

# Immediate Inpatient Hospitalizations for Work-Related Injury or Illness - Washington State, 2015

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# Introduction

Work-related injuries that result in an immediate inpatient hospitalization are severe, costly, and often lead to long term disability. Currently, both the Washington State Division of Occupational Safety and Health<sup>1</sup> (DOSH) and the Federal Occupational Safety and Health Administration<sup>2</sup> (OSHA) require employers to report workplace injuries resulting in inpatient hospitalizations (within 8 or 24 hours of injury, respectively).<sup>3,4</sup>

This report is the second in an annual series that characterizes the results of a unique surveillance system in Washington State created by linking hospital discharge data from Washington's Comprehensive Hospital Abstract Reporting System<sup>5</sup> (CHARS) to Washington State workers' compensation (WC) records to identify immediate inpatient hospitalizations. For additional information, please see the initial report (2014 data), which describes the creation of this surveillance system and provides more detailed methods.<sup>6</sup>

The immediate inpatient work-related hospitalization surveillance system provides descriptive data regarding high risk industries, and results can be used to inform prevention efforts, to monitor trends over time, and to evaluate employer compliance with reporting regulations.

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<sup>1</sup> Washington State Division of Occupational Safety & Health:  
<http://www.lni.wa.gov/SAFETY/TOPICS/ATOZ/ABOUT/DEFAULT.ASP#DOSH>

<sup>2</sup> Occupational Safety and Health Administration: <https://www.osha.gov/>.

<sup>3</sup> Washington Administrative Code (WAC) 296-27-031 - Reporting fatalities, inpatient hospitalizations, amputations, and losses of an eye as the result of work-related incidents. (1) You must report to DOSH within eight hours of a work-related incident that results in: (a) A fatality; or (b) An inpatient hospitalization of any employee. <http://apps.leg.wa.gov/wac/default.aspx?cite=296-27-031>.

<sup>4</sup> OSHA Regulations PART 1904 – Recording and Reporting Occupational Injuries and Illness. 1904.39(a)(2) Within twenty-four (24) hours after the in-patient hospitalization of one or more employees or an employee's amputation or an employee's loss of an eye, as a result of a work-related incident, you must report the in-patient hospitalization, amputation, or loss of an eye to OSHA. [https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=12783](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=12783).

<sup>5</sup> <http://www.doh.wa.gov/DataandStatisticalReports/HealthcareinWashington/HospitalandPatientData/HospitalDischargeDataCHARS>.

<sup>6</sup> Immediate Inpatient Hospitalizations for Work-Related Injury – Washington State, 2014. Anderson NJ, Wuellner SE, Bonauto DK. Technical Report #96-04-2017. Washington State Department of Labor & Industries, Safety & Health Assessment & Research for Prevention (SHARP). [http://www.lni.wa.gov/safety/research/files/immed\\_hospitalizations\\_2014.pdf](http://www.lni.wa.gov/safety/research/files/immed_hospitalizations_2014.pdf).

## Methods

The immediate inpatient hospitalization system links accepted WC claims data to hospital discharge data to identify and characterize inpatient hospitalizations within 1 day of work injury. Hospital discharge data are obtained quarterly (defined by date of discharge) for inpatient hospitalizations in WA hospitals, for patients 14 years of age or older. Records are linked based on name (last, first name or initial, middle), birthdate, workers' compensation (WC) injury date within one day of hospital admission date, sex, and worker's residence zip code; the dataset was limited to one discharge per claim (earliest admission).

Unlinked records are excluded.

In Washington State, non-federal employers are required to obtain workers' compensation insurance through the Department of Labor and Industries' (L&I) industrial insurance system State Fund (SF), unless they meet specific requirements to self-insure, or are covered by an alternative workers' compensation system (e.g. Longshore and Harbor Workers' Compensation Program). The SF covers approximately two-thirds of Washington's 3.5 million workers. There are approximately 450 self-insured (SI) entities (companies or groups of companies) that are not included in the SF.<sup>7</sup> The information available for (SI) claims is different than for SF claims, therefore, some information (e.g. costs) is limited to SF claims only. Employers are identified by the Unified Business Identifier (UBI) number associated with the claim. UBIs are assigned to businesses licensed by the State of Washington and are used by several WA agencies for the identification of businesses/locations and for tax purposes.<sup>8</sup> Additional WC claims data for the linked claims were extracted on February 2, 2018.

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<sup>7</sup> For additional information describing the Washington State workers' compensation system, please refer to previous technical report, 64-1-2013, "Prioritizing Industries for Occupational Injury and Illness Prevention and Research, Washington State Workers' Compensation Claims Data, 2002-2010." Available at: [http://www.lni.wa.gov/safety/research/files/bd\\_3f.pdf](http://www.lni.wa.gov/safety/research/files/bd_3f.pdf).

<sup>8</sup> <http://bls.dor.wa.gov/faqlicense.aspx>

Denominator data for rates by age, gender, and industry sector are presented per 10,000 workers based on employment data from the Quarterly Workforce Indicators (QWI) Explorer Tool (U.S. Census Bureau, 2018).<sup>9</sup>

## Results

There were 762 immediate work-related hospitalizations (linked to WC) in Washington State in 2015. This represents an increase over 2014, in which there were 668 immediate work-related hospitalizations<sup>10</sup> (linked to WC). The Construction industry had the largest percentage of claims (24.5%). The most common incident type was ‘Falls’ (35.7%), and the most common nature of injury was ‘Fractures’ (40%). Hospitalizations peaked in the 3rd quarter of the calendar year (Table 1). The observed 2015 immediate hospitalizations rate was 3.04 per 10,000 FTE (based on employer reported hours).

**Table 1. Immediate inpatient work-related hospitalization by quarter, Washington State, 2015.**

Quarter	Immediate Hospitalizations	Quarterly FTE*	Rate per 10,000 FTE
2015Q1	170	588,071	2.89
2015Q2	186	630,596	2.95
2015Q3	212	636,424	3.33
2015Q4	194	646,169	3.00
<b>Year Total</b>	<b>762</b>	<b>Average – 625,315</b>	<b>3.04</b>

\*FTE data for denominator based on employer reporting to the WA Dept. of Labor and Industries (hours); 1 FTE = 2000 hours.

<sup>9</sup> Quarterly Workforce Indicators (QWI) Data. Longitudinal-Employer Household Dynamics program, QWI Explorer Tool: <http://lehd.ces.census.gov/data/#qwi>.

<sup>10</sup> Immediate Inpatient Hospitalizations for Work-Related Injury – Washington State, 2014. Anderson NJ, Wuellner SE, Bonauto DK. Technical Report #96-04-2017. Washington State Department of Labor & Industries, Safety & Health Assessment & Research for Prevention (SHARP). [http://www.lni.wa.gov/safety/research/files/immed\\_hospitalizations\\_2014.pdf](http://www.lni.wa.gov/safety/research/files/immed_hospitalizations_2014.pdf).

# Worker Demographics

## Age & Gender

Men made up the majority of hospitalizations (81.5%) (Table 2). For men, length of stay ranged from 1-55 days (mean 5 days, median 3 days). There were 141 women hospitalized, with a range of 1-36 days (mean 3.7 days, median 3 days). For women, rates peaked in the oldest age group (65+), while for men, rates were highest in the 45-54 and 55-64 age groups (Table 3). These rates may reflect differences in the proportions of men and women in high-risk occupations.

**Table 2. Distribution of immediate inpatient hospitalization and duration of inpatient stay (days) by age and gender, Washington State, 2015.**

Age Group	Female				Male				All Workers		Inpatient Hosp. Duration (days)	
	#	col %	Mean, Median		#	col %	Mean, Median		#	row %	Mean, Median	
Under 18	s	s	s	s	s	s	s	s	10	1.31	3.3	2.0
19-24	s	s	s	s	s	s	s	s	72	9.45	3.9	3.0
25-34	18	12.8	2.7	1.5	130	20.9	5.3	3.0	148	19.42	5.0	2.5
35-44	17	12.0	2.7	3.0	119	19.2	4.9	3.0	136	17.85	4.6	3.0
45-54	24	17.0	2.8	2.5	147	23.7	4.6	3.0	171	22.4	4.3	3.0
55-64	44	31.2	4.7	3.0	123	19.8	5.7	3.0	167	21.9	5.4	3.0
65+	28	19.9	4.6	3.0	30	4.8	5.8	4.0	58	7.6	5.2	3.5
<b>Total</b>	141	100.0	3.7	3.0	621	100.0	5.0	3.0	762	100.0	4.8	3.0

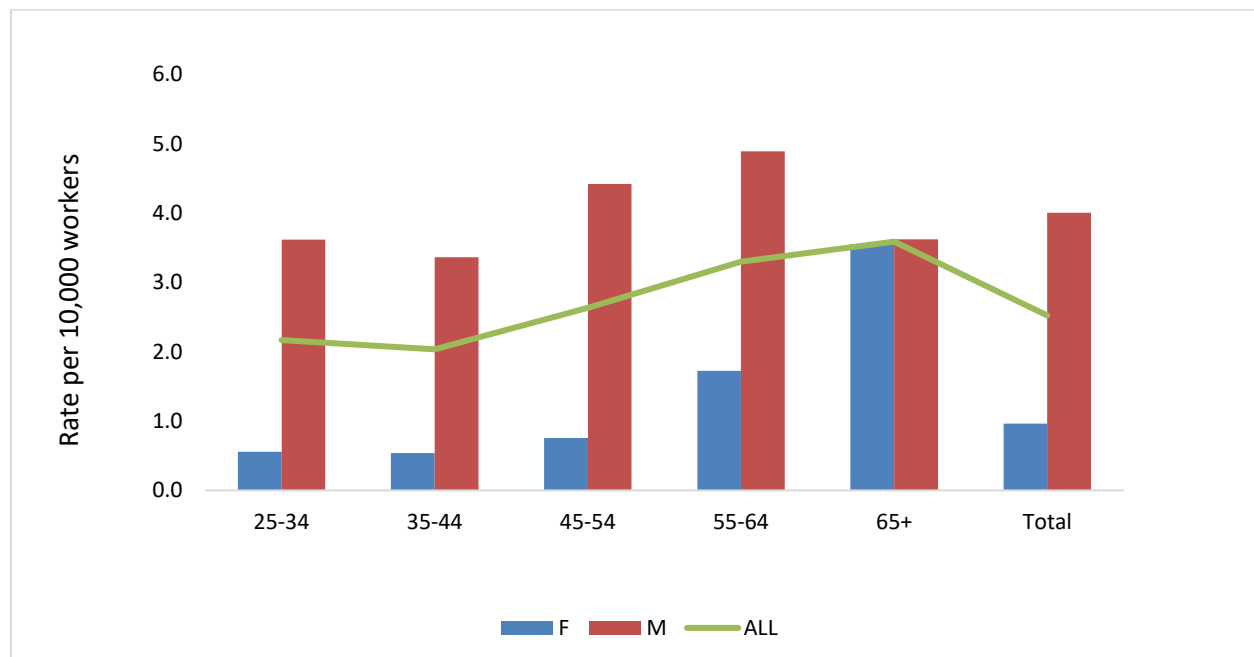
s Suppressed for small numbers (<10).

**Table 3. Rate of immediate work-related hospitalization per 10,000 workers, by age and gender, Washington State, 2015.**

Age category	Female	Male	All
18 and under	s	s	2.01
19-24	s	s	2.40
25-34	0.56	3.61	2.17
35-44	0.54	3.36	2.03
45-54	0.76	4.42	2.63
55-64	1.72	4.89	3.30
65+	3.55	3.62	3.59
<b>TOTAL</b>	<b>0.96</b>	<b>4.00</b>	<b>2.52</b>

s Suppressed for small numbers (<10).

**Figure 1. Immediate Inpatient Hospitalizations rate per 10,000 workers, by age and gender, Washington State, 2015.**



## *Language Preference*

Approximately 16% of hospitalized workers indicated that they prefer a language other than English for communication with L&I (Table 4). Of these 123 indicating a language preference other than English, 111 (90%) indicated a preference for communication in Spanish. The other 12 workers preferred: Russian (second most common requested language after Spanish), Korean, ‘Other’, Vietnamese, Chinese, and Cambodian (each with  $n \leq 5$ ). Only two were self-insured (SI) claims. SI claims report limited information, so this may represent an undercount.

**Table 4. Prefers a language other than English with which to communicate with the agency.**

<b>Prefers Other Language</b>	<b>Number (%)</b>
<b>No</b>	639 (83.9)
<b>Yes</b>	123 (16.1)

## County of Accident

**Table 5. Number and rate of immediate hospitalizations for work-related injury per 10,000 workers, by county of accident, Washington State, 2015. Data limited to counties with  $\geq 10$  hospitalizations.**

County	Frequency	Percent	Rate per 10,000 workers
King	222	29.1	1.75
Pierce	81	10.6	2.93
Snohomish	54	7.1	2.00
Spokane	40	5.3	1.92
Yakima	36	4.7	3.51
Benton	30	3.9	3.70
Clark	25	3.3	1.79
Whatcom	25	3.3	3.14
Grant	23	3.0	6.39
Thurston	22	2.9	2.00
Kitsap	12	1.6	1.84
Franklin	10	1.3	3.22

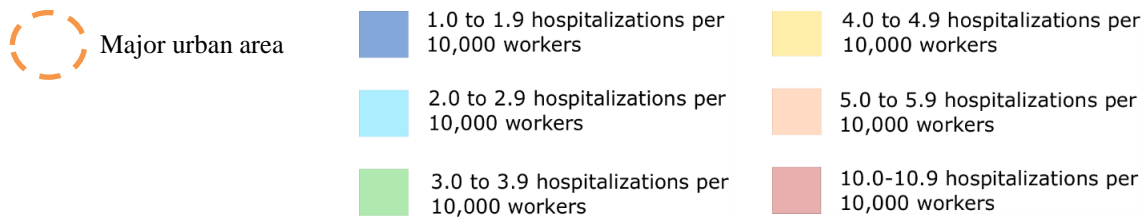
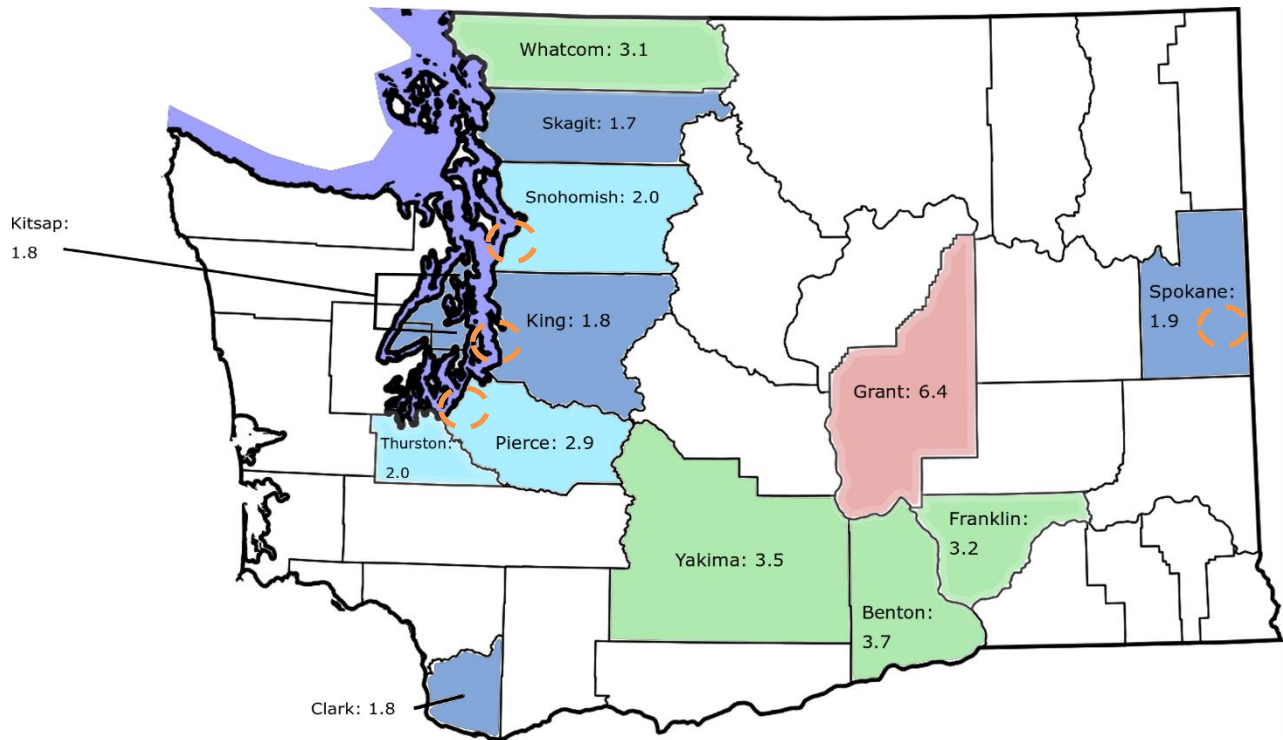
Denominator data (employment by county) obtained using the Quarterly Workforce Indicators (QWI) Explorer Tool.

True county-level hospitalization rate may vary. In some cases, the 'county of accident' variable in L&I WC administrative data may not reflect the county where an incident occurred. When not readily apparent, county of accident may be determined from a variety of sources, including worker residence or employer zip code. Additionally, border county injury rates may be artificially suppressed if a worker is hospitalized in OR or ID.

King County (which includes the City of Seattle), Snohomish County (Everett), Spokane County (Spokane) and Pierce County (Tacoma) represent the largest population areas in the state, and have relatively low rates of immediate hospitalization for work-related injury (Table 5). Some counties with lower population densities had a much higher hospitalization rate – but are based on small numbers and are therefore less reliable estimates. Differences in counties with similar employment numbers may be a more valuable tool for identifying risks. The difference in rates by county also likely represents the industry mix across the state, which varies geographically (e.g. agriculture concentrated primarily on the Eastern side of the state).



**Figure 2. Immediate hospitalization rate per 10,000 workers, by county, Washington State, 2015.**



No rates presented for certain counties due to unstable census estimates and counties with <10 hospitalizations; 18 had out-of-state zip codes reported, 74 had invalid zip codes reported.

Denominator data (employment by county) obtained using the Quarterly Workforce Indicators (QWI) Explorer Tool. U.S. Census Bureau. 2018. Quarterly Workforce Indicators Data. Longitudinal-Employer Household Dynamics program. <http://lehd.ces.census.gov/data/#qwi>.

True county-level hospitalization rate may vary. In some cases, the 'county of accident' variable in L&I WC administrative data may not reflect the county where an incident occurred. When not readily apparent, county of accident may be determined from a variety of sources, including worker residence or employer zip code. Additionally, border county injury rates may be artificially suppressed if a worker is hospitalized in OR or ID.

## Claim Information

### *Claim Liability & Claim Status*

The majority of hospitalized WA workers who filed claims were covered by the WA State Fund: 643 (84.4%); there were 119 (15.6%) Self-Insured claims.<sup>11</sup> Workers' compensation claims in Washington State may be categorized in several ways;<sup>12</sup> primarily as accepted or rejected claims; and then, for accepted claims, split into 2 broad categories for discussion purposes– 'medical-only' versus 'compensable' claims. A 'compensable' claim (a subset of the accepted) are claims resulting in payments of partial wage replacement, disability or death benefits. All 762 claims were accepted at the time of data extraction and analysis, and 695 (91.2%) were compensable.

This is a higher proportion of compensable claims than when looking at all WC claims. In Washington State, for WC claims filed with injury dates in 2015, there were 149,269 claims (SF+SI), of which 127,587 (85.5%) were accepted, 20,583 (13.8%) were rejected, and 37,421 (25.1%) were compensable. The high proportion of compensable claims reflects the severity of work-related injuries that lead to an immediate hospitalization.

### *Hospital Payer (from discharge records)*

In 2015, among all Washington inpatient hospitalization records, workers' compensation was the expected payer for less than 1% (3,608 of 648,004 inpatient hospitalizations).<sup>13</sup> Among the 762 immediate hospitalizations, workers' compensation was the expected payer for 676 records (88.7%),

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<sup>11</sup> Claim information (costs, time loss days, injury information) available to L&I for SI claims is often incomplete, therefore descriptive tables may be limited to SF claims only, where noted.

<sup>12</sup> For further information regarding claim status classification, please refer to previously published descriptions such as the Prioritizing Industries for Occupational Injury and Illness Prevention and Research (2002-2010) report, [http://www.lni.wa.gov/safety/research/files/bd\\_3f.pdf](http://www.lni.wa.gov/safety/research/files/bd_3f.pdf).

<sup>13</sup> 2015 Comprehensive Hospital Abstract Reporting System (CHARS) data: <http://www.doh.wa.gov/DataandStatisticalReports/HealthcareinWashington/HospitalandPatientData/HospitalDischargeDataCHARS>

while some other entity was the expected payer for the remaining 86 records (11.3%). This proportion varied between SF claims and SI claims with approximately 10% of SF claims having “other” payers, and 21% of SI claims had “other” payers.

### *Claim Costs (SF claims only)*

Claim costs in the first year of the claim for the 643 SF immediate inpatient hospitalizations in 2015 ranged from \$214 - \$811,246 per claim (interquartile range [25-75%] - \$19,711 - \$78,797).

**Table 6. Claim costs at 1-year claim maturity for immediate inpatient work-related hospitalizations, Washington State, 2015.**

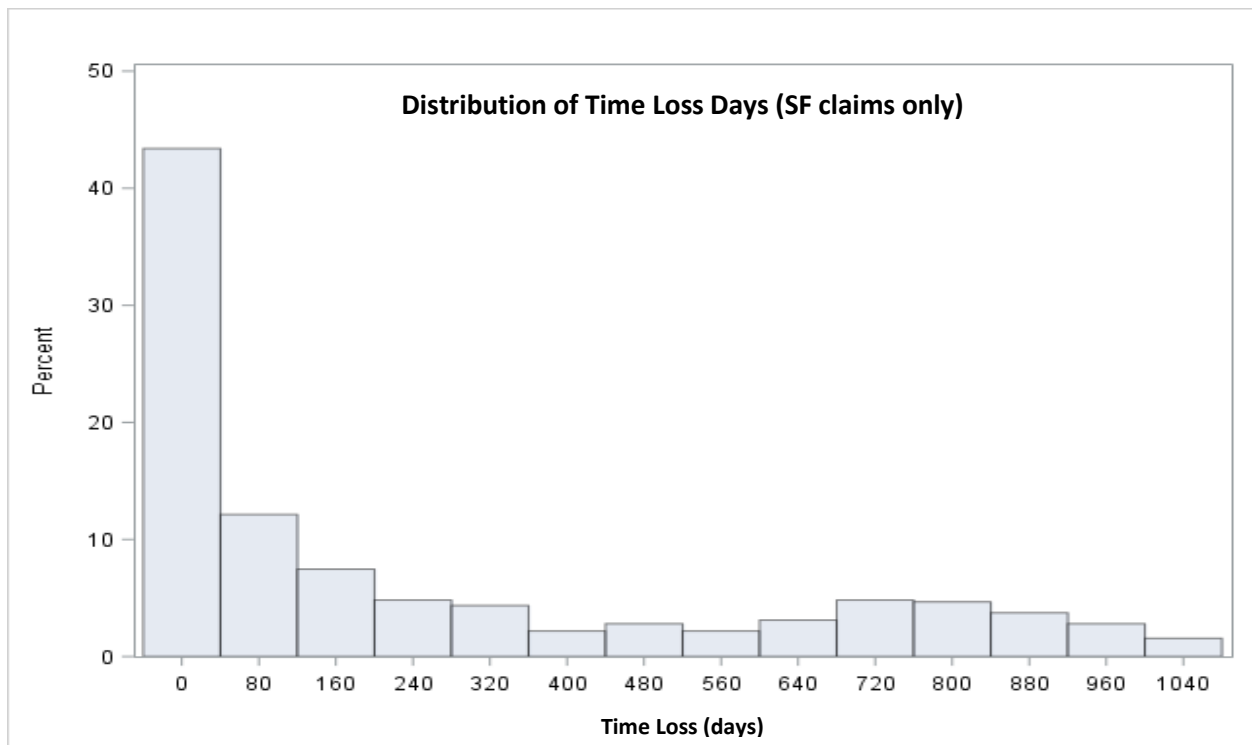
	<b>@ 1 Year Paid-to-date</b>	<b>@ 1 Year Medical Costs</b>
<b>Mean</b>	\$63,398	\$46,632
<b>Median</b>	\$42,121	\$29,826
<b>Range</b>	\$214 - \$811,246	\$214 – \$642,206

Not included in analysis: 119 SI claims and 5 SF claims without cost information.

## Time Loss Days

For SF claims (n=643), overall, there were 211 claims that did not have any recorded days of time loss (32.8%). For the 432 claims with time loss, days lost ranged from 1-1,078 days; mean time loss was 371 days, median 237 days (Q1-Q3: 80-701 days). The distribution is presented in Figure 3.

**Figure 3. Days of time loss for immediate inpatient work-related hospitalizations, Washington State, 2015.**



## Injury Information

The most common injury type (event or exposure)<sup>14</sup> was ‘Fall from Elevation’ (22.2%). Both major types and leading detailed events or exposures are presented in Tables 7-8. Falls (both from elevation and on same level) accounted for 35.7% of immediate hospitalizations.

**Table 7. Major and detailed event/exposure descriptions for the leading event/exposure types, immediate inpatient work-related hospitalizations, Washington State, 2015.**

Injury Event/Exposure (Major Group)	#	% of total (n=762)	Detailed event/exposure description	#	% of injury type
<b>Falls from elevation</b>	<b>169</b>	<b>22.2</b>			
			<i>Fall from ladder</i>	64	37.9
			<i>Fall to lower level, not elsewhere classified</i>	21	12.4
			<i>Fall from nonmoving vehicle</i>	20	11.8
			<i>Fall from roof, unspecified</i>	13	7.7
			<i>Fall from scaffold, staging</i>	12	7.1
			<i>All other</i>	39	23.1
<b>Struck by/against</b>	<b>129</b>	<b>16.9</b>			
			<i>Struck by falling object</i>	41	31.8
			<i>Struck by slipping handheld object</i>	15	11.6
			<i>Struck by discharged object/substance</i>	13	10.1
			<i>Struck by object, not elsewhere classified</i>	12	9.3
			<i>All other</i>	48	37.2
<b>Fall from same level</b>	<b>103</b>	<b>13.5</b>			
			<i>Fall to floor, walkway, or other surface</i>	91	88.3
			<i>All other</i>	12	11.7
<b>Transportation accidents</b>	<b>90</b>	<b>11.8</b>			
			<i>Pedestrian struck by vehicle, mobile equipment in parking lot or non-roadway area</i>	20	22.2
			<i>Collision between vehicles, mobile equipment, unspecified</i>	12	13.3
			<i>All other</i>	58	64.4
<b>Caught in/under/between</b>	<b>79</b>	<b>10.4</b>			
			<i>Caught in running equipment or machinery</i>	40	50.6
			<i>Compressed or pinched by rolling, sliding, or shifting objects</i>	14	17.7
			<i>Caught in or compressed by objects or equipment, not elsewhere classified</i>	14	17.7
			<i>All other</i>	11	13.9
<b>Assaults &amp; violent acts</b>	<b>35</b>	<b>4.59</b>			
			<i>Assaults and violent acts by person(s), not elsewhere classified</i>	13	37.1
			<i>Nonvenomous bites</i>	11	31.4
			<i>All other</i>	11	31.4

Not included (not enough hospitalizations to display detailed codes): those that were blank or uncodeable or other/poorly classified (60), work-related musculoskeletal disorders (23), temperature (21), toxics (15), overexertion (12), explosion (10), bodily reaction (7), electrical (6), abraded (2), and noise (1).

<sup>14</sup> For further information regarding injury type (event or exposure) and how SHARP uses these classifications, please refer to previously published descriptions such as the Prioritizing Industries for Occupational Injury and Illness Prevention and Research (2002-2010) report, [http://www.lni.wa.gov/safety/research/files/bd\\_3f.pdf](http://www.lni.wa.gov/safety/research/files/bd_3f.pdf). For OIICS v1.01 information, please visit the OIICS code tree website: <https://wwwn.cdc.gov/wisards/oiccs/Trees/MultiTree.aspx?Year=2007>.

**Table 8. Immediate inpatient work-related hospitalizations, event or exposure by industry sector, Washington State, 2015.**

Injury Event or Exposure Type*	Industry Sector							
	Agricul. Forestry, Fishing & Hunting	Construct.	Manufact.	Wholesale Trade	Retail Trade	Transport. & Warehous.	Profess., Scientific, & Technical Services	Admin. Support & Waste Managmt. & Remediation Services
Abraded				s				
Bodily reaction	s			s	s	s	s	s
Caught	12	11	22	11	s	s		s
Electrical	s	s						
Exploded		s	s	s	s			
Falls from elevation	18	85	s	12	s	s	s	14
Falls from same level	s	s	s	s	17	s	s	10
Noise								
Nonclassifiable	s	s				s		s
Other**	s	s		s	s	s	s	s
Overexertion	s	s	s		s			
Struck	14	43	21	s	s	s	s	s
Temperature	s	s	s	s	s			
Toxics	s	s	s	s	s			s
Transportation accidents	14	22	s	s	s	14	s	10
Assaults & violent acts	s				s	s	s	s
Work-related musculoskeletal disorders (WMSDs)		s	s	s	s		s	s
Blank/Unknown	s		10		s	s		s
<b>Grand Total</b>	<b>78</b>	<b>186</b>	<b>74</b>	<b>55</b>	<b>58</b>	<b>43</b>	<b>27</b>	<b>64</b>
Injury Event or Exposure Type*	Educational Services	Health Care & Social Assist.	Accomm. & Food Services	Other Services (excl. Pub. Admin.)	Public Administration	All Other Sectors (<10)**	Blank, or Unknown	Grand Total
Abraded								<10
Bodily reaction								<10
Caught		s	s	s		s		79
Electrical					s	s		<10
Exploded						s		10
Falls from elevation	s	s	s		s	s	s	169
Falls from same level	s	13	s	s	s	s		103
Noise							s	<10
Nonclassifiable					s	s		<10
Other**	s		s		s			23
Overexertion	s	s	s	s	s			12
Struck	s	s	s	s	s	s		129
Temperature			s		s	s		21
Toxics		s	s		s	s		15
Transportation accidents	s	s		s	s	s		90
Assaults & violent acts	s	s	s	s	s	s		35
Work-related musculoskeletal disorders (WMSDs)	s	s		s	s	s		23
Blank/Unknown	s	s			s	s	s	29
<b>Grand Total</b>	<b>22</b>	<b>28</b>	<b>33</b>	<b>26</b>	<b>29</b>	<b>35</b>	<b>4</b>	<b>762</b>

s Suppressed for small numbers (<10).

\* Occupational Injury and Illness Classification System, v.1.01.

\*\* Sectors not shown individually (<10 hospitalizations) include: Mining; Utilities; Information; Finance & Insurance; Real Estate, & Rental, & Leasing; and Arts, Entertainment, & Recreation.

## Body Part

**Table 9. Immediate inpatient work-related hospitalization, by part of body injured, Washington State, 2015.**

Part of Body injured (OIICS*)	Frequency (%)	Median paid-to-date total cost (\$) (SF only)
Multiple body parts	170 (22.3)	\$81,488
Lower Extremities	184 (24.1)	\$59,689
Upper Extremities	150 (19.7)	\$39,500
Trunk	78 (10.2)	\$51,894
Head	57 (7.5)	\$71,923
Body Systems	21 (2.8)	\$53,417
Internal**	21 (2.8)	\$10,787
Back	20 (2.6)	\$108,126
Neck	14 (1.8)	\$90,614
Pelvic Region	13 (1.7)	\$61,414
Eyes	s	--
Nonclassifiable	s	--
Blank	28 (3.7)	--
<b>Total</b>	<b>762 (100)</b>	<b>\$54,598</b>

s Suppressed for small numbers (<10).

\* Occupational Injury and Illness Classification System, v.1.01.

\*\* Including: heart, lung(s), kidney(s), uterus, spleen, intestine/peritoneum, pharynx, internal abdominal location.

## Nature of Injury

Of the 762 immediate inpatient work-related hospitalizations in 2015, half (51%) involved ‘fractures’ or ‘fractures and other injuries’ (Table 10), and ‘fractures’ comprised the leading nature of injury type across industry sectors (Table 11). Falls from ladders were the leading cause of fractures in the construction, agriculture, and services industries (Table 12).

**Table 10. Immediate inpatient work-related hospitalization, by nature of injury, Washington State, 2015.**

Nature of Injury*	Frequency (%)	Median paid-to-date total cost (\$) (SF only, n=643)
<b>Fractures</b>	305 (40.0)	\$67,306
<b>Fractures and other injuries</b>	84 (11.0)	\$76,753
<b>Nonclassifiable</b>	36 (4.7)	\$36,519
<b>Other combinations of traumatic injuries and disorders, unspecified or not elsewhere classified</b>	28 (3.7)	\$124,521
<b>Blank</b>	28 (3.7)	--
<b>Cuts, lacerations</b>	28 (3.7)	\$24,809
<b>Soreness, pain, hurt, except the back</b>	27 (3.5)	\$21,727
<b>Heat burns, scalds</b>	23 (3.0)	\$16,380
<b>Punctures, except bites</b>	17 (2.2)	\$11,118
<b>Bruises, contusions</b>	15 (1.9)	\$14,818
<b>Sprains, strains, tears</b>	15 (1.9)	\$47,345
<b>Crushing injuries</b>	14 (1.8)	\$48,957
<b>Amputations, except fingertip</b>	13 (1.7)	\$61,186
<b>Concussions</b>	12 (1.5)	\$65,567
<b>Animal or insect bites, incl. venomous</b>	12 (1.5)	\$7,298
<b>Amputations, fingertip</b>	10 (1.3)	\$63,794
<b>All other categories w/less than 10 ea.</b>	95 (12.9)	\$31,120
<b>Total</b>	<b>762 (100)</b>	<b>\$54,598</b>

\* Occupational Injury and Illness Classification System, v.1.01.



**Table 11. Immediate inpatient work-related hospitalization, nature of injury by industry sector, Washington State, 2015.**

Industry Sector	Nature of Injury*							Grand Total
	Fractures	Fractures and other injuries	Cuts, lacerations	Soreness, pain, hurt, except the back	Heat burns, scalds	All other natures (<20 ea.)	Nonclassifiable & blank / unknown	
Construction	93	26	s	s	s	55	s	186
Agriculture, Forestry, Fishing & Hunting	34	s	s	s		28	s	78
Manufacturing	26	s	s	s	s	20	14	74
Admin. Support & Waste Managmt. And Remediation Services	29	11	s	s		17	s	64
Retail Trade	21	s	s	s	s	22	s	58
Wholesale Trade	23	s	s	s	s	s	s	55
Transportation & Warehousing	14	s	s	s	s	12	s	43
Accommodation & Food Services	14	s	s	s	s	10		33
Public Administration	s		s	s	s	13	s	29
Assistance	14	s	s	s		s	s	28
Professional, Scientific, & Technical Services	s	s	s	s	s	13		27
Other Services (excpt. Pub. Admin.)	s	s	s	s		11	s	26
Educational Services	s	s		s		s	s	22
All other sectors (<10)**	11	s	s	s	s	12	s	35
Blank/Unknown	s					s	s	4
<b>Grand Total</b>	<b>305</b>	<b>83</b>	<b>28</b>	<b>27</b>	<b>23</b>	<b>232</b>	<b>64</b>	<b>762</b>

s Suppressed for small numbers (<10).

\* Occupational Injury and Illness Classification System, v.1.01. Natures with less than 20 claims are shown in aggregate.

\*\* Industry sectors with less than 10 claims are shown in aggregate, including: Mining; Utilities; Information; Finance & Insurance; Real Estate & Rental & Leasing; and Arts, Entertainment, and Recreation.

**Table 12. Leading detailed injury/event descriptions for immediate inpatient work-related hospitalizations, by leading nature of injury, for select industry sectors, Washington State, 2015.**

Industry Sector	Nature of Injury*	
<i>Detailed injury event/exposure*</i>	Fractures	Fractures and other injuries
<b>Construction</b>		
	<i>Fall from ladder</i>	<i>Fall from ladder</i>
	<i>Struck by falling object</i>	<i>Fall to lower level, not elsewhere classified</i>
	<i>Fall from roof, unspecified</i>	
<b>Agriculture, Forestry, Fishing &amp; Hunting</b>		
	<i>Fall from ladder</i>	<i>Fall from ladder</i>
	<i>Caught in running equipment or machinery</i>	<i>Pedestrian struck by vehicle, mobile equipment, unspecified</i>
<b>Manufacturing</b>		
	<i>Caught in running equipment or machinery</i>	<i>Struck by falling object</i>
	<i>Fall to floor, walkway, or other surface</i>	
<b>Admin. Support &amp; Waste Managmt. And Remediation Services</b>		
	<i>Fall from ladder</i>	
	<i>Fall to floor, walkway, or other surface</i>	
	<i>Struck by falling object</i>	

\* Occupational Injury and Illness Classification System, v.1.01.

## Source

**Table 13. Immediate inpatient work-related hospitalization, by leading source of injury, Washington State, 2015.**

Source*	Frequency (%)	Median paid-to-date total cost (\$) (SF only)
<b>Floors, walkways, ground surfaces, unspecified</b>	139 (18.2)	\$78,054
<b>Ground</b>	52 (6.8)	\$68,698
<b>Floor of building</b>	44 (5.8)	\$51,221
<b>Bodily motion or position of injured/ill worker</b>	25 (3.3)	\$69,503
<b>Bodily conditions of injured/ill worker</b>	22 (2.9)	\$20,863
<b>Highway vehicle, unspecified</b>	17 (2.2)	\$124,644
<b>Machinery, unspecified</b>	15 (2.0)	\$55,829
<b>Nonclassifiable</b>	13 (1.7)	\$135,076
<b>Person – other than injured/ill worker, not elsewhere classified</b>	13 (1.7)	\$40,424
<b>Forklift, unspecified</b>	12 (1.6)	\$100,383
<b>Nails, brads, tacks</b>	11 (1.4)	\$9,620
<b>Automobile</b>	10 (1.3)	\$26,539
<b>All other categories w/less than 10 ea.</b>	389 (51.0)	\$47,130
<b>Total</b>	<b>762 (100)</b>	<b>\$54,598</b>

\* Occupational Injury and Illness Classification System, v.1.01; 18 were blank

# Industry & Occupation

## *Industry*

The majority of immediate work-related hospitalizations and the highest rate of immediate work-related hospitalizations occurred in the Construction industry (24.4%) (Table 14, Figure 4), followed by Wholesale & Retail Trade (14.8%), and Agriculture, Forestry, Fishing & Hunting (10.2%).<sup>15</sup>

The leading detailed industries were ‘Temporary Help Services’; ‘Residential Remodelers’; and ‘Painting and Wall Covering Contractors’ (Table 14). These were different than the leading industries in 2014, which were: ‘New Single-Family Housing Construction’; ‘Roofing Contractors’; ‘Landscaping Services’, and ‘Logging’.<sup>16</sup>

In 2015, Fall injuries (both from elevation and on same level), accounted for 34.6% of all immediate work-related hospitalizations, which was nearly the same as 2014 (34.8%).

‘Fall from elevation’ was the leading injury event type in ‘Agriculture, Forestry, Fishing and Hunting’ (for example, 47% of hospitalizations in NAICS 111331 – Apple Orchards were from ‘Fall from Ladder’ events); ‘Construction’ (56% of hospitalizations in NAICS 238320 – Painting and Wall Covering Contractors were ‘Fall from Ladder’ events); ‘Wholesale Trade’, and ‘Administrative and Support and Waste Management and Remediation Services.’

‘Fall on Same Level’ was the leading injury event type in ‘Retail Trade’ (29% of immediate hospitalizations in Retail), ‘Educational Services’, ‘Health Care and Social Assistance’, and ‘Accommodation and Food Services’.

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<sup>15</sup> For more detail on immediate inpatient work-related hospitalizations in Crop/Animal Production Agriculture, please see SHARP technical report Technical Report # 96-03-2017: [http://www.lni.wa.gov/safety/research/files/agri\\_hosp\\_2011\\_2015.pdf](http://www.lni.wa.gov/safety/research/files/agri_hosp_2011_2015.pdf)

<sup>16</sup> Immediate Inpatient Hospitalizations for Work-Related Injury – Washington State, 2014. Anderson NJ, Wuellner SE, Bonauto DK. Technical Report #96-04-2017. Washington State Department of Labor & Industries, Safety & Health Assessment & Research for Prevention (SHARP). [http://www.lni.wa.gov/safety/research/files/immed\\_hospitalizations\\_2014.pdf](http://www.lni.wa.gov/safety/research/files/immed_hospitalizations_2014.pdf).

In 'Other Services (except Public Administration)', the leading injury events were 'Fall on Same Level' and 'Struck By/Against' (30% each).

'Transportation Accidents' were the leading injury event type in the 'Transportation and Warehousing' Sector.

'Violence' was the leading injury event type in 'Professional, Scientific, and Technical Services (33%), however, these were all animal-related incidents in Veterinary Services (NAICS 541940).

'Caught In/Under/Between' injuries were the leading cause of immediate hospitalizations in Manufacturing (50% of these were "Caught in Running Equipment").

**Table 14. Immediate hospitalization for work-related injury by industry sector and select detailed industry, Washington State, 2015.**

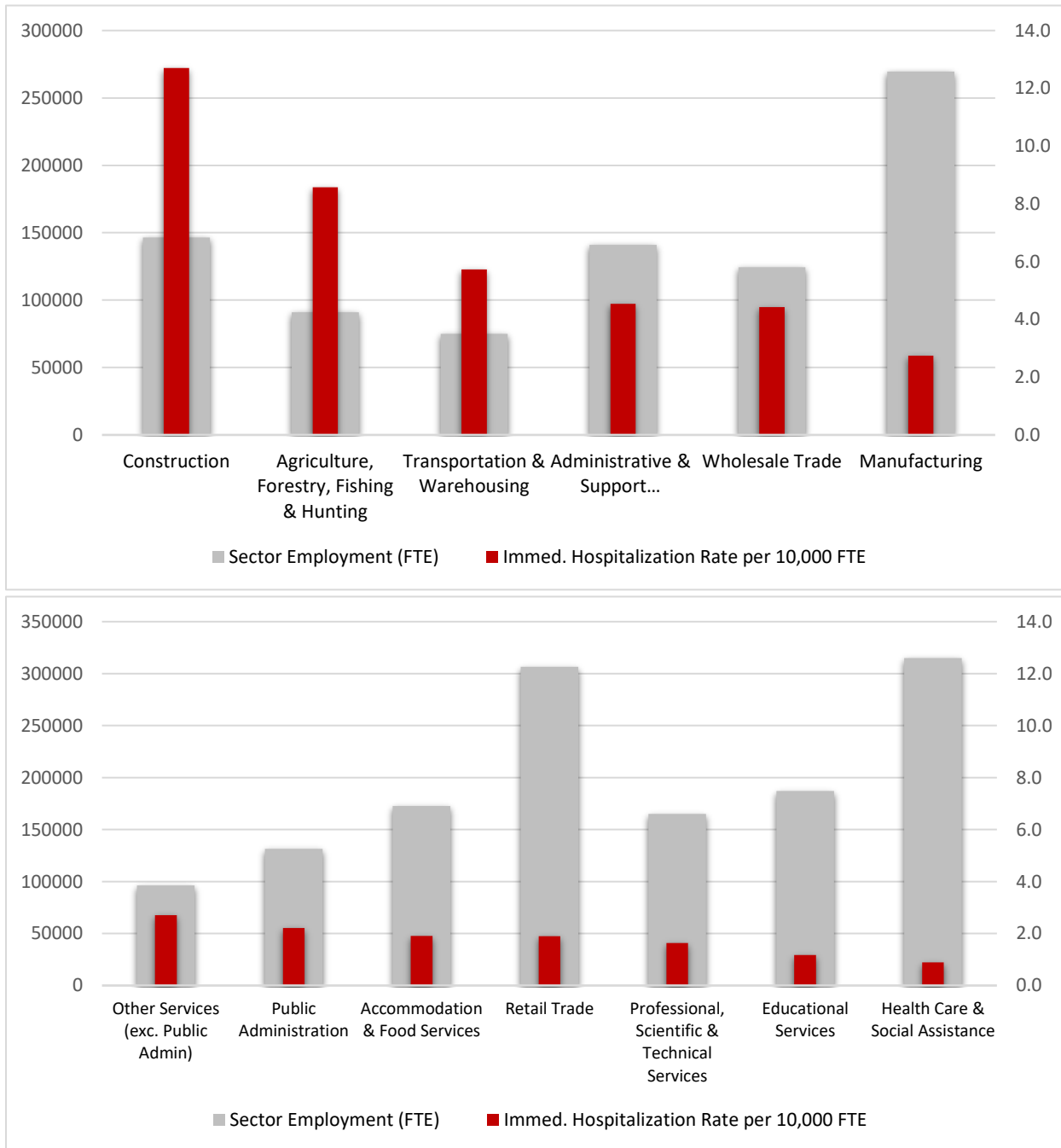
NAICS - Industry Sector*	# Hosp.	%	Rate per 10,000 FTE**	Leading detailed industries	#
<b>23 - Construction</b>	186	24.4	12.71	Residential Remodelers Painting & Wall Covering Contractors New Single-Family Housing Construction (exc. For-Sale Builders)	18 16 15
<b>11 - Agriculture, Forestry, Fishing &amp; Hunting</b>	78	10.2	8.57	Apple Orchards All Other Miscellaneous Crop Farming Logging	15 14 10
<b>31 - 33 - Manufacturing</b>	74	9.7	2.75		
<b>44 - 45 - Retail Trade</b>	58	7.6	1.89		
<b>42 - Wholesale Trade</b>	55	7.2	4.42		
<b>56 - Administrative &amp; Support &amp; Waste Management &amp; Remediation Services</b>	64	8.4	4.54	Temporary Help Services Landscaping Services	23 14
<b>48 - 49 Transportation &amp; Warehousing</b>	43	5.6	5.73	General Freight Trucking, Long-Distance, Truckload & Less Than Truckload	14
<b>72 - Accommodation &amp; Food Services</b>	33	4.3	1.91	Limited Service Restaurants Full-Service Restaurants	12 12
<b>92 - Public Administration</b>	29	3.8	2.21		
<b>62 - Health Care &amp; Social Assistance</b>	28	3.7	0.89	General Medical & Surgical Hospitals	10
<b>54 - Professional, Scientific, &amp; Technical Services</b>	27	3.5	1.64		
<b>81 - Other Services (except Public Administration)</b>	26	3.4	2.70		
<b>61 - Educational Services</b>	22	2.9	1.18	Elementary & Secondary Schools	16
<b>All Others w/less than 10 ea.†</b>	35	4.6			
<b>Missing</b>	4	0.5	--		
<b>Total</b>	<b>762</b>	<b>100</b>			

\* North American Industry Classification System (NAICS) assigned to employer account; this table presents detailed industry codes for industry sectors where these industries make up a substantial proportion of the total claims within the sector.

\*\* FTE data for denominator was from employer reporting to the WA Dept. of Labor and Industries (hours); 1 FTE = 2000 hours.

† Includes: 22- Utilities, 53 - Real Estate & Rental & Leasing, 51 - Information, 71 - Arts, Entertainment, & Recreation, 52 - Finance & Insurance, 21 - Mining, Quarrying, Oil & Gas Extraction. No rates calculated for small industry sectors (<10 hospitalizations each) or detailed industries.

**Figure 4. Immediate Hospitalization Rate\* and Yearly Average Employment by Industry Sector, Washington, 2015.**



\*FTE data for denominator was from employer reporting to the WA Dept. of Labor and Industries (hours); 1 FTE = 2000 hours.

## Occupation

Construction and Extraction (47-0000) and Transportation and Material Moving (53-0000) had the largest proportion of immediate work-related hospitalizations (Table 15). The leading detailed occupations were ‘Construction Laborers’; ‘Carpenters’; ‘Truck Drivers, Heavy and Tractor-Trailer’; ‘Laborers & Freight, Stock, Material Movers, Hand’, and ‘Production Workers, All Other’ (Table 15).

**Table 15. Immediate hospitalization for work-related injury by select detailed occupation group,\* and injury type, Washington State, 2015.**

<b>Occupation Major Group (SOC 2000*)</b> <i>Select Detailed Occupation (representing large proportion)</i>	<b>Frequency (%)</b>	<b>Most common injury type within occupation (%)</b>
<b>Construction and Extraction (47-0000)</b>	176 (23.1)	Fall from Elevation (46)
<i>47-2061 Construction Laborers</i>	44	Struck By/Against (43)
<i>47-2031 Carpenters</i>	20	Fall from Elevation (41)
<i>47-2141 Painters, Construction &amp; Maintenance</i>	18	Fall from Elevation (72)
<i>47-2181 Roofers</i>	16	Fall from Elevation (94)
<b>Transportation and Material Moving (53-0000)</b>	120 (15.7)	Transportation Accidents (25)
<i>53-3032 Truck Drivers, Heavy &amp; Tractor-Trailer</i>	34	Transportation Accidents (38)
<i>53-7062 Laborers &amp; Freight, Stock, Material Movers, Hand</i>	32	Fall on Same Level (22)
<b>Production (51-0000)</b>	76 (10.0)	Caught In/Under/Between (33)
<i>51-9199 Production Workers, All Other</i>	24	Fall on Same Level (29)
<b>Farming, Fishing, and Forestry (45-0000)</b>	61 (8.0)	Fall from Elevation (26)
<i>45-2092 Farmworkers &amp; Laborers, Crop, Nursery, Greenhouse</i>	33	Fall from Elevation (39)
<b>Installation, Maintenance, and Repair (49-0000)</b>	59 (7.7)	Fall from Elevation (20)
<i>49-9099 Installation, Maintenance, &amp; Repair Workers, All Other</i>	16	Fall from Elevation (31)
<b>Buildings and Grounds Cleaning (37-0000)</b>	32 (4.2)	Fall from Elevation (34)
<i>37-3013 Tree Trimmers and Pruners</i>	10	Fall from Elevation (50)
<i>37-2011 Janitors &amp; Cleaners, exc. Maids/Housekeeping</i>	10	Fall from Elevation (40)
<b>Protective Service</b>	26 (3.4)	‘Other’*** (27)
<b>Sales &amp; Related</b>	25 (3.3)	Fall on Same Level (40)
<b>Food Preparation &amp; Serving Related</b>	24 (3.1)	Fall on Same Level (25)
<b>Office &amp; Administrative Support</b>	23 (3.0)	Fall on Same Level (35)
<b>Management</b>	22 (2.9)	Fall on Same Level (45)
<b>Education, Training, Library</b>	13 (1.7)	Fall on Same Level (46)
<b>Personal Care &amp; Service</b>	11 (1.4)	--
<b>All Other Groups (with &lt;10 ea.)</b>	28 (3.7)	--
<b>Blank/Missing</b>	66 (8.7)	--
<b>Total</b>	<b>762 (100)</b>	--

\*Standard Occupational Classification System, 2000; major groups; this table presents detailed occupation codes for major occupational groups where these occupations make up a substantial proportion of the total claims within the group.

\*\*\*‘Other’ injury event or exposure typically reflects poorly defined injuries.

## Employer Information (SF only)

The 643 workers with immediate work-related hospitalizations represent 598 unique employers<sup>17</sup> (State Fund, identified by UBI).

There were 51 businesses (8%) that had more than one immediate work-related hospitalization. Of the businesses associated with more than one hospitalization, 41 (80%) had 2 hospitalizations, 8 (16%) had 3–5 hospitalizations and 2 businesses (4%) had 7–8 hospitalizations in 2015.

The largest proportion of immediate work-related hospitalizations were of workers employed in businesses with 100 or more FTE (Table 16), followed by those employed in businesses with fewer than five FTE.

**Table 16. Immediate work-related hospitalization by employer size, Washington State, 2015.**

Employer Size (FTE)	Count of UBI	%
<5	125	18.2
5 - <10	75	10.9
10 - <25	100	14.6
25 - <50	65	9.5
50 - <100	82	12.0
100+	216	31.5
Unmatched to FTE data	23	3.4
<b>Total</b>	<b>686</b>	<b>100.0</b>

There were 313 employers (45.6%) that had at least one open conference date (for a consultation<sup>18</sup> or enforcement visit) in 2015 with the Washington State Division of Occupational Safety & Health

<sup>17</sup> Two claims were missing associated information.

<sup>18</sup> Washington employers can request a free and confidential L&I Consultation (<http://lni.wa.gov/Safety/Consultation/About.asp>).



(DOSH)<sup>19</sup>, the division of the Dept. of Labor and Industries that develops and enforces safety & health rules. Of the 598 employers identified by unique UBI:

- 19% had an inspection in 2014.
- 50% had an inspection in 2015.
- 20% had an inspection in 2016.
- 60% had at least 1 inspection between 2014-2016.

## Discussion

Immediate inpatient hospitalizations for work-related injuries make up a small proportion of claims filed (<1% of claims with an injury date in 2015), but injuries leading to hospitalization within 24 hours of injury are serious acute injuries that are costly and can be disabling and personally devastating. This subset of claims linked to immediate inpatient work-related hospitalizations differs from that of all claims filed in that they are composed of higher proportions of acute/traumatic injuries (falls, struck by incidents; fracture injuries), as opposed to work-related musculoskeletal disorders, which make up a majority of all claims filed as a whole.

Immediate inpatient work-related hospitalizations are preventable, and this novel surveillance system provides data that can be used for prevention efforts.

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<sup>19</sup> <http://www.lni.wa.gov/SAFETY/TOPICS/ATOZ/ABOUT/DEFAULT.ASP>