2019

Massachusetts Survey of

Occupational Injuries & Illnesses Report

Compiled by:
Executive Office of Labor and Workforce Development
Department of Labor Standards,
Occupational Safety and Health Statistics Program

Contents

Work-Related Nonfatal Injuries and Illnesses in 2019

Total Number of Recordable Cases (TRC) and Incidence rates:
In 2019, there were approximately 86,000 work-related injuries and illnesses reported by employers across the private and public sector workforce. This resulted in a Total Recordable Incidence Rate of 3.1 cases per 100 full-time equivalent workers (FTEs).

Private Sector Workforce
Of the total number of cases 64,700 nonfatal work-related injuries and illnesses were reported from Massachusetts' Private Sector workforce. This total translates into an incidence rate of 2.6 cases per 100 FTE workers. In the private sector, there were 37,900 cases that resulted in either days away from work and/or job transfer or restriction (DART cases). Of that total there were 31,700 cases with Days Away from Work (DAFW), and 6,200 that resulted in Days with Job Transfer or Restriction (DJTR). There were also 26,800 recordable cases that were less severe but recordable under the OSHA recordkeeping requirements.

Public Sector Workforce
State government employers reported an estimated 4,300 TRCs in 2019. The corresponding TRC incidence rate was 4.5 incidents per 100 FTEs. Local government data is unpublishable due to low response rate.

Over-the-Year Changes:
Although most of the data remained relatively unchanged from the 2018 results, there were some statistically significant[1] changes that should be highlighted:

Statistically Significant Changes in the Total Number of Injuries and Illnesses:

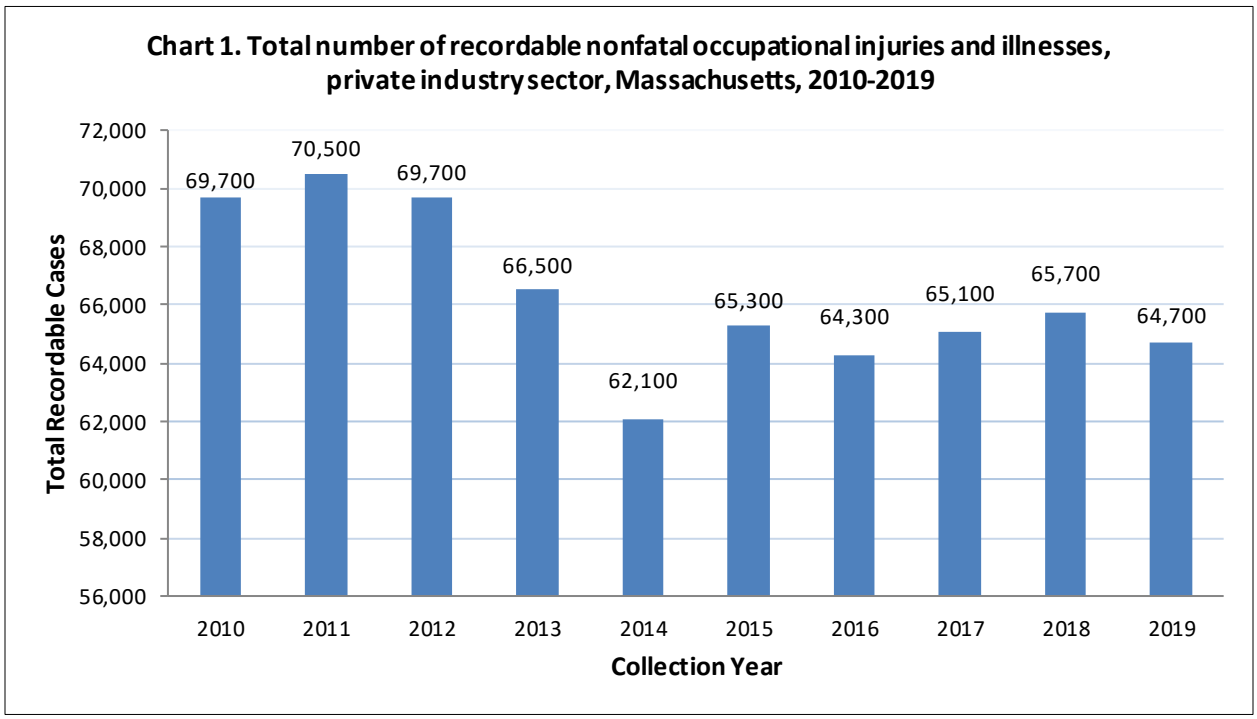
- The private goods-producing sector, which includes the natural resources and mining, construction, and manufacturing industries, increased from 10,000 TRCs in 2018 to 12,200 in 2019.
- Retail trade (within the trade, transportation, and utilities industry) had a decrease from 8,300 in 2018 TRCs to 6,800 in 2019.
- State government's education and health services establishments saw a decrease from 2,200 TRCs in 2018 to 1,100 in 2019. This was a result of both the educational services and health care and social assistance subindustries decreasing in 2019.

Statistically Significant Changes in the Total Recordable Case Rate:

- The finance and insurance industry's TRC incidence rate decreased from 0.6 incidents per 100 FTEs in 2018 to a rate of 0.2 in 2019.
- State government's educational and health services industry's incidence rate decreased from 5.3 incidents per 100 FTEs in 2018, to 2.9 cases in 2019. Similarly, both educational services and health care and social assistance subindustries' TRC incidence rate decreased in 2019.

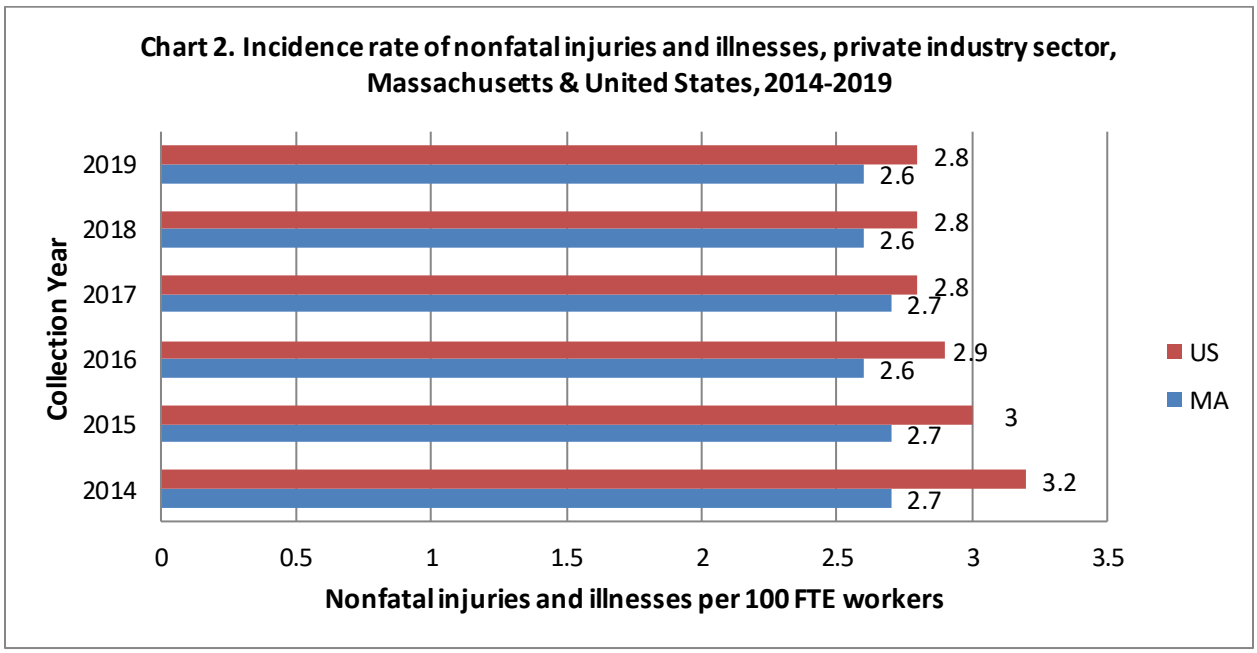
[1] Statistical significance was measured using a traditional statistical significance test at the 95% confidence interval.

Chart 1 shows the total number of nonfatal Injuries and Illnesses from 2010-2019 for employees working in the private industry sector of Massachusetts.



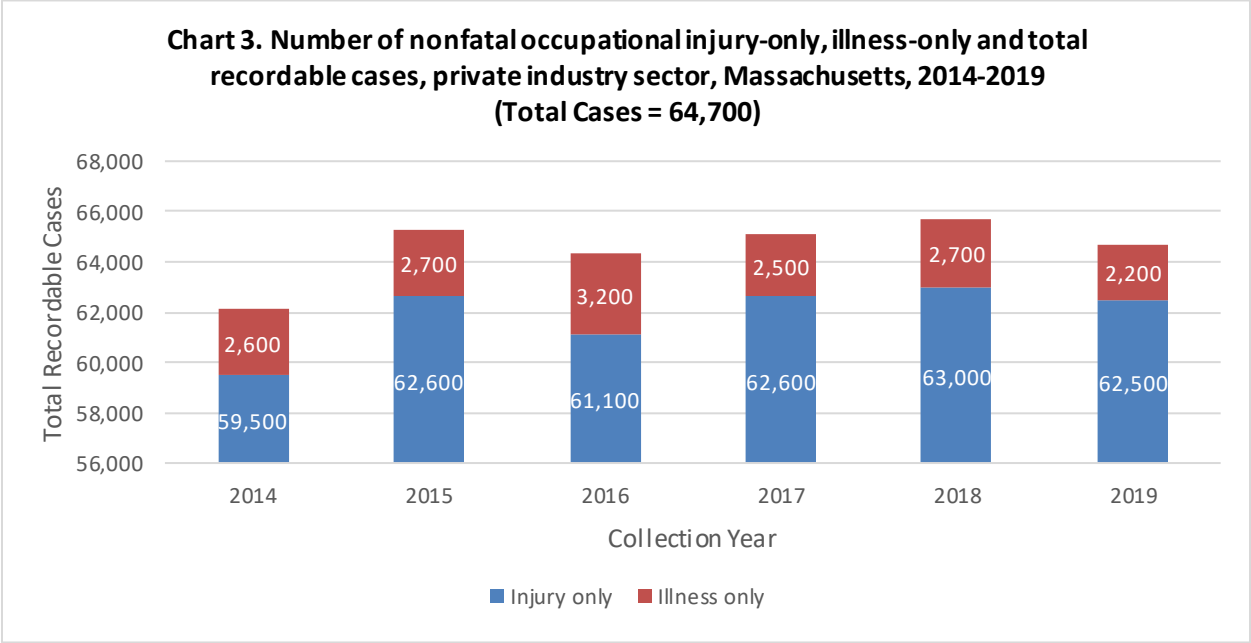
Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019.

Chart 2 compares the Incidence rates between the U.S. and Massachusetts private industry sector workforce from 2014 to 2019.



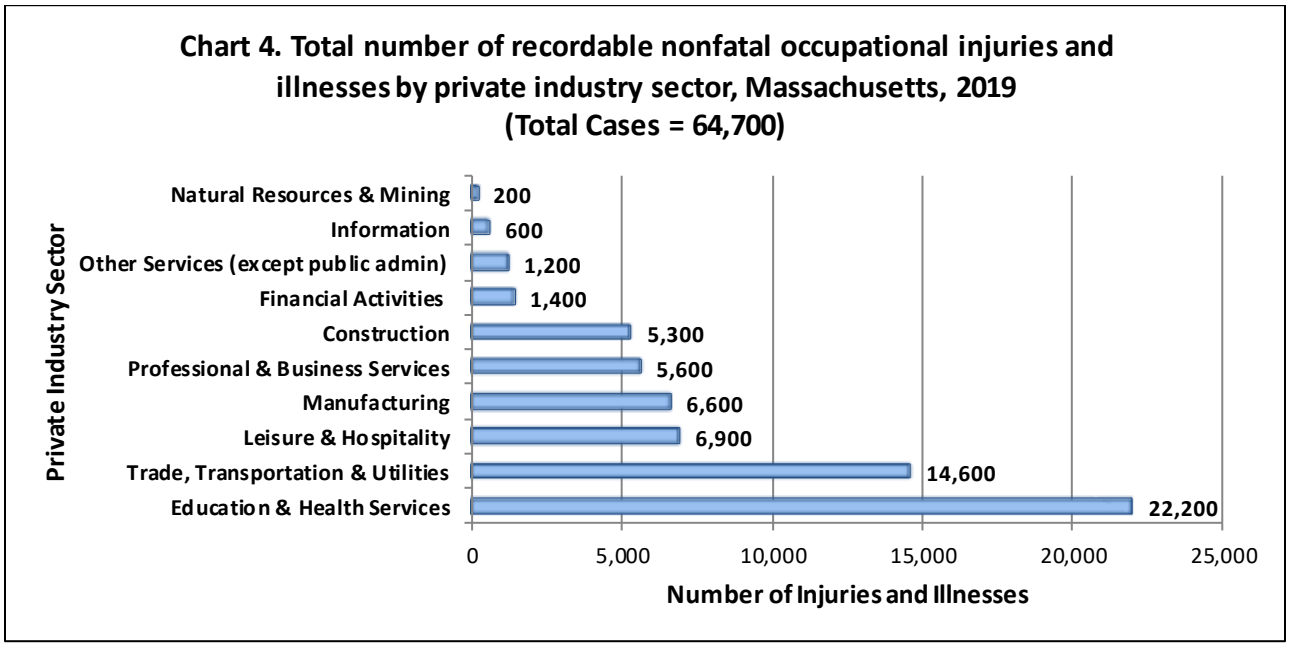
Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019.

Chart 3 shows a comparison of the total number of injury-only to illness-only cases in relation to the total number of incidents in the Massachusetts private industry sector over a five-year period.



Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019.

Chart 4 displays the TRC numbers of both injuries and illnesses within the private industry sector in Massachusetts.



Note: because of rounding and data exclusion of non-classifiable responses, data may not sum to totals.
Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019.

Table 1 below illustrates the total number of recordable occupational illnesses within the private sector, and their respective incidence rates based on the type of illness sustained. There was a total of 2,200 illness-only cases in 2019. This translates to a total recordable case (TRC) incidence rate of 8.8 illnesses per 10,000 full-time equivalent workers (FTEs). The breakdown of illness type by category is the following: skin diseases or disorders, respiratory conditions, poisonings, hearing loss, and all other illnesses:

Table 1. Incidence rate and number of illness-only cases, private industry sector, Massachusetts, 2019		
Type of Illness	**Incidence rate (per 10,000 FTE)**	**Number of Illnesses (n=2,200)**
All other illnesses	4.8	1,200
Skin disorders	1.2	300
Hearing loss	1.6	400
Respiratory conditions	1.0	300
Poisonings	0.1	*

*Data was unpublishable.
Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019.

Table 2 below compares the 2019 TRC incidence rates by major industry sector for Massachusetts and the United States.

Table 2. Incidence rate of nonfatal occupational injuries and illnesses per 100 FTEs, by major private industry sector and state government, Massachusetts and United States, 2019		
Industry	**Massachusetts**	**U.S.**
All Private Industry	2.6	2.8
Goods-producing sector	3.1	3.1
Natural Resources and Mining	3.0	3.4
Construction	3.6	2.8
Manufacturing	2.7	3.3
Service-providing sector	2.5	2.6
Trade, Transportation, and Utilities	3.3	3.4
Information	0.7	1.2
Financial Activities	0.7	0.9
Professional and Business Services	1.0	1.3
Educational and Health Services	4.2	3.6
Leisure and Hospitality	3.2	3.3
Other Services (except public administration)	1.5	2.0
State Government	4.5	3.5

Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019.

Injury and Illness Case Types

Work-related injuries and illnesses are recorded as three individual case types by employers:

1. **Cases with Days Away from Work** commonly identified in this report as **DAFW**.
2. **Cases with Job Transfer or Restricted duty** commonly identified as **DJTR**.
3. **Other Recordable Cases** commonly identified as **ORC**.

For a case to be considered recordable by an employer, there are two criteria about the incident that must be met. First, the injury or illness must be determined to be work-related or caused by the work environment. Second, the incident needs to involve loss of consciousness, require days away from work, job transfer or restricted duty, medical treatment beyond first aid (i.e. stitches, prescribed medication from a doctor, surgery, etc.), involve a significant work-related injury or illness diagnosed by a physical or licensed healthcare professional or meet other recordkeeping criteria as specified under the Occupational Safety and Health Administration's regulation 29 CFR 1904. If both criteria are met, the incident is recordable.

DAFW cases are considered the most serious type of case since the employee was not healthy enough to attend work (usually recommended by a medical professional) due to the severity of their injury or illness. DJTR cases are deemed as such when a work-related injury or illness prohibits an employee from performing one or more of the main functions of that employee's job duties. Cases that require more than first aid treatment or meet other recordkeeping criteria, but where there is no lost work time or job transfer or restriction are considered ORCs.

In 2019, there were a total of 37,900 cases with DAFW and/or DJTR (also known as DART cases) reported by private sector employers. There were an additional 2,100 DART cases reported by State government establishments. Of the 37,900 DART cases, 31,720 were DAFW cases and 6,200 were DJTR cases. In addition to these cases, there were 26,800 ORCs that were classified as recordable under OSHAs recordkeeping requirements.

Table 3 below provides the breakdown of the DAFW cases, DJTR cases and ORCS by major private industry sector and the state government in 2019. The total count for DART cases can be calculated by adding the cases with DAFW and DJTR.

Table 3. Total number of cases by major private industry and case type, private sector and state government, Massachusetts, 2019 (Total cases=69,000)			
Industry	**DAFW Cases (n=33,800)**	**DJTR Cases (n=6,300)**	**Other Recordable Cases (n=28,900)**
Education and Health Services	9,900	1,900	10,300
Trade, Transportation, and Utilities	8,000	2,000	4,600
Manufacturing	3,300	1,100	2,200
Leisure and Hospitality	2,900	200	3,800
Construction	2,700	400	2,300
Professional and Business Services	2,600	500	2,500
State Government	2,100	100	2,100
Financial Activities	900	100	400
Information	400	*	200
Natural Resources and Mining	200	100	*
Other Services	*	*	*

*Indicates data was unpublishable. Note: Because of rounding and data exclusion data may not sum to totals.
Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019.

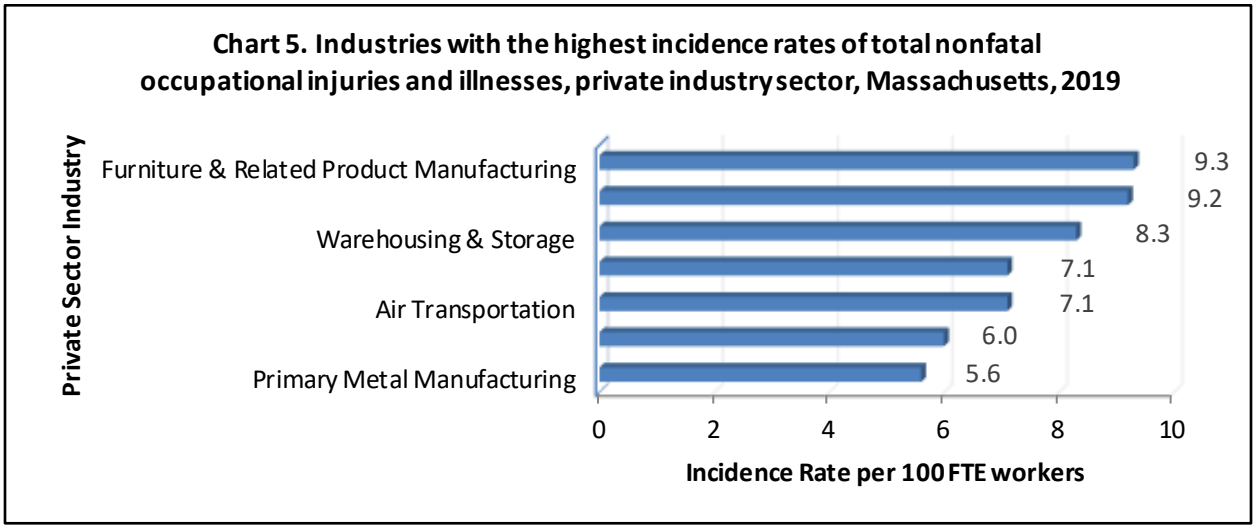
Incidence rates

Table 4 below shows the breakdown of incidence rates for the ORC, DAFW, DJTR, DART, and TRC by each private industry sector and state government.

Table 4. Total recordable incidence rate per 100 FTE workers by case type, private industry sector and state government, Massachusetts, 2019					
Industry	**ORC Rate**	**DAFW Rate**	**DJTR Rate**	**DART Rate (DAFW+DJTR)**	**TRC Rate (ORC+DART)**
Education and Health Services	1.9	1.9	0.4	2.2	4.2
State Government	2.2	2.2	0.1	2.3	4.5
Leisure and Hospitality	1.8	1.4	0.1	1.4	3.2
Trade, Transportation, and Utilities	1.1	1.8	0.4	2.3	3.3
Natural Resources and Mining	0.3	2.0	0.7	2.7	3.0
Construction	1.5	1.8	0.2	2.1	3.6
Manufacturing	0.9	1.4	0.5	1.8	2.7
Other Services (except public administration)	*	*	0.1	1.0	1.5
Professional and Business Services	0.5	0.5	0.1	0.6	1.0
Financial Activities	0.2	0.4	*	0.5	0.7
Information	0.3	0.5	*	0.5	0.7

*Indicates data is unpublishable. Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019.

Chart 5 shows selected industries with the highest total recordable rate incidence rates in Massachusetts.



Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019.

Table 5 below shows the total recordable incidence rates by the establishment employment size.

Table 5. Incidence rates of nonfatal occupational injuries and illnesses per 100 FTE workers, by industry sector and employment size, private industry sector, Massachusetts, 2019

Industry sector	All Establishments	Establishment employment size (workers)				
		1 to 10	11 to 49	50 to 249	250 to 999	1000 or more
Private Industry	2.6	1.0	2.1	3.3	3.2	2.6
Natural resources and mining	3.0	--	2.7	1.2	--	--
Construction	3.6	--	3.4	4.4	4.2	--
Manufacturing	2.7	--	2.8	3.4	2.4	0.9
Trade, transportation, and utilities	3.3	--	2.5	4.2	5.1	5.8
Information	0.7	--	--	1.1	0.3	1.5
Financial activities	0.7	--	0.7	0.7	0.8	0.4
Professional and business services	1.0	--	1.4	1.7	0.6	0.5
Education and health services	4.2	--	2.4	5.1	5.7	4.1
Leisure and hospitality	3.2	--	2.6	4.5	4.4	2.8
Other services	1.5	--	0.4	1.6	5.0	--
State government	4.5	--	--	--	7.9	--

Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019.

Case and Demographic Findings

The following section details the cases in which the injured or ill employee endured at least one full lost workday due to their incident. In 2019, there were an estimated total of 37,300 cases reported with days away from work in the entire Massachusetts workforce. This is approximately 43.4% of the 86,000 total recordable cases. Private sector employers reported a total of 31,720 DAFW cases, while state government accounted for 2,100 DAFW cases or nonfatal occupational injury and illness cases that were reported. Local government case and demographic data is unpublishable.

Some basic information is asked about the employee, such as job title, age, or date of birth, date of hire, or length of service, race, or ethnic background, work shift start time, and time of injury or illness. It is with this data that we compile and publish specific demographic information about the characteristics of the employee. In addition to demographic information, specific case information that describes the nature, event, source, secondary source (if applicable), and part of body affected, is also collected.

Gender: Of the 31,720 total cases with days away from work occurring in the private sector workforce, 17,930 cases or approximately 56.5% were reported to involve a male employee. Female workers accounted for 13,530 or 42.7% of the DAFW cases. Because of rounding and data exclusion of non-classifiable responses, data may not sum to totals.

Table 6 below shows the distribution of occupational injuries and illnesses by gender in major private industry sector in 2019.

Table 6. Number of injuries and illnesses involving DAFW by major occupation type and gender, private industry sector, Massachusetts, 2019

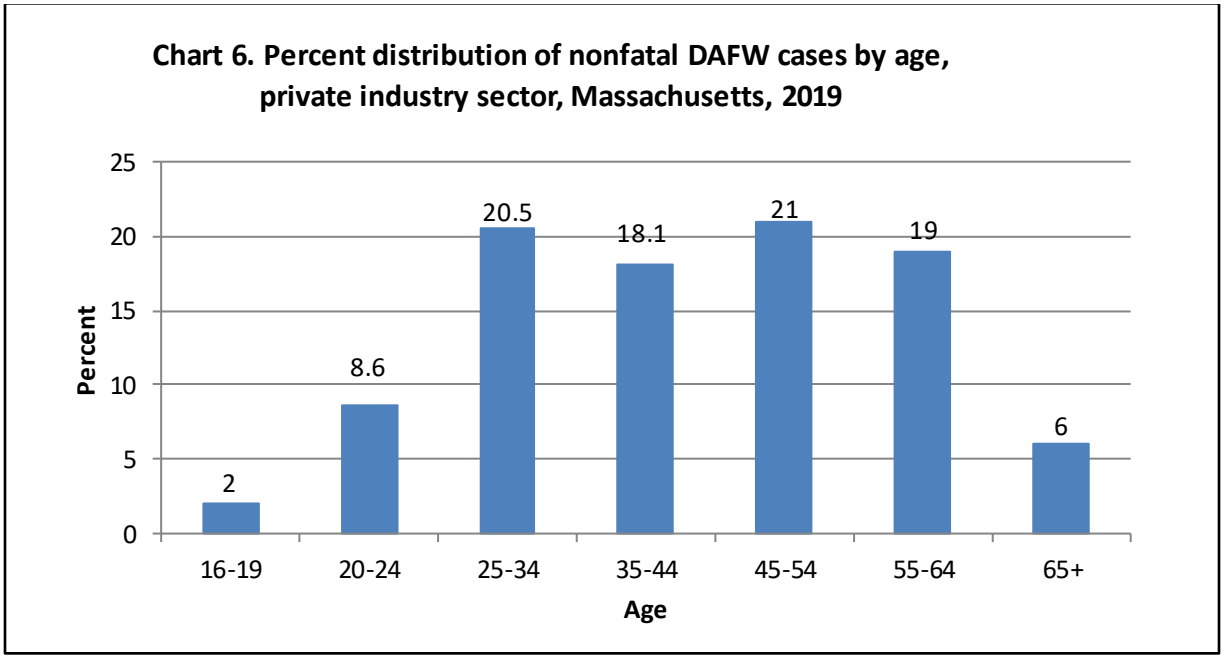
Occupation	Male	Female
Transportation and material moving	5,510	1,330
Service	2,950	5,080
Installation, maintenance, and repair	1,760	80
Office and administration support	580	610
Production	1,840	700
Construction and extraction	2,410	40
Sales and related	900	890
Healthcare practitioners and technical	650	2,450
Management, business, and financial	480	1,150
Education, legal, community service, arts, and media	610	960
Computer, engineering, and science	140	130
Farming, fishing, and forestry	100	100

Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019.

Age: The following tables show the total number, as well as the percent distribution of DAFW cases by age group of workers in the Massachusetts private sector in 2019:

Table 7. Number of Injuries and Illnesses Involving DAFW by age of worker, private industry sector, Massachusetts, 2019 (Total Cases = 31,720)	
Age group of workers	**Number of DAFW cases**
14 to 15	*
16 to 19	620
20 to 24	2,720
25 to 34	6,500
35 to 44	5,740
45 to 54	6,660
55 to 64	6,030
65 and over	1,900

*Indicates data is unpublishable. Due to rounding and exclusion of non-classifiable responses, data may not sum to totals.
Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019.



Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019.

Race: Reporting for race or ethnic background is an optional field on the Survey of Occupational Injuries and Illnesses. Of the 31,720 cases with days away from work, 13,930 cases did not report race or ethnic background. White-only workers accounted for 12,130 of the total number of DAFW cases, Hispanic-only workers accounted for 3,300 cases, Black-only workers accounted for 1,950 cases, Asian-only workers accounted for 290 cases, American Indian or Alaskan Native-only workers accounted for 50 cases. There were 40 cases that identified as multi-race, and lastly 30 cases were classified as Hispanic or Latino and another race.

Table 8 below summarizes the total number of DAFW cases by race or ethnic background of worker by selected industries in 2019.

Table 8. Number of DAFW cases by race or ethnic background of workers, private industry sector, Massachusetts, 2019 (Total Cases = 31,720)						
Industry	**White**	**Black**	**Hispanic or Latino**	**Asian**	**American Indian or Alaskan Native**	**Multi-race**
Private sector	12,130	1,950	3,300	290	50	40
Goods producing	3,300	130	990	90	20	*
Natural resources and mining	100	*	*	*	*	*
Construction	1,840	30	170	*	*	*
Manufacturing	1,360	100	810	90	*	*
Service providing	8,830	1,830	2,310	200	30	40
Trade, transportation, and utilities	2,600	310	640	50	*	*
Information	160	*	*	*	*	*
Financial activities	540	30	30	*	*	*
Professional and business services	700	180	470	*	20	*
Education and health services	3,560	1,010	710	70	*	*
Leisure and hospitality	660	280	420	50	*	*
Other services	*	*	*	*	*	*

*Indicates data was unpublishable. Due to rounding and exclusion of unusable responses, data may not sum to totals.
Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019

Table 9 below summarizes the total number of DAFW cases and the percent distribution of those cases by the nature of incident.

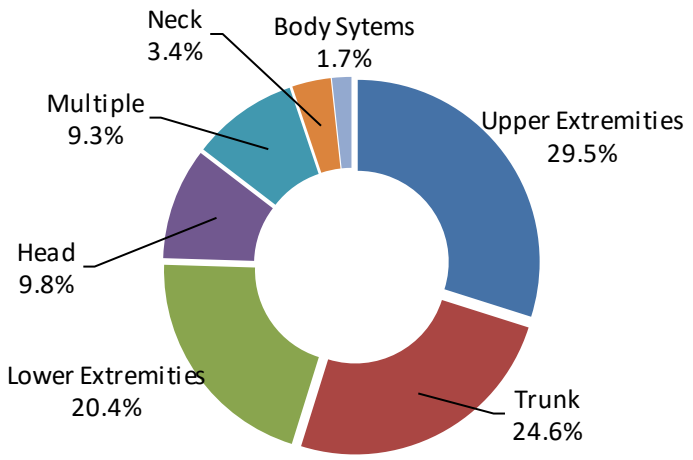
Table 9. Total number of cases and percent distribution of DAFW cases by nature, private industry sector, Massachusetts, 2019, [Total Cases = 31,720]		
Nature of Injury or Illness	**Count**	**Percentage**
Sprains, Strains, Tears	10,800	34.0%
Soreness, Pain	6,640	20.9%
Bruise, Contusions	2,880	9.1%
Cuts, Lacerations, Punctures	2,660	8.4%
Fractures	2,520	7.9%
Multiple Traumatic Injuries	620	2.0%
Heat (thermal) burns	490	1.5%
Carpal Tunnel Syndrome	140	0.4%
Amputations	80	0.3%
Tendonitis	70	0.2%
Chemical Burns and Corrosions	70	0.2%

Note: Because of rounding and data exclusion of non-classifiable responses, data may not sum to the totals
Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019.

Part of Body: The trunk region is defined by the *Occupational Injury and Illness Classification System (OIICS)* manual as the "main part of the body, where the head and limbs are attached." However, the trunk excludes the neck and shoulders. In 2019, the trunk accounted for 7,810 DAFW cases. The back alone accounted for 5,740 or roughly 73.5% of the cases involving the trunk region. The upper extremities, which include the shoulder, arms, hands, and fingers accounted for approximately 9,370 DAFW cases. The lower extremities, which range from the upper leg to the toes, were identified as the part of body in 6,480 DAFW cases. In 2019 the upper and lower extremities combined were accountable for roughly 50% of the total DAFW cases. There were 1,080 cases that reported the part of body to be the neck. The head, including the face, was the affected part of body in 3,100 of the DAFW cases; the eyes specifically was reported as part of body in 340 of those cases. Multiple body parts (not including two from within the same body region as listed above) accounted for 2,950 cases. Lastly, body systems, which is used as the part when an injury affects an entire body system rather than a part, accounted for 530 DAFW cases in 2019.

Chart 7 displays the days away from work cases separated by the part of body and their percent contribution.

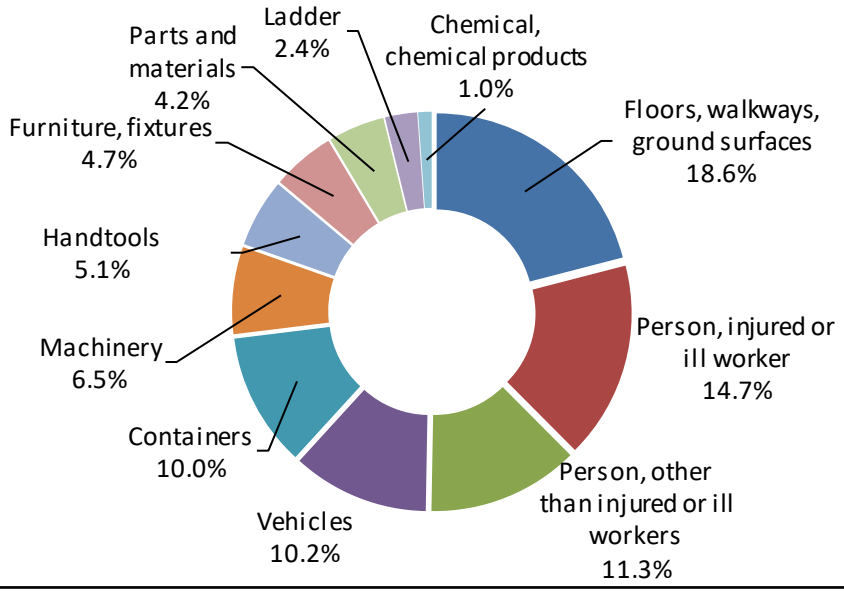
Chart 7. Percent distribution of DAFW cases, by part of body affected, private industry sector, Massachusetts, 2019



Note: Due to rounding and data exclusion of non-classifiable responses, components may not add to totals
Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019.

Chart 8 below displays the percent distribution of the most common sources of incidents that lead to cases with days away from work.

Chart 8. Percent distribution of DAFW cases, by source of the injury and illness, private industry sector, Massachusetts, 2019



Note: Due to rounding and data exclusion of non-classifiable responses, components may not add to totals
Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019.

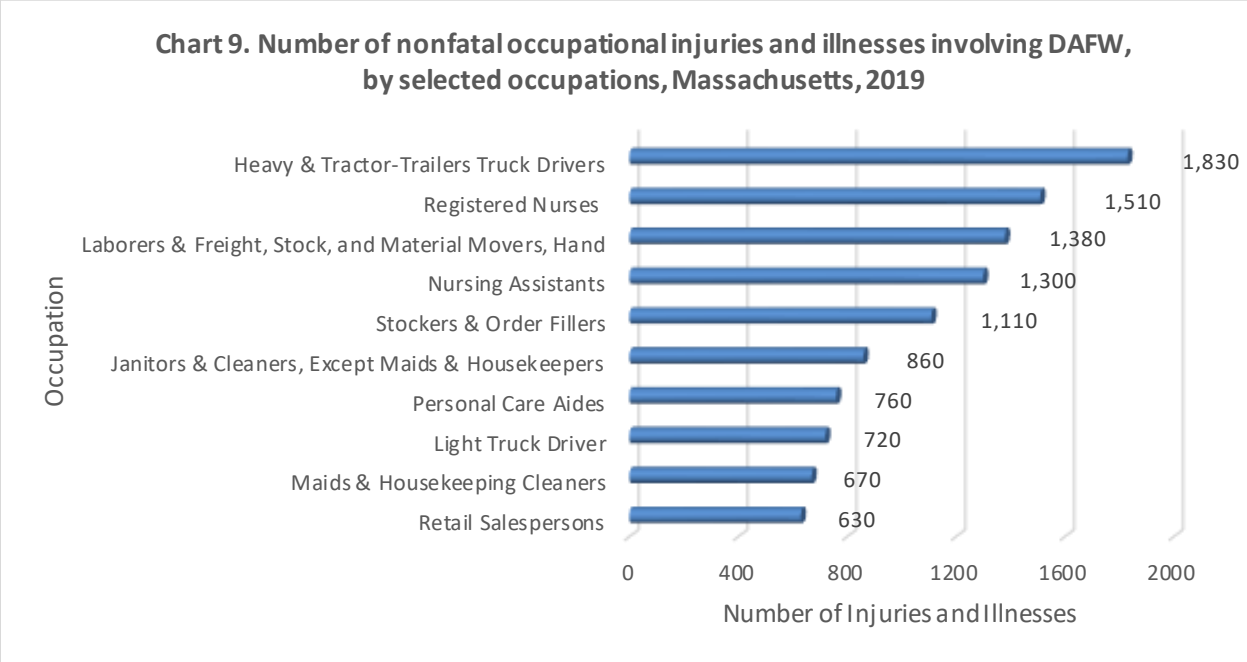
Table 10 below shows the percent distribution of days away from work by the event in which the incident occurred.

Table 10. Number of cases and percent distribution of DAFW cases by event, private industry sector, Massachusetts, 2019 (Total Cases = 31,720)

Event Category	Number	Percentage
Overexertion and Bodily Reaction	10,330	32.6%
Falls, Slip, Trips	9,030	28.5%
Contact with Object, Equipment	7,030	22.2%
Violence and Other Injuries by Persons or Animals	2,010	6.3%
Transportation Incidents	1,630	5.1%
Exposure to Harmful Substances or Environment	1,170	3.7%
Fires and Explosions	*	*

*Indicates data was unpublishable. Due to rounding and exclusion of some responses, data may not sum to totals.
Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019.

Chart 9 provides selected occupations with the highest number of Days Away from Work cases. Registered nurses and nursing assistants continue to be occupations with high number of reported cases.



Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2019.

Data Source for this Report

The data source for this report is the Bureau of Labor Statistics, U.S. Department of Labor, Survey of Occupational Injuries and Illnesses (SOII), in cooperation with participating state agencies. Survey data for the SOII is derived from mandatory logs kept by private industry employers and participating public sector employers during the calendar year. All survey responses are confidential and are used for statistical purposes only. The SOII is a federal-state government partnership between the U.S. Department of Labor's Bureau of Labor Statistics (BLS) and the Massachusetts Department of Labor Standards (DLS). For more information about the data sources and methodology visit BLS' *Concepts* page: bls.gov/opub/hom/soii/data.htm.

About the Department of Labor Standards

The mission of the Massachusetts Department of Labor Standards (DLS) is to promote and protect workers' safety and health, wages, and working conditions, and to support employers and workers in the utilization of apprenticeship as a workforce development tool. In collaboration with public and private entities, DLS protects workers by means of education and training, workplace safety and health consultation and assessment, occupational injury and illness data collection and analysis, and consistent and responsible administration and enforcement of its statutes and regulations. DLS carries out its objectives in a manner that supports employers and strengthens the Commonwealth's communities and economy.

DLS' Occupational Safety and Health Statistics Program administers the Survey of Occupational Injuries and Illnesses (SOII) for all Private Sector and public sector industries, trades, and occupations. The SOII remains the largest occupational injury and illness surveillance system in the country, providing injury and illness counts and rates for a variety of employer, employee, and case characteristics based on a sample of approximately 230,000 establishments. Employers record cases that result in days away from work due to injury or illness. SOII contains multiple case characteristics that capture invaluable information about the nature of the industry, the injury, and the demographics of the injured employee. The Program uses this data to produce an annual occupational injury and illness report, which summarizes overall and industry-specific data on occupational safety. Reports from prior years can be found on the DLS website at mass.gov/lwd/labor-standards/occupational-safety-and-health-statistics-program. The mission of the Occupational Safety and Health Statistics Program is to support continued improvement of workplace environments by compiling and presenting data to employers, employees, researchers, industry professionals, and policy makers, so that these data can be used to devise strategies to reduce occupational injuries and illnesses.

DLS administers eight programs (including the Occupational Safety and Health Statistics Program) that interact with the public on a range of occupational health and safety issues.
Visit mass.gov/orgs/department-of-labor-standards for more information about DLS.

Occupational Health and Safety Resources in Massachusetts

On-Site Consultation Program

This program, administered by DLS, offers a free consultation service designed to help employers recognize and control potential safety and health hazards at their worksites, improve their safety and health program, assist in training employees, and possibly qualify for a one-year exemption from routine OSHA inspections. This service targets smaller businesses (less than 250 employees per establishment or 500 employees nationwide) in high hazard industries, such as manufacturing, healthcare, and construction. It is a confidential service in which your firm's name, and any other information you provide, and any unsafe or unhealthy working conditions found, will not be reported routinely to the OSHA inspection staff.
Visit mass.gov/dols/consult for more information.

Workplace Safety and Health Program

The Workplace Safety and Health Program within DLS, provides technical assistance and performs investigations of workplace health and safety hazards within public sector workplaces in Massachusetts.
Visit mass.gov/lwd/labor-standards/massachusetts-workplace-safety-and-health-program for more information.

Department of Public Health's Occupational Health Surveillance Program

The Occupational Health Surveillance Program within the Department of Public Health generates reports, fact sheets, and safety alerts regarding fatal occupational injuries. For more materials on this subject, please contact the Massachusetts Department of Public Health, Occupational Health Surveillance Program, 250 Washington Street, 4th Floor Boston, MA 02108. To speak with a representative directly, please call 1-800-338-5223. Reports are available on the program's website: mass.gov/orgs/occupational-health-surveillance-program

Department of Industrial Accidents Safety Grant Program

The Department of Industrial Accidents (DIA), through the Office of Safety, annually awards hundreds of thousands of dollars in safety training grants to various organizations. In each fiscal year, thousands of persons receive workplace training through programs funded by these DIA grants. This highly successful program provides monies for workplace safety training aimed at workers throughout the Commonwealth. For more information explore the following link: mass.gov/lwd/workers-compensation/safety/grant-program/safety-grant-program.html

Material Request Information

For more information about the **2019** report or past year data, please contact the Massachusetts Department of Labor Standards, Occupational Safety and Health Statistics Program, 19 Staniford Street, 2nd Floor, Boston, MA 02114; or call 617-626-6945.

Information can also be found on our website at: mass.gov/lwd/labor-standards/occupational-safety-and-health-statistics-program

Detailed statistical information can also be obtained from the Bureau of Labor Statistics at: bls.gov/bls/safety.htm