6	2.1	2.1	1.7	1.3	0.9	0.7	1.0 (P)
13.2.3 Number of incident cases	50	21	29	23	23	17	11	17
13.2.4 Incidence rate per 100,000 employed persons	1.5	0.7	0.9	0.7	0.7	0.5	0.3	0.5 (P)

13.3 Adults with a blood lead level (BLL) ≥ 40 ug/dL

13.3.1 Number of adults with BLL ≥40 ug/dL	13	10	24	10	13	7	5	7
13.3.2 Prevalence rate per 100,000 employed persons	0.4	0.3	0.8	0.3	0.4	0.2	0.1	0.2 (P)
13.3.3 Number of incident cases	11	3	16	5	7	4	2	6
13.3.4 Incidence rate per 100,000 employed persons	0.3	0.1	0.5	0.2	0.2	0.1	0.1	0.2 (P)

Indicator 14. Workers employed in industries at high risk for occupational morbidity

14.1 Number of persons employed in industries at high risk of occupational morbidity 155,685 165,375 159,659 127,571 131,945 134,409 138,641

14.2 Percentage of persons employed in industries at high risk of occupational morbidity 6.7 7.0 6.8 5.2 5.2 5.2 5.2

Indicator 15. Workers employed in occupations at high risk for occupational morbidity

15.1 Number of persons employed in occupations at high risk of occupational morbidity 329,537 303,145 325,470 334,186 371,903 382,969 379,300 415,000

15.2 Percentage of persons employed in occupations at high risk of occupational morbidity 14.5 13.6 14.3 13.7 15.0 15.4 14.8 15.8

Indicator 16. Workers employed in industries and occupations at high risk for occupational mortality

16.1 Number of persons employed in industries at high risk of occupational mortality 316,303 376,458 384,315 419,771 428,700 485,126 481,118 536,000

16.2 Percentage of persons employed in industries at high risk of occupational mortality 13.9 14.6 14.5 15.2 15.4 17.1 16.4 17.8

16.3 Number of persons employed in occupations at high risk of occupational mortality 267,744 314,865 311,770 330,103 316,801 385,433 368,318 408,000

16.4 Percentage of persons employed in occupations at high risk of occupational mortality 11.8 12.2 11.7 11.9 11.4 13.6 12.6 13.5

Indicator 17. Occupational safety and health professionals (discontinued after 2015)²

17.1 Number of board-certified occupational medicine physicians (ABPM) 101 NA 102 NA 111 110

17.2 Rate of ABPM physicians per 100,000 employed persons 3.2 NA 3.2 NA 3.4 3.3

17.3 Number of members of the American College of Occupational and Environ Medicine (ACOEM) 111 NA 118 113 108 141

17.4 Rate of ACOEM members per 100,000 employed persons 3.5 NA 3.7 3.5 3.3 4.2

17.5 Number of American board-certified occupational health nurses (ABOHN) 94 NA NA 89 81 83

17.6 Rate of ABOHN nurses per 100,000 employed persons 3.0 NA NA 2.8 2.5 2.5

17.7 Number of American Association of Occupational Health Nurses (AAOHN) members NA NA NA NA NA NA

17.8 Rate of AAOHN members per 100,000 employed persons NA NA NA NA NA NA

17.9 Number of board-certified industrial hygienists (ABIH) 312 NA 209 253 251 233

17.10 Rate of ABIH hygienists per 100,000 employed persons 9.8 NA 6.6 7.9 7.7 7.0

17.11 Number of American Industrial Hygiene Association (AIHA) members 237 NA 261 196 NA NA

17.12 Rate of AIHA members per 100,000 employed persons 7.5 NA 8.2 6.1 NA NA

17.13 Number of board-certified safety health professionals (BCSP) 276 NA 319 331 350 367

17.14 Rate of BCSP professionals per 100,000 employed persons 8.7 NA 10 10.3 10.7 11.0

17.15 Number of American Society of Safety Engineers (ASSE) members 743 NA 809 848 800 822

17.16 Rate of ASSE members per 100,000 employed persons 23.4 NA 25.4 26.3 24.5 24.6

17.17 Total number of safety and health professionals NA 1,818 1,830 1,749 1,842

17.18 Rate of safety and health professionals per 100,000 employed persons NA 57.1 56.8 53.5 55.2

¹Data not available (NA) for all years.

²Indicator has been discontinued and will not be collected after 2015.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
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Number of employed persons age ≥ 16 years	3,180,000	3,127,000	3,184,000	3,221,000	3,269,000	3,354,000	3,449,000	3,546,000 (P)		
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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	5,045	4,341				
18.2 Total number of establishments in the state	226,052	223,340	236,095	241,210	236,829	232,984				
18.3 Estimated percentage of eligible establishments inspected by OSHA	3.1	2.5	2.3	2.1	2.1	1.9				
18.4 Annual number of employees whose work areas were inspected by OSHA	188,904	153,303	158,802	132,940	182,668	233,942				
18.5 Estimated percentage of employees in eligible establishments inspected by OSHA	6.9	5.5	5.6	4.6	6.2	7.7				

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	\$2,392,919,000	\$2,404,364,000	\$2,430,746,000			
19.2 Average amount of workers' compensation paid per covered worker	\$866	\$856	\$840	\$827	\$825	\$789	\$774			

Indicator 20. Low Back Disorder¹

20.1 Number of hospitalizations involving surgery for work-related low back disorders	991	941	518	677	548					
20.2 Rate of hospitalizations involving surgery for work-related low back disorder, per 100,000 employed persons	31.2	30.1	16.3	21	16.8					
20.3 Number of hospitalizations for work-related low back disorders	1,128	1,069	775	794	653					
20.4 Rate of hospitalizations for work-related low back disorders, per 100,000 employed persons	35.5	34.2	24.3	24.7	20					

Indicator 21. Asthma among Adults Caused or Made Worse by Work (Not available for WA)²

21.1 Estimate of the number of ever-employed adults with asthma who report that their asthma was caused or made worse by work exposures	NA	NA	NA	NA	NA	NA				
21.2 Estimated proportion of ever-employed adults with asthma who report that their asthma was caused or made worse by work exposures	NA	NA	NA	NA	NA	NA				

Indicator 22. Work-Related Severe Traumatic Injury Hospitalizations¹

22.1 Number of hospitalizations for work-related severe traumatic injury	460	443	434	428	408					
22.2 Rate of hospitalizations for work-related severe traumatic injury, per 100,000 employed persons	14.5	14.2	13.6	13.3	12.5					

Indicator 23. Influenza Vaccination Coverage Among Healthcare Personnel (adopted in 2014)

23.1 Percentage of Healthcare Personnel (HCP) who have Received an Influenza Vaccination					87.6%	87.1%	88.9%	89.8%		
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¹This indicator, based on International Statistical Classification of Disease (ICD) codes, is undergoing revisions to accommodate the transition in October 2015 from version ICD-9 to ICD-10. Data will be updated once revision is complete.

²The data for this indicator are not available (NA) for WA. See CSTE indicator website for data from other states: <https://www.cste.org/page/OHIndicators>