



**COMMONWEALTH
OF MASSACHUSETTS**

Deval L. Patrick, Governor

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Executive Office of Labor and
Workforce Development**

2012 Occupational Injuries and Illnesses Annual Report



Compiled by:

Executive Office of Labor and
Workforce Development's

Department of Labor Standards
Occupational Safety and Health
Statistics Program

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Work-Related Nonfatal Injuries and Illnesses in 2012

Total Injuries and Illnesses: In 2012, there were approximately 69,700 nonfatal work-related injuries and illnesses reported in the private sector workforce. This translated into an incidence rate of 3.1 cases per 100 equivalent full-time workers (FTEs). In the private sector, there were 38,600 cases with days away from work, job transfer, or restriction. The total rate, along with the numbers of incidents, remains relatively unchanged compared to the 2011 data. The number of cases involving days on job transfer or restriction (DJTR) decreased from 2011 to 2012. Massachusetts' private sector incidence rate has remained the lowest throughout the New England states that have reported data, and on par or lower than the national rate, which was 3.4 incidents per 100 FTEs.

Among the state's public sector workforce, state government had an estimated total of 3,700 recordable cases in 2012, compared to 6,000 total cases in 2011. This translates to a total recordable case (TRC) incidence rate of 3.7 cases per 100 FTEs for the most recent survey year. The major industries with publishable data for 2012 are Education and Health Services, Public Administration, and Utilities. There were 2,300 cases with days away from work, job transfer, or restriction in state government. The majority of recordable cases, 1,300, occurred among employees in Public Administration at a rate of 2.7 TRC per 100 FTEs. The Education and Health Services industry reported approximately 1,100 TRCs, translating to an incidence rate of 2.7 TRC per 100 FTEs. Due to a low response rate from selected local government agencies, municipal data are not available to be published.

Injuries: There were 66,900 injuries in the private sector in 2012, which translates to 3.0 cases per 100 FTEs. State government experienced 2,600 injuries in 2012, and an incident rate of 2.6 cases per 100 FTEs.

Illnesses: In 2012, private industry workplaces in Massachusetts incurred an estimated total of 2,800 cases of nonfatal occupational illnesses. This resulted in an incidence rate of 12.5 cases per 10,000 FTEs within all private industries. Illnesses can be broken down into subcategories: skin disorders, respiratory conditions, poisonings¹, hearing loss, and all other illnesses. Within all Massachusetts private sector industries, the incidence rates and total number of illnesses were as follows:

Type of Illness	Incidence rate (per 10,000 FTE)	Number of illnesses
Skin disorders	1.9	400
Respiratory conditions	1.0	200
Hearing loss	2.2	500
All other illnesses	7.3	1,600

¹ Data for poisonings was too small to be displayed

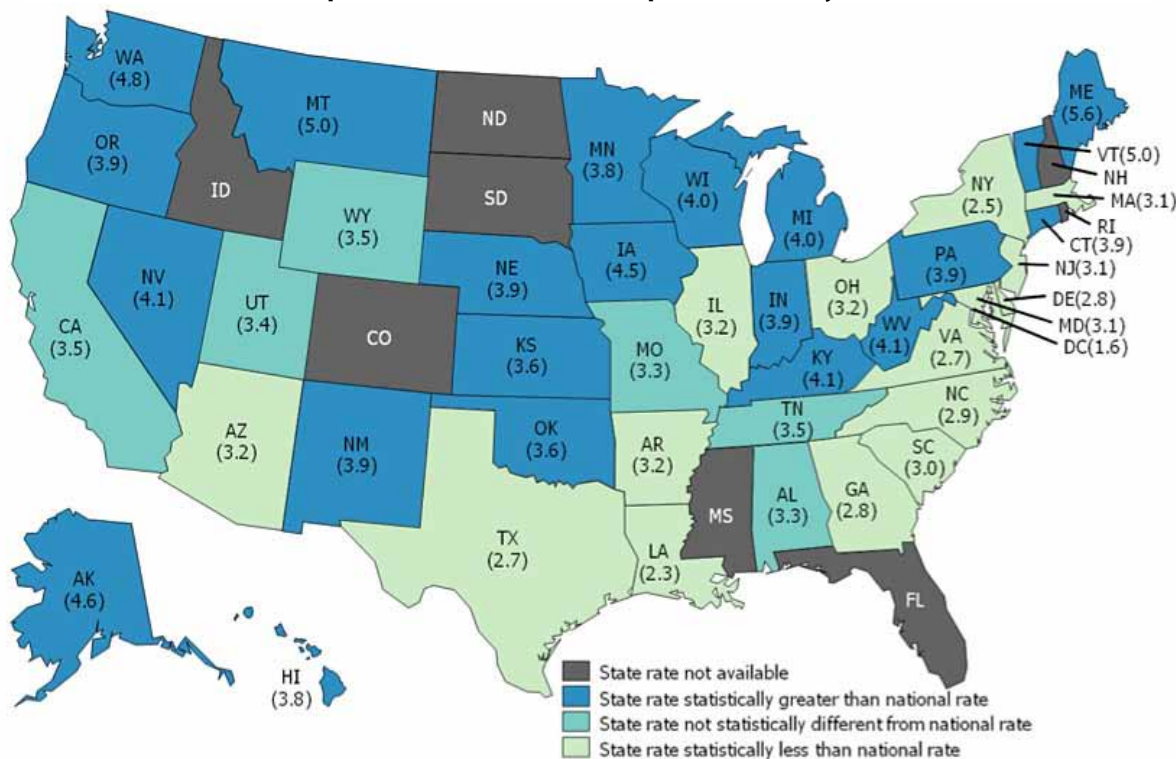
State government had a high incident rate of work-related illnesses with a rate of 109.6 cases per

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10,000 FTEs. In the private sector, the arts, entertainment, recreation, and utilities industries also had relatively high incidence rates of work-related illness with rates of 39.5 and 37.8 cases per 10,000 FTEs, respectively. Education and health services had an incident rate of 22 cases per 10,000 FTEs. Within this industry, the sub-category of health care and social assistance had a rate of 26.1 cases per 10,000 FTEs. Manufacturing also had a high incidence of illnesses at 21.6 cases per 10,000 FTEs. Education and Health Services and State Government both had 1,100 cases of illness in 2012. Of the 1,100 illnesses in State Government, 200 of the cases were classified as respiratory conditions and 800 were classified in the all other illnesses category (this category includes illnesses not classified as skin disorders, respiratory conditions, poisonings, or hearing loss). The classifications for the remaining illnesses did not have sufficient data to be displayed. Cases incurred by the Education and Health Services sector were divided into two sub-sectors: Educational services (100 cases) and Health care and social assistance (1,000 cases).

Figure 1: State nonfatal occupational injury and illness incident rates* compared to the national rate, private industry, 2012

Chart 1: State nonfatal occupational injury and illness incidence rates* compared to the national rate, private industry, 2012

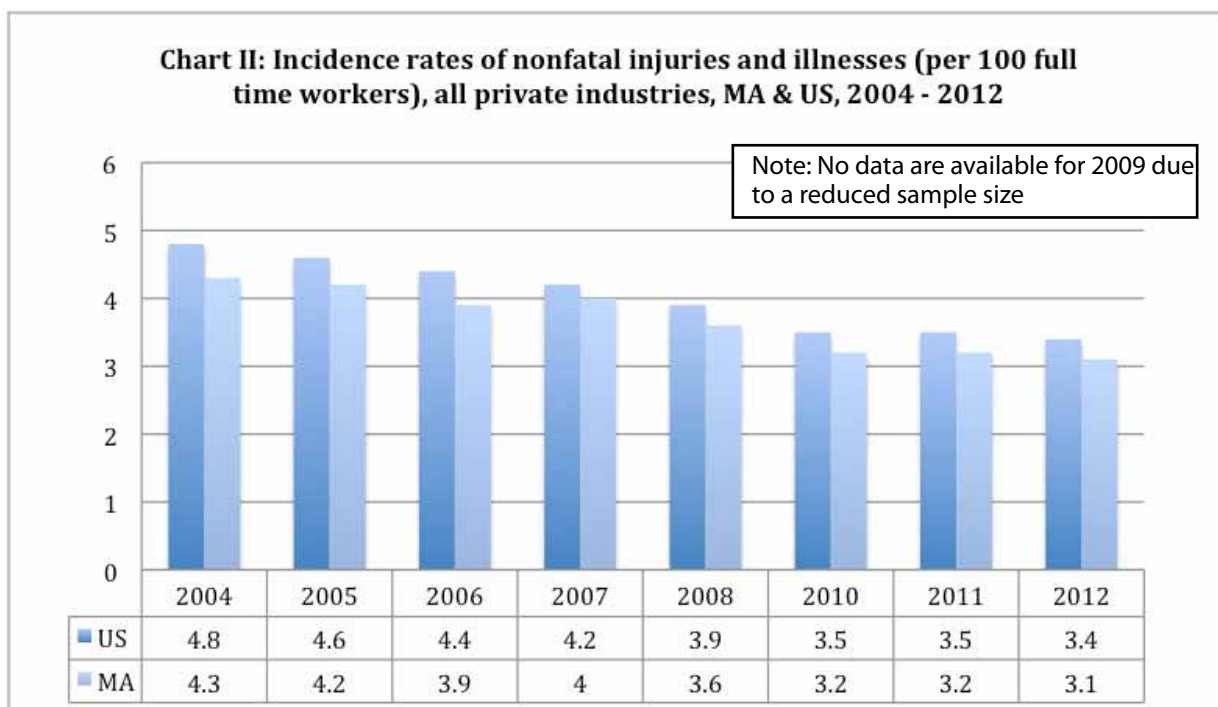
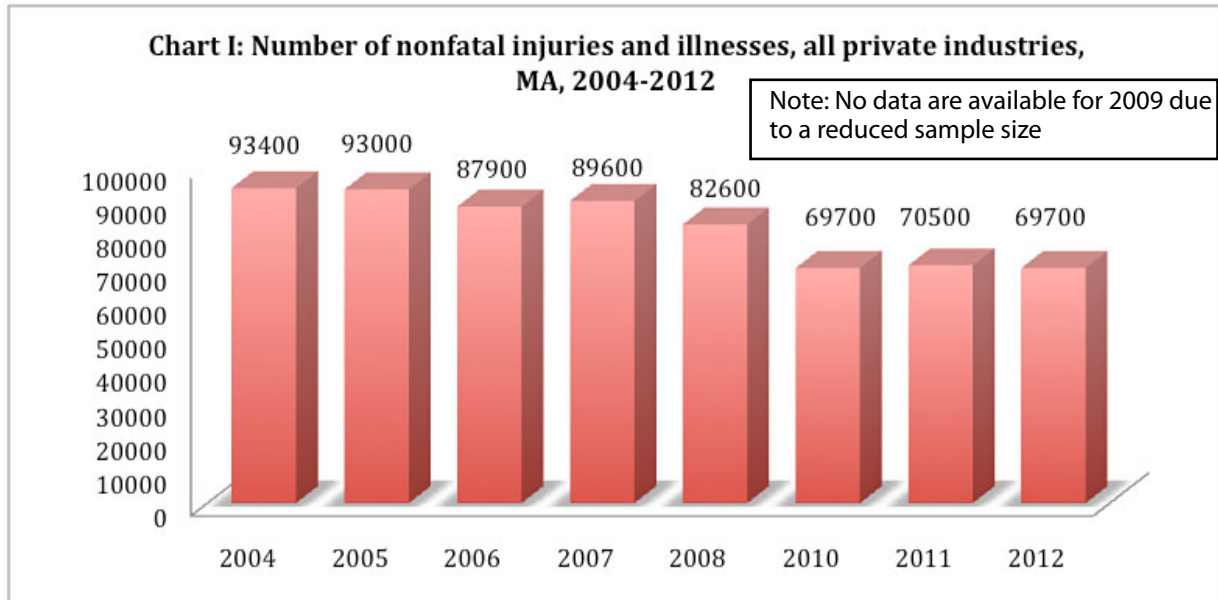


Among the 42 states and the District of Columbia for which estimates of nonfatal injuries and illnesses are available for 2012, 21 states experienced a higher incidence of injuries and illness than the national rate (3.4 cases per 100 full-time workers); 15 states plus the District of Columbia experienced lower rates; and 6 states had rates that were not statistically different from the national rate.

*Total recordable case (TRC) incidence rate per 100 full-time workers
Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, November 2013

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Figure 1 captures the national landscape by including each state's incident rate and statistical significance. According to the Bureau of Labor Statistics, Massachusetts has the lowest incident rate in New England (3.1) and is statistically lower than the national rate of 3.4 cases per 100 FTEs.



Charts I and II above show time comparisons of numbers and rates of nonfatal injuries and illnesses from 2004-2012 among all Massachusetts private industries. The data show a downward trend over time in the total numbers and rates of nonfatal injuries and illnesses.

Industry information

The table below compares the incidence rates by industry for Massachusetts and the United States.

Incidence rate of nonfatal occupational injuries and illnesses, per 100 FTE's, MA and US, 2012		
	Massachusetts	US
Natural Resources & Mining	6.9	4
Construction	4.7	3.9
Education & Health Services	4.6	4.7
Leisure & Hospitality	4.4	4
Trade, Trans, & Utilities	3.8	3.9
State Government	3.7	4.6
Other Services	3.3	2.6
Manufacturing	3.0	4.4
Professional & Business Services	1.7	1.7
Information	0.9	1.6
Financial Activities	0.7	1.4

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**.

In order for a case to be considered recordable by an employer, there are two criteria about the incident that have to be met. First, the injury or illness has to be determined to be work-related or caused by the work environment. Second, the incident needs to involve at least one of the following: loss of consciousness, 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 recordability criteria as specified under 29 CFR 1904. If both of these criteria are met, the incident is recordable.

DAFW cases are considered the most serious due to the fact that the employee could not perform any function of his/her job because of the injury or illness.

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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 recordability criteria, but where there is no lost work time or transferred/restricted duty are considered Other Recordable Cases (ORC). The following chart shows the breakdown of each type of case by major industry group in 2012:

Number of cases by major industry and case type, private sector, MA, 2012			
	Cases with DAFW	Cases with DJTR	Other Recordable Cases
Education & Health Services	9700	2500	10200
Trade, Transportation, & Utilities	7400	2300	6300
Professional & Business Services	3000	500	3700
Leisure & Hospitality	2900	300	4300
Manufacturing	2900	1300	3200
Construction	2400	600	1500
Other Services	1500	100	800
Information	400	*	200
Financial Activities	400	*	1000
Natural Resources & Mining	200	*	100

*Indicates data are unavailable

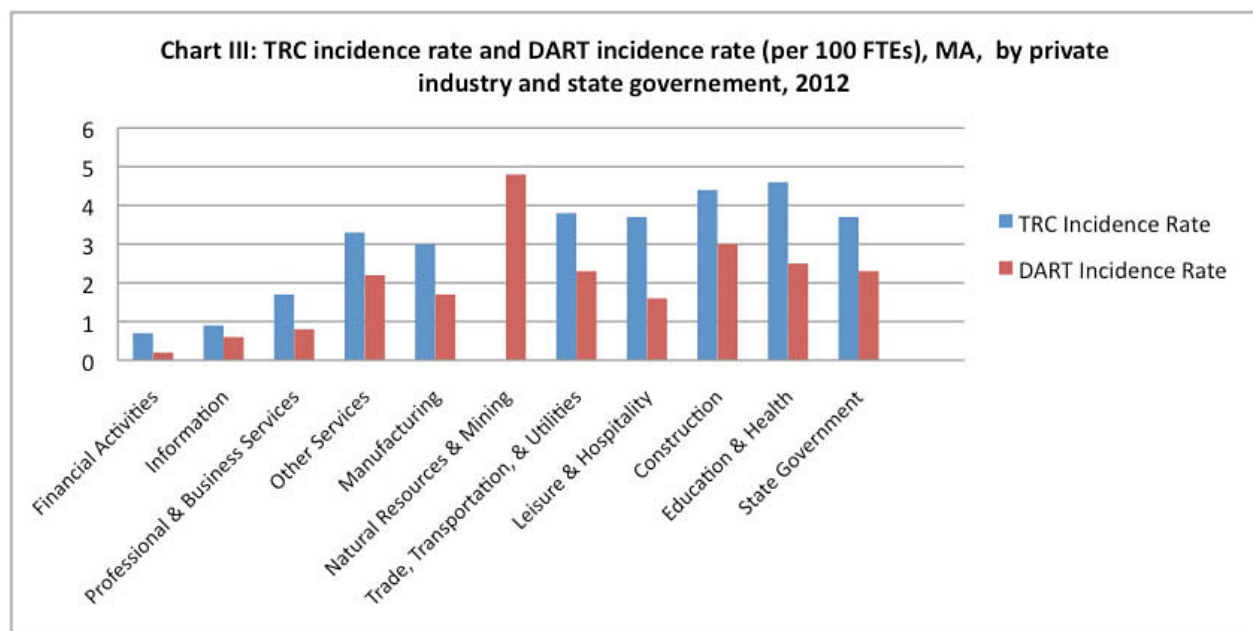
In 2012, there were 44,900 cases with DAFW and/or DJTR in all industries including state and local government. There were 36,700 cases with DAFW and 8,200 cases with DJTR. There were also 38,000 other recordable cases that are not classified under DAFW or DJTR.

TRC and DART incidence rates

Chart III represents a comparison of the TRC incidence rates and Days Away, Restricted, or Transferred (DART) rates for private industries in addition to state and local government. The DART rate includes those cases involving days away from work, restricted work activity, and transfers to another job.

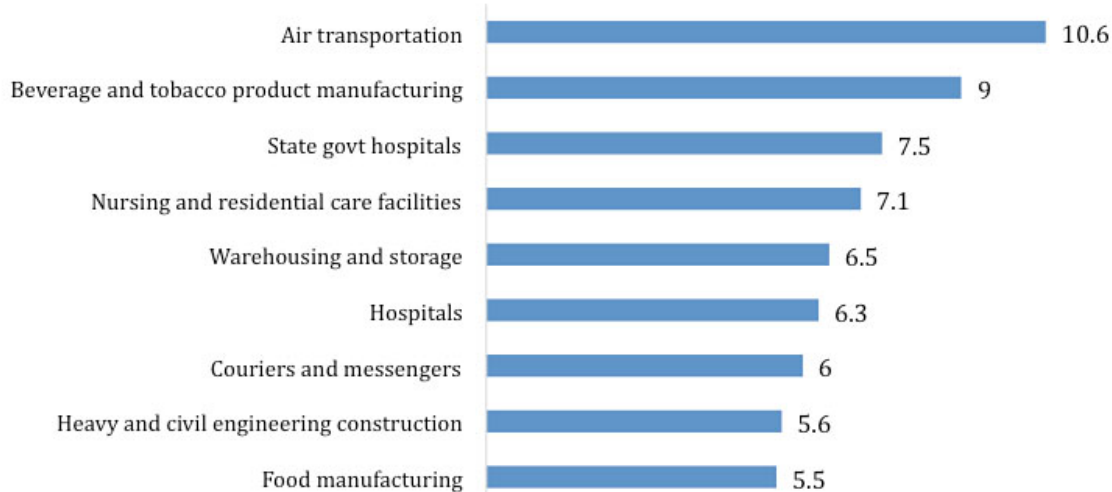
Hazardous industries with a smaller number of workers can show higher TRC incidence rates than their counterparts with larger numbers of employees. Likewise, a larger industry such as Professional and Business Services has a relatively low TRC incidence rate and a higher number of recordable incidents. It is important to note that Natural Resources and Mining is missing the TRC incidence rate due to lack of sufficient data reported for this sector.

Sector-level industry data from the 2011 survey to the 2012 survey stayed relatively unchanged; however, the total number of recordable cases in Wholesale Trade dropped significantly from 4,400 in 2011 to 3,200 in 2012.



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Chart IV: Industries with the highest incidence rates of total nonfatal occupational injuries and illnesses, Massachusetts, 2012

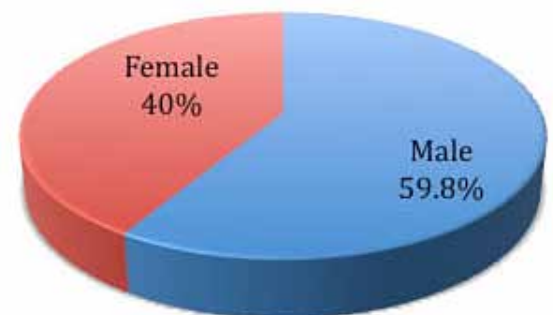


The chart above shows selected sub-industries with high TRC incident rates in Massachusetts. Air transportation had a high rate of 10.6 incidents per 100 FTEs. Beverage and tobacco product manufacturing had a high rate with 9 incidents per 100 FTEs. State Government Hospitals had a rate of 7.5 incidents per 100 FTE, while in 2011 they had a rate of 8.5 cases per 100 FTEs.

Case and Demographic Findings

Case and demographic findings for this survey are purely based on DAFW cases. The reason for this is that the survey is intended to obtain more detailed information about the more severe cases involving missed work days. 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 these data that we compile and publish demographic information about the incidences of injuries and illnesses. In addition to demographic information, specific injury or illness information that describes the nature, event, source, secondary source, and part of body affected, is also collected.

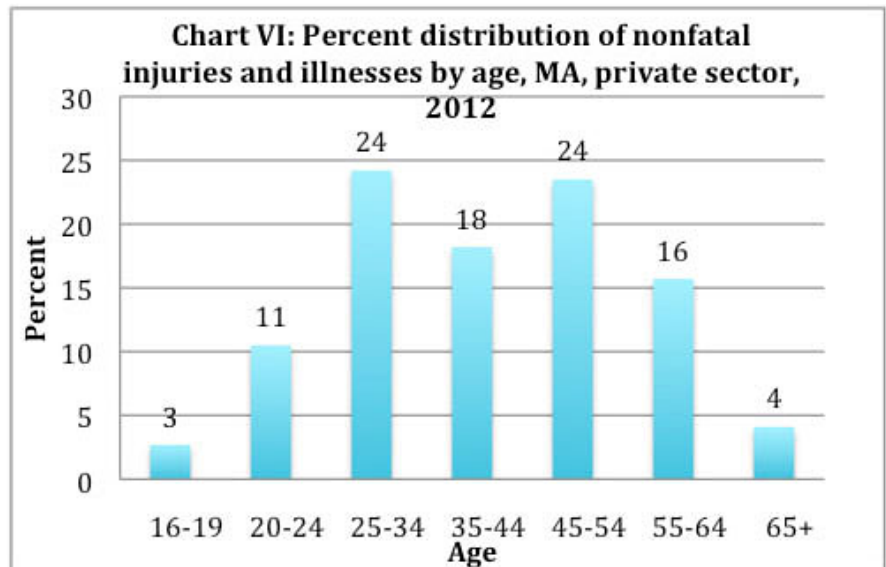
Chart V: Percent distribution of nonfatal occupational injuries and illnesses by gender, MA, private sector, 2012



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Gender: Incidents involving men accounted for a higher percentage of total DAFW injuries in 2012 than incidents involving women. Of all the people who suffered DAFW injuries in 2012, 40% were female and 59.8% were male. It is important to note that approximately 100 cases did not report gender and are not included in these calculations.

Age: Injuries and illnesses to workers in the 25-34 and 45-54 year-old age categories accounted for the highest percentage of all cases with DAFW. Workers in these age groups made up about 24% of the total injuries. Cases occurring to workers in the 16-19 and 65 and older age groups reported a lower percentage of all recordable DAFW injuries with 3% and 4%, respectively.



Nature of Injury: Sprains, strains, and tears made up 40.7% (12,560 cases) of all DAFW injuries in 2012. Soreness and pain made up 16.1% (4,980 cases) of the reported nature of injuries, and cuts, lacerations, and punctures accounted for 9.9% (3,070 cases) of the injuries.

Distribution of injuries and illnesses by nature, Massachusetts, Private industry, 2012 [Total Cases = 30,880]

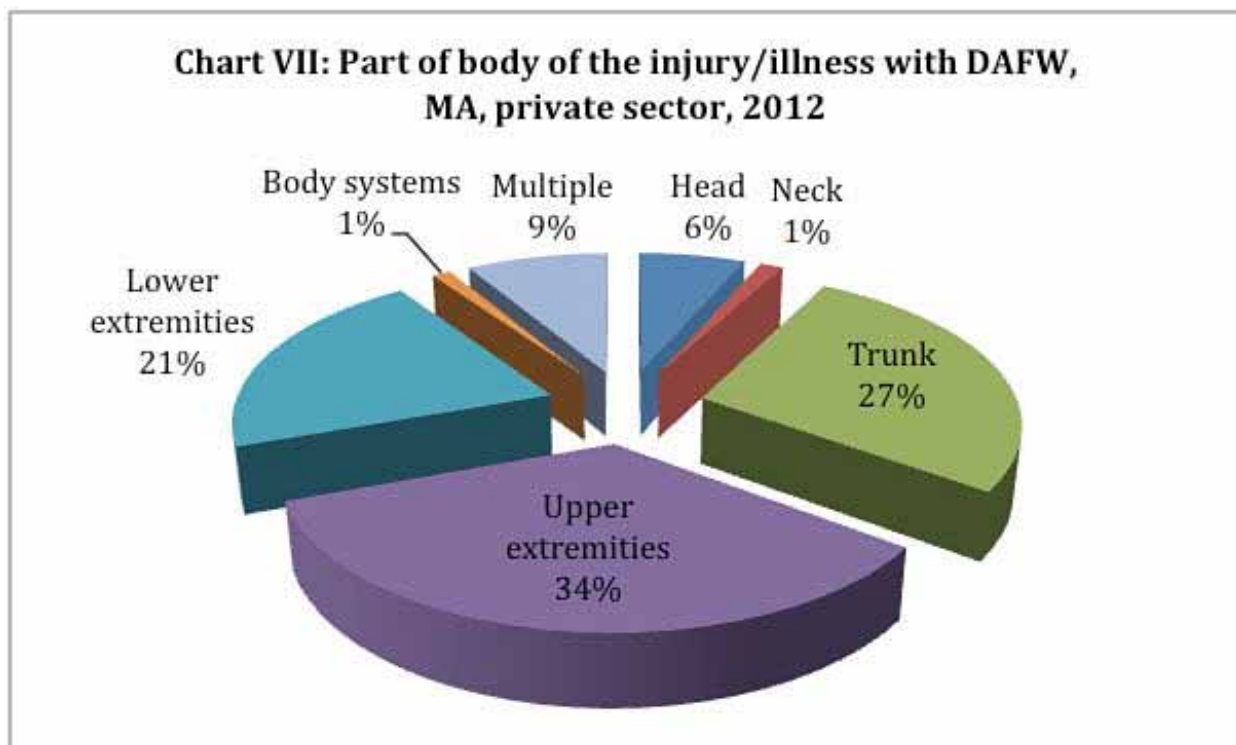
Sprains, strains, tears	12,560	40.7%
Soreness, pain	4,980	16.1%
Cuts, lacerations, punctures	3,070	9.9%
Bruise, contusions	2,770	9.0%
Fractures	2,370	7.7%
Heat (thermal) burns	570	1.8%
Multiple traumatic injuries	490	1.6%
Amputations	180	0.6%
Carpal tunnel syndrome	160	0.5%
Chemical burns and corrosions	100	0.3%
Tendonitis	90	0.3%
All other	3,540	11.5%

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Part of Body: The Massachusetts workforce experienced the most injuries to the upper extremities, ranging from the upper arm to the fingertips, in 2012. According to the 2012 survey findings, it is estimated that 34% (10,570 cases) of DAFW cases involved injuries to the upper extremities. There were 6,480 DAFW cases that involved the back; however, the entire trunk region experienced 27% (8,370 cases) of the total DAFW cases in 2012. The trunk region is defined by the *Occupational Injury and Illness Classification System (OIIICS)* manual as the “main part of the body, where the head and limbs are attached.” Typically, the region of the trunk most affected is the back.

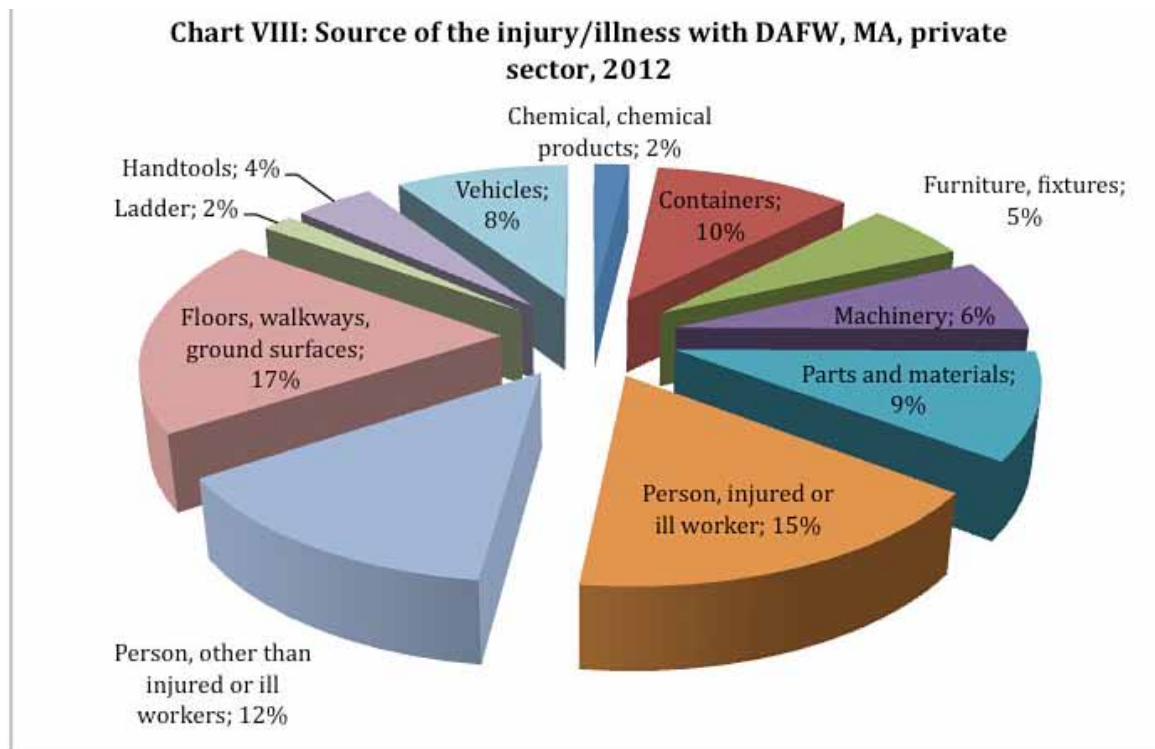
The lower extremities, which range from the upper leg and thigh to the toes, was identified as the affected part of body in 21% (6,430 cases) of the DAFW cases. Multiple body parts were involved in 9% (2,640 cases). The Head, including the face, was the affected part of body in 6% (1,970 cases) of the DAFW cases.

The neck was the affected part of body in 1% (440 cases) of the DAFW cases in 2012. Lastly, the body systems (i.e. circulatory, gastrointestinal system, respiratory system, etc.) was the affected part of body in 1% (340 cases) of all DAFW cases.



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Source of injury or illness in the private sector: The most common source of injury involving DAFW was floors, walkways, or ground surfaces, resulting in 5,290 cases (17%). The employee who was the injured or ill person was the second most common source of injury with 4,620 cases, also 15% of the total. Of the 4,620 cases where the source of injury was the injured or ill employee, 4,440 were due to the workers' motion or position. Persons other than the injured/ill worker were the source listed in 12%, or 3,820 of all the DAFW cases.



Event causing the injury or illness in the private sector: Of the 30,880 total cases reported in 2012, 11,250 involved overexertion (36.4%). 7,790, or 25.2% of the DAFW cases involved contact with object or equipment. Falls, trips, and slips were the events specified in 7,540 DAFW cases or 24.4% of the total. Violence and other injuries by persons or animals was the event of incident in five percent or 1,600 cases. Exposure to harmful substances was the event named in four percent (1,370 cases) of the total cases with DAFW. Lastly, 1,120 cases involved transportation incidents.

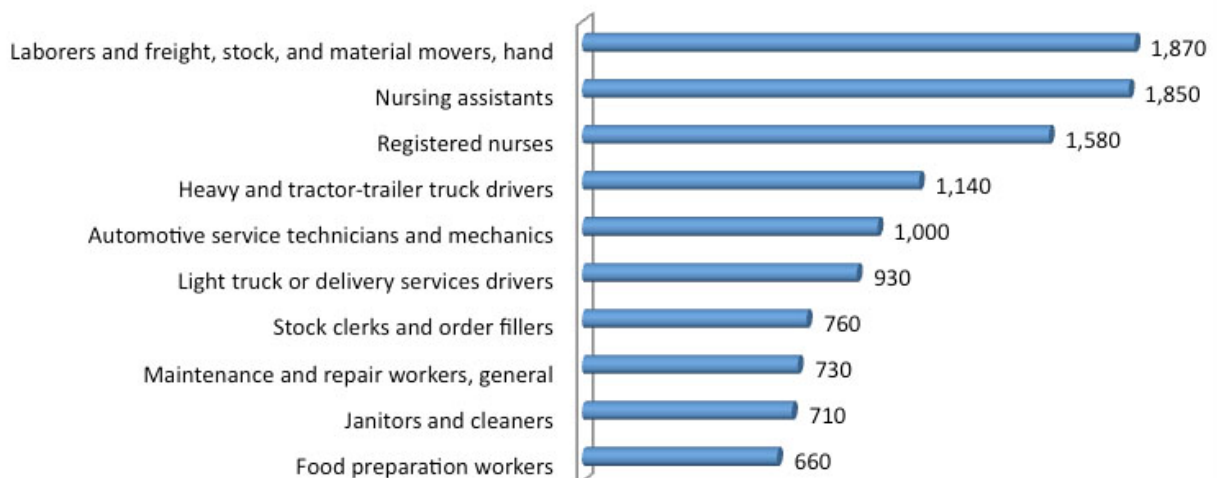
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Distribution of injuries and illnesses by event, Massachusetts, Private industry, 2012 [Total Cases = 30,880]		
Fires and explosions	*	*
Overexertion and bodily reaction	11,250	36.4%
Contact with object, equipment	7,790	25.2%
Falls, slips, trips	7,540	24.4%
Violence and other injuries by persons or animal	1,600	5.2%
Exposure to harmful substances or environments	1,370	4.4%
Transportation incidents	1,120	3.6%
All other	210	0.7%

*Indicates data are unavailable

Occupations: Laborers, material movers, registered nurses, and nursing assistants were among the occupations that experienced the highest numbers of nonfatal injuries and illnesses in 2012. Laborers and freight, stock, and material movers incurred 1,870 injuries and illnesses. Nursing assistants and registered nurses had 1,870 and 1,580 injuries, respectively. While the number of injuries and illnesses for registered nurses decreased by 270 cases in the last year, the number of injuries and illnesses for nursing assistants remained statistically unchanged compared to 2011. The number of injuries and illnesses incurred by laborers and freight, stock, and material movers increased by 490 cases in 2012.

Chart IX: Highest numbers of nonfatal occupational injuries and illnesses, involving DAFW, by selected occupation, MA, private sector, 2012



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).

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.

The Occupational Safety and Health Statistics Program within DLS administers the SOII for all private sector and public sector industries, trades, and occupations. The Program collects approximately 5,800 surveys in Massachusetts annually from a randomly selected sample of establishments within the private and public sectors. 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 <http://www.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.

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 (fewer 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 www.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 <http://www.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, 6th Floor, Boston, MA 02108. To speak with a representative directly, please call 1-800-338-5223. Reports are available on the program's website: <http://www.mass.gov/eohhs/gov/departments/dph/programs/health-stats/ohsp/fatal-injury/>

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:

<http://www.mass.gov/lwd/workers-compensation/safety/grant-program/safety-grant-program.html>

Material Request Information

For more information about this 2012 report, please contact the Massachusetts Department of Labor Standards, Occupational Safety and Health Statistics Program, 19 Staniford Street, 2nd Floor, Boston, MA 02114; 617-626-6945.

Information can also be found on our website at:

<http://www.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:

<http://www.bls.gov/bls/safety.htm>

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