Injuries, Illnesses & Fatalities in Wholesale and Retail Trade in 2005: A Chartbook

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

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Foreword

The National Institute for Occupational Safety and Health (NIOSH) is the federal agency responsible for occupational safety and health research. To meet the complex challenges of the 21st century, the National Occupational Research Agenda (NORA), which was jointly developed by NIOSH and its partners in the mid 1990s, was restructured. From this effort, ten unique industry sectors were formed. The sectors were defined by using the North American Industry Classification System (NAICS). NAICS provides definitions for 20 sectors that NIOSH aggregated into ten sectors. Ten Sector Councils were formed with stakeholder partnerships to stimulate innovative research and to facilitate the transfer of research into workplace practices. To provide guidance and direction, each Sector Council developed a set of goals for improving occupational health surveillance, developing interventions, and supporting the transfer and evaluation of best practices.

Wholesale and Retail Trade (WRT) is one of the largest of the ten sectors, and yet it is the least familiar to many researchers in the occupational safety and health field. As a result, the WRT Sector Council saw the need for an informational resource to (1) assist the public in understanding the occupational safety and health characteristics of the WRT sector, (2) assist researchers in identifying workplace injury, illness, and fatality risks in the WRT sector, and (3) assist employers, workers, and safety and health practitioners in identifying areas where prevention efforts might be needed.

This document was prepared from publically available datasets, primarily from the U.S. Bureau of Labor Statistics (BLS) within the U.S. Department of Labor (DOL). The BLS datasets for the NAICS sectors Wholesale Trade (42) and Retail Trade (44-45) were organized and formatted as a “chartbook.” The WRT Chartbook consists of more than 200 combined charts, figures, and tables, along with concise descriptive narratives and reference sources, primarily for the year 2005. Data for the years preceding and following 2005 were used to show trends that affected business within the sector. Multiple-year data also were used to track employment changes, to generate projections for annual and seasonal employment, and to show changes in the number of WRT establishments from year to year.

The 2005 data served as a reference base for the development of the WRT sector goals. The Chartbook provides a snapshot of the status of occupational health and safety in 2005 for the WRT sector. The downstream value of the Chartbook depends on the quality of the data reported to BLS during any given year. Assuming the reporting requirements do not change in any significant ways over the next decade, the 2005 Chartbook can serve as the baseline for evaluating the downstream impact of NORA efforts addressing the WRT sector.

A link to the WRT sector goals is available from the NIOSH Web site: http://www.cdc.gov/niosh/nora/comment/agendas/wholrettrade/.

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Preface

This Chartbook provides a summary of fatal and nonfatal injury/illness information describing a large population of understudied workplaces and workers: the wholesale and retail trade (WRT) sector. The WRT sector consists of one of ten industry sectors formed from stakeholder meetings conducted throughout the U.S. by NIOSH that served to define the structure of the second decade of NORA. The contents of the WRT Chartbook are based on data from the mid-decade year of 2005. This year was chosen to serve as the baseline for the WRT sector, which corresponds to the launch of the second decade of NORA. The purpose of this Chartbook is to identify high-risk subsectors, as well as industries, occupations, and tasks, in the WRT sector for 2005. Researchers and practitioners will be able to use the Chartbook as a resource to address the controls and prevention needed for reducing the workplace injuries/illnesses and fatalities occurring in the WRT sector. The primary information source for the WRT Chartbook is the U.S. Bureau of Labor Statistics (BLS), which incorporates additional data from the Current Population Survey (CPS) provided by the U.S. Census Bureau, among other related sources [BLS 2010]. The BLS provides through its Web site an extensive set of files containing information on the number and rates of occupational injuries, illnesses, and fatalities. The WRT Chartbook can serve to alert employers, employees, and researchers to hazards in the WRT sector that may affect them, and provide direction for new research and prevention efforts in the sector. The data are presented as tables and charts.

The WRT sector is a product of NIOSH's efforts to organize the 2002, two-digit North American Industrial Classification System (NAICS) coding [NAICS 2002] into logical groupings that can be readily communicated about and strategically governed and evaluated. As a result, NIOSH combined the wholesale component (sector 42) with the retail component (sectors 44–45) to form the NIOSH Wholesale and Retail Trade Program [NIOSH 2010].

The combined WRT is the second largest of the ten NIOSH-defined sectors in terms of number of employees, about 21 million [BLS 2007]. The projected 10-year employee growth (2008–2018) is about 4.3% [BLS 2007]. Currently, the WRT sector consists of nearly 1.6 million companies [U.S. Census Bureau 2010], which represent 146 types of businesses [NAICS 2002]. These businesses range from one-person, one-location establishments to an international chain employing over 1.4 million employees in 4,338 stores in the U.S. alone [Walmart Corporation 2010]. With the exception of chain or franchised businesses, each establishment is unique. They differ in size, type of merchandise, number and bulk of products, and physical nature of the workplace (i.e., warehouse, office, or store). However, the majority of jobs involve some aspects of materials handling (the storage, distribution, and sale of merchandise). Retail workers have the added demands and stresses of long workdays, prolonged standing, and frequent public contact.

This Chartbook is available on the NIOSH Web site at www.cdc.gov/niosh/docs/2012-106/. Full-text bibliographic references are provided.

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Abstract

Injuries, Illnesses, and Fatalities in Wholesale and Retail Trade in 2005: A Chartbook. This document serves as a descriptive epidemiologic reference tool for the wholesale and retail trade (WRT) sector. As such, this document provides information on the factors affecting the occupational health of the WRT workforce. This document provides national surveillance data compiled from the Bureau of Labor Statistics' files. The information was collected and organized into a "chartbook" to highlight the extent and nature of occupational injuries, illnesses, and fatalities occurring within the WRT sector for the year 2005. The year 2005 serves as the birth and baseline year for the WRT NORA sector.

The WRT Chartbook, consisting of 187 figures and 21 tables, is intended to be a resource for agencies, industry associations, labor unions, and other organizations, as well as employers, researchers, workers, and other individuals. Through narrative text, statistical tables, and charts, the WRT Chartbook describes the magnitude, distribution, and trends of the sector's occupational injuries, illnesses, and fatalities. The Chartbook data can be used to compare one or more WRT subsectors, industry groups, and/or industries with the overall "private sector" data, a form of benchmarking.

The Chartbook is organized into four distinct chapters:

Chapter 1 gives an overview of the demographic characteristics of the trade industry and its workers. Data are provided on WRT employment trends, on occupations, subsectors, industries, and economic factors, and on workforce demographics, such as age, gender, and race/ethnicity. [Note: See the Glossary entry on Sector, Subsector, and Industry on page VIII for a discussion of how these terms are used within this Chartbook.]

Chapter 2 focuses on fatalities in the WRT sector. Tables and charts provide the context for comparing fatality rates, numbers, and trends across industry sectors and within the WRT sector. Information on events and exposures associated with fatalities is presented for both the wholesale and retail trade sectors. Geographic data show states with the highest number of worker fatalities. Chapter 2 also provides information on the fatalities by occupation, gender, age, and race/ethnicity.

Chapter 3 gives information on nonfatal injuries and illnesses among trade workers. This chapter provides the context for evaluating the impact of nonfatal injuries/illnesses and their severity as measured by cases with days away from work (DAW). The nature of the events and exposures that are associated with nonfatal injuries/illnesses are presented in detail for both the wholesale and retail sectors. The data consist of both the rates and the actual number of cases of injuries/illnesses for subsectors and industries within the WRT sector. The information presented on the types of injuries/illnesses allows one to focus on those injury/illness types that are most prevalent, such as sprains and strains, fractures, and cuts/lacerations. The sources of injury/illness are shown and include items such as containers, vehicles, the floor, worker motion, and parts and materials. Figures identify the parts of the body that are affected. The data are broken down by gender, age, race/ethnicity, and location.

Chapter 4 addresses selected high-risk subsectors and industries from among the 146 distinct types of businesses (71 wholesale businesses and 75 retail businesses) that make up WRT. When the occupational injury, illness, and fatality data are compiled for the overall sector, the resulting counts and rates, though useful for making general comparisons between major industry sectors (2-digit NAICS), mask the reality that certain subsectors and industries experience much higher counts and rates than others. The purpose of Chapter 4 is to examine data specific to the WRT subsectors and industries in order to (1) identify those that experience higher rates and counts of occupational injuries, illnesses, and fatalities and (2) examine characteristics of their workforces, and their injury, illness, and fatality outcomes. Such examination may identify factors that appear to contribute to risk in the high-risk subsectors and industries, which, in turn, may suggest prevention opportunities.

A reference list is provided at the end of each chapter that provides citations of data sources linked to each table and figure included in the Chartbook.

The WRT Chartbook also contains an appendix and a bibliography of additional references. The appendix has a complete breakdown of the 146 types of wholesale and retail subsectors and industries by NAICS code. This listing is a useful view of the variety of industries or businesses included in the WRT sector from the two-digit level through the six-digit level of NAICS.

The WRT Chartbook builds upon the landmark Worker Health Chartbook 2000 (updated in 2004) [NIOSH 2004], which is an epidemiologic reference on occupational morbidity and mortality across all industries in the United States. The Worker Health Chartbook 2004 includes more than 400 figures and tables describing the magnitude, distribution, and trends of the Nation's occupational injuries, illnesses, and fatalities. The Worker Health Chartbook 2004 is accessible on the NIOSH Web site at: www.cdc.gov/niosh/docs/2004-146/.

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Abbreviations

BLS	Bureau of Labor Statistics
CDC	Centers for Disease Control and Prevention
CFOI	Census of Fatal Occupational Injuries
CPS	Current Population Survey
DAW	days away from work
DOL	Department of Labor
GAO	Government Accountability Office
NAICS	North American Industrial Classification System
NIOSH	National Institute for Occupational Safety and Health
NORA	National Occupational Research Agenda
NTIS	National Technical Information Service
OMB	Office of Management and Budget
OSHA	Occupational Safety and Health Administration
QCEW	Quality Census of Employment and Wages
SIC	Standard Industrial Classification
SOC	Standard Occupational Classification
WRT	Wholesale and Retail Trade

Glossary

Cases involving days away from work: Cases involving days away from work are cases requiring at least one day away from work with or without days of job transfer or restriction.

Cases involving job transfer or restriction: Job transfer or restriction cases occur when, as a result of a work-related injury or illness, an employer or health care professional keeps, or recommends keeping an employee from doing the routine functions of his or her job or from working the full workday that the employee would have been scheduled to work before the injury or illness occurred.

Centers for Disease Control and Prevention: The Centers for Disease Control and Prevention (CDC) is headquartered in Atlanta, Georgia and is an agency of the U.S. Department of Health and Human Services. CDC is recognized as the lead federal agency for protecting the safety and health of the people of the United States. CDC provides credible information to enhance health decisions and promote health through strong partnerships with other public and nongovernment organizations. CDC develops and applies disease prevention and control, occupational and environmental health, and health promotion and education activities designed to improve the health of people not only in the U.S., but also, through its Center for Global health, around the world.

Civilian labor force: The civilian labor force comprises all civilians classified as employed and unemployed.

Employed persons: Employed persons are all persons who fit into one of the following categories during the reference week of the U.S. Census Bureau's Current Population Survey (CPS): (1) persons who did any work at all as paid employees, worked in their own business or profession or on their own farm, or worked 15 or more hours as unpaid workers in a family-operated enterprise and (2) persons who did not work but had jobs or businesses from which they were temporarily absent because of illness, bad weather, vacation, child-care problems, labor disputes, maternity or paternity leave, or other family or personal obligations—whether or not they were paid by their employers for the time off and whether or not they were seeking other jobs.

Establishment: An establishment is an economic unit, such as a farm, mine, factory, or store that produces goods or provides services. An establishment is typically located at a single physical location and is engaged in one, or predominantly one, type of economic activity for which a single industrial classification may be applied. An enterprise, on the other hand, may consist of more than one location performing the same, or different, types of economic activities. Each establishment of that enterprise is assigned a NAICS code based on its own primary business activity (http://www.census.gov/eos/www/naics/faqs/faqs.html#q2). The BLS Quality Census of Employment and Wages (QCEW) program collects data at the establishment level whenever possible. An employer can have one or more establishments. A large manufacturer, for example, might have several manufacturing plants, and each one would be considered a separate establishment [BLS 2008].

Fatal occupational injury rate: Fatal occupational injury rates are determined by combining the number of fatal occupational injuries identified by the Census of Fatal Occupational Injuries (CFOI), which is organized by the Bureau of Labor Statistics (BLS), with the average annual number of employed workers from the CPS, conducted for BLS by the Census Bureau. These rates depict the risk that certain workers (such as those in a given occupation or industry) have of incurring a fatal injury. The formula for calculating an annual occupational injury rate is

$$\text{Fatal injury} = (N/W) \times 100{,}000$$

where

N = the number of fatally injured workers ages 16 and older.

W = the number of employed workers ages 16 and older.

For example, in computing the fatal occupational injury rate for 1994,

$$N = 6{,}588 - 25 \text{ workers under age 16}$$

$$= 6{,}563 \text{ (from 1994 CFOI)}$$

and

$$W = 124{,}469{,}000$$

(from CPS 1994 annual average plus resident military figures derived from Census Bureau data). Thus

$$\text{Fatality rate} = (6{,}563/124{,}469{,}000) \times 100{,}000$$

$$= 5 \text{ deaths per } 100{,}000 \text{ workers}$$

Because neither hours nor employment figures are collected in the CFOI, fatality rates are calculated using annual average employment estimates from the CPS. Employment-based fatality rates measure the incidence of a fatal injury for all workers in the group regardless of exposure time. Such measures do not reflect the movement of persons into and out of the labor force, the length of their workweek or work year, or the effect of multiple jobholders.

Hispanic or Latino workers: Hispanic or Latino workers are those who trace their origins to a Spanish-speaking country or culture. Origins may include the heritage, nationality group, ancestry, or country of birth of the person or person's parents or ancestors. People who identify their origin as Hispanic or Latino may be of any race.

Nonfatal occupational injury/illness incidence rate: Nonfatal injury/illness Incidence rates for all U.S. industry, or by industry sectors, represent the number of injuries and illnesses per 100 full-time workers and are calculated as:

$$(N/EH) \times 200{,}000$$

where,

N = number of injuries and illnesses

EH = total hours worked by all employees during the calendar year

200,000 = base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year)

Incidence rates for injuries and illnesses by specific worker demographics (e.g., age, gender, etc.), or case characteristics (e.g., nature of injury, source of injury, event or exposure leading to injury, part of body injured, etc.); or, incidence rates for illnesses alone represent the number of illnesses per 10,000 workers and are calculated as:

$$(N/EH) \times 20{,}000{,}000$$

where,

N = number of illnesses

EH = total hours worked by all employees during the calendar year

20,000,000 = base for 10,000 equivalent full-time workers (working 40 hours per week, 50 weeks per year)

Rates per 10,000 workers can be converted to rates per 100 workers by moving the decimal point two places to the left and rounding the resulting rate to the nearest 0.1.

North American Industry Classification System (NAICS): For more than 60 years, the Standard Industrial Classification (SIC) system served as the structure for collecting, aggregating, presenting, and analyzing data on the U.S. economy. In 1997, the North American Industry Classification System (NAICS) was adopted to replace the SIC system. The NAICS is the standard used by federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. economy. As a result, it is possible for users to assemble a comprehensive statistical picture of an industry within the U.S. The NAICS also provides a consistent system for economic analysis across the three North American Free Trade Agreement partners—Canada, Mexico, and the United States. The 2007 definitions from NAICS may be accessed on the Web at http://www.census.gov/cgi-bin/sssd/naics/naicsrch?chart=2007. The official NAICS manual can be obtained in print or CD-ROM versions from the National Technical Information Service (NTIS) by calling 1–800–553–6847 or (703) 605–6000, or visiting the NTIS Website at http://www.ntis.gov/products/naics.aspx.

Occupation: Occupation is a set of activities or tasks that workers are paid to perform. Workers who perform essentially the same tasks are in the same occupation whether or not they are in the same industry. Some occupations are concentrated in a few industries and others may be found in the majority of industries.

Current, recent, or usual job activity information is collected by many agencies to help characterize an occupation. Questions are used to obtain information about the kind of work and the most important activities or duties. This information, in conjunction with data on industry or employer and class of worker (e.g., private or public sector, nonprofit, self-employed), is used to classify jobs by occupational class. BLS codes occupation in injury/illness cases based upon job titles and incident descriptions supplied by employers.

Occupational injury: An occupational injury is any injury that results from a work-related event or

from a single instantaneous exposure in the work environment.

Occupational illness: An occupational illness is any abnormal condition or disorder (other than one resulting from an occupational injury) caused by exposure to factors associated with employment. Occupational illness includes acute and chronic illnesses and diseases that may be caused by inhalation, absorption, ingestion, or direct contact.

Race: Race refers to a human population distinguished as a group by certain physical characteristics. However, the concept of race involves self-identification. Racial categories are sociopolitical constructs and should not be interpreted as being scientific or anthropological. Racial categories include both racial and national-origin groups. The racial classifications used by federal agencies since 1997 follow the standards set forth in the October 30, 1997, Federal Register Notice entitled ***Revisions to the Standard Classification of Federal Data on Race and Ethnicity***. The Office of Management and Budget (OMB) requires five minimum categories for race: white, black or African American, American Indian or Alaska Native, Asian, and Native Hawaiian or other Pacific Islander. OMB also states that respondents should be offered the option to select one or more races.

Rates: See **Fatal occupational injury incidence rate** and **Nonfatal occupational injury/illness incidence rate** above.

Sector, Subsector, Industry Group, and Industry: Each of these terms represents a NAICS 2002 hierarchical code. The codes consist of 2 -3 -4 and 5-digit assigned numbers for classifying economic activity. Specifically, a sector carries a 2-digit code; a subsector carries a 3-digit code, an industry group carries a 4-digit code, and an industry carries a 5-digit code. The wholesale sector carries the 2-digit NAICS code 42; whereas, the retail sector requires two 2-digit codes; namely: 44 and 45 to accommodate the increased number of commercial activities. To clarify further consider the wholesale activity defined by the NAICS system as "merchant wholesalers, durable goods," the official NAICS 3-digit assigned number is 423 and is known as a subsector. Drilling down to the 4-digit level, the wholesale activity known as "motor vehicle and motor vehicle parts and supplies merchant wholesalers" was assigned the NAICS number of 4231, which makes it an industry group. At the 5-digit level, the wholesale activity known as "automobile and other motor vehicle merchant wholesalers" was assigned the NAICS number of 42311 and is defined as an industry. An industry consists of a group of establishments primarily engaged in producing or handling the same product or group of products or in rendering the same service or services. To get a better understanding of the hierarchical structure of the NAICS-coding, refer to the Appendix and the section showing the Wholesale substructure coding. ***Note: In this document, the generic word "industry" will frequently be used to refer to the 3rd and 4th digit-level NAICS terms, as defined above, unless the meaning of the information in the context presented would be compromised.***

The hierarchical structure of NAICS coding from 2-digit to 5-digit-coded levels serves also to promote the comparability of establishment data describing various facets of the economy including safety data. As an example, either the wholesale (42) or retail component (44, 45) may be compared with other 2-digit sectors, such as health care (62), or utilities (22). The retail and wholesale 2-digit level may also be compared with each other. The comparison selected is often dependent upon which combination provides the most insight into the demographic characteristics or the injury, illness and fatality experience. This Chartbook, however, does not address other 2-digit units for the purpose of comparisons; namely, the NAICS sectors: 51–56, 61, 71, 81, and 92. (See the Note on page 16.)

Severity: Severity of an injury or illness is estimated by using information provided by employers about the number of days away from work to recuperate from each disabling condition. If, as a result of injury or illness, the worker did not return to work by the end of the survey year, the employer reports an approximate return date that, in conjunction with the date of injury or illness, yields an estimated number of days- away-from- work (DAW) for that case. Two basic measures of severity are used with the characteristics of DAW cases: (1) median days away from work (the point at which half of the DAW cases have a longer duration and half have a shorter duration), and (2) the distribution of DAW cases involving various of absences from work ranging from 1 to 31 days or longer.

Standard Occupational Classification (SOC): According to the Bureau of Labor Statistics, the Standard Occupational Classification (SOC) System was developed as a universal

occupational classification system that government agencies and private industry could use to produce comparable data. It covers all occupations in which work is performed for pay or profit, reflecting the current occupational structure in the U.S. In the 2000 version of the SOC (which is used in this Chartbook), occupations are clustered within 23 major occupational groups. Within the 23 major groups are 96 minor groups, 449 broad occupations, and 821 detailed occupations.

Occupations with similar skills or work activities are grouped at each of the four levels of hierarchy to facilitate comparisons. For example, the major occupational group "Sales and related occupations" (41-0000) is divided into five minor groups, "Supervisors, sales workers" (41-1000), "Retail sales workers" (41-2000), "Sales representatives, services" (41-3000), "Sales representatives, wholesale and manufacturing" (41-4000), and "Other sales and related workers" (41-9000). The minor group "Retail sales workers" contains broad occupations such as "Cashiers" (41-2010), "Counter and Rental Clerks and Parts Salespersons" (41-2010), and "Retail salespersons" (41-2020). The broad occupation "Cashiers" includes detailed occupations such as "Cashiers (except gaming)" (41-2011), and "Gaming change persons and boot cashiers" (41-2012).

The current version is the 2010 SOC (Available on-line at: http://www.bls.gov/soc/).

Surveillance: Surveillance is the systematic, ongoing collection or acquisition of information about occupational diseases, injuries, and hazards. Surveillance includes the analysis and interpretation of surveillance data, the dissemination of data or information derived from surveillance to appropriate audiences for prevention and control, and the development of surveillance methodology.

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The WRT Chartbook includes a substantial amount of information based on data and other contributions from the Office of Safety, Health, and Working Conditions, Bureau of Labor Statistics. The nature and extent of the content of the Chartbook provided a significant challenge to our technical reviewers. We extend our thanks for their time, constructive comments, and suggestions. We are particularly grateful for the suggestions and comments provided by the technical reviewers from the Office of the Director; namely, Drs. Rodger Rosa and Rene Pana-Cryan.

Special appreciation is extended to Vanessa Williams and Susan Afanuh who provided much needed support in the final stages of the production of this publication. Ms. Williams was instrumental in the final editing, layout, and formatting. Ms. Afanuh drafted the “Alt Text” for each of the more than 200 tables and charts for this document, ensuring that this document was 508 Compliant, but more importantly ensuring that this document would meet the needs of those with limited vision.

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Background

The wholesale trade sector comprises establishments engaged in wholesaling merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The wholesaling process is an intermediate step in the distribution of merchandise. Wholesalers are organized to sell or arrange the purchase or sale of (1) goods for resale (that is, goods sold to other wholesalers or retailers), (2) capital or durable nonconsumer goods, and (3) raw and intermediate materials and supplies used in production. Wholesalers sell merchandise to other businesses and normally operate from a warehouse or office.

The retail trade sector comprises establishments engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The retailing process is the final step in the distribution of merchandise; retailers are therefore organized to sell merchandise in small quantities to the general public. This sector comprises two main types of retailers: store and nonstore retailers.

Wholesale and retail trades make up a large part of the nation's employment and business establishments. In the overall U.S. economy, wholesale trade represents about 4.4% of all employment and 7.1% of all establishments whereas retail trade represents about 11.6% of all employment and 12.4% of all establishments. When combined, the WRT sector accounts for 16% of all employment and 19.5% of all establishments.

Current employment statistics estimate that annual average employment in wholesale trade during 1995–2005 ranged from 5.4 million in 1995 to 5.9 million in 2000. During 2005, wholesale trade employment averaged 5.7 million. In retail trade during the same period, employment ranged from 13.9 million in 1995 to 15.3 million in 2005. Over the last 10 years, the average hourly earnings of nonsupervisory workers in the wholesale sector averaged 12% more per hour than the average earnings in all private industry, whereas the average retail worker made 27% less than the average production and nonsupervisory workers. The impact lower earnings has on safety and health in the workplace has not been investigated; however, lower earnings have been associated with a poorer quality of healthcare. What implications poorer overall health has on a person's safety and health at work is also a topic for further research.

In general, workers in the WRT combined sector are at a relatively low risk of occupational injury and death as compared with workers in the mining and agriculture industries. Yet, because workers in the WRT sector outnumber those workers in small industry sectors, such as mining and agriculture sectors, the actual number of injuries/illnesses and deaths is substantial. However, at the 4- and 5-digit NAICS WRT industry level, there is a broad range of work activities and physical hazards that may pose a considerable risk for thousands of WRT workers.

The purpose of the WRT Chartbook is to provide sufficient data in the forms of charts and figures to allow users to assess the occupational fatality, injury and illness burden in the WRT and to identify high-risk subsectors and industries within WRT where intervention efforts may be targeted.

In reviewing the data presented in the WRT Chartbook, the reader should be aware that a number of researchers have found evidence that BLS data are, in general, underreported. Economic disincentives may be the major influencing factors that result in employees and employers choosing not to report or record work-related injuries and illnesses (Azaroff et al. 2002; Leigh et al. 2004; GAO 2009). For employers, higher numbers and rates of injuries and illnesses may lead to increased workers' compensation premiums, the threat of OSHA inspection, and possible denial for those seeking government contracts (Leigh et al. 2004; GAO 2009). For employees, reporting injuries and illnesses may lead to denied promotions, layoffs, or decreased likelihood of being hired into new jobs (Leigh et al. 2004). Azaroff et al. (2002) suggest that potential "adverse consequences" are associated with each step of the reporting and recording process.

Other disincentives, particularly associated with smaller or new enterprises, include unfamiliarity with reporting requirements, the larger relative paperwork burden, and the general lack of penalties levied against smaller businesses [Leigh, et al. 2004; GAO 2009]. Illnesses are more likely to be underreported than injuries, since associations between illness outcomes and causal events or exposures may be more difficult to establish [Azaroff et al. 2002; GAO 2009].

Summary of Findings

Fatal Injuries

- Worker fatalities recorded in 2005 for the WRT sector reached 609. The WRT had the fourth highest number of fatalities among major industry sectors, following construction (1,192); transportation, warehousing (885); and agriculture, forestry, fishing and hunting (669).
- The 609 fatalities represented nearly 12% of the 5214 worker fatalities in U.S. private industry; 400 of the 609 fatalities occurred in retail trade, with 209 fatalities in wholesale trade.
- Of the 400 retail fatalities in 2005, 50% resulted from assaults and violent acts; whereas, in wholesale trade, transportation incidents were the leading cause or event associated with fatalities in 2005 accounting for 105 fatalities (51%).
- Among 4-digit wholesale trade industries, miscellaneous durable-goods (NAICS 4239) had the highest number of fatal work injuries at 29, largely as a result of 20 fatalities in the recyclable material (NAICS 42393) industry.
- Among 4-digit retail trade industries, grocery stores (NAICS 4451) experienced 84 traumatic worker fatalities (46 fatalities in convenience stores and 38 fatalities in supermarkets and other non-convenience grocery stores), followed by gasoline stations (NAICS 4471) with 58 fatalities, automobile dealers (NAICS 4411) with 43, and building material and supplies dealers (NAICS 4441) with 39 fatalities.
- Fatalities in 2005 from assaults and violent acts for two industries; namely, convenience stores (NAICS 44512) and gasoline stations-with-convenience stores (NAICS 44711), recorded 79 fatalities. By comparison over the same year, the state and local police from the public safety sector (NAICS 92212) had 60 fatalities.
- In wholesale trade the occupational groups in 2005 with the highest number of fatal injuries at 44 were truck drivers in the occupation listed as heavy/tractor-trailer, followed by laborers, freight, stock, and manual material movers with 27 fatalities, and 24 fatalities among nonretail sales supervisors.
- In retail trade, sales supervisors and managers in 2005 accounted for the highest number of fatal injuries at 99, followed by cashiers, except gaming with 61 fatalities; and retail salespersons with 38 fatalities. Retail trade truck drivers operating heavy/tractor trailers and the retail drivers operating light/delivery service accounted for 29 and 20 fatalities, respectively.

Nonfatal Injuries/Illnesses

- WRT workers experienced more nonfatal injuries/illnesses at 849,700 in 2005 than any major industry sector with the exception of manufacturing with 895,900 injuries/illnesses. In terms of days away from work (DAW), a measure of severity, the WRT sector had 256,100 cases requiring one or more days away from work, whereas the manufacturing sector had 209,100, had cases during the same period. In terms of DAW for 2005, the WRT sector had 256,100 injuries/illnesses, which exceeded the 209,100 DAW reported for the manufacturing sector over the same period. The significance of injuries/illnesses requiring more DAW than found in other sectors is an indication of the severity of the injuries/illnesses, as measured by recovery time needed.
- The leading events or exposures that contributed to the nonfatal injuries/illnesses involving DAW in WRT were as follows: contact with object/equipment, resulting in 28.6% of DAW injuries; overexertion, accounting for 26.9% of DAW injuries/illnesses; and falls to same level, which contributed 13.9% of all DAW injuries/illnesses.
- Sprains and strains, accounting for well over 111,000 injuries in 2005, is the leading category used to describe the nature of injury/illness within WRT.
- Both the wholesale and the retail trade sectors for 2005 experienced higher rates of injury/illness than the overall private industry as it pertains to body parts that are at high risk for pain and discomfort. The most frequently identified body parts include the shoulders, back, and regions about the lower back. Other body parts identified as locations for discomfort and malfunction include the knee, the foot/toe, and other lower extremities.
- The retail sector experienced higher rates, whereas the wholesale sector had lower rates as compared against the private industry for injuries/illnesses to the finger, hand, and wrist. Private industry, however, had higher injury rates than either wholesale or retail trade for the eyes, body systems, and multiple body parts.

- Contact with containers, followed by injuries from floor surfaces, walkways, or ground surfaces, are the main sources associated with the onset of injuries/illnesses as reported by employers in the WRT. In addition, worker motion or position; vehicles; and parts and materials were also associated with WRT injury/illness.

- In 2005, there were 14 subsectors and industries that recorded 100,000 or more nonfatal occupational injuries and illnesses. Four of the subsectors were WRT businesses: general merchandise stores (NAICS 452); merchant wholesalers, durable goods (NAICS 423); merchant wholesalers, nondurable goods (NAICS 424); and grocery stores (NAICS 44511).

- The wholesale trade business—namely, the beer, wine, and distilled-alcohol beverage merchants (NAICS 4248)—is a BLS industry, as defined by the four-digit NAICS code, having the highest injury/illness case rates with DAW, at 6.6 cases per 10,000 workers.

- Beer, wine, and distilled alcoholic beverage merchant wholesalers (NAICS 4248) had the highest total nonfatal injury/illness incidence rate at 9.6 of all wholesale industries, followed by grocery and related product (NAICS 4244) at 7.7, metal and mineral (except petroleum) (NAICS 4235) at 7.5, lumber and other construction materials (NAICS 4233) at 6.8, farm product raw material (NAICS 4245) at 6.1, and motor vehicle-motor vehicle parts and supplies (NAICS 4231) at 6.0.

- Among 5-digit retail trade industries, the highest total injury/illness incidence rates were recorded for 2005 from the following: home centers (NAICS 44411) with 9.2 incidence rates (IR), warehouse clubs and superstores (45219) with 7.3 IR, other building material dealers (44419) with 7.0 IR, tire dealers (NAICS 44132) with 6.6 IR, supermarkets and other grocery (except convenience) stores (NAICS 44511) with 6.4 IR, and hobby, toy, and game stores (45112) with 6.4 IR.

- Retail sales employees in 2005 accounted for 30,600 injuries/illnesses requiring DAW. Other detailed occupational groups suffering a high number of injuries/illnesses with DAW in retail work included laborers and freight, stock, material movers, hand with 21,120 injury/illness cases; retail sales supervisors with 15,140 cases; and stock clerks/order fillers with 15,010 cases.

- In wholesale trade, laborers and freight, stock, and material movers, hand, accounted for 20,170 injuries/illnesses cases requiring DAW, followed by truck drivers, heavy/tractor-trailer with 9,060, and lastly truck drivers, light or delivery services with 7,430 cases of injury/illness requiring DAW.

- In summary, working in a warehouse or in a retail store is generally perceived as relatively safe work. Moreover, this perception is supported to some extent when BLS incidence rates from the WRT sector are compared as a whole with the rates from other sectors. However, this perception breaks down when you drill down to the third, fourth and even fifth coded level within the WRT sector. At these levels, there are a number of businesses within various WRT subsectors, industry groups, and/or industries that have risk levels which put them at risk for costly injuries and fatalities that could easily bankrupt them. Regardless of all the rates and comparisons that are presented, what is clear year after year is that approximately three-quarters of a million wholesale and retail workers suffer injury or illness at work each year. For those workers who become one of the numbers that contribute to the annual three-quarters of a million work injuries and for those employers who record the event, such injuries should be treated as an opportunity to investigate and implement appropriate interventions before the long term consequences of such injuries negatively impact the worker and the employer.

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Chapter 1

Characteristics of Wholesale & Retail Trade Workers

Table 1.1. Number of establishments and employment (ages 16 years and older) in U.S. private industry, in wholesale and retail trade sectors, and in wholesale and retail trade combined, 2003–2007.

	2003		2004		2005		2006		2007	
	Establishments	*Employment*	*Establishments*	*Employment*	*Establishments*	*Employment*	*Establishments*	*Employment*	*Establishments*	*Employment*
Private Industry	7,963,340	107,065,553	8,093,142	108,490,066	8,294,662	110,611,016	8,505,496	112,718,858	8,681,001	114,012,221
Wholesale Trade	588,865	5,589,032	593,052	5,642,537	601,625	5,752,802	614,754	5,885,194	626,680	5,987,206
Retail Trade	1,036,967	14,930,765	1,034,581	15,060,686	1,038,585	15,256,340	1,045,491	15,370,040	1,050,642	15,509,017
WRT	1,625,832	20,519,797	1,627,633	20,703,223	1,640,210	21,009,142	1,660,245	21,255,234	1,677,322	21,496,223
	% of Private Sector Establishments	*% of Private Sector Employment*	*% of Private Sector Establishments*	*% of Private Sector Employment*	*% of Private Sector Establishments*	*% of Private Sector Employment*	*% of Private Sector Establishments*	*% of Private Sector Employment*	*% of Private Sector Establishments*	*% of Private Sector Employment*
Wholesale Trade	7.4	5.2	7.3	5.2	7.3	5.2	7.2	5.2	7.2	5.3
Retail Trade	13.0	13.9	12.8	13.9	12.5	13.8	12.3	13.6	12.1	13.6
WRT	20.4	19.2	20.1	19.1	19.8	19.0	19.5	18.9	19.3	18.9

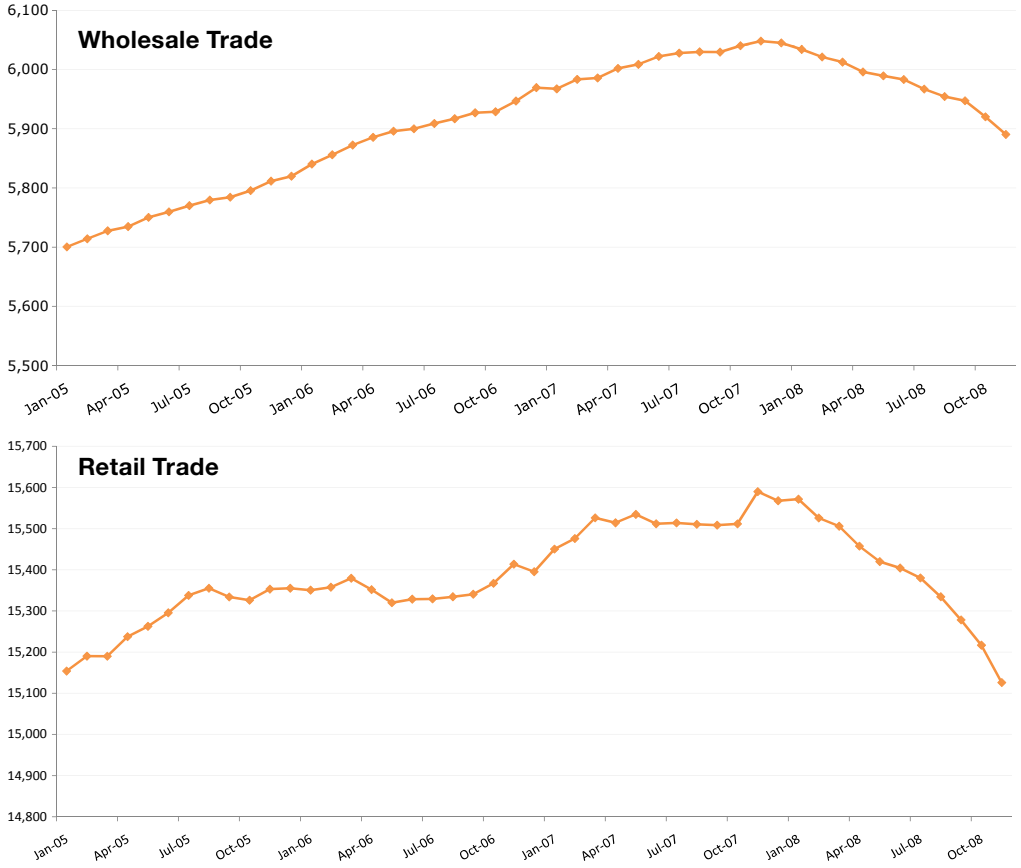
Table 1.2. Employment in wholesale and retail trade sectors, and wholesale and retail trade overall, 2008 and 2018 (projection).

Industry sector	2008	2018	% Increase	# Change
Wholesale trade	5,963,900	6,219,800	4.29%	255,900
Retail trade	15,356,400	16,010,400	4.26%	654,000
WRT Overall	21,320,300	22,230,200	4.27%	909,900

Employment in Wholesale and Retail Trade

According to BLS data, more than 110 million workers ages 16 years or older were employed in U.S. private industry in 2005 at about 8.3 million establishments. Over 21 million of these (19.0%) were employed in over 1.6 million establishments (19.8%) in the WRT sector—15.3 million workers in over 1 million establishments in retail trade, and 5.8 million workers in over 600,000 establishments in wholesale trade (Table 1.1). BLS projects that by 2018, WRT will have more than 22 million employed workers. Retail and wholesale employment combined is projected to increase by about 4.3% from 2008–2018, an increase of over 900,000 workers (Table 1.2).

Figure 1.1. Employment in wholesale and retail trade sectors, January 2005 through November 2008 (thousands).



Employment Trends in Wholesale and Retail Trade Sectors *(Figure 1.1)*

The wholesale and retail trade sectors exhibit different employment trends. The BLS Current Employment Statistics survey shows that although employment in both sectors increased from January 2005 through November 2007, retail employment experienced sharper seasonal fluctuations than wholesale employment. The fluctuations are likely in part due to increased hiring to meet demands during consumer-oriented holidays. From December 2007 through November 2008, both sectors showed steadily decreasing employment.

Employment for wholesale in January 2005 was at 5,702,600, increased steadily, and peaked at 6,075,000 in November 2007. Thereafter, wholesale employment declined to 5,890,300 in November 2008. Over the entire period, employment in wholesale trade grew by 3.3%.

During the same period, retail employment increased from 15,153,900 in January 2005, peaked at 15,590,000 in November 2007, and also began to decline, dropping to 15,126,000 by November 2008, a net decrease of 0.2%.

Fastest Growing Occupational Groups in Wholesale and Retail Trade (among those adding at least 5,000 jobs between 2008 and 2018) *(Figures 1.2 and 1.3)*

The BLS National Employment Matrix predicts that the fastest growing occupational groups in wholesale trade by 2018 will be bill and account collectors (24.9% increase from 2008), driver/sales workers (18.4%), sales managers (17.7%), industrial machinery mechanics (17.7%), and customer service representatives (15.8%). Vehicle and mobile equipment technicians and mechanics, sales representatives, stock clerks, accountants and auditors, and retail sales workers are also projected to increase between 8% and 10% by 2018.

For retail trade, the fastest growing occupations will include pharmacy technicians (32.7%), miscellaneous entertainment attendants* (22.9%), pharmacists (18.6%), and customer service representatives (15.9%). Protective service, food preparation, and retail sales occupations are also expected to grow in number between 5% and 10% by 2018.

** Miscellaneous entertainment attendants and related workers (39-3090) is the only broad occupation category included. It has been included because employment projections have not been published for all of the detailed occupations comprising this category, and therefore it is not possible to determine which detailed occupation(s) accounts for this projection. BLS points out that employment projections may be withheld from publication for quality, confidentiality, or other purposes. (See www.bls.gov/oes/oes_ques.htm#Ques35.)*

Figure 1.2. Fastest growing major occupational groups in the wholesale trade sector, 2008–2018 (percent increase rounded up).

Figure 1.3. Fastest growing major occupational groups in the retail trade sector, 2008–2018 (percent increase rounded up).

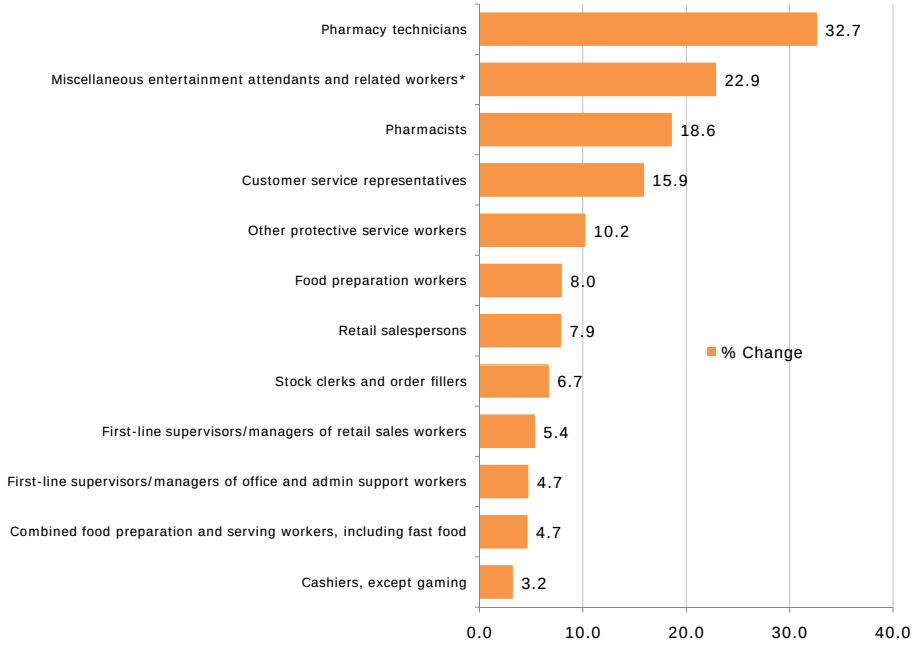


Figure 1.4. Major occupational groups in the wholesale trade sector in which the largest number of jobs will be added, 2008–2018.

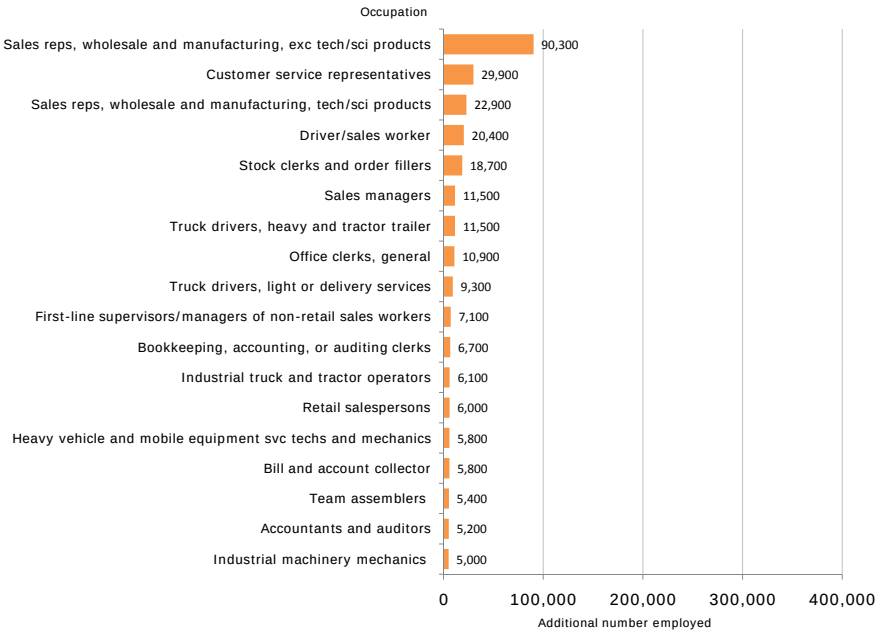
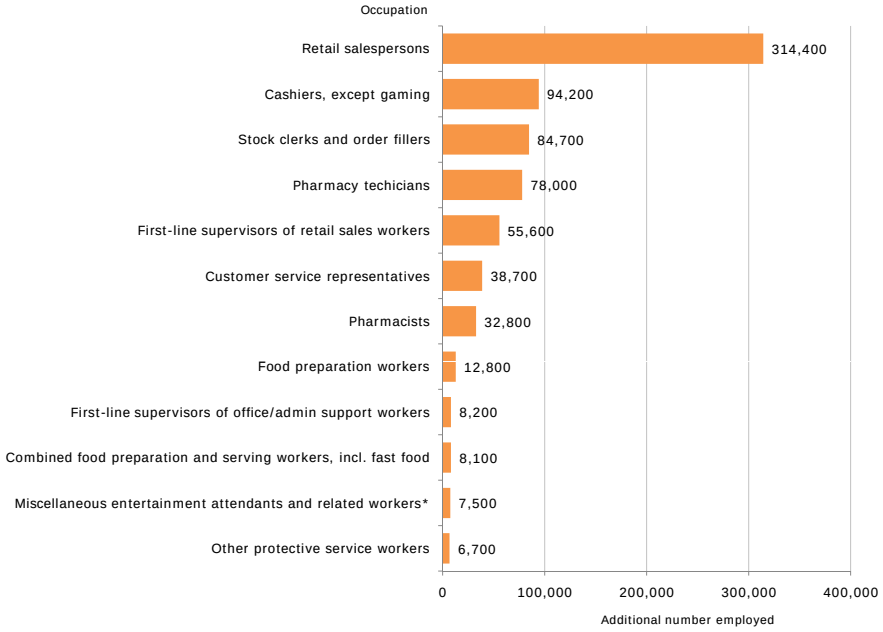


Figure 1.5. Major occupational groups in the retail trade sector in which the largest number of jobs will be added, 2008–2018.



Occupational Groups with the Largest Number of Jobs Added in Wholesale and Retail Trade

(Figures 1.4 and 1.5)

According to the BLS National Employment Matrix, the occupational group in wholesale trade with the largest projected increase in the number of workers will be sales representatives for wholesale companies selling other than scientific and technical products (90,300 workers), followed by customer service representatives (29,900), sales representatives for companies selling scientific and technical products (22,900), driver/sales workers (20,400), and stock clerks and order fillers (18,700). Other occupations expected to add more than 10,000 workers by 2018 include sales managers, heavy and tractor-trailer truck drivers, and office clerks.

For retail trade, the occupational groups with the largest projected increase will be retail sales (314,400), cashiers (other than gaming) (94,200), stock clerks and order fillers (84,700), and pharmacy technicians (78,000). Other occupations expected to add more than 30,000 workers by 2018 include retail sales supervisors, customer service representatives, and pharmacists.

** See the footnote on the previous page.*

Table 1.3. Wholesale and retail trade subsectors and industries with highest employment, by gender and race/ethnicity, 2005.

Sector, Subsector, or Industry	NAICS Code	Employment (thousands)	Distribution (%)					
			Gender		Race			Ethnicity
			Men	Women	White	Black or African American	Asian	Hispanic or Latino
All wholesale and retail trade	42, 44-45	21,405	55.6	44.4	84.4	9.1	4.3	12.7
Grocery stores	4451	2,670	49.2	50.8	81.5	10.3	5.4	14.2
Department stores and discount stores	45211	2,434	36.5	63.5	79.5	14.7	3.1	12.4
Automobile dealers	4411	1,337	80.2	19.8	89.1	6.8	2.0	11.5
Building material and supplies dealers	4441	1,088	71.5	28.5	89.0	7.3	1.6	11.6
Clothing and accessories, except shoe, stores	4481	890	26.3	73.7	78.4	14.0	5.6	14.4
Groceries and related products wholesalers	4244	887	73.6	26.4	84.8	9.8	3.1	21.1
Pharmacies and drug stores	44611	834	36.9	63.1	81.8	10.6	5.5	10.6
Furniture and home furnishings stores	442	715	57.6	42.4	85.2	9.9	2.9	13.7
Radio, TV, and computer stores	4431	652	69.9	30.1	78.4	11.1	7.6	8.7
Auto parts, accessories, and tire stores	4413	526	84.5	15.1	89.7	6.9	1.9	14.5
Machinery, equipment, and supplies wholesalers	4238	523	76.3	23.7	91.0	4.3	2.8	8.8
Gasoline stations	4471	520	52.2	47.8	78.3	11.6	7.3	9.0

Largest Wholesale and Retail Trade Industries

(Table 1.3)

The Current Population Survey (CPS) estimated that industries in WRT that had the highest employment in 2005 were grocery stores, department and discount stores, automobile dealers, building material and supplies stores, and clothing and accessories (except shoe) stores. Grocery stores employed roughly an equal number of male and female workers, whereas males made up nearly three quarters of workers at grocery and related products and machinery, equipment, and supplies wholesalers, the two wholesale industries that ranked among the 12 largest WRT employers. Department and discount stores employed almost twice as many females as males. Automobile dealers and building materials and supplies stores both have a disproportionate ratio of male to female workers—eight of ten workers in automobile dealers and seven of ten in building materials and supplies stores are male. Nearly three quarters of employees at clothing and accessories (except shoe) stores in 2005 were female. See Chapter 4 for more detail on the occupational injury/illness and fatality experience in selected high-risk WRT industries.

Table 1.3, and also Figures 1.8 and 1.9 on page 11, are derived directly from BLS CPS data, which are limited to the three primary race/ethnicity categories presented above—Black or African American, Asian, and Hispanic or Latino. These data indicate that higher proportions of Black workers are employed in department and clothing stores; whereas, a low proportion are employed by machinery, equipment, and supplies wholesalers; automobile dealers; and auto parts/tires stores. A higher proportion of Asian workers are employed in radio, TV, and computer stores and gasoline stations; whereas, lower proportions are employed in building materials and supplies wholesalers, auto parts/tires stores, and automobile dealers. For Hispanic or Latino workers, a high proportion (21.1%) are employed by groceries and related products wholesalers; while smaller proportions of Hispanics are employed by radio, TV, and computer stores; machinery, equipment, and supplies wholesalers; and gasoline stations.

Table 1.4. Wholesale and retail trade industries (4-digit NAICS) with the largest projected employment growth from 2008 to 2018, ranked by percent change.

Industry	NAICS	2008 Employment	2018 Employment	Numeric change	Percent change
Other general merchandise stores	4529	1,490,100	2,096,800	606,700	40.7
Wholesale electronic markets and agents and brokers	4251	850,100	1,075,900	225,800	26.6
Beer, wine, and distilled alcoholic beverage merchant wholesalers	4248	160,600	192,800	32,200	20.1
Drugs and druggists' sundries merchant wholesalers	4242	208,100	247,700	39,600	19.0
Used merchandise stores	4533	118,900	139,800	20,900	17.6
Health and personal care stores	4461	1,002,400	1,163,200	160,800	16.0
Sporting goods, hobby, and musical instrument stores	4511	472,000	529,200	57,200	12.1
Grocery and related product merchant wholesalers	4244	730,600	816,600	86,000	11.8
Other motor vehicle dealers	4412	165,300	181,700	16,400	9.9
Electronic shopping and mail-order houses	4541	250,800	274,600	23,800	9.5
Miscellaneous durable goods merchant wholesalers	4239	297,300	319,700	22,400	7.5
Hardware, and plumbing and heating equipment and supplies merchant wholesalers	4237	253,000	272,000	19,000	7.5
Other miscellaneous store retailers	4539	289,700	309,500	19,800	6.8
Building material and supplies dealers	4441	1,114,600	1,178,200	63,600	5.7
Clothing stores	4481	1,133,700	1,198,100	64,400	5.7
Home furnishings stores	4422	275,300	289,600	14,300	5.2
Lawn and garden equipment and supplies stores	4442	138,600	145,800	7,200	5.2
Furniture stores	4421	267,400	280,600	13,200	4.9
Vending machine operators	4542	45,900	48,100	2,200	4.8
Shoe stores	4482	192,000	199,700	7,700	4.0
Electronics and appliance stores	4431	549,600	569,100	19,500	3.6
Lumber and other construction materials merchant wholesalers	4233	236,300	244,100	7,800	3.3
Machinery, equipment, and supplies merchant wholesalers	4238	684,900	701,400	16,500	2.4
Beer, wine, and liquor stores	4453	138,100	138,800	700	0.5
Grocery stores	4451	2,497,300	2,509,000	11,700	0.5

Employment Trends by Wholesale and Retail Trade Industries

Increasing Employment *(Table 1.4)*

BLS projects that the majority of 4-digit (NAICS) industries in WRT will experience an increase in employment by 2018. Among the fast growing retail industries are other general merchandise stores (40.7%); used merchandise stores (17.6%); health and personal care stores (16.0%); and sporting goods, hobby, and musical instrument stores (12.1%). Wholesale sectors that are projected to undergo growth include wholesale electronic markets and agents and brokers (26.6%); beer, wine, and distilled alcoholic beverage merchant wholesalers (20.1%); drugs and druggists' sundries merchant wholesalers (19.0%), and grocery and related product merchant wholesalers (11.8%).

Table 1.5. Wholesale and retail trade industries (4-digit NAICS) with the largest projected employment decline from 2008 to 2018, ranked by negative percent change.

Industry	NAICS	2008 Employment	2018 Employment	Numeric change	Percent change
Direct selling establishments	4543	139,600	114,800	-24,800	-17.8
Specialty food stores	4452	223,000	184,700	-38,300	-17.2
Petroleum and petroleum products merchant wholesalers	4247	100,700	85,300	-15,400	-15.3
Book, periodical, and music stores	4512	174,800	149,800	-25,000	-14.3
Office supplies, stationery, and gift stores	4532	351,800	309,500	-42,300	-12.0
Apparel, piece goods, and notions merchant wholesalers	4243	149,000	131,900	-17,100	-11.5
Jewelry, luggage, and leather goods stores	4483	158,500	141,800	-16,700	-10.5
Department stores	4521	1,557,000	1,397,800	-159,200	-10.2
Chemical and allied products merchant wholesalers	4246	130,100	117,700	-12,400	-9.5
Farm product raw material merchant wholesalers	4245	76,200	69,000	-7,200	-9.5
Paper and paper product merchant wholesalers	4241	139,900	126,900	-13,000	-9.3
Gasoline stations	4471	843,400	768,800	-74,600	-8.9
Miscellaneous nondurable goods merchant wholesalers	4249	357,900	326,800	-31,100	-8.7
Florists	4531	87,400	79,900	-7,500	-8.6
Professional and commercial equipment and supplies merchant wholesalers	4234	654,800	598,800	-56,000	-8.6
Furniture and home furnishing merchant wholesalers	4232	111,300	105,600	-5,700	-5.1
Electrical and electronic goods merchant wholesalers	4236	351,000	334,900	-16,100	-4.6
Motor vehicle and motor vehicle parts and supplies merchant wholesalers	4231	338,800	324,800	-14,000	-4.1
Metal and mineral (except petroleum) merchant wholesalers	4235	133,300	127,900	-5,400	-4.1

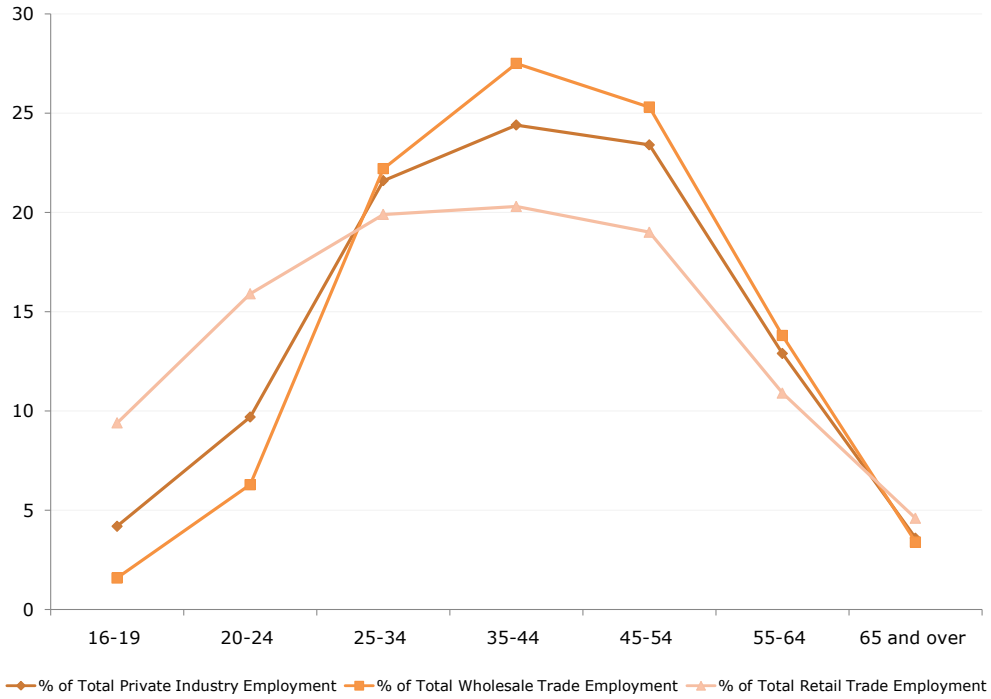
Decreasing Employment *(Table 1.5)*

Retail industries which face declining employment include direct selling establishments (-17.8%); specialty food stores (-17.2%); book, periodical, and music stores (-14.3%); office supplies, stationery, and gift stores (-12.0%); jewelry, luggage, and leather goods stores (-10.5%); and department stores (-10.2%). Wholesale industries expected to shrink substantially by 2018 include petroleum and petroleum products merchant wholesalers (-15.3%); and apparel, piece goods, and notions merchant wholesalers (11.5%).

Table 1.6. Employment distribution by age (ages 16 years and older) in wholesale and retail trade sectors, and U.S. private industry, 2005.

Age (years)	U.S. Private Industry		Wholesale Trade			Retail Trade		
	Private Industry Employment (thousands)	% of Total Private Industry Employment	Wholesale Trade Employment (thousands)	% of Total Wholesale Trade Employment	% of Total Private Industry Employment for Age Group	Retail Trade Employment (thousands)	% of Total Retail Trade Employment	% of Total Private Industry Employment for Age Group
16-19	5,978	4.2	74	1.6	1.2	1,590	9.4	26.6
20-24	13,792	9.7	288	6.3	2.1	2,672	15.9	19.4
25-34	30,680	21.6	1,016	22.2	3.3	3,342	19.9	10.9
35-44	34,630	24.4	1,257	27.5	3.6	3,423	20.3	9.9
45-54	33,207	23.4	1,157	25.3	3.5	3,190	19.0	9.6
55-64	18,349	12.9	630	13.8	3.4	1,835	10.9	10.0
65 and older	5,094	3.6	157	3.4	3.1	774	4.6	15.2
Total	141,730		4,579			16,826		

Figure 1.6. Age distribution in U.S. private industry and in the wholesale and retail trade sectors, 2005.



Age *(Table 1.6 and Figure 1.6)*

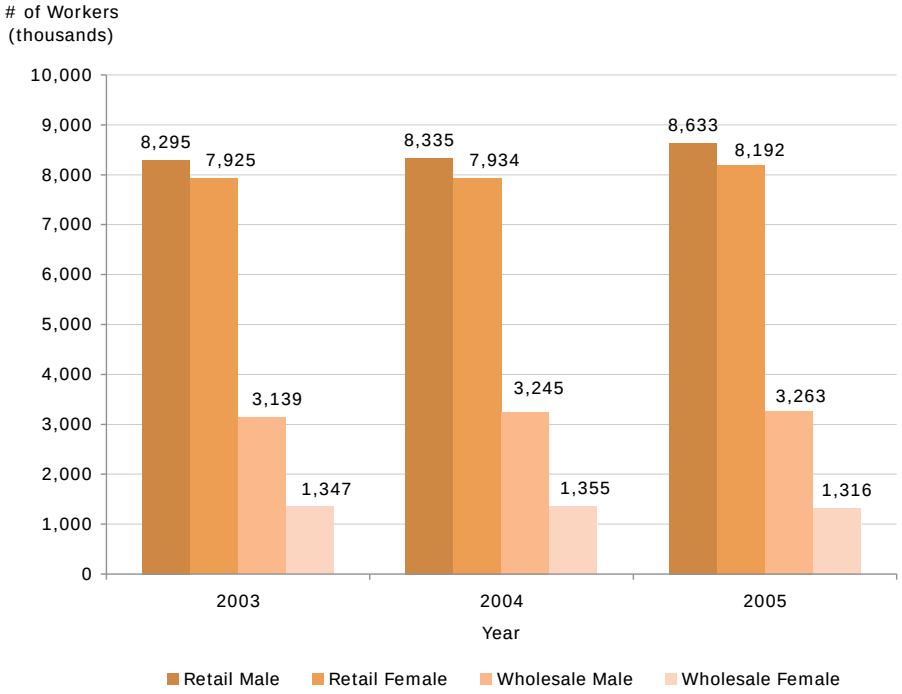
The distribution of workers by age in wholesale trade is comparable with the age distribution across all private industry sectors. Workers under the age of 25 are underrepresented in the wholesale trade workforce, and workers ages 25–64 are slightly overrepresented relative to the age distribution across all private industry.

Workers within the retail trade sector, however, are more evenly distributed across age groups than either wholesale trade or all of private industry. Many more younger workers (16–24 years of age) and older workers (65 years and older) work in retail than in any other sector. In fact, more than one fourth of all workers 16 to 19 years old work in retail jobs. Further, about 15 percent of all U.S. private industry workers who are 65 years of age and older, and about 11 percent of all those who are 55 and older, are employed in the retail trade sector.

Gender *(Figure 1.7)*

Across all private industries, male workers represented 53.6% of the U.S. workforce compared with 46.4% for female workers in 2005.* In 2005 the gender distribution of the WRT workforce was comparable, with males making up 55.6% and females 44.4%. When considered separately, however, wholesale trade and retail trade exhibit very different gender distributions. Retail trade employs proportionately more women than either wholesale trade or private industry overall. In fact, the distribution ratio is nearly 50:50 in retail trade. Wholesale trade, by contrast has a disproportionate gender distribution with males dominating employment by approximately 70:30.

Figure 1.7. Gender trends within the worker populations in wholesale and retail trade, 2003–2005.



*BLS [2005]. Labor Force Statistics from the Current Population Survey. http://www.bls.gov/cps/cps_aa2005.htm. Table 17. Employed persons by industry, sex, race, and occupation, 2005. Online at: ftp://ftp.bls.gov/pub/special.requests/lf/aa2005/pdf/cpsaat17.pdf.

Figure 1.8. Race/ethnicity trends within the worker population in the wholesale trade sector, 2003–2005.

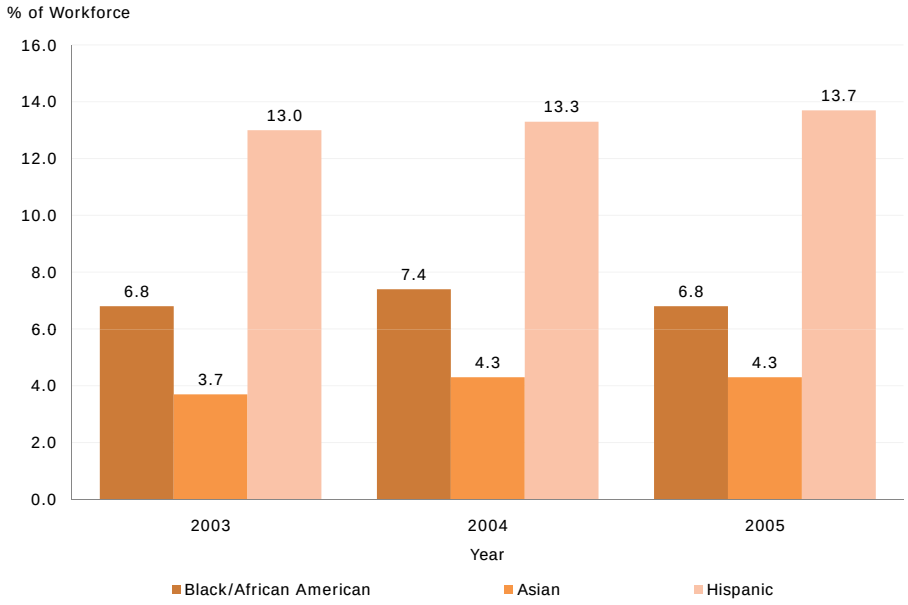
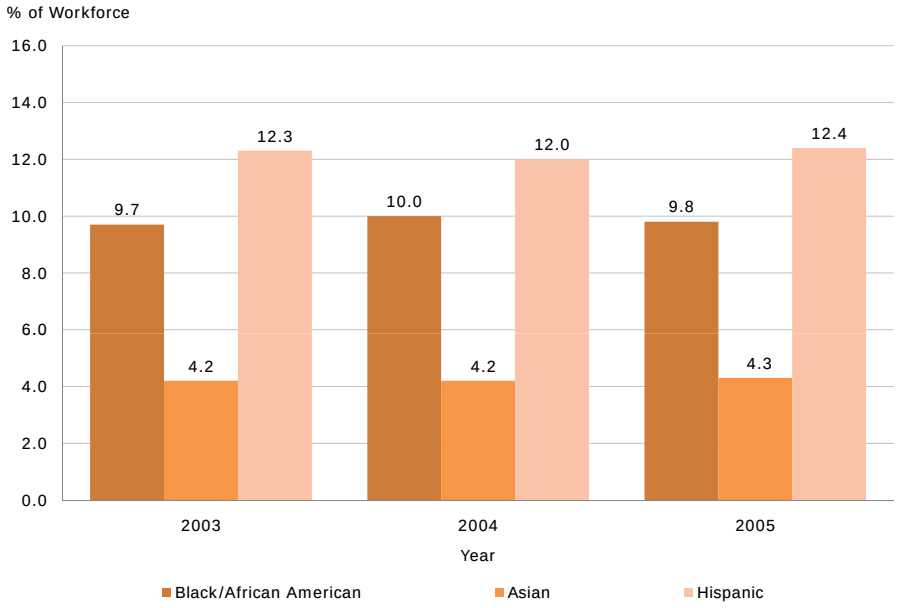


Figure 1.9. Race/ethnicity trends within the worker population in the retail trade sector, 2003–2005.



Race/Ethnicity *(Figures 1.8 and 1.9)*

BLS estimated the racial distribution of the 21.4 million wholesale and retail trade workers in 2005 as 84.4% white, 9.1% black or African American, and 4.3% Asian, leaving less than half a million workers in other race categories.* As shown in Figures 1.8 and 1.9, a slightly higher proportion of workers reporting Hispanic or Latino ethnicity worked in wholesale trade (13.7%) than retail trade (12.4%) in 2005. Retail trade had a higher proportion of workers who were black or African American (about 10% each year) than wholesale trade (about 7% each year). Asian workers represented the same proportion of the total workforce (4.3%) in both the wholesale and retail trade sectors in 2005. For the 3-year period represented in the figures, the only slight trend noted is an increase in the proportion of workers reporting Hispanic or Latino ethnicity in wholesale trade (from 13.0% in 2003 to 13.7% in 2005).

**BLS [2005]. Labor Force Statistics from the Current Population Survey. http://www.bls.gov/cps/cps_aa2005.htm. Table 17. Employed persons by industry, sex, race, and occupation, 2005. Online at: ftp://ftp.bls.gov/pub/special.requests/lf/aa2005/pdf/cpsaat17.pdf.*

Economic Factors in Wholesale and Retail Trade

Compensation/Benefits *(Figures 1.10 and 1.11)*

In 2005 the average compensation cost paid by wholesale employers to their employees was $27.73 per hour worked per employee. The average compensation cost for retail employers was $15.67 per hour worked per employee. Of the average compensations, $19.55 in wholesale and $11.88 in retail are wages and salaries. The remainder, $8.19 in wholesale and $3.79 in retail, are total benefit costs. On average, wages and salaries represented 70.5%, and the cost for benefits represented 29.5% of total compensation for each wholesale trade employee. For retail employees, wages and salaries represented 75.8%, and cost for benefits represented 24.2% of total compensation. Components of the total cost for benefits are shown in Figure 1.11. Legally required benefits include Social Security, Medicare, unemployment insurance, and workers' compensation insurance.

Figure 1.10. Employer costs per hour worked by employee in wholesale and retail trade, September 2006.

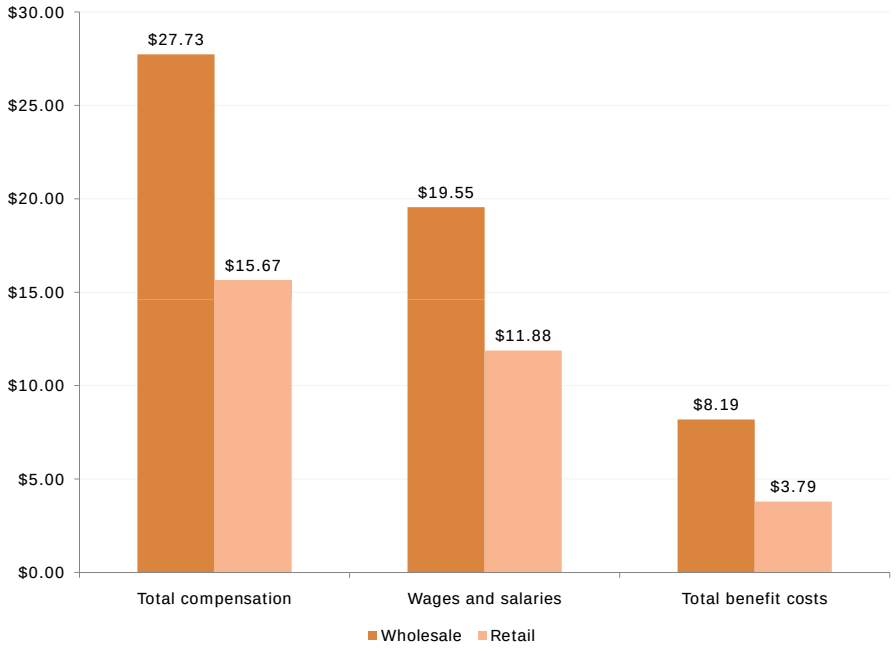
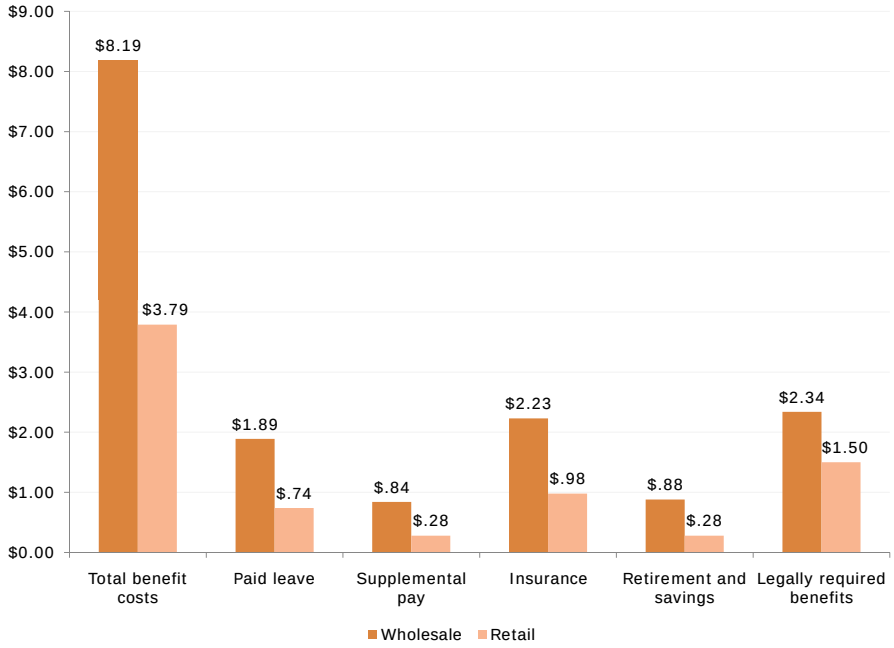


Figure 1.11. Breakdown of benefit costs per hour worked by employee in wholesale and retail trade, September 2006.



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5. BLS [2010]. Employment Projections—Industry employment by occupation. Table 1.8 2008-18 National Employment Matrix, industry employment by occupation. National Employment Matrix. Employment by industry, occupation, and percent distribution, 2008 and projected 2018. 44000-45000 Retail Trade. Online at: ftp://ftp.bls.gov/pub/special.requests/ep/ind-occ.matrix/ind_pdf/ind_440000-450000.pdf. *(Figure 1.3 and Figure 1.5)*

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11. BLS [2005]. Labor Force Statistics from the Current Population Survey. http://www.bls.gov/cps/tables.htm#annual. Table 18. Employed persons by detailed industry, sex, race, and Hispanic or Latino ethnicity. Combined data from 2003, 2004, and 2005. Online at: ftp://ftp.bls.gov/pub/special.requests/lf/aa2003/pdf/cpsaat18.pdf; ftp://ftp.bls.gov/pub/special.requests/lf/aa2004/pdf/cpsaat18.pdf; ftp://ftp.bls.gov/pub/special.requests/lf/aa2005/pdf/cpsaat18.pdf. *(Figure 1.8, Figure 1.9)*

12. BLS [2006]. Employer costs per hour worked for employee compensation and costs as a percent of total compensation: Private industry workers, by industry group, September 2006. Washington, DC: U.S. Department of Labor, Bureau of Labor Statistics, Safety and Health Statistics. Online at: http://www.bls.gov/news.release/archives/ecec_12132006.pdf. *(Figure 1-10, Figure 1-11)*.

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Chapter 2

Fatal Injuries Among Wholesale & Retail Trade Workers

Number of Fatal Injuries in Wholesale and Retail Trade *(Figure 2.1 and Table 2.1)*

In 2005, 609 workers in the WRT sector died as a result of traumatic injuries suffered at work. WRT ranked fourth among major industry sectors in worker fatalities behind construction (1,192 fatalities); transportation/warehousing (885); and agriculture, forestry, fishing and hunting (715). WRT had more worker fatalities than administration and support and waste management and remediation (398)—a sector that includes high-risk activities such as landscaping, waste management, and building services—and other traditionally high-risk sectors such as manufacturing (393), other services (210), and mining (159).

The 609 WRT fatalities represented nearly 12% of all worker deaths from traumatic injury in private industry. Of these 609 deaths, 400 occurred in retail trade and 209 occurred in wholesale trade. *(Table 2.1)*.

[***Note: This Chartbook does not total either the fatalities or the nonfatal injury/illness cases for all the service-oriented sectors organized as the NORA services sector, which includes private 2-digit NAICS sectors 51-56, 61, 71, 72, and 81, and most of public 2-digit sector 92 (excepting the justice, public order, and safety activities subsector). If NORA services sector was represented as a unit, and all fatalities and nonfatal injury/illness cases were totalled, the result (over 750 fatal injuries and 1 million nonfatal injuries/illnesses) would exceed the numbers for the combined wholesale and retail trade sectors***

Figure 2.1. Number of fatalities by 2-digit NAICS sector, 2005.

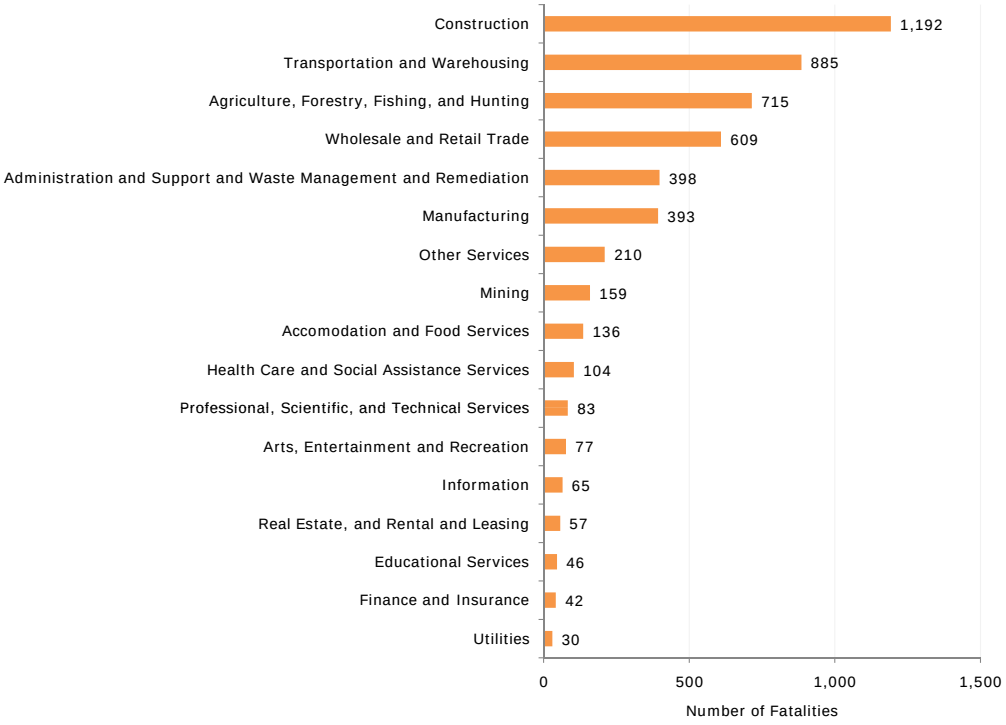


Table 2.1. Number of fatalities by 2-digit NAICS sector, 2005.

Industry	NAICS	Number of Fatalities	% of All Private Industry Deaths
Construction	23	1,192	22.9%
Transportation and Warehousing	48, 49	885	17.0%
Agriculture, Forestry, Fishing, and Hunting	11	715	13.7%
Wholesale and Retail Trade	42, 44-45	609	11.7%
Administration and Support and Waste Management and Remediation	56	398	7.6%
Manufacturing	31-33	393	7.5%
Other Services	81	210	4.0%
Mining	21	159	3.0%
Accomodation and Food Services	72	136	2.6%
Health Care and Social Assistance Services	62	104	2.0%
Professional, Scientific, and Technical Services	54	83	1.6%
Arts, Entertainment and Recreation	71	77	1.5%
Information	51	65	1.2%
Real Estate, and Rental and Leasing	53	57	1.1%
Educational Services	61	46	0.9%
Finance and Insurance	52	42	0.8%
Utilities	22	30	0.6%

Figure 2.2. Number of fatalities in wholesale and retail trade, 2003–2005.

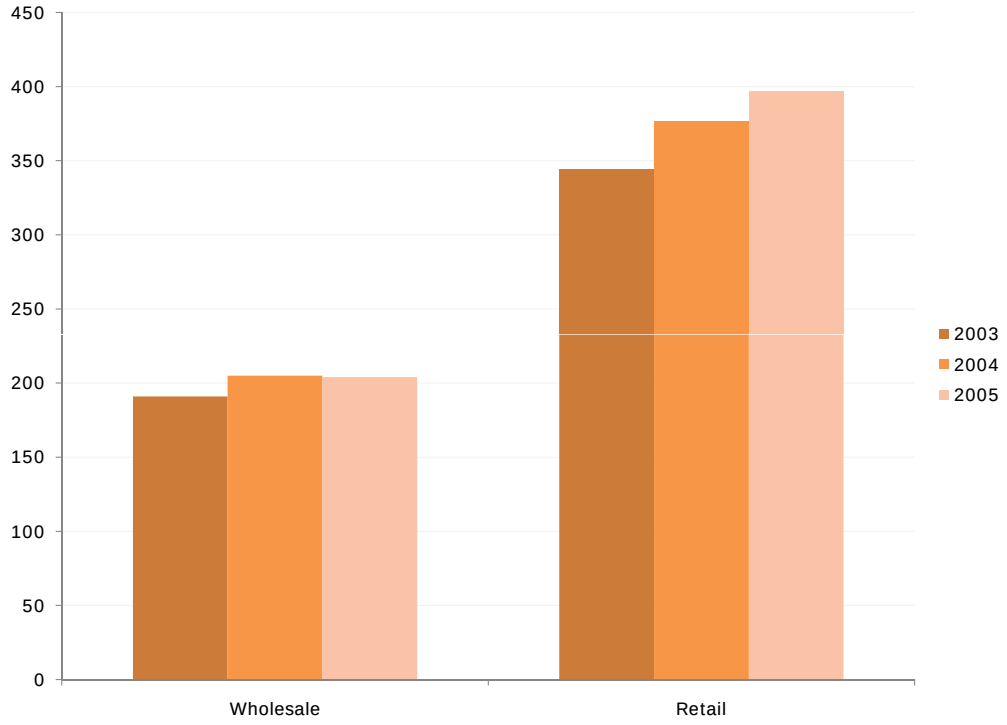


Table 2.2. Rate (per 100,000 workers) of fatal injuries by 2-digit NAICS sector, 2005.

2-digit Industry	NAICS	Fatality Rate
Agriculture, forestry, fishing, and hunting	11	32.5
Mining	21	25.6
Transportation and warehousing	48, 49	17.7
Construction	23	11.1
Administrative/support & waste management/remediation services	56	7.2
Utilities	22	3.6
Arts, entertainment, and recreation	71	3.2
Other services, except public administration	81	3.0
Wholesale and retail trade	42, 44, 45	2.9
Wholesale trade	42	4.6
Retail trade	44, 45	2.4
Manufacturing	31–33	2.4
Information	51	2.0
Real estate and rental and leasing	53	1.9
Accommodation and food services	72	1.5
Educational services	61	1.3
Professional, scientific, and technical services	54	1.0
Health care and social assistance	62	0.7
Finance and insurance	52	0.6

presented herein. However, all of these service-oriented sectors are quite distinct one from another in terms of workforce demographics, tasks, processes, equipment, and therefore risks (e.g., educational services versus accommodation and food services) and so much larger in terms of aggregated population (totalling nearly 46.5 million), that such an aggregation of data for comparison purposes does not appear to be useful. This Chartbook also does not treat the NORA transportation, warehousing, and utilities sector as a unit for comparison purposes. For further clarification, see the entry sector, subsector, and industry in the Glossary on page VIII.]

Fatality Trend in Wholesale and Retail Trade

(Figure 2.2)

BLS data for 2003–2005 indicate that fatal workplace injuries were on the rise in both wholesale and retail trades. From 2003–2005, fatalities resulting from traumatic injuries increased by 16.3% in retail trade, and 9.4% in wholesale trade.

Rate of Fatal Injuries in Wholesale and Retail Trade

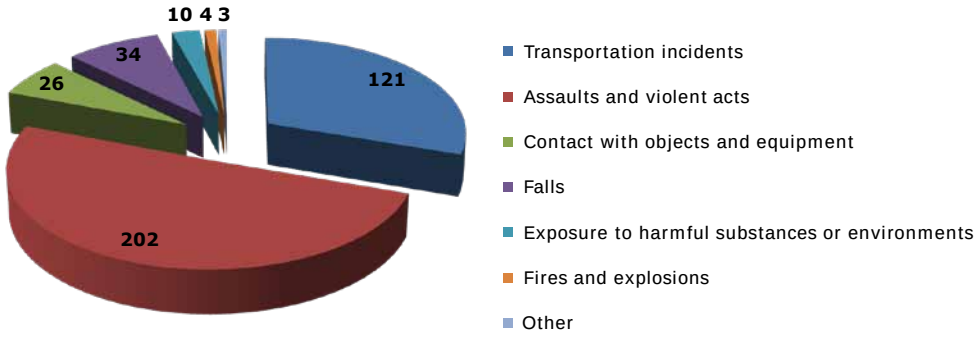
(Table 2.2)

The fatality rate (deaths per 100,000 workers) in 2005 for WRT combined was 2.9. The rate for wholesalers was nearly double that of retailers (4.6 and 2.4, respectively).

Events/Exposures Associated with Fatal Injuries in Retail Trade *(Figure 2.3)*

Of the 400 fatalities among retail workers, over half resulted from assaults and violent acts, another 30% resulted from transportation incidents; 9% from falls; 7% from contact with objects/equipment; 3% from exposure to harmful substances/environments; and 1% from fires/explosions.

Figure 2.3. Fatal injuries by events/exposures, retail trade, 2005.



Events/Exposures Associated with Fatal Injuries in Wholesale Trade *(Figure 2.4)*

Assaults and violent acts are far less prevalent in wholesale trade, causing about 6% of the 209 workplace deaths among wholesalers in 2005. The leading cause or event associated with fatalities in wholesale trade in 2005 was transportation incidents (51%). Contact with objects/equipment contributed to 23% of the deaths, and falls, exposure to harmful substances/environments, and fires/explosions accounted for 9%, 7%, and 4% of the deaths, respectively.

Figure 2.4. Fatal injuries by events/exposures, wholesale trade, 2005.

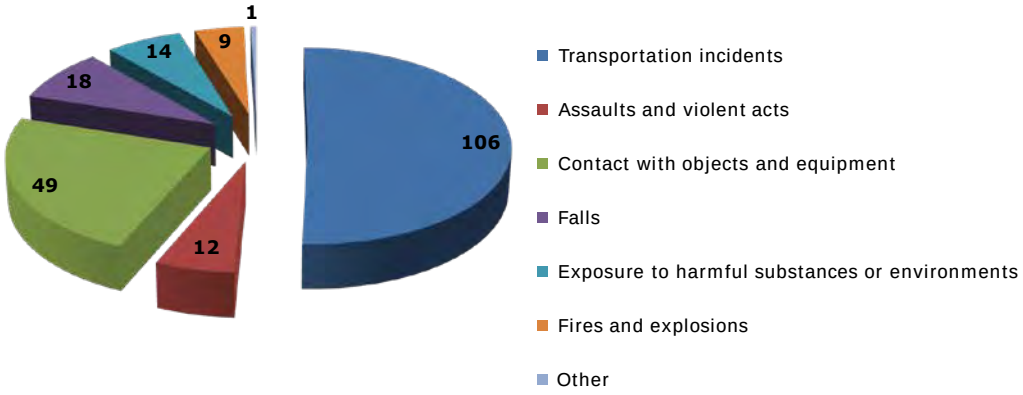


Figure 2.5. Fatal occupational injuries in the wholesale and retail trade sector by state, 2005.

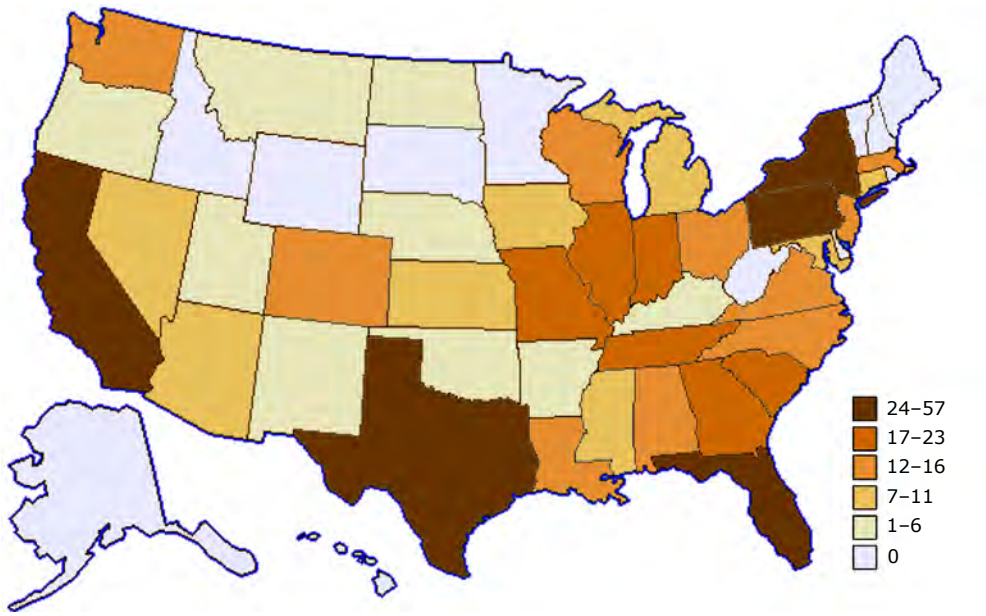


Table 2.3. Occupations with the highest number of fatal work injuries in wholesale and retail trade, 2005.

Occupation	Retail	Wholesale	Total WRT
Sales and Related Occupations	214	45	259
Transportation and Material Moving Occupations	99	100	199
Installation, Maintenance, and Repair Occupations	26	32	58
Office and Administrative Support Occupations	26	0	26
Production Occupations	8	8	16
Construction and Extraction Occupations	3	7	10
Arts, Design, Entertainment, Sports, and Media Occupations	4	0	4
Farming, Fishing, and Forestry Occupations	0	3	3
Protective Service Occupations	3	0	3

Distribution of Fatal Injuries by State in Wholesale and Retail Trade *(Figure 2.5)*

Of all the United States, California (54), Florida (49), and Texas (42) had the highest number of worker deaths in WRT in 2005, followed by Pennsylvania (33), New York (30), Indiana (23) and Illinois (23). Twenty-three states had 10 or more worker deaths resulting from traumatic injury in the WRT sector. Fourteen states (shown in white on the map) had no worker deaths from traumatic injury in the WRT sector.

Distribution of Fatal Injuries by Occupation in Wholesale and Retail Trade *(Table 2.3)*

Sales and sales-related occupations experienced the highest number of fatal occupational injuries (259) in the trade sector, with transportation and material moving occupations suffering the next highest number of deaths (199). Traumatic fatalities occurred progressively less frequently among installation, maintenance, and repair; office and administrative support; production; and construction and extraction occupations.

Fatal Injuries by Detailed Occupation in Wholesale Trade *(Table 2.4)*

Among the detailed occupational groups working within the wholesale trade sector, truck drivers, heavy and tractor-trailer, accounted for the highest number of fatal injuries (44), followed by laborers and freight, stock, and material movers, hand (27), and first-line supervisors of nonretail sales workers (24). Other truck drivers, including those who drove light and delivery trucks, and who combined driving with sales work, accounted for 11 and 6 fatal injuries, respectively.

In addition to sales supervisors, wholesale sales representatives involved with nontechnical and nonscientific products accounted for a relatively high number of deaths (15). Other occupational groups at risk in wholesale trade include heavy mobile equipment and industrial machine mechanics; and installation, maintenance, and repair workers.

Fatal Injuries by Detailed Occupation in Retail Trade

(Table 2.5)

Sales occupations, particularly first-line supervisors/managers of retail sales workers (99), cashiers, other than gaming (61), retail sales persons (38), and door-to-door, news and street vendors, and related workers (6), combined to account for the highest number of fatal injuries in retail trade. Transport and material moving workers—especially truck drivers, heavy and tractor-trailer (29); truck drivers, light and delivery (20); laborers, and freight, stock,

Table 2.4. Number of fatalities by detailed occupations in wholesale trade, 2005.

Detailed Occupation	Occupation Code	Number of Fatalities
Truck drivers, heavy and tractor-trailer	53-3032	44
Laborers and freight, stock, and material movers, hand	53-7062	27
First-line supervisors of nonretail sales workers	41-1012	24
Sales representatives, wholesale and manufacturing, except technical and scientific products	41-4012	15
Truck drivers, light or delivery	53-3033	11
Drivers/sales workers	53-3031	6
Mobile heavy equipment mechanics, except engines	49-3042	5
Industrial machinery mechanics	49-9041	5
Maintenance and repair workers, general	49-9042	5
Installation, maintenance and repair workers, all other	49-9099	4
First-line supervisors of production and operating workers	51-1011	3
Industrial truck and tractor operators	53-7051	3

Table 2.5. Number of fatalities by detailed occupations in retail trade, 2005.

Detailed Occupation	Occupation Code	Number of Fatalities
First-line supervisors/managers of retail sales workers	41-1011	99
Cashiers, except gaming	41-2011	61
Retail salespersons	41-2011	38
Truck drivers, heavy and tractor-trailer	53-3032	29
Truck drivers, light or delivery services	53-3033	20
Laborers and freight, stock, and material movers, hand	53-7062	19
Stock clerks and order fillers	43-5081	16
Automotive service technicians and mechanics	49-3023	9
Drivers/sales workers	53-3031	9
Door-to-door sales workers, news and street vendors, and related workers	41-9091	6
Motor vehicle operators, all others	53-3099	6
Service station attendants	53-6031	6
Parts Salespersons	41-2022	4
Customer service representatives	43-4051	4
Butchers and meat cutters	51-3021	4
Floral designers	27-1023	3
Security guards	33-9032	3
Sales and related workers, all others	41-9099	3
Tire repairers and changers	49-3093	3
Maintenance and repair workers, general	49-9042	3
Cleaners of vehicles and equipment	53-7061	3

Table 2.6. Number of fatalities by 4-digit retail trade industry, 2005.

4-digit Industry	NAICS	Number of Fatalities
Grocery Stores	4451	84
Gasoline Stations	4471	58
Automobile Dealers	4411	43
Building Materials and Supplies Dealers	4441	39
Direct Selling Establishments	4543	21
Automotive Parts, Accessories, and tire Stores	4413	20
Other Miscellaneous Store Retailers	4539	15
Specialty Food Stores	4452	13
Other General Merchandise Stores	4529	11
Other Motor Vehicle Dealers	4412	10

Table 2.7. Number of fatalities by 4-digit wholesale trade industry, 2005.

4-digit Industry	NAICS	Number of Fatalities
Miscellaneous Durable Goods	4239	29
Machinery, Equipment, and Supplies	4238	26
Grocery and Related Products	4244	26
Petroleum and Petroleum Products	4247	19
Miscellaneous Nondurable Goods	4249	15
Farm Products and Raw Materials	4245	14
Professional and Commercial Equipment, Supplies	4234	12
Chemical and Allied Products	4246	8
Wholesale Electronic Markets, Agents, Brokers	4251	7

and material movers, hand (19); drivers/sales workers (9); motor vehicle operators, all other (6); and service station attendants (6)—also accounted for many fatal injuries in retail trade.

Other detailed occupational groups at risk for fatal injuries in retail included stock clerks and order fillers, and automobile mechanics.

Distribution of Fatal Injuries by Industries in Retail Trade *(Table 2.6)*

WRT comprises 146 distinct types of business. Generally, trade activities are perceived to be less hazardous for workers than activities in industries such as agriculture, forestry, fishing and hunting; construction; transportation/warehousing, manufacturing, and mining. Retail trade industries that experience the highest number of fatalities include grocery stores, gasoline stations, automobile dealers, and building materials and supplies dealers. Chapter 4 contains more detailed data related to risks in WRT industries.

Distribution of Fatal Injuries by Industries in Wholesale Trade *(Table 2.7)*

Wholesale trade industries that experience the highest number of worker deaths from traumatic injuries include miscellaneous durable goods; machinery, equipment, and supplies; and grocery and related products.

Distribution of Fatal Injuries by Gender in Wholesale Trade and Retail Trade *(Figure 2.6)*

In both wholesale and retail trades, fatal injuries to male workers appeared to be trending upward from 2003–2005. In wholesale trade, the proportion of male deaths increased from 92.7% in 2003 to 96.2% in 2005, yet the proportion of male deaths in retail showed more fluctuation (ranging from 86.9% in 2003, to 88.3% in 2004, then falling to 86.0% in 2005).

Distribution of Fatal Injuries by Gender in Private Industry *(Figure 2.7)*

Across all private industry, the distribution of fatal injuries by gender remained fairly static, with deaths of males representing from 92.5% (2003) to 93.5% (2004) of the total, before dropping to 93.4% in 2005.

Figure 2.6. Fatal occupational injuries in wholesale and retail trade by gender, 2003–2005.

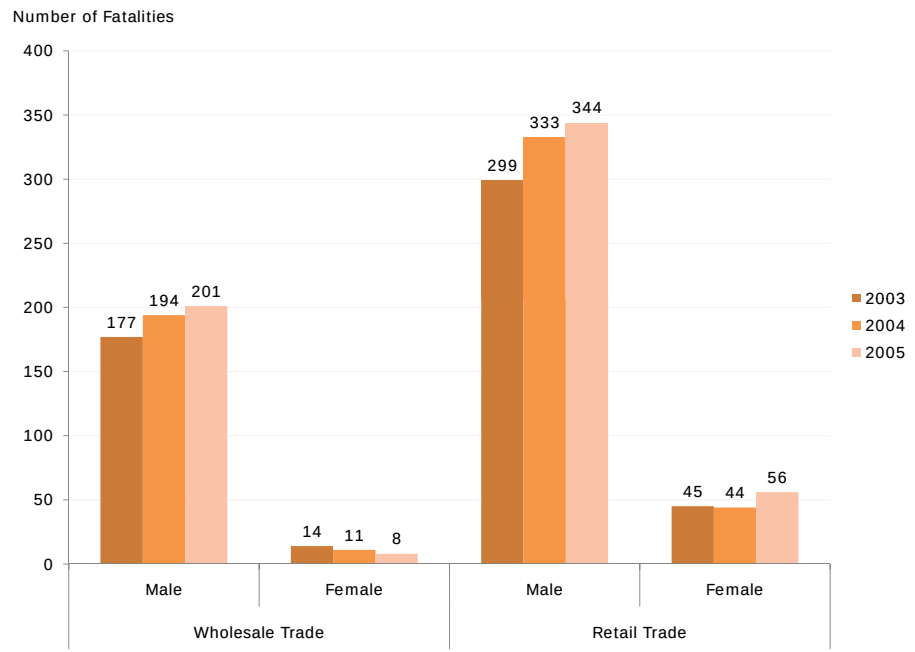


Figure 2.7. Fatal occupational injuries in the U.S. private industry by gender, 2003–2005.

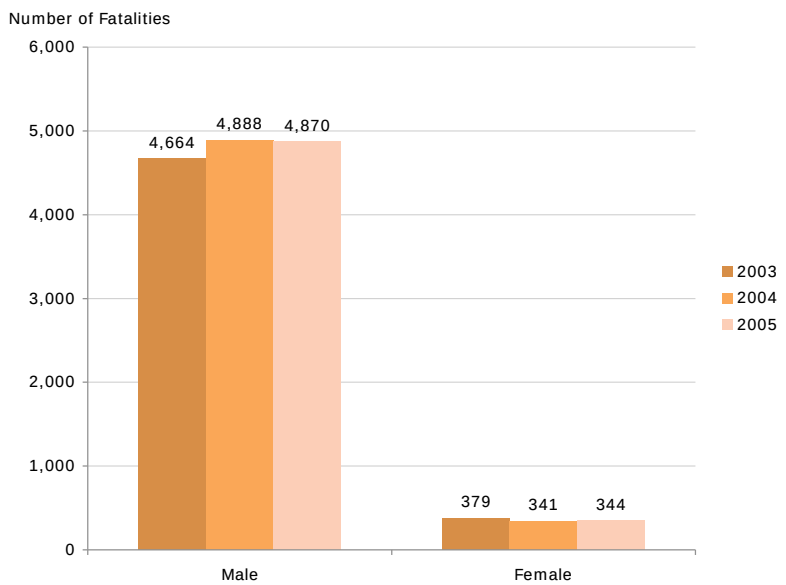
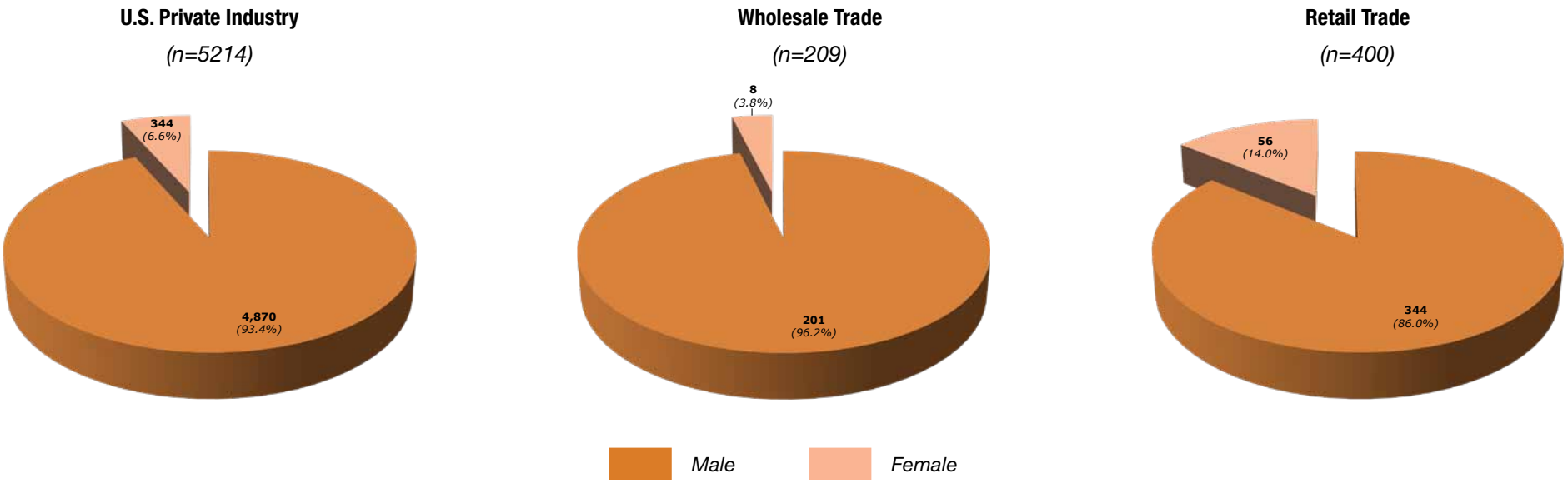


Figure 2.8. Distribution of fatal occupational injuries in the U.S. private industry, wholesale trade, and retail trade by gender, 2005.



Distribution of Fatal Injuries by Gender in Wholesale and Retail Trade *(Figure 2.8)*

In 2005 across all private industry, workplace fatalities were split about 93% to 7% among male and female workers, respectively. The distributions in wholesale (96% to 4%) and retail (86% to 14%) differed from the private industry average.

Distribution and Trend in Fatal Injuries by Age in Wholesale Trade *(Figure 2.9)*

The distribution of fatal injuries by age group was similar to the distribution across all private industry, with far fewer deaths occurring among very young and very old workers. A shift is apparent from 2003–2005 in the number of deaths among workers in the middle age groups, with the highest number in the 35–44 years group in 2003, shifting to the 45–54 years group in 2004 and 2005.

Distribution and Trend in Fatal Injuries by Age in Retail Trade *(Figure 2.10)*

In retail trade, there were many more deaths, proportionately, in the 65 and older age group than in wholesale trade or across all private industry. In 2004 the 65 deaths among workers age 65 and older was second (along with the 65 deaths among 35–44 year-olds) only to the 90 deaths among workers ages 45–54.

Figure 2.9. Fatalities in wholesale trade by age, 2003–2005.

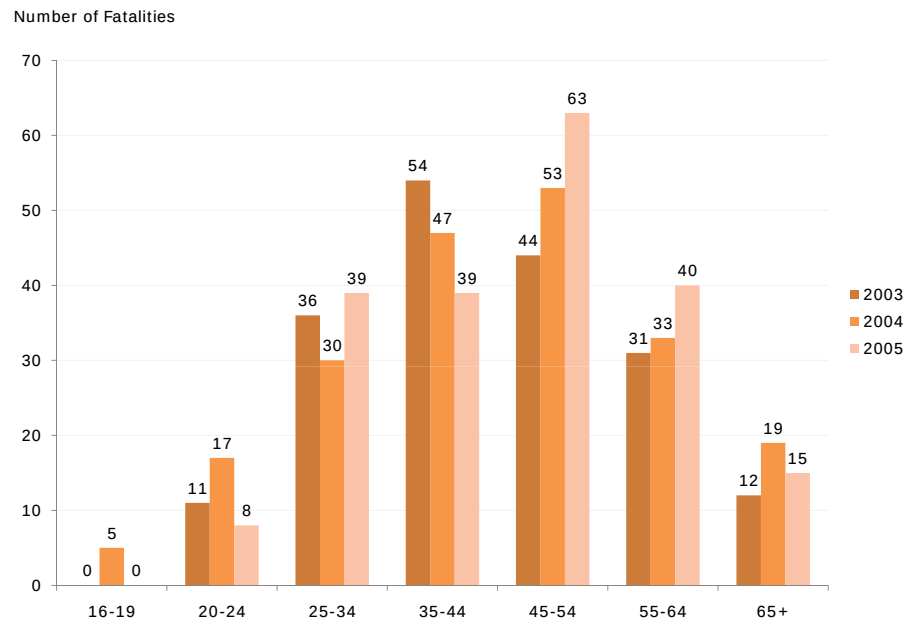


Figure 2.10. Fatalities in retail trade by age, 2003–2005.

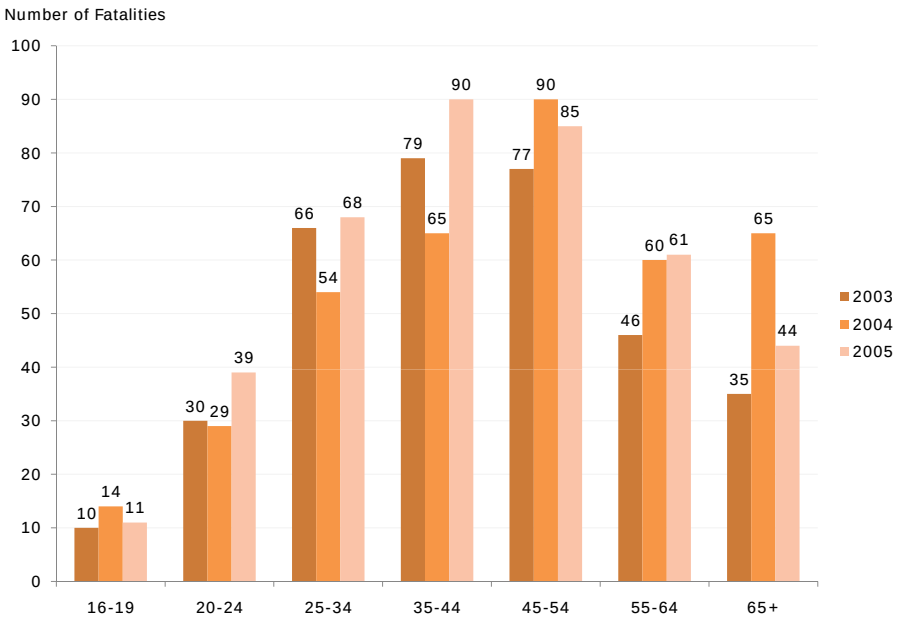
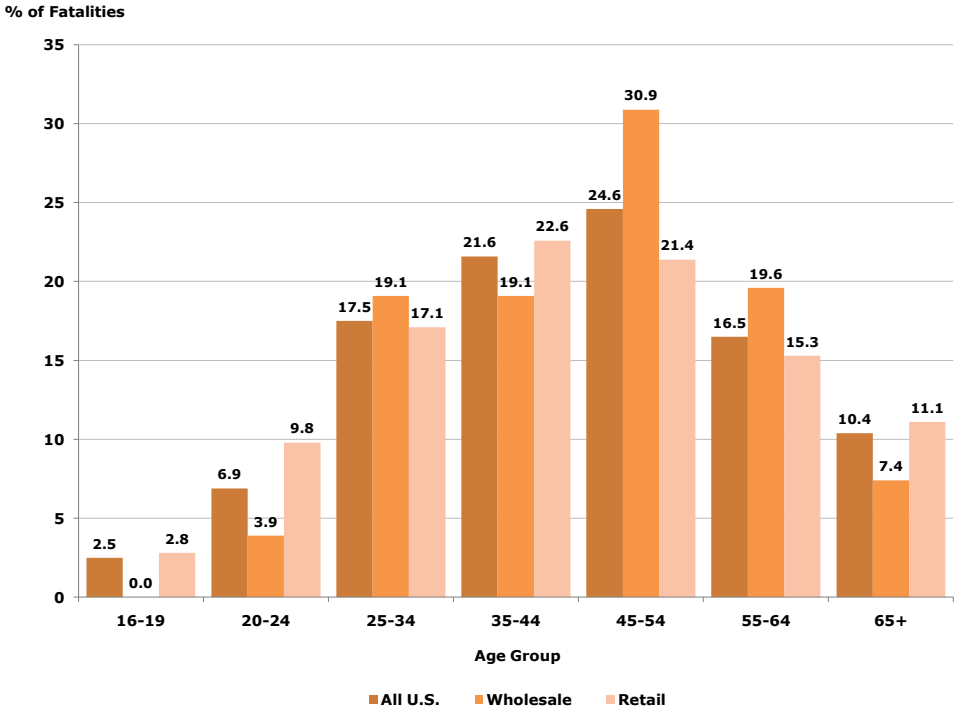


Figure 2.11. Distribution (%) of fatalities by age in U.S. private industry, wholesale trade, and retail trade, 2005.



Distribution of Fatal Injuries by Age in U.S. Private Industry, Wholesale Trade, and Retail Trade

(Figure 2.11)

The distribution by age of fatally injured workers in 2005 differed for wholesale trade, retail trade, and private industry overall. Nearly one-quarter of all workers who were fatally injured in retail work in 2005 were below 25 years of age (12.6%), or above 65 years of age (11.1%), percentages which exceeded the respective percentages for those age groups in both wholesale trade and private industry in general. Over half (50.5%) of wholesale trade workers fatally injured in 2005 were between 45 and 64 years of age, with another fifth (19.1%) were between the ages of 25 to 34 years of age; whereas, the percentages in retail for these middle age groups were lower than both wholesale trade and private industry in general.

Distribution and Trend in Fatal Injuries by Race/Ethnicity in Wholesale Trade *(Figure 2.12)*

Fatally injured workers in wholesale trade were predominantly white (159 deaths in 2005), followed by Hispanics or Latinos (35 deaths in 2005), and blacks or African Americans (11 deaths in 2005).

Distribution and Trend in Fatal Injuries by Race/Ethnicity in Retail Trade *(Figure 2.13)*

In the retail sector, excluding the 249 deaths of white workers in 2005, fatal, work-related injuries were more evenly distributed across other racial/ethnic groups, with 56 blacks or African Americans, 45 Asians, and 42 Hispanics or Latinos dying of workplace trauma. Four workers classified as American Indian or Alaskan Native were fatally injured in retail trade in 2003. These 4 deaths were added to the 12 deaths coded by BLS as "Other or Not Reported" for 2003. Except for the addition of the 4 cases for 2003, "Other or Not Reported" in BLS race/ethnicity data usually refers to cases that either were not coded for race/ethnicity or the entry did not match the following categories: White; Black or African American; Asian; American Indian or Alaskan Native; Native Hawaiian or Pacific Islander; or Hispanic or Latino.

Figure 2.12. Fatalities in wholesale trade by race/ethnicity, 2003–2005.

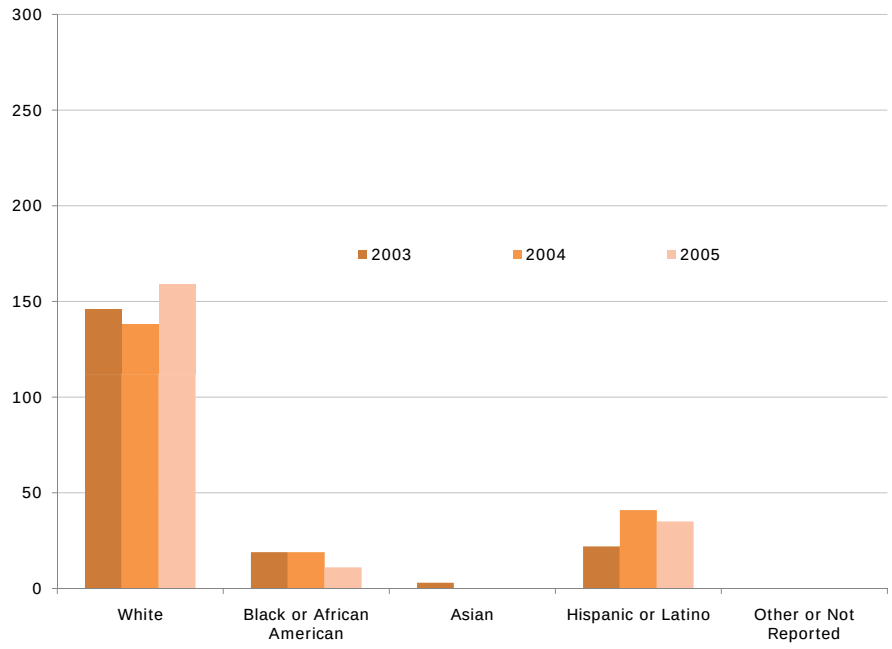


Figure 2.13. Fatalities in retail trade by race/ethnicity, 2003–2005.

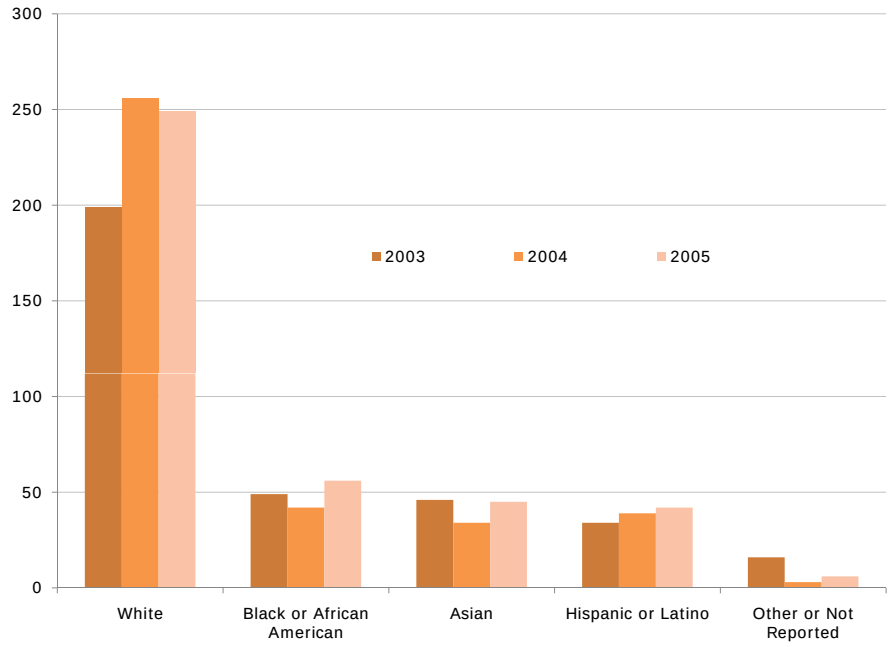
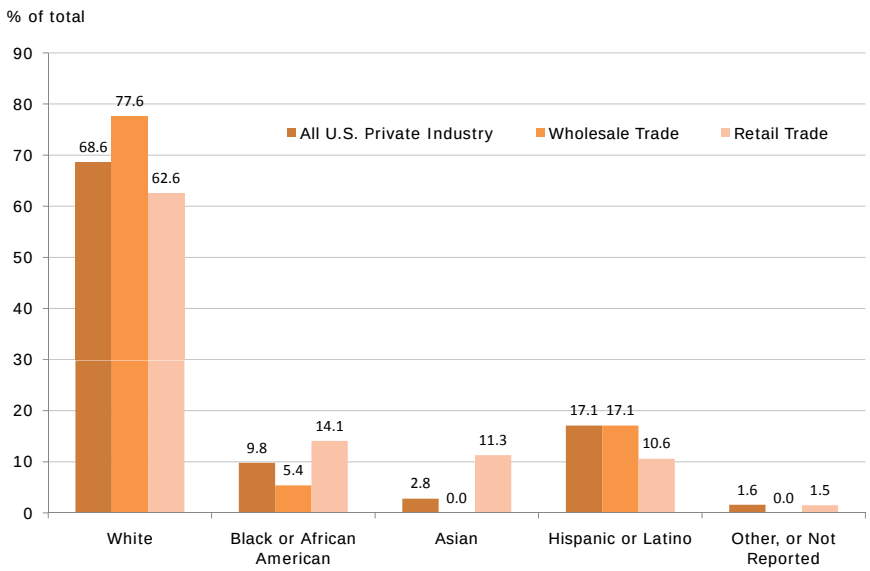


Figure 2.14. Distribution (%) of fatalities by race/ethnicity in U.S. private industry, wholesale trade, and retail trade, 2005.



Distribution of Fatal Injuries (as a percentage of total) by Race/Ethnicity for U.S. Private Industry, Wholesale Trade, and Retail Trade, 2005 *(Figure 2.14)*

In 2005, a higher percentage of black or African American (14.1%) and Asian (11.3%) workers and a lower percentage of Hispanic (10.6%) and white (62.6%) workers were fatally injured on the job in retail trade than in either wholesale trade or private industry in general. In contrast, a higher percentage of white workers (77.6%) and a lower percentage of black or African American (5.4%) and Asian (2.8%) workers were fatally injured on the job in wholesale trade than in either retail trade or private industry in general. These data indicate that Asian workers may face higher risks of fatal injury at work in retail trade than in wholesale trade, since the percentage of total employment represented by Asians within these sectors is roughly the same (see Figures 1.8 and 1.9 on page 10). On the other hand, Hispanic workers may face higher risks of fatal injury at work in wholesale trade than in retail trade, since the percentage of total employment represented by Hispanics within these sectors is also roughly the same.

Chapter 2 References

1. BLS [2005]. Census of Fatal Occupational Injuries (Revised Data). Table A-1. Fatal occupational injuries by industry and event or exposure, All United States, 2005. Online at: www.bls.gov/iif/oshwc/cfoi/cftb0205.pdf. *(Figure 2.1, Table 2.1, Figure 2.3, Figure 2.4, Table 2.6, Table 2.7)*

2. BLS [2005]. Census of Fatal Occupational Injuries (Revised Data). Table A.1. Fatal occupational injuries by industry and event or exposure, all United States. Online at: 2003 data: www.bls.gov/iif/oshwc/cfoi/cftb0187.pdf; 2004 data: www.bls.gov/iif/oshwc/cfoi/cftb0196.pdf; 2005 data: www.bls.gov/iif/oshwc/cfoi/cftb0205.pdf. *(Figure 2.2)*

3. BLS [2005]. Census of Fatal Occupational Injuries. Fatal occupational injuries, employment, and rates of fatal occupational injuries by selected worker characteristics, occupations, and industries, 2005. Online at: www.bls.gov/iif/oshwc/cfoi/CFOI_Rates_2005.pdf. *(Table 2.2)*

4. BLS [2005]. Census of Fatal Occupational Injuries. State Occupational Injuries, Illnesses, and Fatalities. Online at: www.bls.gov/iif/oshstate.htm (Data compiled from each individual state's Profile of occupational fatalities, which are linked to this page.) *(Figure 2.5)*

5. BLS [2009]. Injuries, Illnesses, and Fatalities. Multi-Screen Data Search. Access data query table at: http://www.bls.gov/iif/data.htm. Click on "Multi-Screen Data Search" button for "Census of Fatal Occupational Injuries (2003 forward)" database. Search on parameters: Area="N00 all U.S."; Case type="1 Fatalities by detailed private industry"; Category=(select all occupational categories); Industry="SP2RET Retail trade" and "SP2WHT Wholesale trade"; Click on "Retrieve Data" button; Year: 2005. *(Table 2.3)*

6. BLS [2009]. Injuries, Illnesses, and Fatalities. Multi-Screen Data Search. Access data query table at http://www.bls.gov/iif/data.htm. Click on "Multi-Screen Data Search" button for "Census of Fatal Occupational Injuries (2003 forward)" database. Search on parameters: Area="N00 all U.S."; Case type="P Fatalities by detailed private occupation"; Category=(select "RET Private Industry--Retail Trade," and "WHT Private Industry--Wholesale Trade;" Occupation: select all detailed (six-digit) occupations, excluding all that end with a "0" (zero) or an "X"; Click on "Retrieve Data" button; Year: 2005. *(Table 2.4, Table 2.5)*

7. BLS [2009]. Injuries, Illnesses, and Fatalities. Multi-Screen Data Search. Access data query table at: http://www.bls.gov/iif/data.htm. Click on "Multi-Screen Data Search" button for "Census of Fatal Occupational Injuries (2003 forward)" database. Search on parameters: Area="N00 all U.S."; Case type="1 Fatal injury by detailed private industry"; Category = "Gender-- Male", "Gender-- Female"; Industry="SP2RET Retail trade" and "SP2WHT Wholesale trade"; Click on "Retrieve Data" button; Years: 2003-2005 *(Figure 2.6, Figure 2.7, Figure 2.8)*

8. BLS [2009]. Injuries, Illnesses, and Fatalities. Multi-Screen Data Search. Access data query table at: http://www.bls.gov/iif/data.htm. Click on "Multi-Screen Data Search" button for "Census of Fatal Occupational Injuries (2003 forward)" database. Search on parameters: Area="N00 all U.S."; Case type="1 Fatal injury by detailed private industry"; Category = "Age group-- 16–17", "Age group-- 18–19", "Age group-- 20–24", "Age group-- 25–34", "Age group-- 35–44", "Age group-- 45–54", "Age group-- 55–64", "Age group-- 65 and older"; Industry="SP2RET Retail trade" and "SP2WHT Wholesale trade"; Click on "Retrieve Data" button; Years: 2003–2005. *(Figure 2.9, Figure 2.10)*

9. BLS [2009]. Injuries, Illnesses, and Fatalities. Multi-Screen Data Search. Access data query table at: http://www.bls.gov/iif/data.htm. Click on "Multi-Screen Data Search" button for "Census of Fatal Occupational Injuries (2003 forward)" database. Search on parameters: Area="N00 all U.S."; Case type="1 Fatal injury by detailed private industry"; Category = 50X "Ownership—Private Industry"; "Age group-- 16–17", "Age group-- 18–19", "Age group-- 20–24", "Age group-- 25–34", "Age group-- 35–44", "Age group-- 45–54", "Age group-- 55–64", "Age group-- 65 and older"; Industry="000000 "All workers", "SP2RET Retail trade" and "SP2WHT Wholesale trade"; Click on "Retrieve Data" button; Year: 2005. *(Figure 2.11)*

10. BLS [2009]. Injuries, Illnesses, and Fatalities. Multi-Screen Data Search. Access data query

table at: http://www.bls.gov/iif/data.htm. Click on “Multi-Screen Data Search” button for “Census of Fatal Occupational Injuries (2003 forward)” database. Search on parameters: Area=”N00 all U.S.”; Case type: “1 Fatalities by detailed private industry”; Category: “Race RAX-- White”, “Race RBX-- Black”, “Race RCX-- American Indian, Aleut, Eskimo”, “Race RDX Asian”, “Race REX Pacific Islander”, “Race RGX Multiple”, “Race RHX Other or not reported”, “Race RIX Hispanic”; Industry=”SP2RET Retail trade”, “SP2WHT Wholesale trade”; Click on “Retrieve Data” button; Years: 2003-2005.
(Figure 2.12, Figure 2.13, Figure 2.14)

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Chapter 3

Nonfatal Injuries/Illnesses Among Wholesale & Retail Trade Workers

Number of Nonfatal Injuries/Illnesses in Wholesale and Retail Trade *(Table 3.1)*

In 2005 the combined WRT sector had more nonfatal injuries/illnesses (849,700) than any major industry sector except manufacturing (895,900), and more injuries/illnesses experienced in WRT were severe enough to result in days away from work (DAW) (256,100) than those in any other sector, including manufacturing (209,100). The toll in WRT exceeded that of industry sectors traditionally viewed as high-risk, including construction (414,900); transportation/warehousing (280,500); agriculture, forestry, fishing and hunting (54,600); and various service sectors, most notably health care and social assistance services (668,900), and accommodation and food services (326,400).

Events/Exposures Associated with Nonfatal Injuries/Illnesses in Wholesale and Retail Trade *(Figure 3.1)*

The leading events/exposures resulting in nonfatal injuries/illnesses with DAW in the WRT sector were contact with objects/equipment (73,170 injuries, representing 28.6% of all DAW injuries in the sector) and overexertion (68,750; 26.8%). Falls on the same level accounted for 13.9% of all DAW injuries/illnesses in WRT, followed by falls to lower level (5.7%) and transportation incidents (4.6%). See Figures 3.2 and 3.3 for distribution of events/exposures associated with nonfatal injuries and illnesses in the wholesale trade and retail trade sectors individually.

Table 3.1. Nonfatal injury/illness cases by 2-digit NAICS, total cases, and days away from work cases, 2005.

Industry	NAICS Code	Total Recordable Cases	Cases with Days Away from Work (DAW)
Manufacturing	31–33	895,900	209,100
Wholesale and retail trade	42, 44, 45	849,700	256,100
Health care and social assistance	62	668,900	175,900
Construction	23	414,900	157,100
Accommodation and food services	72	326,400	75,700
Transportation and warehousing	48, 49	280,500	117,400
Administrative and support and waste management and remediation services	56	165,400	57,300
Other services, except public administration	81	94,800	28,800
Professional, scientific, and technical services	54	87,700	24,800
Arts, entertainment, and recreation	71	72,100	18,200
Real estate and rental and leasing	53	66,400	24,200
Information	51	58,900	20,700
Agriculture, forestry, fishing, and hunting	11	54,600	18,900
Finance and insurance	52	54,200	14,100

Figure 3.1. Nonfatal injury/illness cases involving days away from work by event/exposure, wholesale and retail trade, 2005.

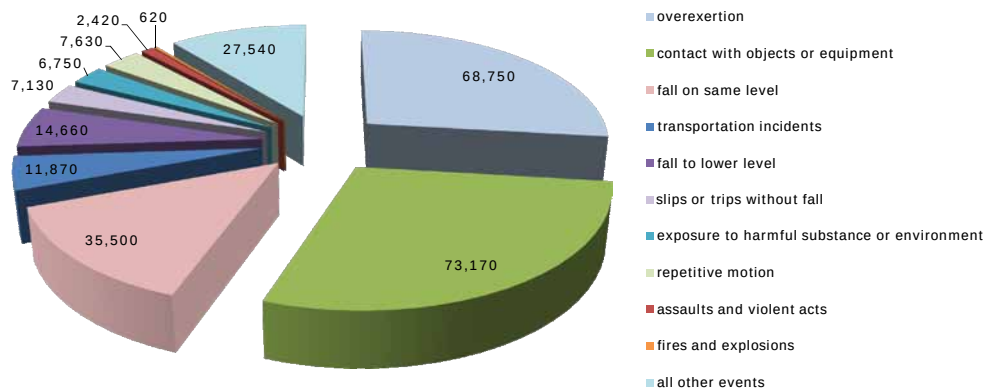

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Figure 3.2. Nonfatal injury/illness cases involving days away from work by event/exposure, wholesale trade, 2005.

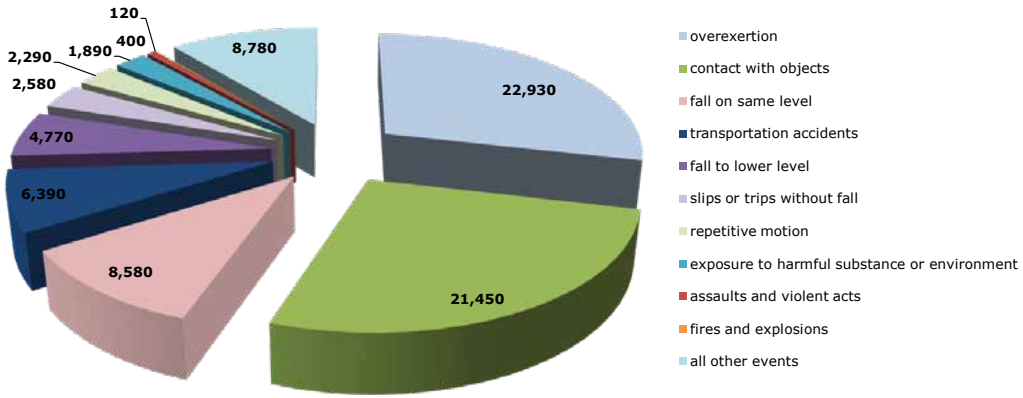
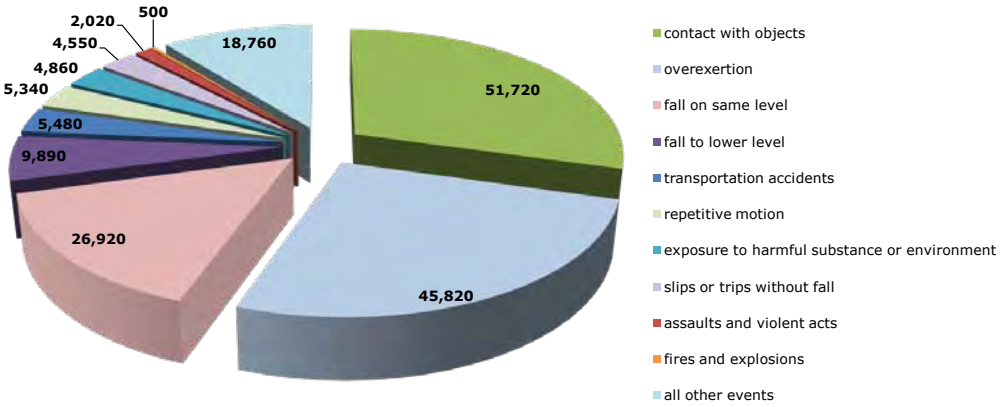


Figure 3.3. Nonfatal injury/illness cases involving days away from work by event/exposure, retail trade, 2005.



Events/Exposures Associated with Nonfatal Injuries/Illnesses in Wholesale Trade *(Figure 3.2)*

The leading event producing nonfatal injuries/illnesses in wholesale trade was overexertion (22,930 cases), followed by contact with object/equipment (21,450), fall on same level (8,580), and transportation incidents (6,390).

Events/Exposures Associated with Nonfatal Injuries/Illnesses in Retail Trade *(Figure 3.3)*

The distribution differed between wholesale and retail in the following ways: (1) contact with object/equipment was the leading cause of nonfatal injuries/illnesses within retail trade (51,720), ahead of overexertion (45,820). Although like wholesale, fall on the same level was the third leading exposure causing injuries/illnesses (26,920), unlike wholesale, fall to lower level cases (9,890) exceeded those caused by transportation incidents (5,480).

Rates of Nonfatal Injuries/Illnesses in Wholesale and Retail Trade *(Table 3.2)*

The incidence rates for nonfatal injuries/illnesses (number of cases per 10,000 full-time workers) in the WRT sector were not among the highest in 2005. Transportation/warehousing (7.0 cases per 10,000 full-time workers) had the highest rate among 2-digit NAICS sectors, followed by manufacturing (6.3); construction (6.3); arts, entertainment, and recreation (6.1); and agriculture, forestry, fishing and hunting (6.1). Both retail trade and wholesale trade experienced total case rates (5.0 and 4.5, respectively) nearly equal to the rate experienced by private industry overall (4.6). A similar pattern was seen in rates of injuries and illnesses that resulted in days away from work in 2005, with sectors such as transportation, construction, and agriculture showing higher rates (2.9, 2.4, and 2.1, respectively), and wholesale trade and retail trade with rates (1.5 each) closer to the private industry average.

Rates of Nonfatal Injuries/Illnesses by Selected Events/Exposures in U.S. Private Industry, Wholesale Trade, and Retail Trade *(Figure 3.4)*

Although overall rates of nonfatal injuries/illnesses are similar among wholesale trade, retail trade, and private industry, differences are noted when rates are calculated for the events or exposures that lead to injuries and illnesses. Both wholesale and retail operations had higher rates of injury and illness from overexertion and contact with object/equipment than private

Table 3.2. Nonfatal injury/illness case rates (per 10,000 workers) by 2-digit NAICS, total case rates, and days away from work case rates, 2005.

Industry	NAICS Code	Total Recordable Case Rate	Case Rates with Days Away from Work (DAW)
Transportation and warehousing	48, 49	7.0	2.9
Manufacturing	31–33	6.3	1.5
Construction	23	6.3	2.4
Arts, entertainment, and recreation	71	6.1	1.6
Agriculture, forestry, fishing and hunting	11	6.1	2.1
Health care and social assistance	62	5.9	1.6
Retail trade	44, 45	5.0	1.5
Utilities	22	4.6	1.3
Accommodation and food services	72	4.5	1.0
Wholesale trade	42	4.5	1.5
Administrative and support and waste management and remediation services	56	3.7	1.3
Real estate and rental and leasing	53	3.7	1.3
Mining	21	3.6	1.5
Other services, except public administration	81	3.2	1.0

Figure 3.4. Incidence rates (per 10,000 workers) for nonfatal occupational injuries/illnesses involving days away from work by events/exposures, U.S. private industry, wholesale trade, and retail trade, 2005.

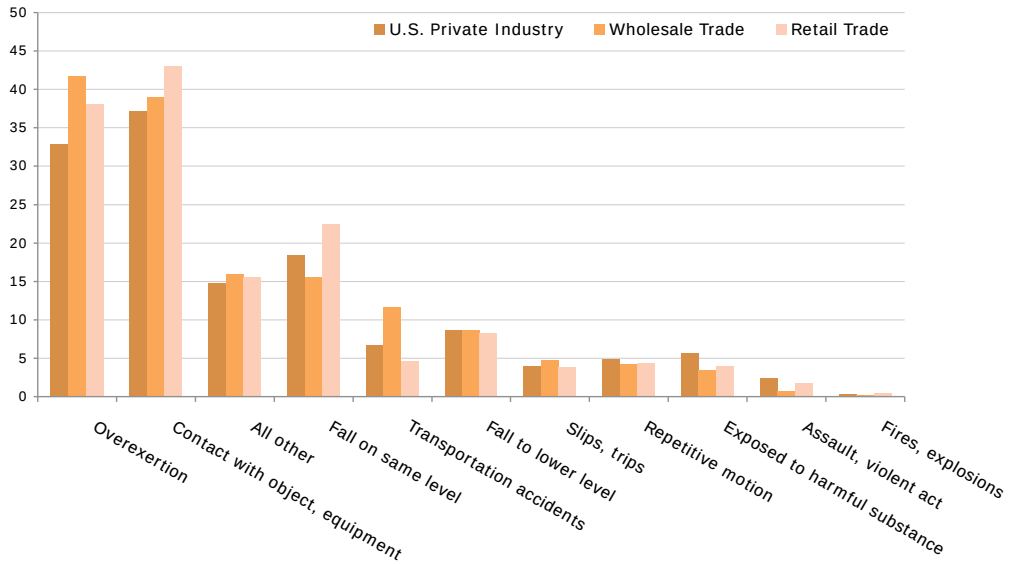


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Figure 3.5. Numbers and rates (per 10,000 workers) of nonfatal injury/illness cases involving days away from work by event/exposure, wholesale trade sector, 2005.

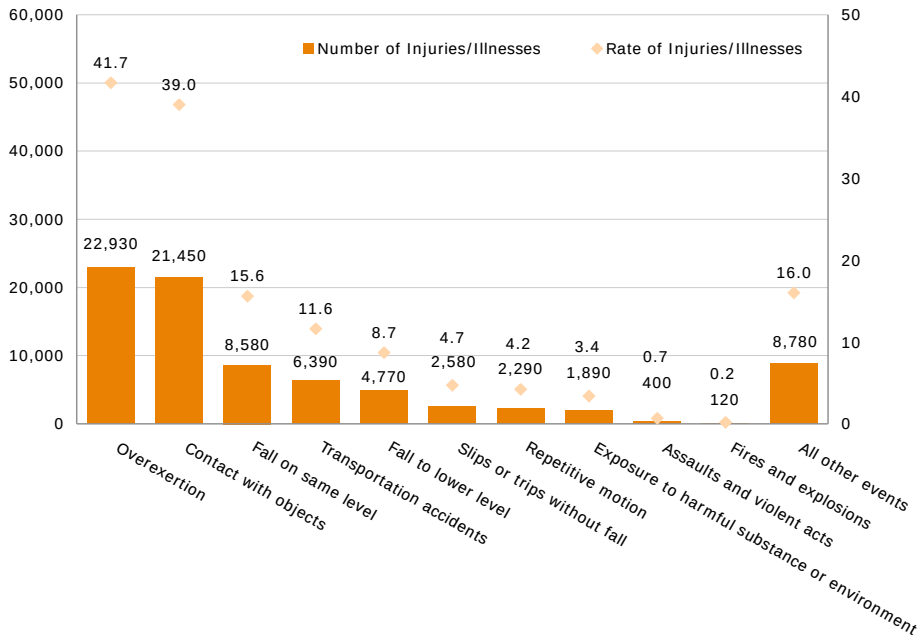
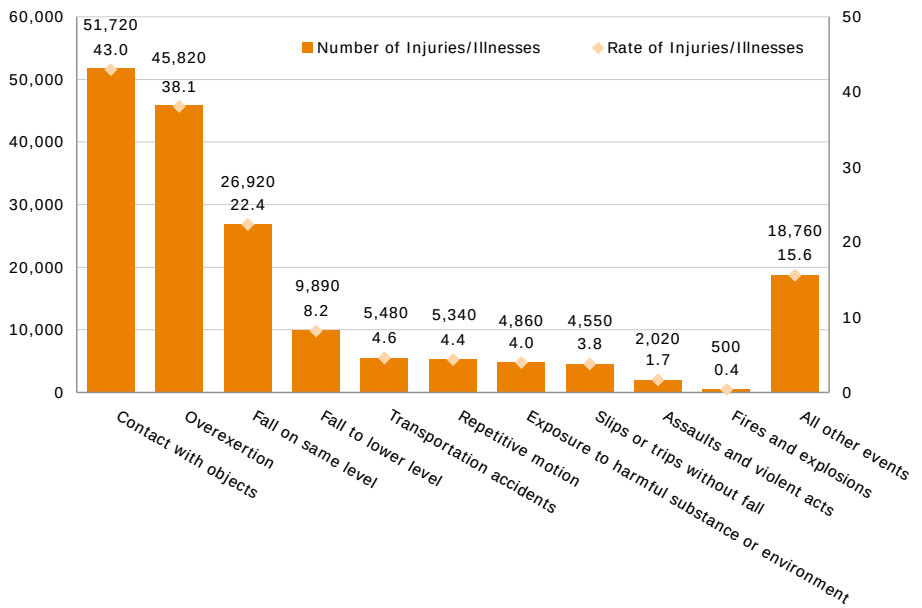


Figure 3.6. Numbers and rates (per 10,000 workers) of nonfatal injury/illness cases involving days away from work by event/exposure, retail trade sector, 2005.



industry overall. Rates of injury/illness from falls on the same level were higher in retail, and rates of injury/illness from transportation incidents were higher in wholesale, than the counterpart rates for all private industries combined.

Numbers and Rates of Nonfatal Injuries/Illnesses by Events/Exposures in Wholesale Trade and Retail Trade *(Figures 3.5 and 3.6)*

In wholesale trade, rates of injury/illness from overexertion (41.7 cases per 10,000 workers) and contact with object/equipment (39.0) were similar to the rates in retail trade (38.1 and 43.0, respectively), although the numbers of injuries/illnesses resulting from these events were more than doubled in retail. Rates showed much wider differences for transportation incidents (11.6 in wholesale; 4.6 in retail), and falls on same level (22.4 in retail; 15.6 in wholesale).

Numbers and Rates of Nonfatal Injuries/Illnesses by Nature of Injury in U.S. Private Industry, Wholesale Trade, and Retail Trade *(Figure 3.7 and 3.8)*

Sprains and strains were by far the leading nature of injury/illness experienced by all U.S. workers across private industry in 2005. Rates of days away from work for sprain/strain injuries among WRT workers were well above the private industry average in 2005.

Figure 3.7. Incidence rates (per 10,000 workers) for nonfatal occupational injuries/illnesses involving days away from work by nature of injury/illness, U.S. private industry, wholesale trade, and retail trade, 2005.

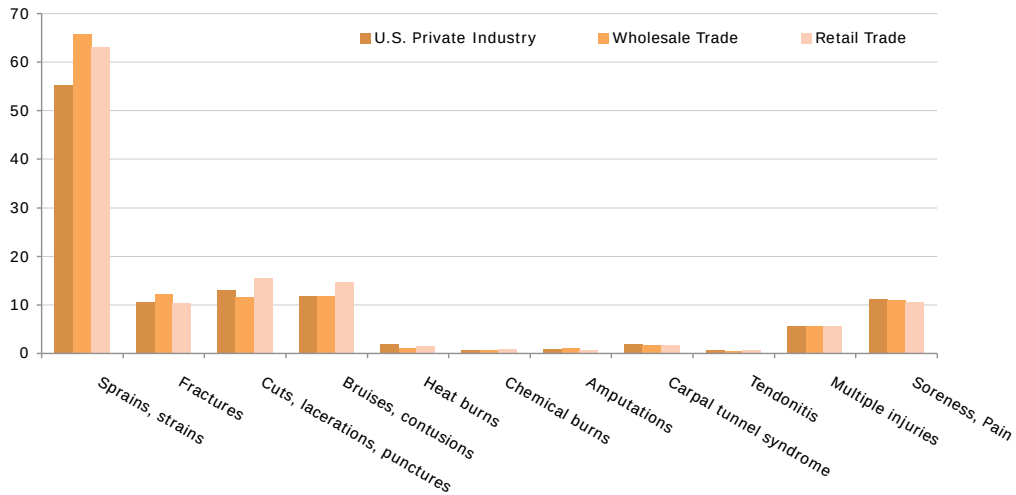


Figure 3.8. Numbers of nonfatal injury/illness cases by nature of injury/illness, wholesale trade and retail trade, 2005.

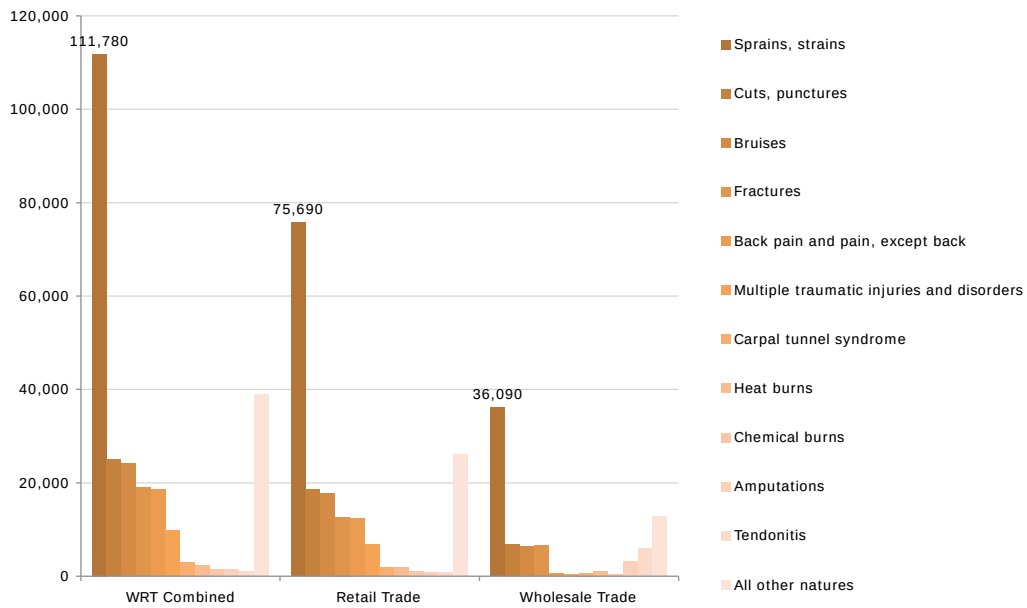


Figure 3.9. Numbers and rates (per 10,000 workers) of nonfatal injury/illness cases involving days away from work by nature of injury, wholesale trade sector, 2005.

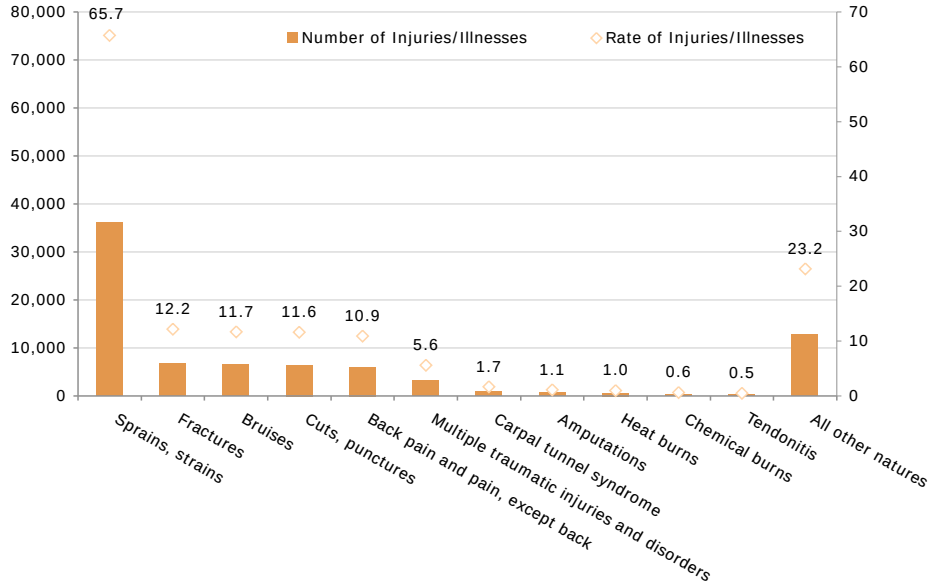
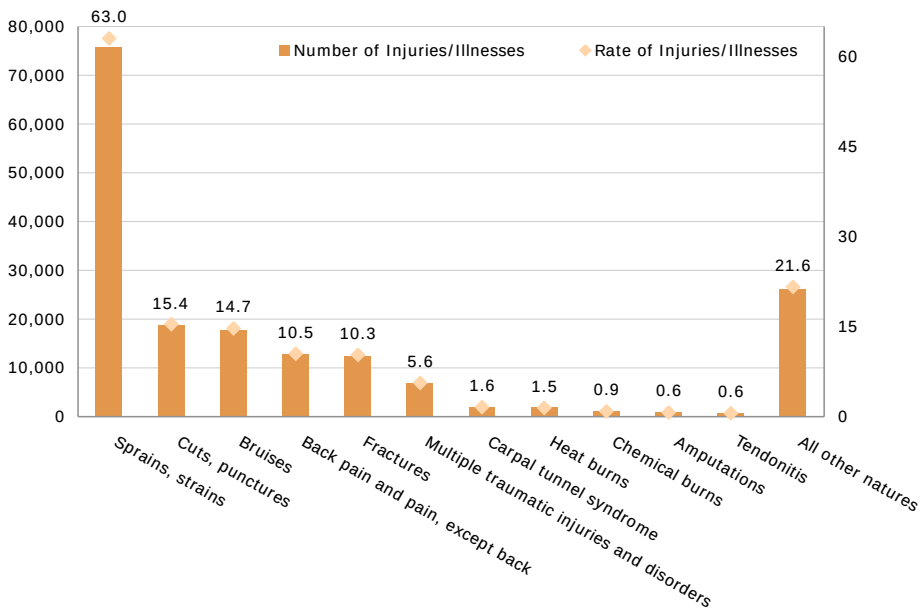


Figure 3.10. Numbers and rates (per 10,000 workers) of nonfatal injury/illness cases involving days away from work by nature of injury, retail trade sector, 2005.



Numbers and Rates of Nonfatal Injuries/Illnesses by Selected Nature of Injury Categories in Wholesale Trade and Retail Trade *(Figures 3.9 and 3.10)*

Although sprains/strains were the predominant type of nonfatal injury/illness for both retail and wholesale tradeworkers, wholesale workers experienced a higher rate of fractures than retail workers. Rates among retail workers exceeded those for wholesale workers for cuts, punctures (15.4 and 11.6, respectively) and bruises (14.7 and 11.7, respectively).

Rates of all other natures of injury/illness were similar in the two major trade sectors.

Rates of Injuries/Illnesses by Source of Injury/Illness, Private Industry, Wholesale Trade, and Retail Trade *(Figures 3.11 and 3.12)*

Wholesale and retail trade operations are centered upon the movement and storage of products. It is no surprise that containers was the source of injury/illness category most often associated with nonfatal injuries/illnesses. Rates of injury/illness in both the wholesale and retail sectors where the source of injury/illness was container was nearly double the private industry rate. The rate of injury/illness for which vehicles was the source of injury/illness was much higher in wholesale trade than in retail trade or in the overall private industry. Floors and other ground surfaces, and furniture/fixtures were source of injury/illness categories associated with higher rates of injury/illness in retail trade than in either wholesale trade or the U.S. private industry.

Figure 3.11. Incidence rates (per 10,000 workers) for nonfatal occupational injuries/illnesses involving days away from work by source of injury/illness, U.S. private industry, wholesale trade, and retail trade, 2005.

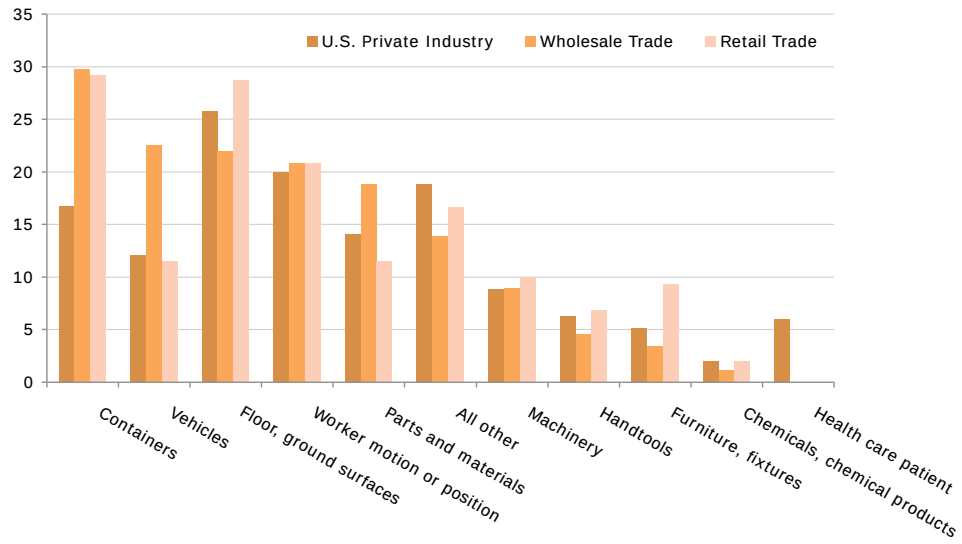


Figure 3.12. Numbers of nonfatal occupational injuries/illnesses involving days away from work by source of injury/illness, U.S. private industry, wholesale trade, and retail trade, 2005.

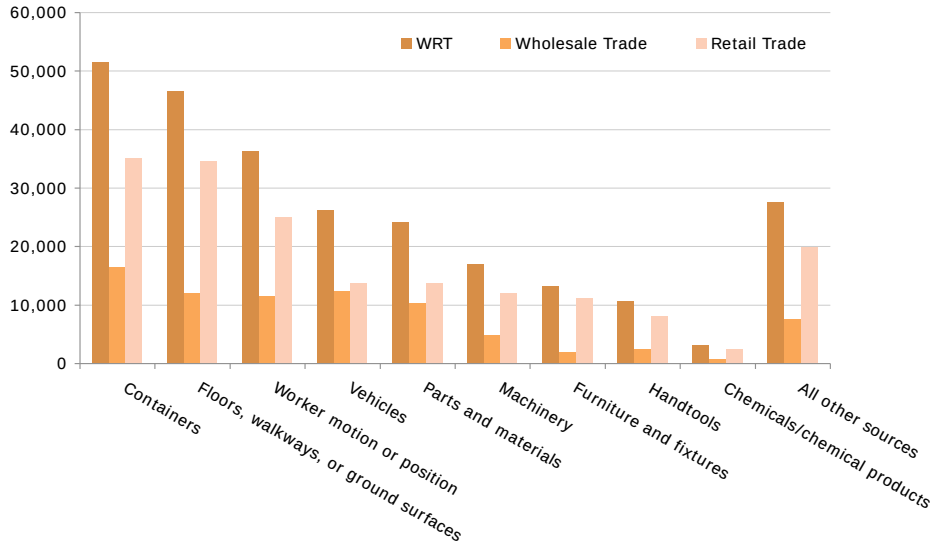


Figure 3.13. Numbers and rates (per 10,000 workers) of nonfatal injury/illness cases by source of injury, wholesale trade sector, 2005.

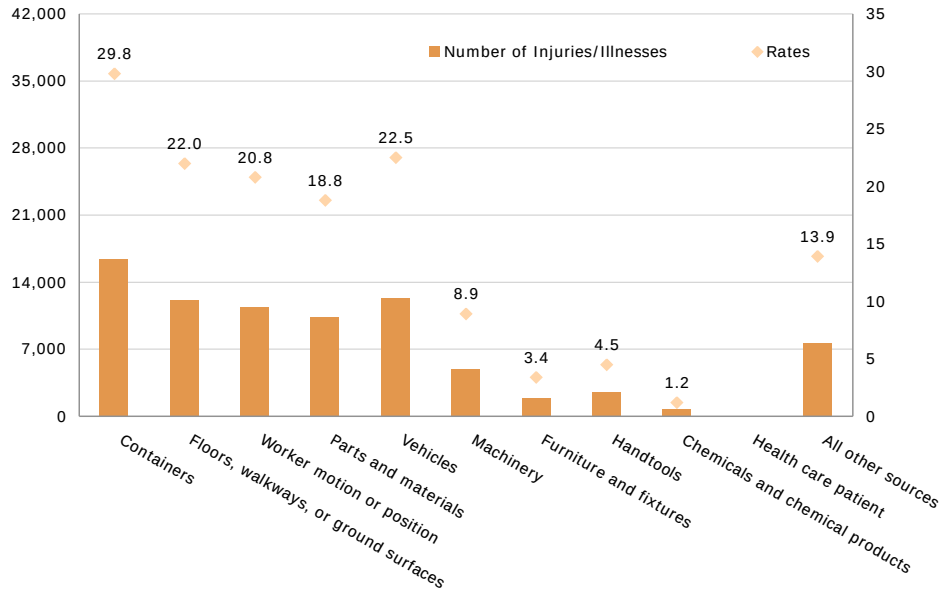
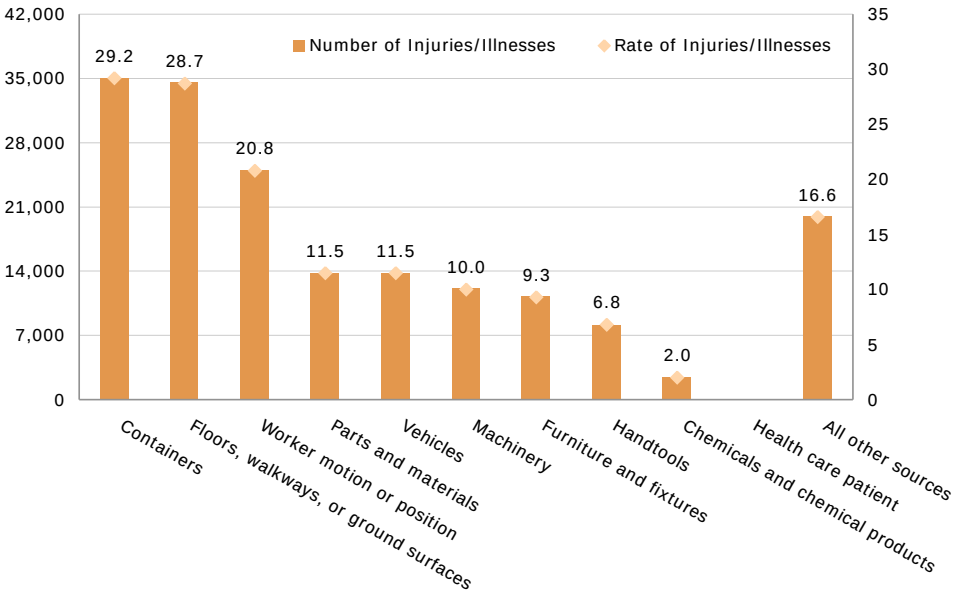


Figure 3.14. Numbers and rates (per 10,000 workers) of nonfatal injury/illness cases by source of injury, retail trade sector, 2005.



Numbers and Rates of Injuries/Illnesses by Source of Injury/Illness in Wholesale Trade and Retail Trade

(Figures 3.13 and 3.14)

Wholesale Trade

In wholesale trade, five source of injury/illness categories represented a top tier of injury/illness concerns in 2005. As previously mentioned, containers was the leading source of injury/illness in both wholesale trade and retail trade, accounting for more than 51,000 reported injuries/illnesses that resulted in days away from work and a rate of nearly 30 injury/illness cases per 10,000 workers. Other source of injury/illness categories causing elevated numbers and rates of nonfatal injuries/illnesses in wholesale trade included vehicles (12,350 injuries/illnesses; and a rate of 22.5/10,000 workers); floors, walkways, or ground surfaces (12,090; 22.0); worker motion or position (11,410; 20.8); and parts and materials (10,330; 18.8).

Retail Trade

In retail trade, although vehicles and parts and materials account for slightly more injuries/illnesses than in wholesale trade, the rates for these sources of injury/illness were substantially lower in retail trade as a result of the much larger working population. On the other hand, the retail trade sector had higher rates for floors, walkways, or ground surfaces as a source of injury/illness, which is consistent with the higher number and rate of injuries from falls to same level (see Figures 3.5 and 3.6).

Rates and Percentages of Injuries/Illnesses by Detailed Body Part Injured in Private Industry, Wholesale Trade, and Retail Trade *(Figures 3.15 and 3.16)*

Workers in both the wholesale and retail trade sectors experienced higher rates of injury than those in private industry in general for the back, the shoulder, and other parts of the trunk; the knee, the foot/toe, and other lower extremities; the head other than eyes; the upper extremities other than the finger, wrist, and hand; and the neck. The retail sector experienced higher rates and the wholesale sector lower rates than private industry for injuries to the finger, hand, and wrist. Private industry in general had higher injury rates than either wholesale or retail trade for the eyes, body systems, and multiple body parts.

Back injuries accounted for between 20 and 25% of all injuries/illnesses in wholesale trade, retail trade, and private industry in general, followed by injuries to the lower extremities (other than knee or foot/toe), fingers, knees and multiple parts, each of which represented nearly 10% of all injuries in each sector. Injuries to the trunk (other than back), the shoulder, and upper extremities (other than the finger, hand, and wrist) each accounted for greater than 5% of injuries/illnesses in each sector.

Figure 3.15. Incidence rates (per 10,000 workers) for nonfatal occupational injuries/illnesses involving days away from work by detailed body part injured, U.S. private industry, wholesale trade, and retail trade, 2005.

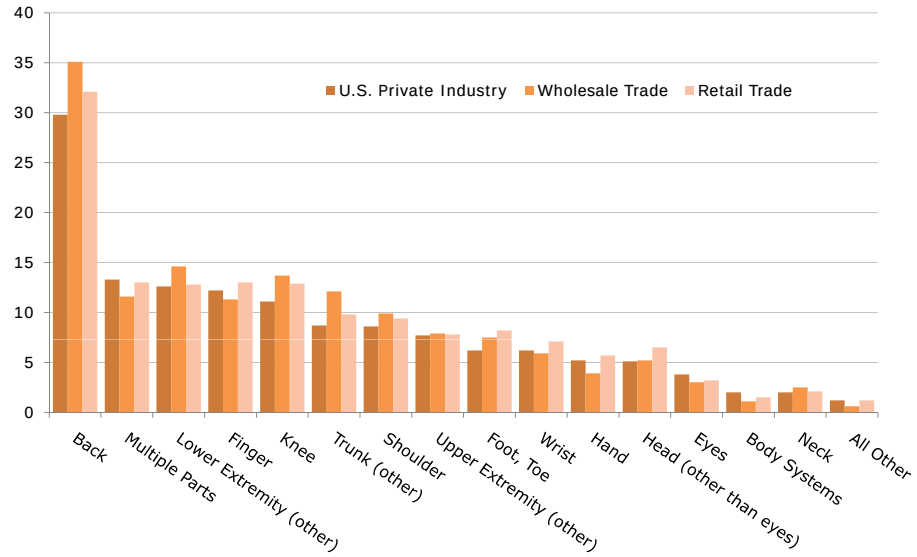


Figure 3.16. Percentage of total nonfatal injuries/illnesses involving days away from work by detailed body part injured, U.S. private industry, wholesale trade, and retail trade, 2005.

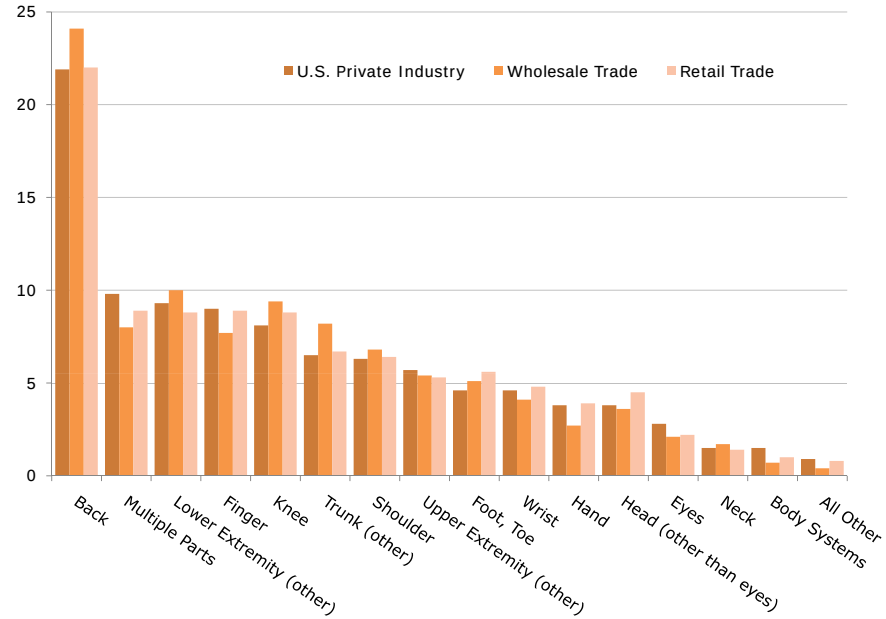


Figure 3.17. Numbers and rates (per 10,000 workers) of nonfatal occupational injuries/illnesses involving days away from work by selected body parts injured, wholesale trade, 2005.

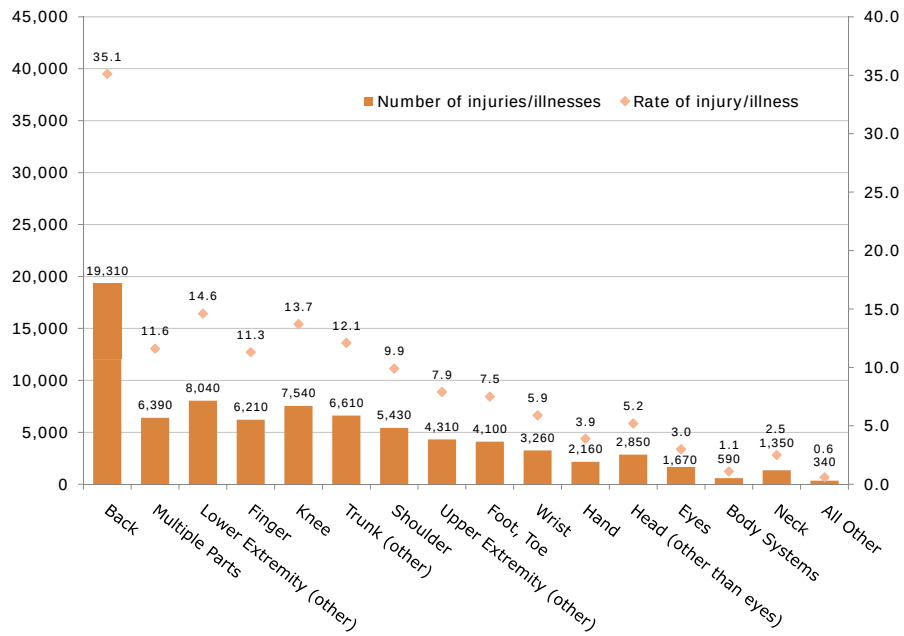
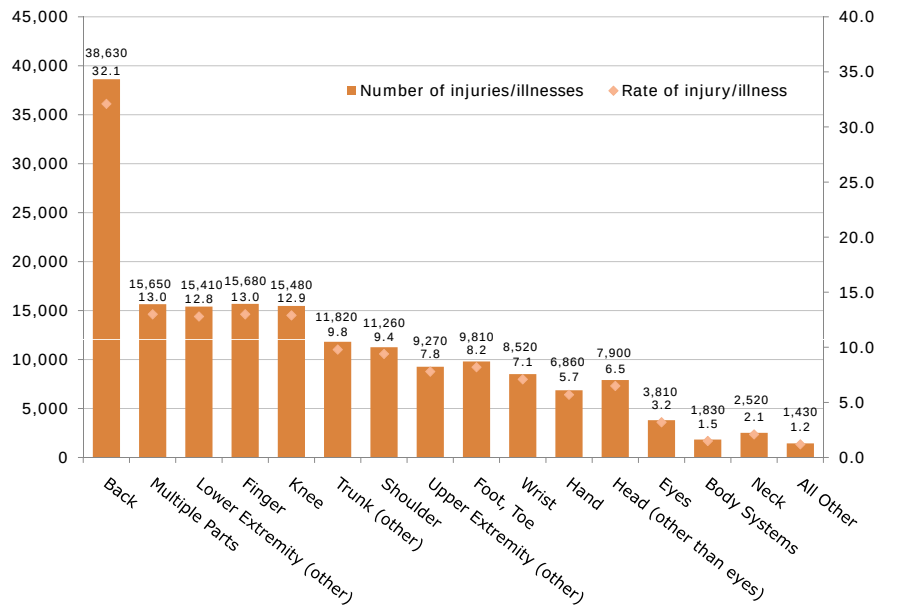


Figure 3.18. Numbers and rates (per 10,000 workers) for nonfatal occupational injuries/illnesses involving days away from work by selected body parts injured, retail trade, 2005.



Numbers and Rates of Nonfatal Injuries/Illnesses by Detailed Body Part Categories in U.S. Private Industry, Wholesale Trade, and Retail Trade

(Figures 3.17 and 3.18)

The prevalence of sprain/strain injuries noted earlier (see Figures 3.7–3.10) coupled with the high numbers and rates of back, trunk (other than back), knee, finger, and other extremity injuries, is consistent with the WRT sector's focus on moving and storing products. Manual and mechanical methods of handling products both produce inherent risks of acute traumatic injuries and musculoskeletal disorders related to overexertion, repeated trauma, and awkward body positions and movement during product-handling tasks.

Nonfatal Injuries/Illnesses by Gender in Wholesale Trade, Retail Trade and U.S. Private Industry

(Figures 3.19 and 3.20)

As noted in Chapter 1, male and female workers in retail trade are nearly equally distributed. However, about 70% of workers in wholesale trade are male (Figure 1.7). Not surprisingly, the injuries and illnesses by gender for the period 2003–2005 reflect this difference in gender distribution. Males experienced from 85%–88% of the nonfatal injuries/illnesses resulting in DAW in wholesale trade and about 60% in retail trade within the same time frame.

In private industry overall, males experienced about 65%–66% of injuries/illnesses. If data from wholesale and retail are combined, the resultant distribution of injuries/illnesses experienced by males ranges from about 67%–69%, a figure that more closely lines up with the private industry distribution.

Two additional findings of note are that (1) males were overrepresented among injury/illness cases in both wholesale and retail trade, as they were in private industry in general, and (2) injuries/illnesses for both males and females in private industry and retail trade appeared to trend downward from 2003 to 2005; in wholesale trade, no trend was apparent.

Figure 3.19. Numbers of nonfatal injury/illness cases involving days away from work by gender, wholesale and retail trade, 2003–2005.

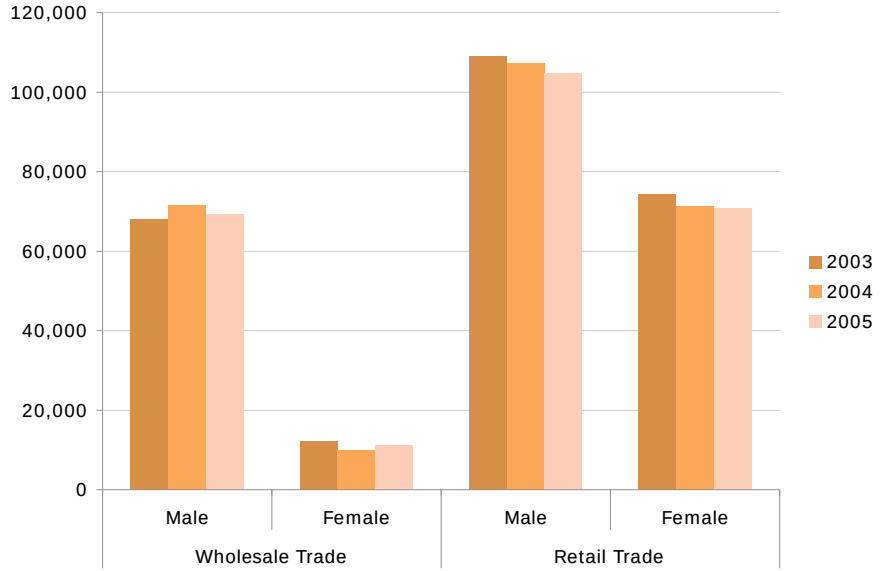


Figure 3.20. Numbers of nonfatal injury/illness cases involving days away from work by gender, U.S. private industry, 2003–2005.

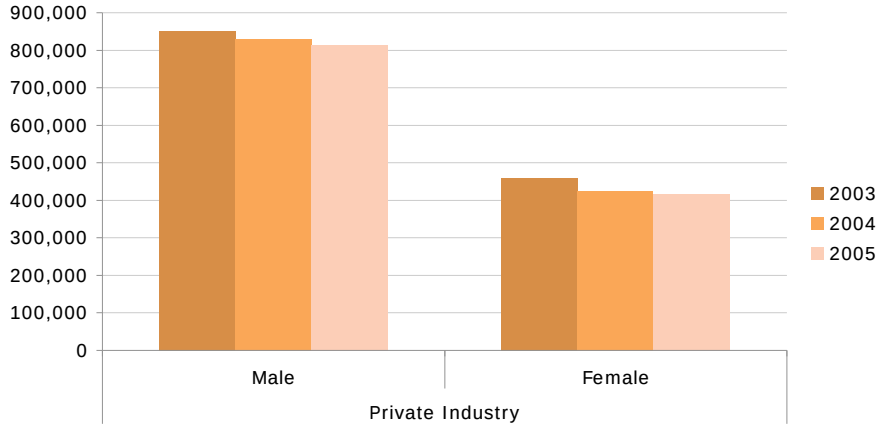


Figure 3.21. Distribution of nonfatal injury/illness cases involving days away from work by gender, U.S. private industry, wholesale trade, and retail trade, 2005.

** Gender was not reported in 4,540 cases for U.S. Private Industry, nor in 380 cases for Retail Trade.*

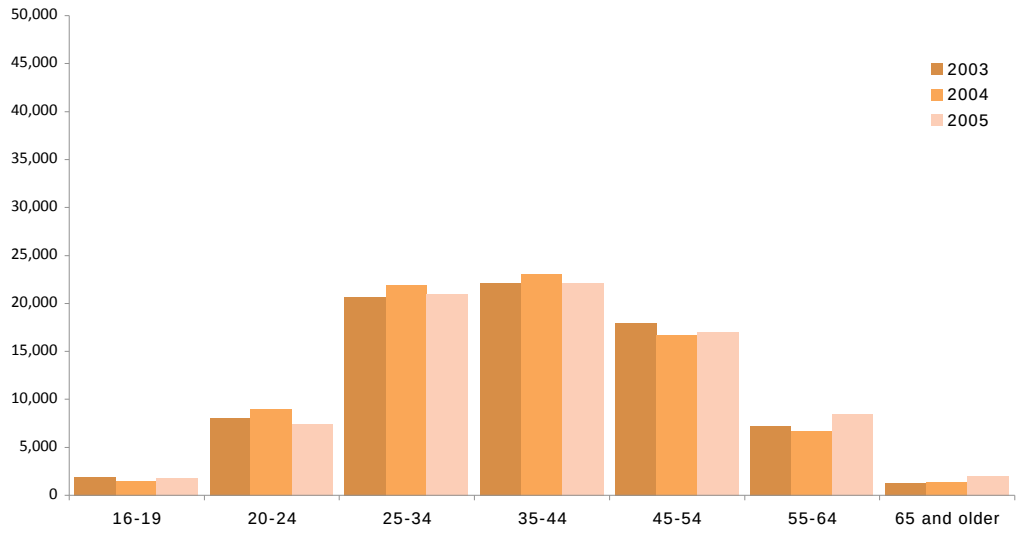
Gender Distribution of Nonfatal Injuries/Illnesses Involving Days Away from Work in U.S. Private Industry, Wholesale Trade, and Retail Trade *(Figure 3.21)*

Figure 3.21 is comparable with Figure 2.8 in Chapter 2 of this Chartbook. Figure 2.8 shows the distribution of fatal injuries by gender for the two major sectors within WRT and private industry. The distribution of nonfatal injuries/illnesses by gender is similar to the distribution of fatal injuries by gender when differences are noted among wholesale, retail, and overall private industry populations. However, the nonfatal injury/illness by gender experience is much different when the relative proportion of females is considered. Female workers experience a much larger share of nonfatal injuries/illnesses than of fatal injuries. As seen above (for the year 2005), females experienced between about 14%–40% of nonfatal injuries/illnesses with DAW. On the other hand, female workers experienced only 4%–14% of the fatal injuries experienced in 2005 within wholesale trade, retail trade, and private industry overall.

Nonfatal Injuries/Illnesses by Age in Wholesale Trade *(Figure 3.22)*

As with the distribution of injuries/illnesses by gender, the distribution by age group reflects differences (noted in Chapter 1, Figure 1.5) in the distribution of the workforce by age between wholesale trade and retail trade. The distribution of workers by age in wholesale trade, as well as the distribution of nonfatal injury/illness by age, is similar to the distributions seen in private industry overall (not shown in figure). Wholesale trade has proportionately fewer younger and older workers than retail trade, and proportionately fewer nonfatal injuries and illnesses among younger and older workers, as well.

Figure 3.22. Numbers of nonfatal injury/illness cases involving days away from work by age, wholesale trade, 2003–2005.



Nonfatal Injuries/Illnesses by Age in Retail Trade

(Figure 3.23)

The nonfatal injuries/illnesses experienced in the retail trade sector are somewhat more evenly distributed across age groups than those in wholesale trade. The only potential trend that might be noted in Figures 3.22 and 3.23 is that injuries/illnesses appear to be decreasing slightly in the age groups representing workers 20–44 years of age, while increasing slightly for the 16–19-year-olds and groups age 55 and older. The effect is a more evenly distributed injury/illness pattern across age groups.

Figure 3.23. Numbers of nonfatal injury/illness cases involving days away from work by age, retail trade, 2003–2005.

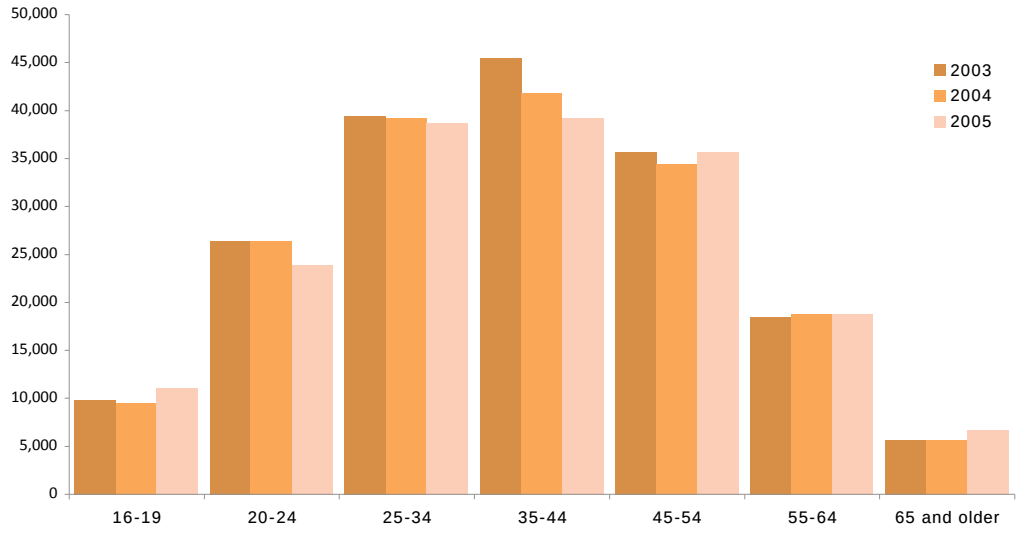
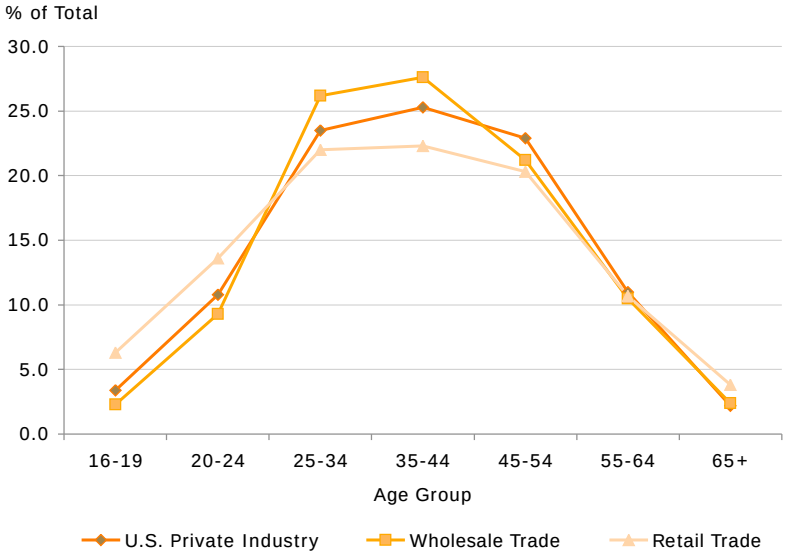


Figure 3.24. Percentage of nonfatal injury/illness cases involving days away from work by age, U.S. private industry, wholesale trade, and retail trade, 2005.

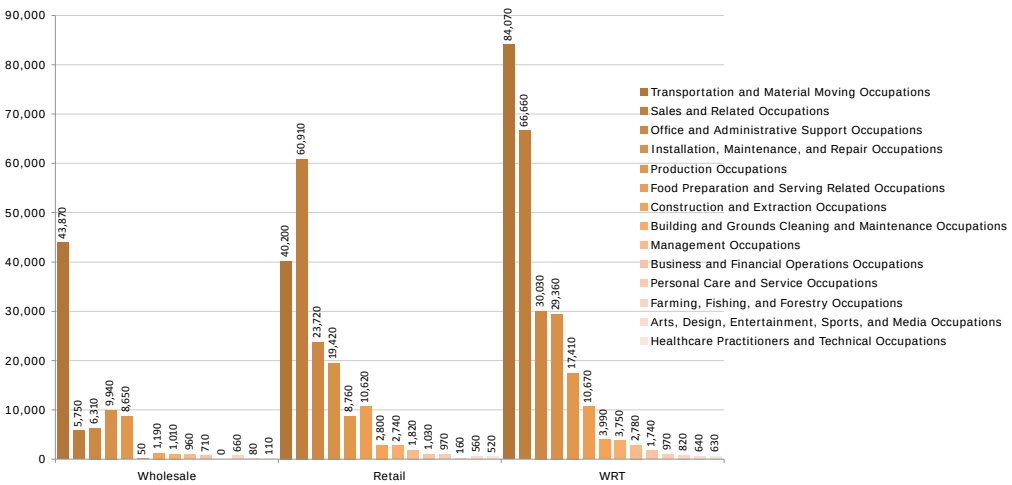


Nonfatal Injuries/Illnesses by Age in U.S. Private Industry, Wholesale Trade, and Retail Trade, 2005

(Figure 3.24)

In 2005 workers younger than 25 represented 11.6% of all nonfatal injuries/illnesses in wholesale trade and nearly 20% in retail trade. Workers age 25–54 years suffered 75% of the nonfatal injuries/illnesses in wholesale trade, but just 64.6% in retail. The distribution of injuries/illnesses by age in the private industry was more closely aligned with the wholesale trade sector. For example, in private industry, the percentage of nonfatal injury/illness cases involving workers younger than 25 years of age was 14.2%, and the percentage of cases involving workers age 25-54 years was 71.6%.

Figure 3.25. Nonfatal injury/illness cases involving days away from work by major occupational groups, wholesale trade, retail trade, and wholesale and retail trade combined, 2005.



Nonfatal Injuries/Illnesses by Major Occupational Groups in Wholesale and Retail Trade *(Figure 3.25)*

A large proportion of the nonfatal injuries/illnesses experienced in retail trade involved two major occupational groups: sales and related occupations and transportation and material moving occupations. In wholesale, the transportation and material moving occupations suffered the majority of the injuries/illnesses. In WRT combined, transportation and material moving workers had the most injuries, followed by sales and related occupations. Other major occupational groups that incurred injuries/illnesses in WRT include office and administrative support; installation, maintenance, repair; production; and food preparation and service.

Nonfatal Injuries/Illnesses Involving Days Away from Work by Detailed Occupation in Wholesale Trade

(Table 3.3)

Workers in one detailed occupational group—laborers and freight, stock, and material movers, hand—suffered 20,170 reported injuries/illnesses with DAW in 2005, more than double the injuries/illnesses with DAW suffered by truck drivers, heavy and tractor-trailer (9,060). Other detailed occupational groups accounting for high numbers of injuries/illnesses included truck drivers, light and delivery services (7,430); driver/sales workers (3,910); shipping, receiving, and traffic clerks (3,270). Production workers, sales representatives, and mechanics were among other detailed occupations incurring a high number of injuries/illnesses in wholesale trade.

Table 3.3. Number of nonfatal injuries/illnesses with days away from work by detailed occupations in wholesale trade, 2005.

Detailed Occupation	Occupation Code	Number of Injuries/ Illnesses with DAW
Laborers and freight, stock, and material movers, hand	53-7062	20,170
Truck drivers, heavy and tractor-trailer	53-3032	9,060
Truck drivers, light and delivery services	53-3033	7,430
Driver/sales workers	53-3031	3,910
Shipping, receiving, and traffic clerks	43-5081	3,270
Production workers, all other	51-9199	2,810
Sales representatives, wholesale and manufacturing, except technical and scientific products	41-4012	2,700
Maintenance and repair workers, general	49-9042	2,510
Industrial machinery mechanics	49-9041	1,730
Assemblers and fabricators, all other	51-2099	1,360
Sales representatives, wholesale and manufacturing, technical and scientific products	41-4011	1,110
Industrial tractor and traileroperators	53-7051	1,080

Nonfatal Injuries/Illnesses Involving Days Away from Work by Detailed Occupation in Retail Trade *(Table 3.4)*

Retail salespersons suffered the highest number (30,600) of injuries/illnesses with DAW in retail trade in 2005, followed by laborers and freight, stock, material movers, hand (21,120); First-line supervisors/managers of retail sales workers (15,140); and stock clerks and order fillers (15,010). Cashiers, except gaming (12,440) and automotive service technicians and mechanics (9,520) also accounted for high numbers of injuries/illnesses with DAW.

Table 3.4. Number of nonfatal injuries/illnesses with days away from work by detailed occupations in retail trade, 2005.

Detailed Occupation	Occupation Code	Number of Injuries/ Illnesses with DAW
Retail salespersons	41-2031	30,600
Laborers and freight, stock, material movers, hand	53-7062	21,120
First-line supervisors/managers of retail sales workers	41-1011	15,140
Stock clerks and order fillers	43-5081	15,010
Cashiers, except gaming	41-2011	12,440
Automotive service technicians and mechanics	49-3023	9,520
Combined food preparation and serving	35-3021	6,910
Cleaners of vehicles and equipment	53-7061	6,660
Truck drivers, heavy and tractor-trailers	53-3032	4,460
Butchers and meat cutters	51-3021	3,230
Customer service representatives	43-4051	2,690
Shipping, receiving, and traffic clerks	43-5071	2,670
Tire repairers and changers	49-3093	2,380
Maintenance and repair workers, general	49-9042	2,010

Figure 3.26. Numbers of nonfatal injury/illness cases involving days away from work by race/ethnicity, wholesale trade, 2003–2005.

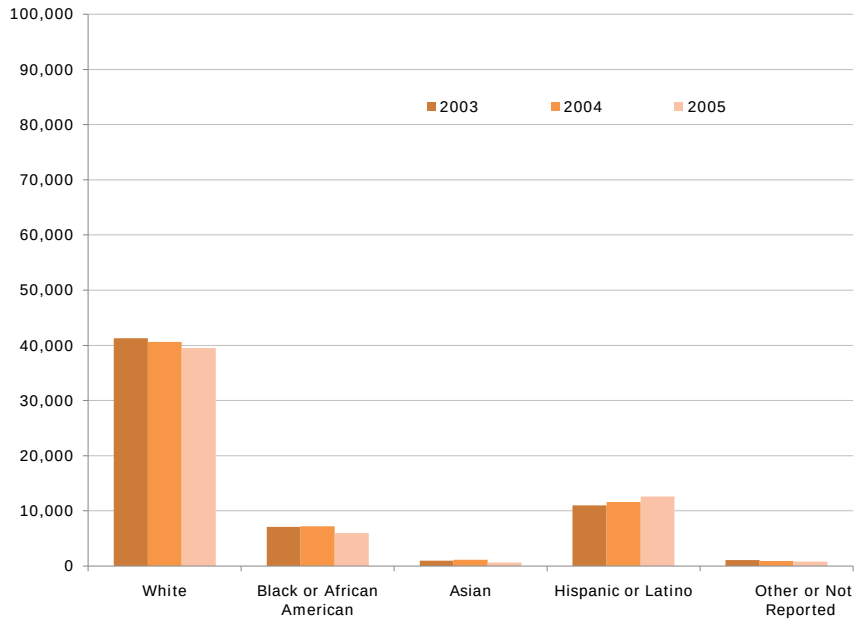
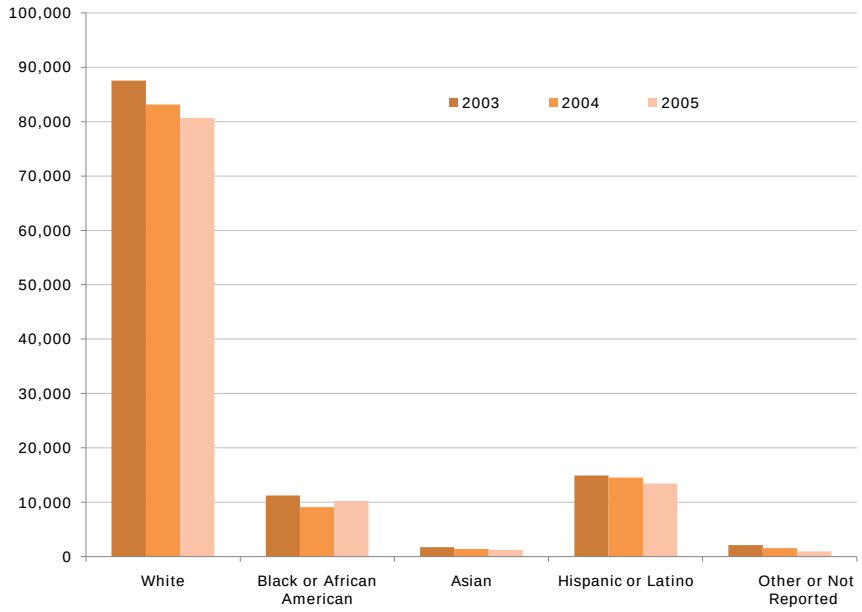


Figure 3.27. Numbers of nonfatal injury/illness cases involving days away from work by race/ethnicity, retail trade, 2003–2005.



Nonfatal Injuries/Illnesses by Race/Ethnicity in Wholesale Trade and Retail Trade *(Figures 3.26 and 3.27)*

In 2005, 66.6% of the nonfatal occupational injuries/illnesses resulting in DAW were suffered by white workers. Hispanic or Latino workers accounted for 21.3% of the nonfatal injuries/illnesses, and blacks or African Americans incurred 10.0%. The only potential trends evident in the 2003–2005 data indicate a decrease in the number of injuries/illnesses incurred by white workers, and an increase in the number of injuries/illnesses incurred by Hispanic or Latino workers.

In retail trade in 2005, 75.8% of all nonfatal occupational injuries/illnesses resulting in DAW were suffered by white workers, and Hispanic or Latino and black or African American workers accounted for 12.6% and 9.6% of all such injuries/illnesses, respectively. Trends indicate an overall decline in nonfatal injuries/illnesses involving DAW in retail trade.

The distribution of nonfatal injuries/illnesses with DAW among race/ethnicity categories was similar for wholesale trade and private industry overall. The distribution in retail trade differed slightly, as a greater percentage of white workers were reported with injuries/illnesses involving DAW (75.2% of all injuries/illnesses with DAW) than for either wholesale trade (66.6%) or all private industry (66.8%). Correspondingly, for retail trade, there was a smaller percentage of cases reported for blacks or African Americans (9.2%) and Hispanics or Latinos (12.9%) than reported for wholesale trade (11.1% and 19.3%, respectively) or all private industry (11.8% and 18.3%, respectively). In a very high percentage

of cases of nonfatal injury/illness with DAW, race/ethnicity was not reported. The percentage of cases without race/ethnicity data ranged from 24.6% in wholesale trade to 30.2% in all private industry and 37.9% in retail trade. (Data for private industry not shown in Figures 3.26 and 3.27.)

Numbers of Nonfatal Injuries/Illnesses by State in Wholesale Trade *(Figure 3.28)*

California reported the highest number of nonfatal injuries/illnesses in wholesale trade in 2005 (27,600), followed by Texas (17,500), Florida (13,200), Illinois (11,400), New Jersey (9,800), and New York (9,800). Among the states for which data were provided, Alaska (400 cases), Delaware (400), Vermont (600), Wyoming (600), Hawaii (800), Montana (900), and Rhode Island (900) reported the lowest number of wholesale trade injuries/illnesses.

Numbers of Nonfatal Injuries/Illnesses by State in Retail Trade *(Figure 3.29)*

The states with the highest numbers of nonfatal injury/illness cases in retail trade in 2005 were California (73,700), Florida (48,800), and Texas (40,500). Among the next tier of states with high numbers of nonfatal injuries/illnesses were New York (25,400) and Illinois (22,500). Among the states for which data were provided, those reporting the fewest injuries/illnesses were Washington (100), District of Columbia (400), Wyoming (1,200), Alaska (1,700), and Vermont (1,900).

Figure 3.28. Numbers of nonfatal injury/illness cases involving days away from work by state, wholesale trade, 2005.

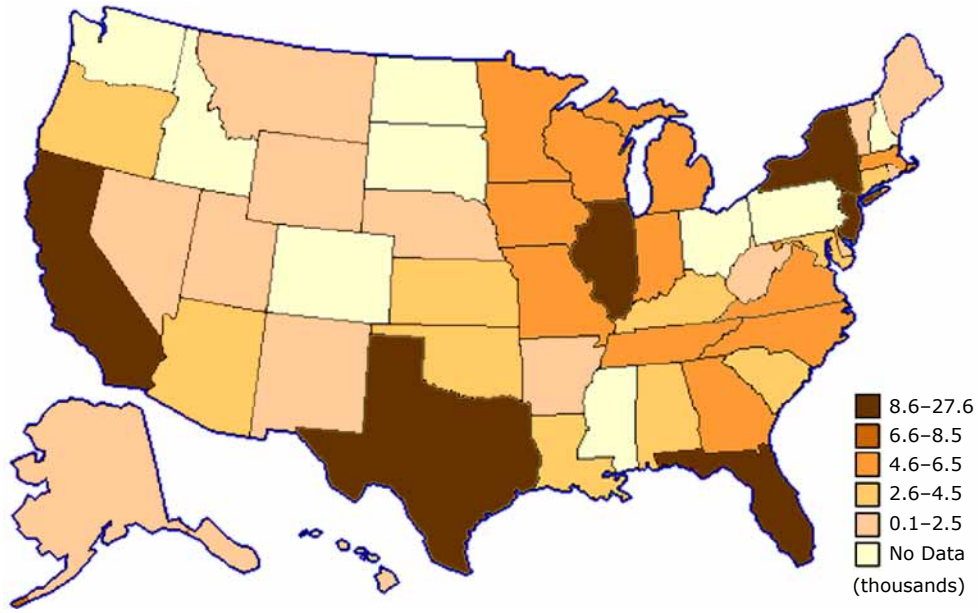


Figure 3.29. Numbers of nonfatal injury/illness cases involving days away from work by state, retail trade, 2005.

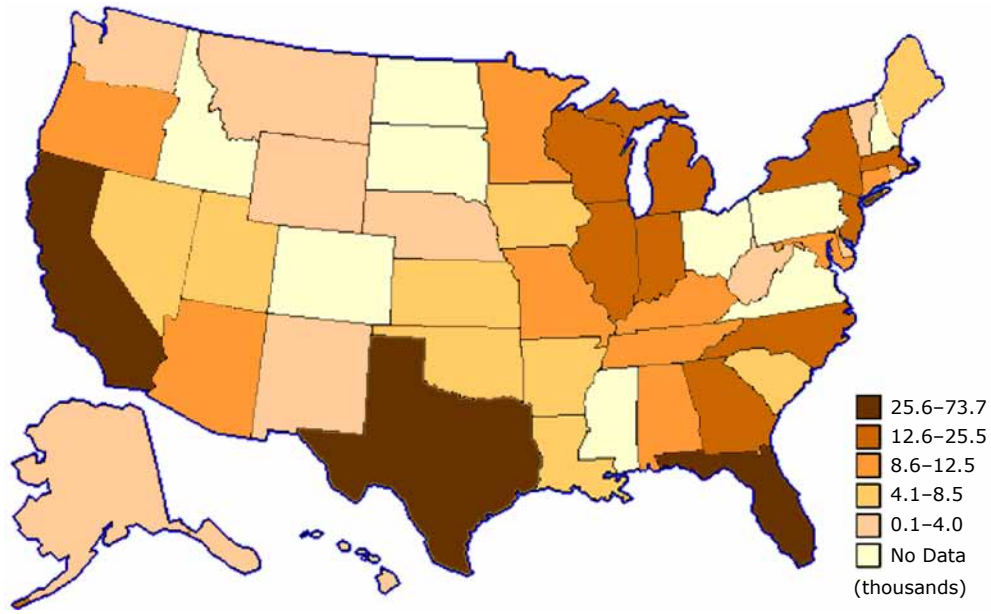


Figure 3.30. Rates (per 10,000 workers) of nonfatal injury/illness cases by state, wholesale trade, 2005.

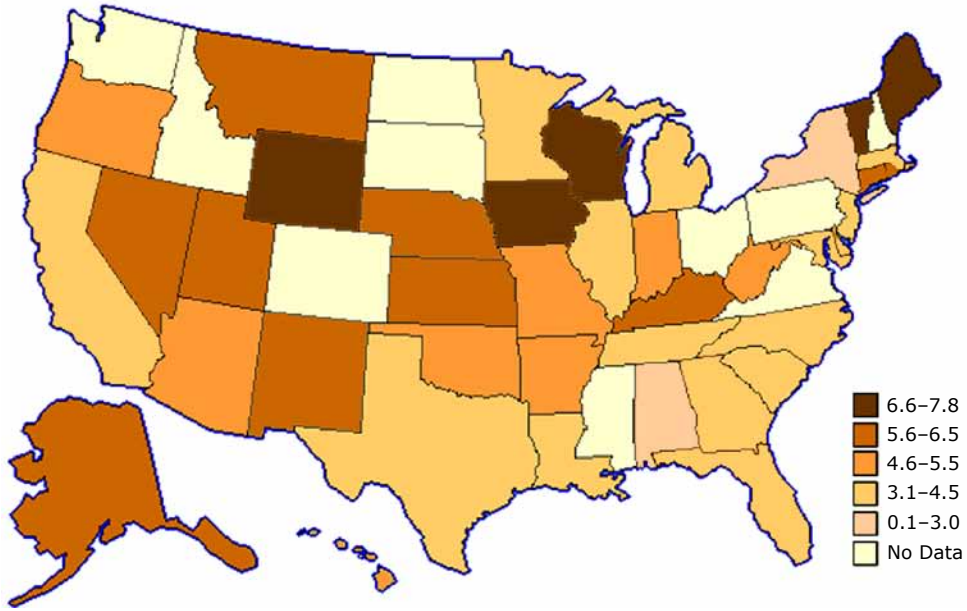
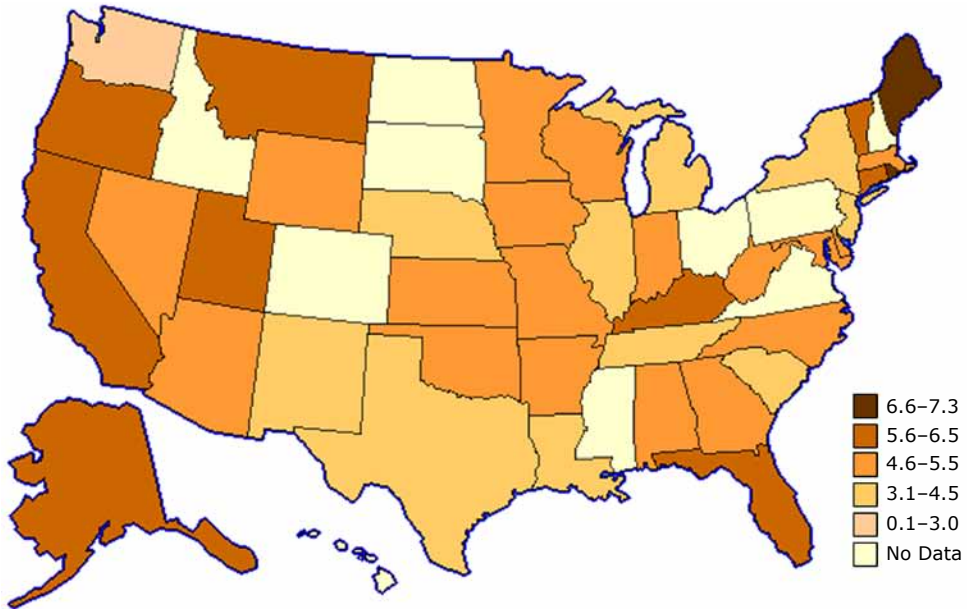


Figure 3.31. Rates (per 10,000 workers) of nonfatal injury/illness cases by state, retail trade, 2005.



Rates of Nonfatal Injuries/Illnesses by State in Wholesale Trade *(Figure 3.30)*

High rates for the wholesale trade sector were found in Maine (7.8), Wyoming (7.3), Iowa (7.2), Wisconsin (7.1), and Vermont (6.8). Lowest rates were experienced in Alabama (2.3), New York (3.0), Delaware (3.1), Louisiana (3.7), North Carolina (3.8), and Texas (3.8).

Rates of Nonfatal Injuries/Illnesses by State in Retail Trade *(Figure 3.31)*

The states with the highest rates of nonfatal injuries/illnesses in retail trade in 2005 were Maine (7.3) and Rhode Island (6.9), followed by Connecticut, Montana, Utah, and Vermont (all with rates of 5.9). The lowest rate where data were available was found in Washington (1.4). Other low-rate states were New York (3.9) and Texas (4.3), as well as Nebraska, New Jersey, and Tennessee (all 4.4).

Injuries, Illnesses, and Nonclassifiable Injury/Illness Cases with DAW in U.S. Private Industry, Wholesale Trade, and Retail Trade *(Table 3.5)*

In 2005, injuries with DAW accounted for about 93% of all injury/illness cases with DAW; whereas, illnesses with DAW accounted for less than 7% of all cases reported (about 0.5% were nonclassifiable).

2-, 3-, and 4-digit Nature of Illness Categories Reported in U.S. Private Industry, Wholesale Trade, and Retail Trade *(Table 3.6)*

Of the illnesses reported in wholesale and retail trade in 2005, the highest percentage were digestive system diseases and disorders (42.8% in wholesale, 30.1% in retail). All of these digestive system illnesses were hernias, with the vast majority reported as inguinal or unspecified hernias. Inguinal hernias are often caused by the lifting of heavy objects, a common task performed by workers in wholesale and retail trade businesses. Nervous system and sense organ diseases also occurred frequently in wholesale and retail trade and private industry in general, particularly carpal tunnel syndrome, which accounted for 20% of the illness cases in private industry, 18.5% of the cases in wholesale trade, and 16.8% of the cases in retail trade. Musculoskeletal system and connective tissue diseases and disorders were the third most frequent illnesses, representing 17.3% of private industry cases, 14.4% of wholesale trade cases, and 17.6% of retail trade cases.

Table 3.5. Injury, illness, and nonclassifiable cases involving days away from work in U.S. private industry, wholesale trade, and retail trade, 2005.

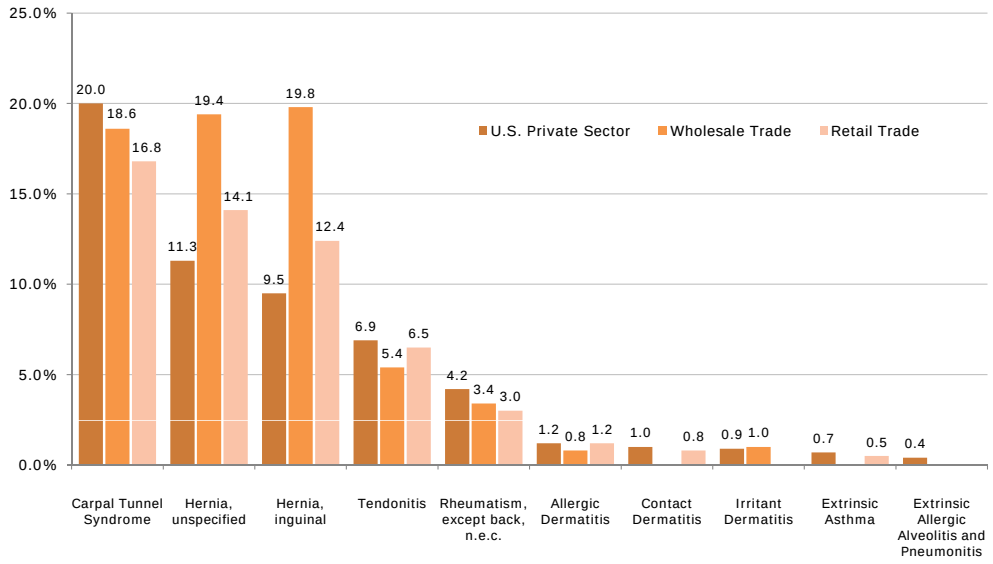
Industry Sector	All Traumatic Injuries w/DAW	% of Total	All Illnesses w/DAW	% of Total	Nonclassifiable	% of Total	Total Injuries/Illnesses w/DAW
All U.S. Private Industry	1,145,900	92.8%	82,480	6.7%	6,290	0.5%	1,234,670
Wholesale Trade	74,910	93.4%	5,000	6.2%	260	0.3%	80,170
Retail Trade	163,620	93.0%	11,410	6.5%	840	0.5%	175,870
Total WRT	238,530	93.2%	16,410	6.4%	1,100	0.4%	256,040

Table 3.6. Distribution (%) of illnesses involving days away from work by nature of illness categories reported in U.S. private industry, wholesale trade, and retail trade, 2005.

2-, 3-, and 4-digit Nature of Illness categories		% of All U.S. Private Industry Illness cases w/DAW	% of All Wholesale Trade Illness cases w/DAW	% of All Retail Trade Illness cases w/DAW
oiics code	*Description*			
12xxxx	Nervous system and sense organ diseases	26.7%	22.4%	21.6%
124xxx	Disorders of the Peripheral Nervous System	20.8%	20.0%	17.3%
1241xx	*Carpal Tunnel Syndrome*	*20.0%*	*18.6%*	*16.8%*
15xxxx	Digestive system diseases and disorders	24.8%	42.8%	30.1%
153xxx	Hernia	24.8%	42.8%	30.1%
1530xx	*Hernia, unspecified*	*11.3%*	*19.4%*	*14.1%*
1531xx	*Hernia, inguinal*	*9.5%*	*19.8%*	*12.4%*
17xxxx	Musculoskeletal system and connective tissue diseases and disorders	17.3%	14.4%	17.6%
173xxx	Rheumatism, except back	15.0%	12.0%	15.4%
1733xx	*Tendonitis*	*6.9%*	*5.4%*	*6.5%*
1739xx	*Rheumatism, except back, n.e.c.*	*4.2%*	*3.4%*	*3.0%*
41xxxx	Symptoms	15.4%	14.2%	20.1%
411xxx	General Symptoms	5.5%	2.8%	7.3%
412xxx	Symptoms involving nervous system	3.5%	5.0%	5.9%
416xxx	Symptoms involving respiratory system and chest	2.5%	2.8%	2.5%
18xxxx	Disorders of the skin and subcutaneous tissue	6.1%	2.8%	2.9%
182xxx	Dermatitis	3.8%	2.0%	1.6%
1823xx	*Allergic Dermatitis*	*1.2%*	*0.8%*	*1.2%*
1822xx	*Contact Dermatitis*	*1.0%*	*...*	*0.8%*
1824xx	*Irritant Dermatitis*	*0.9%*	*1.0%*	*...*
52xxxx	Mental disorders or syndromes	3.3%	0.8%	2.4%
521xxx	Anxiety, stress, neurotic disorders	3.1%	0.6%	2.2%
14xxxx	Respiratory system diseases	2.2%	0.6%	3.6%
144xxx	COPD and allied conditions	1.2%	...	2.7%
1443xx	*Extrinsic Asthma*	*0.7%*	*...*	*0.5%*
1444xx	*Extrinsic Allergic Alveolitis and Pneumonitis*	*0.4%*	*...*	*...*

Note: The acronym "oiics," column one refers to the Occupational Injury and Illnesses Classification System, see http://wwwn.cdc.gov/oiics/.

Figure 3.32. Leading nature of illness categories (4-digit) reported in U.S. private industry, wholesale trade, and retail trade, 2005.



4-digit Nature of Illness Categories Reported in U.S. Private Industry, Wholesale Trade, and Retail Trade

(Figure 3.32)

Hernias (combining the categories *hernia, inguinal* and *hernia, unspecified*) accounted for nearly 40% of all the illnesses reported in wholesale trade, over 26% of those reported in retail trade, and nearly 21% of those reported in private industry in general in 2005. Carpal tunnel syndrome was the next most frequently reported illness, accounting for 20% of all private industry cases, 18.6% of wholesale trade cases, and 16.8% of retail trade cases. Musculoskeletal disorders tendonitis and rheumatism (except back) were less frequently reported.

Chapter 3 References

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2. BLS [2005]. Injuries, Illnesses, and Fatalities. Case and Demographic characteristics for Work-related Injuries and Illnesses Involving Days Away from Work. Online at: www.bls.gov/iif/oshcdnew.htm. Resource Tables for 2005. Table R4. Number of nonfatal occupational injuries and illnesses involving days away from work by industry and selected events or exposures leading to injury or illness, 2005. Online at: www.bls.gov/iif/oshwc/osh/case/ostb1660.pdf. *(Figure 3.1, Figure 3.2, Figure 3.3, Figure 3.5, Figure 3.6)*

3. BLS [2009]. Occupational Injuries and Illnesses: Counts, Rates, and Characteristics, 2005. Table 1. Incidence rates of nonfatal occupational injuries by industry and case types, 2005. Online at: www.bls.gov/iif/oshwc/osh/os/ostb1619.pdf. *(Table 3.2)*

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5. BLS [2005]. Injuries, Illnesses, and Fatalities. Case and Demographic characteristics for Work-related Injuries and Illnesses Involving Days Away from Work. Online at: www.bls.gov/iif/oshcdnew.htm Resource Tables for 2005. Table R5. Incidence rates for nonfatal occupational injuries and illnesses involving days away from work per 10,000 full-time workers by industry and selected natures of injury or illness, 2005. Online at: www.bls.gov/iif/oshwc/osh/case/ostb1661.pdf. *(Figure 3.7, Figure 3.9, Figure 3.10)*

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7. BLS [2005]. Injuries, Illnesses, and Fatalities. Case and Demographic characteristics for Work-related Injuries and Illnesses Involving Days Away from Work. Online at: www.bls.gov/iif/oshcdnew.htm. Resource Tables for 2005. Table R.3. Number of nonfatal occupational injuries and illnesses involving days away from work by industry and selected sources of injury or illness, 2005. Online at: http://www.bls.gov/iif/oshwc/osh/case/ostb1659.pdf. Table R7. Incidence rates for nonfatal occupational injuries and illnesses involving days away from work per 10,000 full-time workers by industry and selected sources of injury or illness, 2005. Online at: http://www.bls.gov/iif/oshwc/osh/case/ostb1663.pdf. *(Figure 3.11, Figure 3.12, Figure 3.13, Figure 3.14)*

8. BLS [2005]. Injuries, Illnesses, and Fatalities. Case and Demographic characteristics for Work-related Injuries and Illnesses Involving Days Away from Work. Online at: www.bls.gov/iif/oshcdnew.htm. Resource Tables for 2005. Table R6. Incidence rates for nonfatal occupational injuries and illnesses involving days away from work per 10,000 full-time workers by industry and selected parts of body affected by injury or illness, 2005. Online at: http://www.bls.gov/iif/oshwc/osh/case/ostb1662.pdf. *(Figure 3.15, Figure 3.17, Figure 3.18)*

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13. BLS [2009]. Injuries, Illnesses, and Fatalities. Multi-Screen Data Search. Access data query table at http://www.bls.gov/iif/data.htm. Click on "Multi-Screen Data Search" button for "Nonfatal cases involving days away from work: selected characteristics (2003 forward)" database. Search on parameters: Area="00 all U.S."; Ownership= "1 Private Industry"; Data Type="6 Injury and Illness Cases"; Case Type="O Industry division or selected characteristic by detailed occupation"; Category=select "RET Industry--Retail Trade" and "WHT Industry--Wholesale Trade"; Occupation=select all detailed occupations (six-digit), excluding those that end in a "0" (zero) or an "X." Click on "Retrieve Data" button; Year: 2005. *(Table 3.3, Table 3.4)*

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17. BLS [2009]. Injuries, Illnesses, and Fatalities. Multi-Screen Data Search. Access data query

table at: http://www.bls.gov/iif/data.htm. Click on “Multi-Screen Data Search” button for “Census of Fatal Occupational Injuries (2003 forward)” database. Search on parameters: Area=”00 All U.S.”; Ownership=”1 Private Industry”; Data Type=”6 Injury and Illness Cases”; Case Type=”N Industry division or selected characteristic by detailed nature of condition”; Category=”00X All industry”, “RET Industry-Retail Trade”, and “WHT Industry-Wholesale Trade”; Nature=Select all nature categories by clicking on the first, then Shift-clicking on the last; Click on the “Retrieve Data” button; Year-2005. *(Table 3.6, Figure 3.32)*

Chapter 4

High-Risk Subsectors and Industries in Wholesale & Retail Trade

Introduction

The WRT sector is made up of 146 distinct types of business, as categorized in the NAICS. Of these, 71 are wholesale businesses and 75 are retail businesses. When the occupational injury, illness, and fatality data are compiled for the overall WRT sector, the resulting counts and rates, though useful for making general comparisons between major industry sectors (2-digit NAICS), mask the reality that certain industries within the sectors exhibit much higher counts and rates than others. The purpose of this chapter is to examine data specific to the industries within WRT in order to (1) identify those that experience higher rates and counts of occupational injuries, illnesses, and fatalities and (2) examine characteristics of the workforce and the injury, illness, and fatality outcomes for higher-risk industries. Such examination may identify factors that appear to contribute to risk and cause in the high-risk subsectors, which, in turn, may suggest prevention opportunities. BLS has identified that certain WRT industries are among the leading U.S. private sector industries for injury/illness counts (see Figure 4.1), and injury/illness rates (see Table 4.1).

High Nonfatal Injury/Illness Counts in U.S. Private Industry

(Figure 4.1)

Of the 14 U.S. subsectors and industries with at least 100,000 nonfatal occupational injuries and illnesses in 2005, 4 are WRT subsectors and industries—general merchandise stores (NAICS 452), merchant wholesalers, durable goods (NAICS 423), supermarkets and other grocery stores (NAICS 44511), and merchant wholesalers, nondurable goods (NAICS 424).

Figure 4.1. Private industry subsectors and industries with more than 100,000 nonfatal injuries/illnesses, 2005.

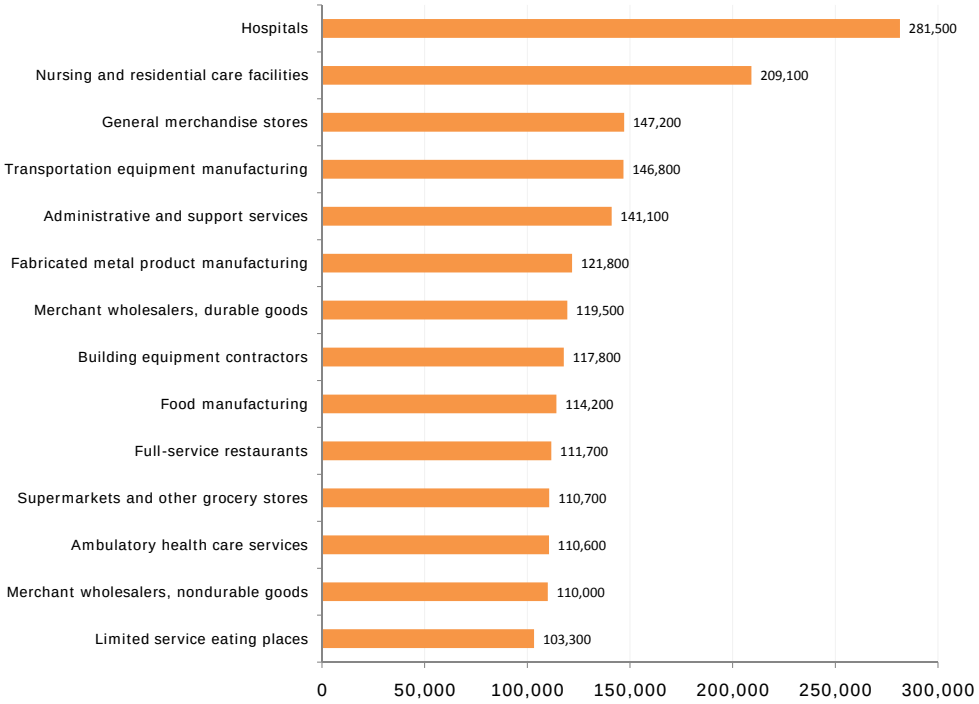

Table 4.1. Private sector industries with highest injury/illness case rates (per 10,000 workers) with days away from work, 2005.

Industry	NAICS Code	Annual Average Employment	2004	2005
Beet sugar manufacturing	311313	6,300	–	13.2
Light truck and utility vehicle manufacturing	336112	72,600	10.4	10.4
Animal (except poultry) slaughtering	311611	148,400	8.4	8.8
Flat glass manufacturing	327211	13,100	5.0	8.6
Couriers	4921	512,900	9.2	8.6
Prefabricated wood building manufacturing	321992	26,700	6.8	8.3
Truss manufacturing	321214	49,300	6.9	8.0
Scheduled air transportation	4811	460,900	8.0	8.0
Hog and pig farming	1122	17,100	10.6	7.7
Framing contractors	23813	168,100	6.3	7.7
Heavy duty truck manufacturing	33612	37,900	–	7.7
Iron foundries	331511	61,200	8.3	7.5
Amusement parks and arcades	7131	153,900	10.1	7.5
Rooming and boarding houses	7213	10,800	0.4	7.5
Soft drink manufacturing	312111	77,000	7.9	7.3
Clay refractory manufacturing	327124	5,700	–	7.3
Truck trailer manufacturing	336212	35,700	5.8	7.2
Fluid milk manufacturing	311511	54,900	6.7	7.0
Cheese manufacturing	311513	37,800	5.5	7.0
Bottled water manufacturing	312112	15,500	9.0	6.9
Iron and steel forging	332111	25,800	5.2	6.8
Overhead traveling crane, hoist, and monorail system manufacturing	333923	13,900	–	6.8
Manufactured home (mobile home) manufacturing	321991	46,500	6.7	6.7
Boat building	336612	60,600	5.9	6.6
Beer, wine, and distilled alcoholic beverage merchant wholesalers	4248	144,300	7.0	6.6
All Private industry		109,127,000	2.5	2.4

Table 4.2. Nonfatal occupational injury/illness rates (per 10,000 workers) by 4-digit NAICS industries, wholesale trade, 2005.

Wholesale Trade Industry (4-digit NAICS)	NAICS	Population	Incidence Rate	Number of Cases
Beer, wine, and distilled alcoholic beverage	4248	144,300	9.6	13,400
Grocery and related product	4244	692,800	7.7	53,000
Metal and mineral (except petroleum)	4235	122,600	7.5	9,300
Lumber and other construction materials	4233	250,900	6.8	17,000
Farm product raw material	4245	72,900	6.1	3,700
Motor vehicle and motor vehicle parts and supplies	4231	342,200	6.0	19,100
Machinery, equipment, and supplies	4238	657,300	4.3	28,000
Miscellaneous nondurable goods	4249	359,200	4.3	14,100
Hardware, and plumbing and heating equipment and supplies	4237	241,500	4.1	9,700
Petroleum and petroleum products	4247	100,500	4.1	4,100
Furniture and home furnishing	4232	112,300	3.9	4,200
Paper and paper product	4241	151,500	3.9	5,300
Miscellaneous durable goods	4239	277,900	3.7	9,800
Apparel, piece goods, and notions	4243	145,700	3.6	4,800
Chemical and allied products	4246	130,000	3.1	4,000
Wholesale electronic markets and agents and brokers	4251	731,300	2.5	16,600
Drugs and druggists' sundries	4242	215,600	2.3	4,700
Electrical goods	4236	340,100	2.2	7,200
Professional and commercial equipment and supplies	4234	636,200	1.9	11,900

High Nonfatal Injury/Illness Rates in U.S. Private Industry *(Table 4.1)*

In a BLS ranking of U.S. private sector industries by rates of injury/illness cases that involved days away from work, the wholesale industry beer, wine, and distilled alcoholic beverage merchant wholesalers (NAICS 4248) was included along with the traditionally high-risk manufacturing, construction, and farming industries. The rate in this wholesale industry in 2005 (6.6 injuries/illnesses per 10,000 workers) was more than 2.5 times the rate for all private industry (2.4).

Nonfatal Occupational Injury/Illness Rates in Wholesale Trade *(Table 4.2)*

Among all wholesale trade industries, the beer, wine, and distilled alcoholic beverage merchant wholesalers industry ranked first, with an overall injury/illness case rate of 9.6 injuries/illnesses per 10,000 workers, followed by grocery and related product (7.7), metal and mineral (except petroleum) (7.5), lumber and other construction materials (6.8), farm product raw material (6.1), and motor vehicle and motor vehicle parts and supplies (6.0).

Fatal Injury Counts in Wholesale Trade

(Tables 4.3 and 4.4)

Among wholesale trade industries, those with the highest number of fatal work injuries in 2005 included miscellaneous durable goods (NAICS 4239), with 29 worker deaths and, with 26 deaths each machinery, equipment and supplies (NAICS 4238) and grocery and related product (NAICS 4244). Other wholesale industries that experienced more than 10 fatalities in 2005 were petroleum and petroleum products (NAICS 4247), motor vehicle and motor vehicle parts and supplies (NAICS 4231), farm product raw material (NAICS 4245), and professional and commercial equipment and supplies (NAICS 4234) with 19, 16, 14, and 12 deaths, respectively.

Often, a high count or rate attributed at the 4-digit NAICS level results from a high count or rate at the 5- or 6-digit NAICS level. For example, of the 29 fatal work injuries incurred in the miscellaneous durable goods industry, 20 happened in wholesale companies that sell recyclable material (NAICS 42393). Similarly, most of the work injury deaths experienced by farm product raw material wholesalers, occurred in companies dealing with grain and field bean (NAICS 42451) produce.

Table 4.3. Fatalities by 4-digit NAICS industries, wholesale trade, 2005.

Wholesale Trade Industry (4-digit NAICS)	NAICS Code	Total Fatalities
Miscellaneous durable goods	4239	29
Machinery, equipment, and supplies	4238	26
Grocery and related product	4244	26
Petroleum and petroleum products	4247	19
Motor vehicle and motor vehicle parts and supplies	4231	16
Farm product raw material	4245	14
Professional and commercial equipment and supplies	4234	12
Lumber and other construction materials	4233	9
Chemical and allied products	4246	8
Metal and mineral (except petroleum)	4235	6
Drugs and druggists' sundries	4242	5
Furniture and home furnishing	4232	4
Electrical goods	4236	3
Hardware, and plumbing and heating equipment and supplies	4237	3
Paper and paper product merchant wholesalers	4241	3
Apparel, piece goods, and notions	4243	3

Table 4.4. Fatalities by 5-digit NAICS industries, wholesale trade, 2005.

Wholesale Trade Industry (5-digit NAICS)	NAICS Code	Total Fatalities
Recyclable material	42393	20
Industrial machinery and equipment	42383	11
Grain and field bean	42451	11
Motor vehicle parts (used)	42314	10
General line grocery	42441	8
Metal service centers and offices	42351	6
Fresh fruit and vegetable	42448	6
Other grocery and related products	42449	6
Other chemical and allied products	42469	6
Medical, dental, and hospital equipment and supplies	42345	5
Construction and mining (except oil well) machinery, equipment	42381	5
Drugs and druggists' sundries	42421	5
Petroleum bulk stations and terminals	42471	5
Automobile and other motor vehicle	42311	4
Farm and garden machinery and equipment	42382	4
Sporting and recreational goods and supplies	42391	4
Furniture	42321	3
Lumber, plywood, millwork, and wood panel	42331	3
Brick, stone, and related construction material	42332	3
Roofing, siding, and insulation material	42333	3
Electrical apparatus/equipment, wiring supplies, construction material	42361	3
Service establishment equipment and supplies	42385	3

Table 4.5. Nonfatal occupational injury/illness rates (per 10,000 workers) by 5-digit NAICS industry, retail trade, 2005.

Retail Trade Industry (5-digit NAICS)	NAICS	Population	Incidence Rate	Number of Cases
Home centers	44411	622,600	9.2	54,200
Warehouse clubs and superstores	45291	984,000	7.3	58,800
Other building material dealers	44419	291,900	7.0	19,900
Tire dealers	44132	162,000	6.6	10,400
Supermarkets and other grocery (except convenience) stores	44511	2,290,500	6.4	108,200
Hobby, toy, and game stores	45112	137,000	6.4	5,400
Department stores	45211	1,611,300	6.0	69,100
All other general merchandise stores	45299	323,600	5.8	14,100
Fuel dealers	45431	94,800	5.6	4,900
Other direct selling establishments	45439	50,300	5.5	2,200
Pet and pet supplies stores	45391	87,700	5.2	3,300
Other home furnishings stores	44229	175,000	5.1	6,300
Recreational vehicle dealers	44121	41,000	5.0	1,900
New car dealers	44111	1,135,700	4.9	53,800
Hardware stores	44413	164,000	4.5	5,700
Floor covering stores	44221	101,100	4.4	4,000
Nursery and garden centers	44422	114,000	4.4	4,200
Other specialty food stores	44529	132,200	4.4	4,500
Paint and wallpaper stores	44412	41,100	4.2	1,500
Family clothing stores	44814	496,400	4.2	13,700
Office supplies and stationery stores	45321	178,300	4.2	5,800
Automotive parts and accessories stores	44131	326,100	4.1	12,100
Motorcycle, boat, and other motor vehicle dealers	44122	124,700	3.6	4,000
Meat markets	44521	49,800	3.6	1,400
Gasoline stations with convenience stores	44711	745,600	3.5	21,300
Sewing, needlework, and piece goods stores	45113	55,300	3.4	1,100
Fruit and vegetable markets	44523	44,000	3.0	1,200
All other miscellaneous store retailers	45399	159,800	3.0	3,700
Other gasoline stations	44719	120,900	2.9	3,000
Sporting goods stores	45111	217,600	2.9	4,400
Appliance, television, and other electronics stores	44311	364,700	2.8	8,400
Manufactured (mobile) home dealers	45393	25,800	2.7	600
Gift, novelty, and souvenir stores	45322	217,900	2.6	3,400
Pharmacies and drug stores	44611	690,400	2.5	13,300
Used car dealers	44112	122,400	2.4	2,700
Other health and personal care stores	44619	93,500	2.4	1,800
Women's clothing stores	44812	261,900	2.4	3,700
Outdoor power equipment stores	44421	32,300	2.3	700
Book stores and news dealers	45121	153,600	2.1	2,200
Cosmetics, beauty supplies, and perfume stores	44612	97,800	1.7	1,100
Clothing accessories stores	44815	43,200	1.7	500
Musical instrument and supplies stores	45114	35,400	1.7	400
Computer and software stores	44312	148,500	1.6	2,100
Camera and photographic supplies stores	44313	17,800	1.3	200
Men's clothing stores	44811	76,000	1.0	500
Other clothing stores	44819	118,300	1.0	800
Prerecorded tape, compact disc, and record stores	45122	50,200	1.0	300
Optical goods stores	44613	63,900	0.9	500
Art dealers	45392	23,900	0.8	100
Jewelry stores	44831	155,600	0.6	700

Nonfatal Occupational Injury/Illness Rates in Retail Trade *(Table 4.5)*

In 2005, among retail trade industries, the highest injury/illness case rates were attributed to home centers, with a rate of 9.2; warehouse clubs and superstores (7.3); other building material dealers (7.0); tire dealers (6.6); supermarkets and other grocery (except convenience) stores (6.4); hobby, toy and game stores (6.4); and department stores (6.0).

Fatal Injury Counts in Retail Trade

(Tables 4.6 and 4.7)

The highest count of work-related fatal injuries in 2005—84 deaths—occurred in the grocery stores industry. These 84 deaths were nearly evenly split between convenience stores (46 deaths) and supermarkets and other grocery (except convenience) stores (38 deaths). Other 4-digit NAICS retail trade industries with high fatality counts included gasoline stations (58 deaths), automobile dealers (43 deaths), and building material and supplies dealers (39 deaths).

At the 5-digit NAICS level, the 46 deaths attributed to convenience stores, was the highest among retail industries. Interestingly, the second highest number of deaths in retail were found in gasoline stations with convenience stores, which accounted for 44 of the 58 deaths in the 4-digit gasoline stations industry. Other retail industries exhibiting high counts of fatal injuries included supermarkets and other grocery (except convenience) stores (38 deaths), other building material dealers (19 deaths), new car dealers (17 deaths), used car dealers (15 deaths), other direct selling establishments (15 deaths), and home centers (13 deaths).

Table 4.6. Fatalities by 4-digit NAICS industries, retail trade, 2005.

Retail Trade Industry	NAICS Code	Total Fatalities
Grocery stores	4451	84
Gasoline stations	4471	58
Automobile dealers	4411	43
Building material and supplies dealers	4441	39
Direct selling establishments	4543	21
Automotive parts, accessories, and tire stores	4413	20
Other miscellaneous store retailers	4539	15
Specialty food stores	4452	13
Other general merchandise stores	4529	11
Other motor vehicle dealers	4412	10
Beer, wine, and liquor stores	4453	9
Furniture stores	4421	8
Lawn and garden equipment and supplies stores	4442	8
Department stores	4521	8
Electronics and appliance stores	4431	7
Clothing stores	4481	7
Sporting goods, hobby, and musical instrument stores	4511	7
Jewelry, luggage, and leather goods stores	4483	5
Florists	4531	5
Office supplies, stationery, and gift stores	4532	4
Used merchandise stores	4533	4
Shoe stores	4482	3

Table 4.7. Fatalities by 5-digit NAICS industries, retail trade, 2005.

Retail Trade Industry	NAICS Code	Total Fatalities
Convenience stores	44512	46
Gasoline stations with convenience stores	44711	44
Supermarkets and other grocery (except convenience) stores	44511	38
Other building material dealers	44419	19
New car dealers	44111	17
Used car dealers	44112	15
Other direct selling establishments	45439	15
Home centers	44411	13
All other miscellaneous store retailers	45399	11
Automotive parts and accessories stores	44131	10
Tire dealers	44132	10
Motorcycle, boat, and other motor vehicle dealers	44122	9
Beer, wine, and liquor stores	44531	9
Furniture stores	44211	8
Nursery and garden centers	44422	8
Other gasoline stations	44719	8
Department stores	45211	8
Appliance, television, and other electronics stores	44311	7
Sporting goods stores	45111	6
Warehouse clubs and superstores	45291	6
Fuel dealers	45431	6
Hardware stores	44413	5
Meat markets	44521	5
Jewelry stores	44831	5
All other general merchandise stores	45299	5
Florists	45311	5
Other specialty food stores	44529	4
Used merchandise stores	45331	4
Manufactured (mobile) home dealers	45393	4
Family clothing stores	44814	3
Shoe stores	44821	3
Gift, novelty, and souvenir stores	45322	3

Table 4.8. Fatalities from assaults and violent acts, U.S. industry (including public administration), 2005.

4- and 5-digit Industry	NAICS	Number of worker deaths (n=788)
Justice, Public Order, and Safety Activities *(State and Local Government)*	9221	66
Police Protection	92212	60
Grocery Stores	4451	64
Convenience Stores	44512	44
Supermarkets and Other Grocery (except Convenience) Stores	44511	20
Gasoline Stations	4471	42
Gasoline Stations with Convenience Stores	44711	35
Cattle Ranching and Farming	1121	29
Limited Service Eating Places	7222	27
Limited Service Restaurants	722211	24
Taxi and Limousine Service	4853	25
Taxi Service	48531	23
Drinking Places (Alcoholic Beverages)	7224	24
Automotive Repair and Maintenance	8111	20
Personal Care Services	8121	20
Hair, Nail, and Skin Care Services	81211	16
Full Service Restaurants	7221	19
Full Service Restaurants	72211	19
Traveler Accomodation	7211	16
Hotels (except Casino Hotels) and Motels	72111	16
Automobile Dealers	4411	15

Fatalities from Assault and Violent Acts in U.S. Industry (Including Public Administration) *(Table 4.8)*

A high percentage of deaths in the convenience stores and gasoline stations with convenience stores industries resulted from assaults and violent acts. This high percentage points to a well-documented problem: violence (resulting in homicide) stemming from robberies in retail establishments, particularly convenience stores.

As shown in Chapter 2 of this Chartbook, occupational assaults and violent acts represent the leading cause of fatal work injury in the retail trade sector overall, resulting in 202 deaths, or slightly more than half of the 400 fatal work injuries in retail trade in 2005.

Table 4.8 shows that the total number of fatalities caused by assaults and violent acts for both convenience stores (NAICS 44512) and gasoline stations with convenience stores (NAICS 44711) was 79. That is 19 more fatal injuries than experienced during the same year by the public sector state and local police protection (NAICS 92212), and nearly three times the number experienced by cattle ranching and farming (NAICS 1121), limited service eating places (NAICS 7222), taxi and limousine service (NAICS 4853), and drinking places (alcoholic beverages) (NAICS 7224). Among WRT industries, retail automobile dealers also experienced a high number of fatalities.

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Fatal Injuries in Selected High-Risk Wholesale Trade Industries

Miscellaneous durable goods *(NAICS 4239)*
Recyclable product *(NAICS 42393)*
Grocery and related product *(NAICS 4244)*
Petroleum and petroleum product *(NAICS 4247)*
Machinery, equipment, and supplies *(NAICS 4238)*

Fatal Injuries by Event/Exposure for Selected Wholesale Trade Industries *(Figures 4.2 through 4.6)*

In 2005 the leading event/exposure contributing to fatal injuries in the wholesale trade sector was transportation incidents (106 deaths). *However, in miscellaneous durable goods, the 4-digit NAICS wholesale industry that experienced the highest number of fatal injuries in 2005, there were an equal number of deaths resulting from transportation incidents and contact with objects and equipment (10 each). All 10 deaths attributed to contact with objects and equipment occurred in the recyclable material industry (NAICS 42393).

For other selected wholesale industries with high fatal injury counts (grocery and related product-NIACS 4244; petroleum and petroleum products-NAICS 4247; and machinery, equipment and supplies-NAICS 4238), the leading contributing event/exposure was transportation incidents.

BLS [2005]. Census of Fatal Occupational Injuries (Revised Data). Table A-1. Fatal occupational injuries by industry and event or exposure, All United States, 2005. Online at: www.bls.gov/iif/oshwc/cfoi/cftb0205.pdf, page 8 of 24.

Figure 4.2. Fatal injuries by event/exposure, miscellaneous durable goods, NAICS 4239, 2005.

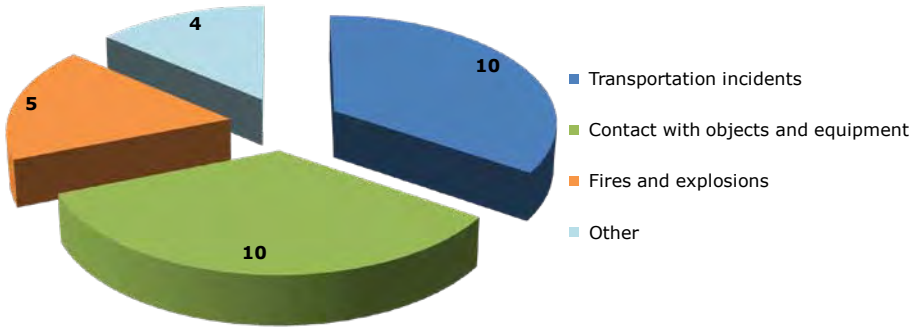


Figure 4.3. Fatal injuries by event/exposure, miscellaneous durable goods, recyclable material, NAICS 42393, 2005.

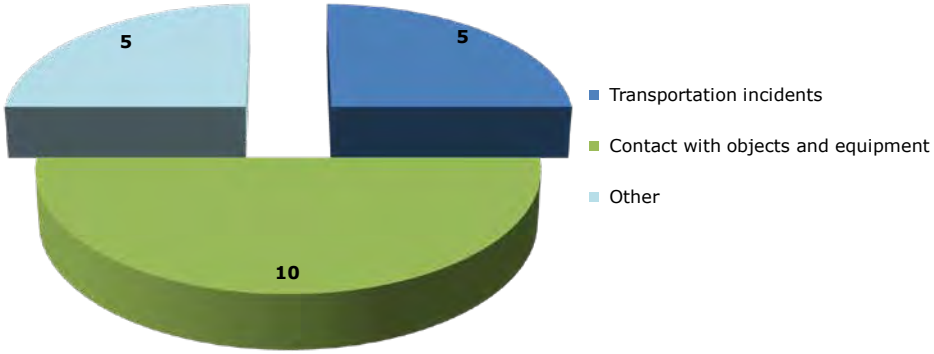


Figure 4.4. Fatal injuries by event/exposure, grocery and related product, NAICS 4244, 2005.

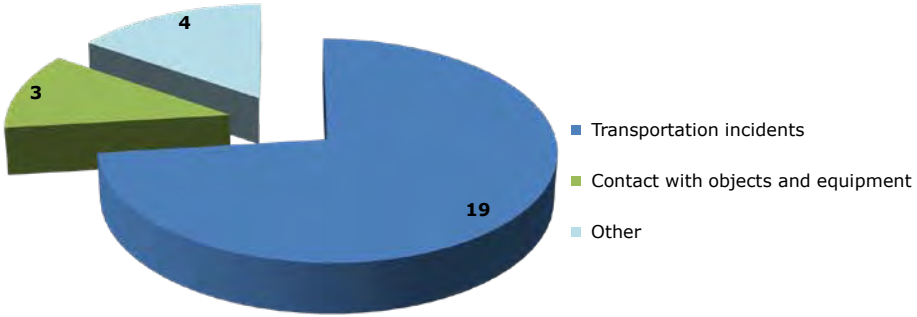


Figure 4.5. Fatal injuries by event/exposure, petroleum and petroleum products, NAICS 4247, 2005.

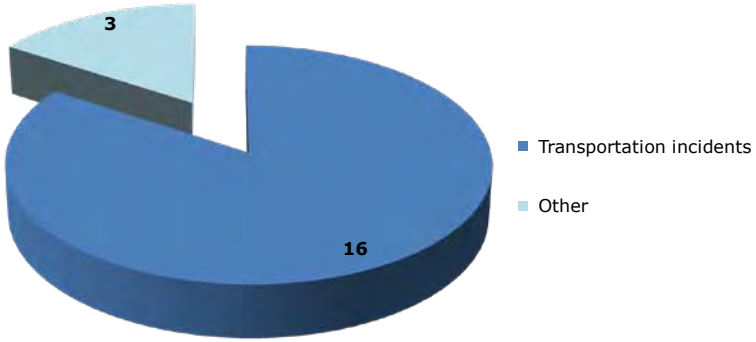
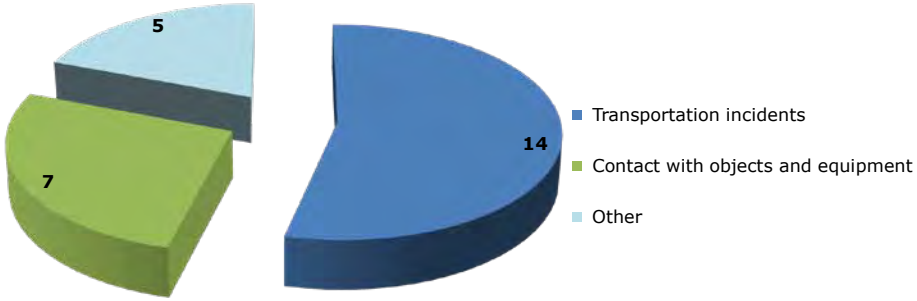


Figure 4.6. Fatal injuries by event/exposure, machinery, equipment and supplies, NAICS 4238, 2005.



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Fatal Injuries in Selected High-Risk Retail Trade Industries

Grocery stores *(NAICS 4451)*
- **Supermarkets and other grocery [except convenience] stores** *(NAICS 44511)*
- **Convenience stores** *(NAICS 44512)*

Gasoline stations *(NAICS 4471)*
- **Gasoline stations with convenience stores** *(NAICS 44711)*

Building materials and supplies dealers *(NAICS 4441)*
- **Home centers** *(NAICS 44411)*
- **Other building materials dealers** *(NAICS 44419)*

Automobile dealers *(NAICS 4411)*
- **New car dealers** *(NAICS 44111)*
- **Used car dealers** *(NAICS 44112)*

Direct selling establishments *(NAICS 4543)*

Fatal Injuries by Event/Exposure for Selected Retail Trade Industries *(Figures 4.7 through 4.18)*

The leading contributing event/exposure to fatal injuries in retail was assaults and violent acts, which resulted in 202 deaths in 2005. These violence-related deaths were prevalent in grocery stores (NAICS 4451-64 deaths), particularly in convenience stores (NAICS 44512-44 deaths) and supermarkets and other grocery (except convenience) stores (NAICS 44511-20 deaths); and in gasoline stations (NAICS 4471-42 deaths), particularly in gasoline stations with convenience stores (NAICS 44711-35 deaths).

Other events/exposures contributing to a high number of deaths among retail workers were transportation incidents and contact with objects and equipment, both of which were more numerous than assaults and violent acts in building material and supply dealers (NAICS 4441).

Automobile dealers (NAICS 4411) experienced a nearly equal number of deaths from transportation incidents (16 deaths) and assaults and violent acts (15 deaths) in 2005, but a closer look at industries reveals that transportation incidents were the leading event/exposure associated with deaths among new car dealers (NAICS 44111), and assaults and violent acts led all events/exposures associated with deaths among used car dealers (NAICS 44112).

In direct selling establishments (NAICS 4543) and home centers (NAICS 44411), transportation incidents accounted for more deaths than any other event/exposure.

BLS data providing insight into circumstances leading to fatal injuries are more limited than data on nonfatal injuries. However, these breakouts by event/exposure provide one way to focus research and prevention resources.

Figure 4.7. Fatal injuries by event/exposure, grocery stores, NAICS 4451, 2005.

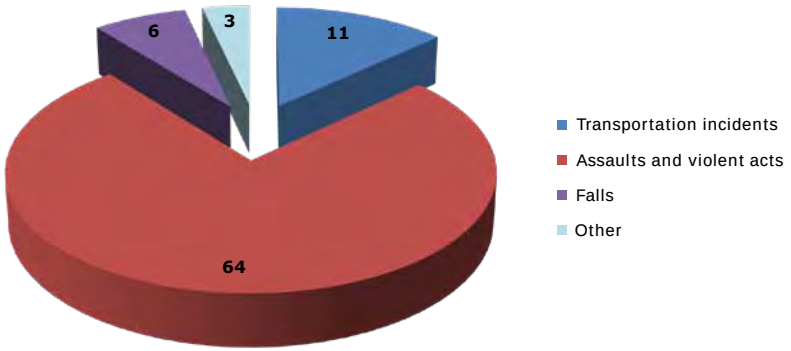


Figure 4.8. Fatal injuries by event/exposure, supermarkets and other grocery, NAICS 44511, 2005.

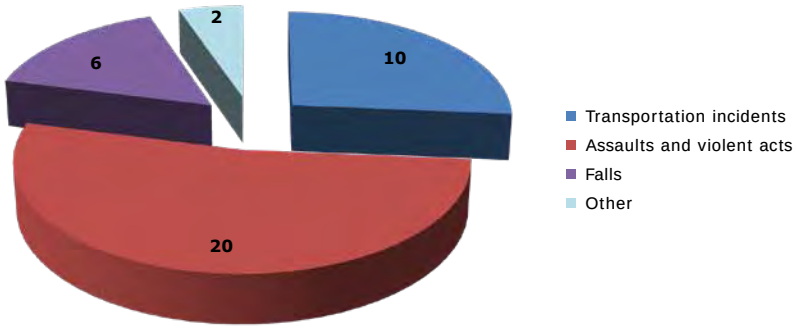


Figure 4.9. Fatal injuries by event/exposure, convenience stores, NAICS 44512, 2005.

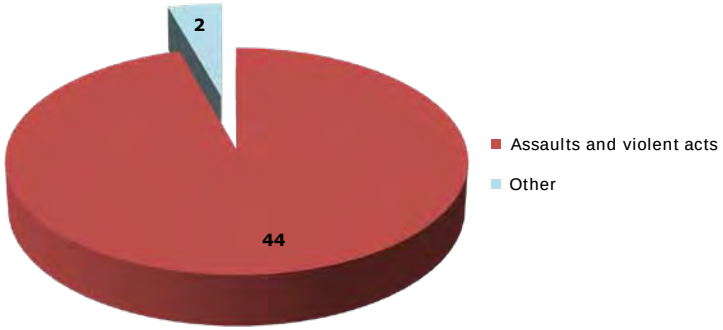


Figure 4.10. Fatal injuries by event/exposure, gasoline stations, NAICS 4471, 2005.

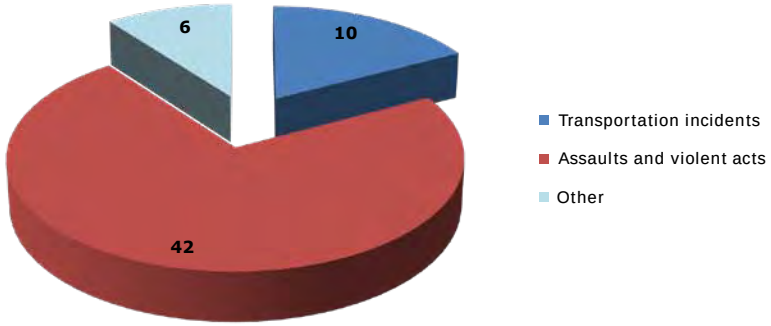


Figure 4.11. Fatal injuries by event/exposure, gasoline stations with convenience stores, NAICS 44711, 2005.

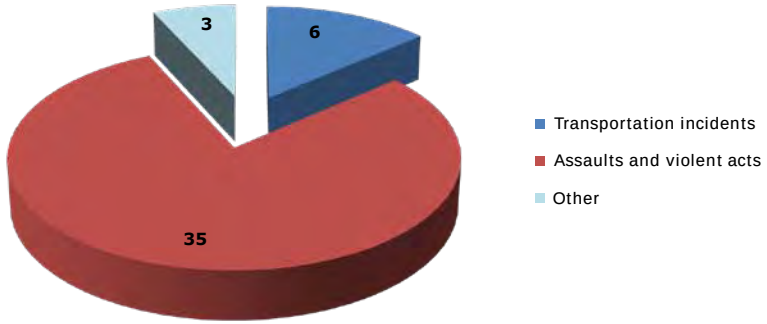


Figure 4.12. Fatal injuries by event/exposure, building material and supplies dealers, NAICS 4441, 2005.

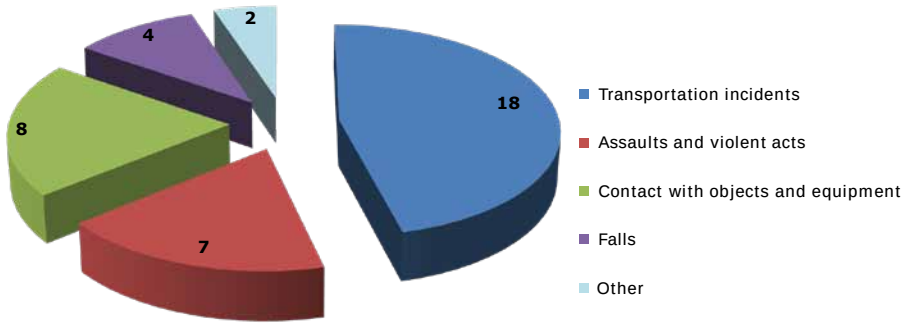


Figure 4.13. Fatal injuries by event/exposure, other building material dealers, NAICS 44419, 2005.

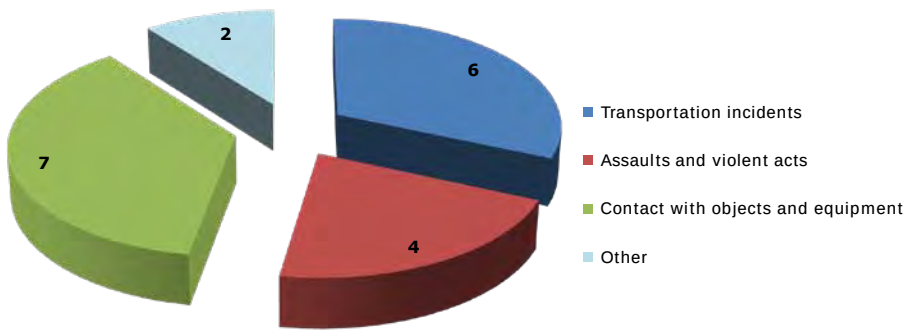


Figure 4.14. Fatal injuries by event/exposure, automobile dealers, NAICS 4411, 2005.

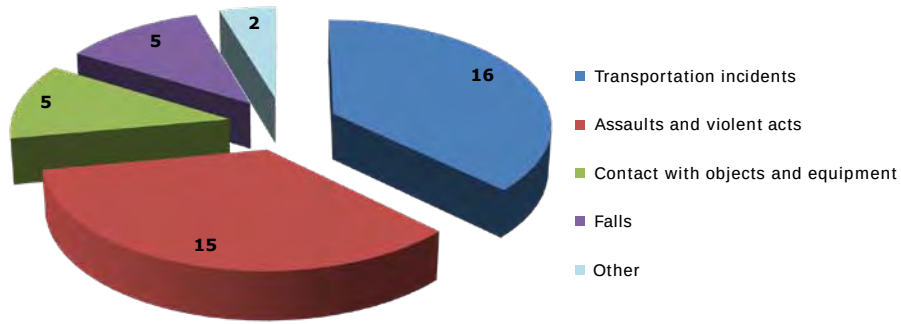


Figure 4.15. Fatal injuries by event/exposure, new car dealers, NAICS 44111, 2005.

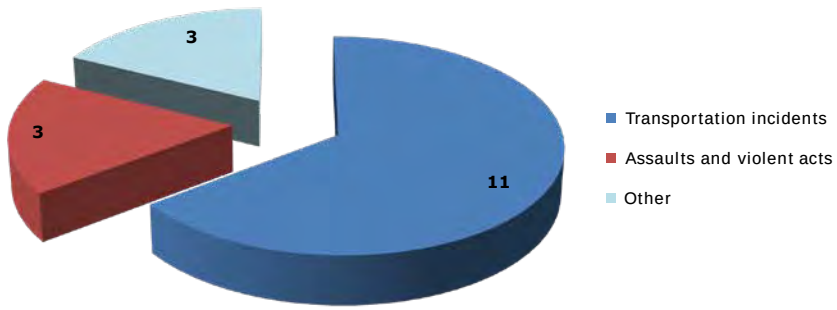


Figure 4.16. Fatal injuries by event/exposure, used car dealers, NAICS 44112, 2005.

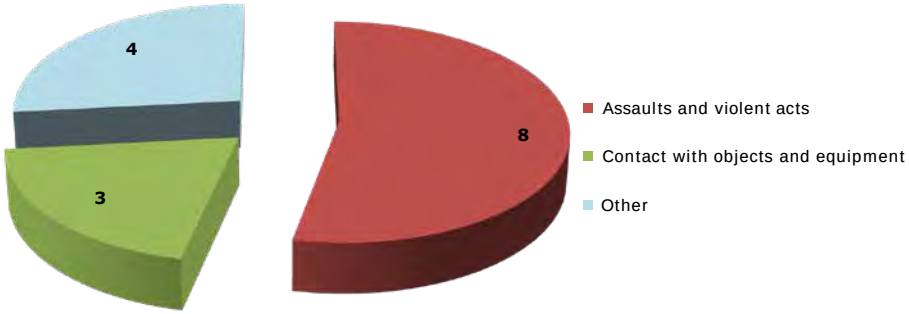


Figure 4.17. Fatal injuries by event/exposure, direct selling establishments, NAICS 4543, 2005.

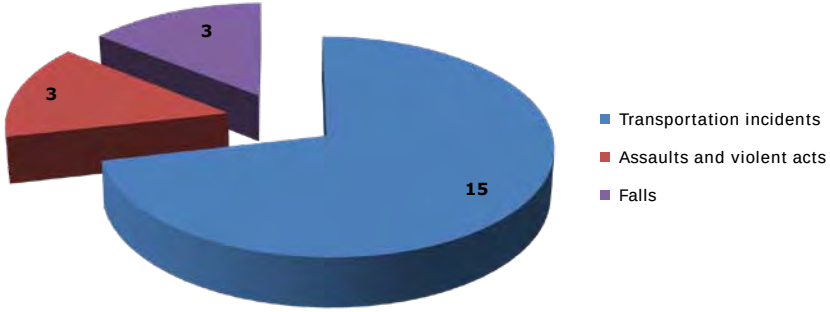
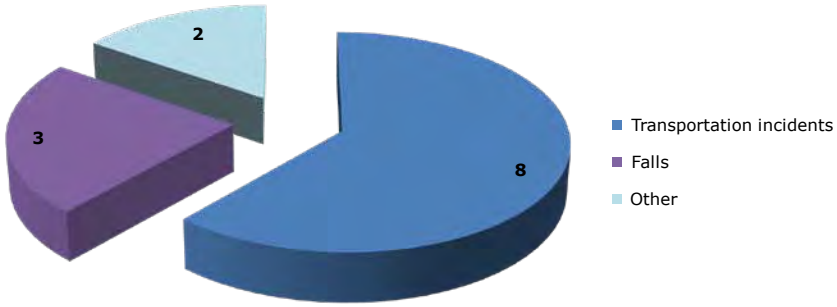


Figure 4.18. Fatal injuries by event/exposure, home centers, NAICS 44411, 2005.



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Nonfatal Injuries/Illnesses in Selected High-Risk Wholesale Trade Industries

Beer, wine and distilled alcoholic beverage wholesale merchants (NAICS 4248)

Grocery and related product merchant wholesalers (NAICS 4244)

Metal and mineral [except petroleum] merchant wholesalers (NAICS 4235)

Lumber and other construction materials merchant wholesalers (NAICS 4233)

Farm product raw material merchant wholesalers (NAICS 4245)

Motor vehicles and motor vehicle parts and supplies merchant wholesalers (NAICS 4231)

Nonfatal Injuries/Illnesses in Selected Wholesale Trade Industries

Wholesale Component: Overview of Contents

This section presents key injury/illness data for the six wholesale industries-listed below[1]. Each of the six industries is identified with a 4-digit NAICS code. The six were chosen from the set of 71 wholesale industries because they had high rates and numbers of injuries and illnesses[2]. To gain a better understanding of the reasons for the elevated levels of injury and illness, additional analyses of the BLS datasets were undertaken. The analyses focused on (1) identifying the demographic features of the workforce, as well as on (2) identifying the characteristics of the workers' injuries/illnesses. The analyses were performed to provide further insight into the risk factors responsible for the level and extent of injuries and illnesses in the wholesale trade sector. This information can also be used to identify priorities for further analysis, research, and prevention. All data presented are for the baseline year of 2005, unless otherwise noted.

Beer, wine and distilled alcoholic beverage wholesale merchants *(NAICS 4248)*

Grocery and related product merchant wholesalers *(NAICS 4244)*

Metal and mineral [except petroleum] merchant wholesalers *(NAICS 4235)*

Lumber and other construction materials merchant wholesalers *(NAICS 4233)*

Farm product raw material merchant wholesalers *(NAICS 4245)*

Motor vehicles and motor vehicle parts and supplies merchant wholesalers *(NAICS 4231)*

Demographic Factors

(Figures 4.19 through 4.66)

For each of the six wholesale industries, the following set of data and associated figures provide injury/illness information on what is known about the demographic factors extracted from the incident reports: namely, age, gender, race/ethnicity, and occupation.

Worker age

Injuries/illnesses occurred more frequently among younger workers in the high-risk wholesale trade industries than was generally found when compared with older age groups working in the same industry. The youngest age group, namely, 25 to 34-year old workers, experienced more injuries/illnesses as compared to their older counterparts in the following three industries: the beer, wine, and distilled alcoholic beverage merchant wholesalers (NAICS 4248), the grocery and related product merchant wholesalers (NAICS 4244), and the lumber and other construction materials wholesalers (NAICS 4233).

Workers under 20 years of age and workers 65 years of age or older incurred a smaller percentage of the injuries/illnesses across industry groups. Percentages ranged from zero injuries/illnesses to 3% of all injuries/illnesses for the 16 to 19-year-old age group; similarly, for the 65 and older age group, percentages ranged from zero injuries/illnesses to 2% of all industry injuries/illnesses. An exception was found in the motor vehicles and motor vehicle parts and supplies industry (NAICS 4231) where 12% of all workers suffering injuries or illnesses were 65 years or older.

Worker gender

Males are frequently at greater risk for serious injury/illness than are females, particularly in workplaces involving heavy material handling jobs. Similar findings were found with respect to the existing set of six wholesale industries, examined here. In four of these six wholesale industries, nearly 90% of the injuries/illnesses were to males. Males experienced the highest percentage of injuries (~ 95%) in the beer, wine, and distilled alcoholic beverage industry–NAICS 4548; however, the injury rates were somewhat higher for females in the motor vehicles and motor-vehicle parts and supplies industry (NAICS 4231), and in the raw material merchant wholesalers industry (NAICS 4245), in which the ratio of injuries of males to females was greater than four to one.

Worker race/ethnicity

This analysis of worker injury/illness data organized by race/ethnicity was the most difficult of the analyses to evaluate because of the amount of missing data. There appears to be some reluctance to provide such information. For example, in the grocery and related product merchant wholesalers industry (NAICS 4244), information on race/ethnicity was missing in 41% or in (nearly 7,500) of the 18,000-plus injuries/ illnesses cases. With respect to the other five wholesale industries, the percentage of "not reported" cases ranged from 14% to 34%. In the only industry in which race/ethnicity was fully identified, namely: the farm product raw material merchant wholesalers industry (NAICS 4245), 18% of the injured cases identified as Hispanic or Latino, the remaining were white only.

Worker occupation

Workers in the "transportation and material moving" occupations experienced a majority of the injuries/ illnesses in the high-risk wholesale industries. For example, transportation and material moving workers sustained more than 84% of the injuries/ illnesses in the beer, wine, and distilled alcoholic beverage merchant wholesalers industry (NAICS 4248). In addition, workers from the transportation and material moving occupation incurred nearly 75% of the injuries/ illnesses that were reported in the grocery and related product merchant wholesalers (NAICS 4244) industry. Other occupational categories that experienced substantial numbers of injuries/illnesses included: installation, maintenance, and repair occupations that were employed in the industry motor vehicle and motor vehicle parts and supplies merchant wholesalers industry (NAICS 4231). The "production occupations" also had high rates of injuries in both the grocery and related product merchant wholesalers industry (NAICS 4244) and in the metal and mineral (except petroleum) merchant wholesalers industry (NAICS 4235).

1 In this chapter, for purposes of consistency, the generic term "industry" will be used in referring to both the 3-digit and 4-digit NAICS terms, i.e., subsector and industry group, respectively. The NAICS terms will be used, however, when needed to distinguish differences in the data that are associated with the hierarchical structure of NAICS. More detailed information on the structure and coding of the industries is found in the Glossary under Sector, Subsector.

2 Due to rounding and data exclusion of non-classifiable responses, the sum or totals on select charts and figures may not be fully accounted for, such as summing to 100%. The case of missing data, according to BLS, is to maintain privacy for select reporting entities.

Injury/Illness Characteristics for the Wholesale Sector

(Figures 4.19 through 4.66)

For each of the six wholesale industries that are presented in this chapter, the following set of data and associated figures provide key injury/illness information on what is known about the four main features that characterize an injury/illness: namely, the nature of the injury/illness, the source of the injury/illness, the event or exposure, and the part of the body injured. Such information, extracted from the incident reports, is particularly useful in developing appropriate controls and interventions. All data presented are for the baseline year of 2005, unless otherwise noted.

Overview

In the wholesale trade sector, sprains and strains were the most frequently reported "nature of injury/illness" condition, followed by reports of fractures, cuts/lacerations, punctures, and bruises. The leading "source" of injury/illness was containers; followed by vehicles; floor, ground surfaces; and parts and materials. Overexertion was the leading event/exposure accounted for 28% of injuries/illnesses, contact with objects accounted for 28% of the injuries/illnesses, followed by fall on the same level at 11%, and transportation incidents accounting for 8%. The trunk was the most frequently reported injured body part.

This snapshot of the wholesale trade sector suggests that the prevalent mode of injury/illness is the handling and movement of products. Specifically, overexertion injuries impacting the trunk (primarily the back) can arise from physically demanding, manual materials handling jobs. Similarly, traumatic injuries can arise from an event/exposure defined as contact with objects, which also is the result of the handling of packaged or unpackaged products, parts, or materials. Both of these scenarios are common to all six wholesale industries presented here.

Nature of injury/illness

For the six wholesale industries in this analysis, the condition known as "sprains and strains" accounted for either half or nearly half of all of the conditions that constitute the "nature of injury/illness" category[1]. Cuts/ punctures and bruises were identified as either the second or third most commonly identified condition in the nature of injury/illness category. Specifically, sprains and strains were the most prevalent condition in the current set of wholesale industries: the beer, wine, and distilled alcoholic beverage merchant wholesalers industry at 55% (NAICS 4248) and the grocery and related product merchant wholesalers industry also at 55% (NAICS 4244). Multiple traumatic-injuries- and-disorders was the condition identified as the second leading nature of injury/illness, with the exception of the farm product raw material merchant wholesalers industry, in which sprains and strains followed by bruises were the most prevalent condition.

Source of injury/illness

In two industries—beer, wine, and distilled alcoholic beverage merchant wholesalers (NAICS 4248) and grocery and related product merchant wholesalers (NAICS 4244)—containers were the primary source of injury/illness. Parts and materials were the primary source of injury/illness in the metal and mineral (except petroleum) merchant wholesalers industry (NAICS 4235), the lumber and other construction materials merchant wholesalers industry (NAICS 4233), and the motor vehicles and motor vehicle parts and supplies merchant wholesalers industry (NAICS 4231), representing, 30%, 24%, and 31%, respectively, of the injuries/illnesses in those industries. Floors, walkways, or ground-surfaces was the primary source of injury/illness in farm product raw material merchant wholesalers industry (NAICS 4245), representing 37% of all nonfatal injuries/illnesses.

Event/exposure

Overexertion, followed by contact with objects, were the two most frequently identified events/exposures that characterized nearly all of the 71 industries, comprising the wholesale sector. There were some notable differences, however, with respect to the six high-risk wholesale industries, discussed here. For example, the analysis of metal and mineral (except petroleum) merchant wholesalers industry (NAICS 4235) revealed that contact with objects was the leading contributor to injury/illness with 47% of the cases, whereas overexertion accounted for 18% of the injured cases. Contact with objects was also the most frequent event/exposure contributing to injury/illness in the motor vehicle and motor vehicle parts and supplies merchant wholesalers industry (NAICS 4231) as well as in the lumber and other construction materials merchant wholesalers industry (NAICS4233). Overexertion was the most frequent event/ exposure contributing to nonfatal injury/illness in three of the six (currently analyzed) following industries: the beer, wine and distilled alcoholic beverage merchant wholesalers (NAICS 4248), the grocery and related product merchant

wholesalers (NAICS 4244), and the motor vehicle and motor vehicle parts and supplies merchant wholesalers (NAICS 4231). Contact with objects was the second most frequently identified event/exposure in each of these three industries.

Part of body

The trunk, followed by lower extremities and upper extremities, was the body part most often injured in these six high- risk wholesale industries. The exception was the farm product raw material industry (NAICS 4245) in which the lower extremities were identified as the primary body part injured in 45% of the cases, whereas the trunk was injured in 30% of the cases.

Some Concluding Thoughts Regarding the Wholesale Sector

Numerous charts and figures were presented to highlight the patterns of injuries/illnesses found in the above set of wholesale industries. Demographic data as well as information related to the event, exposure, nature, and source of occupational injuries and illnesses were presented. Improved data systems, however, are still needed to track the health and safety of workers. If available, company or facility-level data are an invaluable component to supplement BLS data for understanding the injury/illness risks, as well as identify opportunities for prevention.

One of the first steps toward prevention is to establish company-wide systems for early detection of complaints or reports such as local muscle fatigue, loss of motion, and even loss of sensations; these symptoms and others can serve as important sentinel events. Companies that seek out this information and follow-up to identify the job activities that may be responsible will often find the underlying cause and be able to intervene long before the symptom turns into a reportable injury or illnesses.

There is a need to educate the public and policy-makers, and industry leaders in the wholesale sector regarding the economic benefits of early detection and prevention of injuries such as overexertion, sprains and strains. Many of these symptoms can develop into chronic and costly musculoskeletal disorders. It is clear from the analyses of the wholesale sector that manual material handling and moving tasks offer the greatest opportunity for injuries, and therefore off the greatest benefit for developing interventions. Contacts with objects and equipment were other examples of events associated with injuries to workers who performed stock and material moving jobs. Engineering solutions are needed. The most effective engineering solutions are those that incorporate ergonomic principles. The key to improving work efficiency and occupational safety and health is the design/selection of appropriate manual material handling equipment that is scaled to the workplace and jobs.

Evaluation research is also needed for those wholesale industries that are at high risk for chronic injuries and illnesses. These companies need to determine those aspects of policies and programs in the wholesale sector to find which are, or are not, effective in achieving strategic goals of occupational health and safety. They also need to develop techniques to estimate the economic burden of the fatalities, injuries, and illnesses. Finally, they need to consider working with their loss control, insurance suppliers, and or workers' compensation providers to assess the economic burden of injuries/illnesses to the wholesale sector industries

1 Occupational Injury and Illness Classification Manual, U.S. Department of Labor, Bureau of Labor Statistics, December 1992.

Beer, wine, and distilled alcoholic beverage merchant wholesalers *(NAICS 4248)*

Figure 4.19. Nonfatal injuries/illnesses by age, NAICS 4248, 2005.

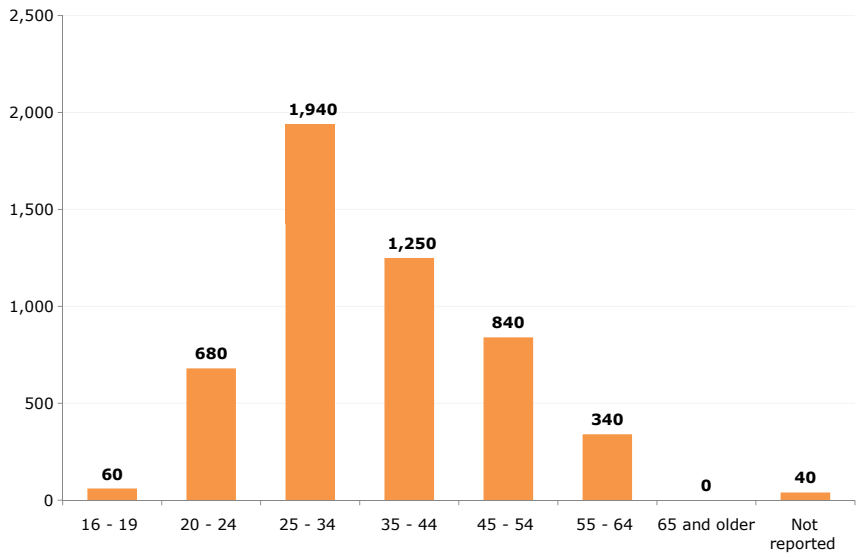


Figure 4.20. Nonfatal injuries/illnesses by gender, NAICS 4248, 2005.

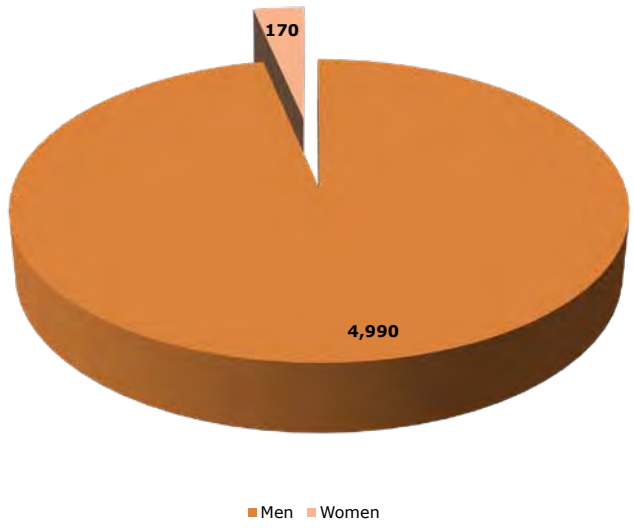


Figure 4.21. Nonfatal injuries/illnesses by race/ethnicity, NAICS 4248, 2005.

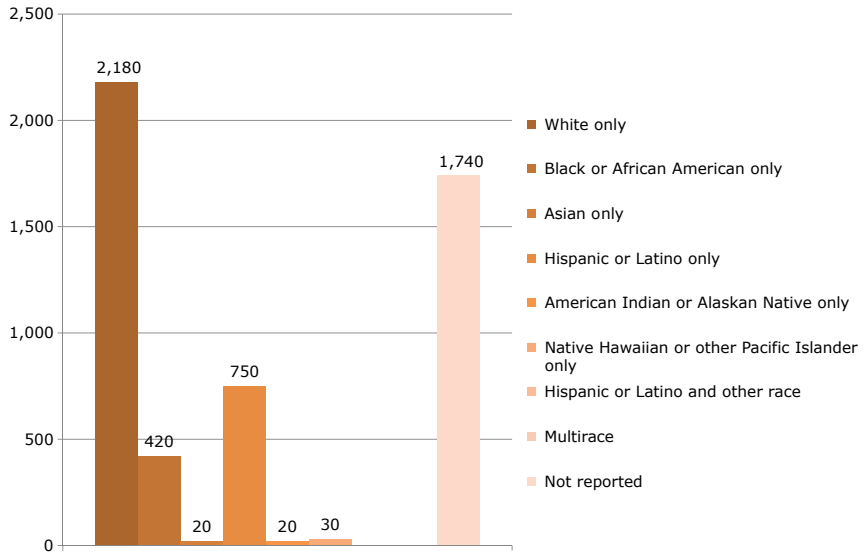
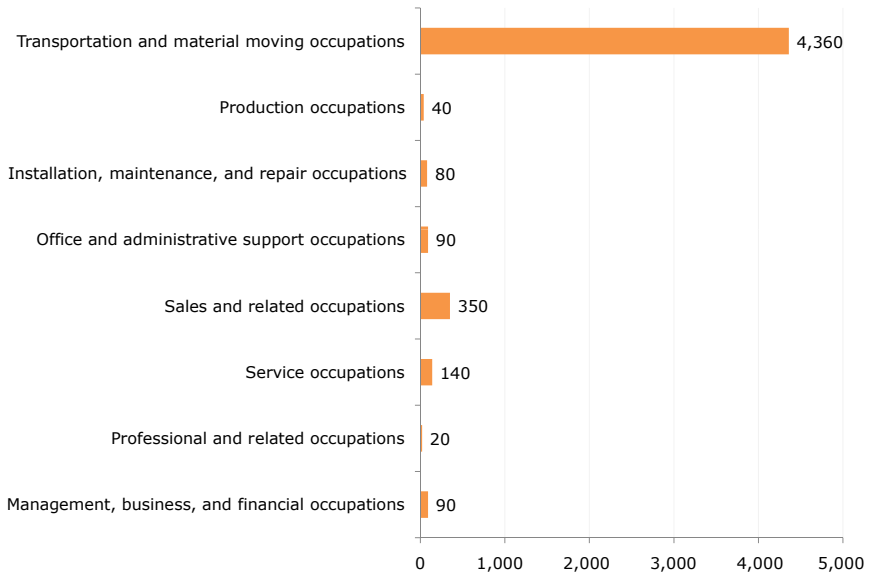


Figure 4.22. Nonfatal injuries/illnesses by occupation, NAICS 4248, 2005.



Beer, wine, and distilled alcoholic beverage merchant wholesalers *(NAICS 4248)*

Figure 4.23. Nonfatal injuries/illnesses by nature of injury/illness, NAICS 4248, 2005.

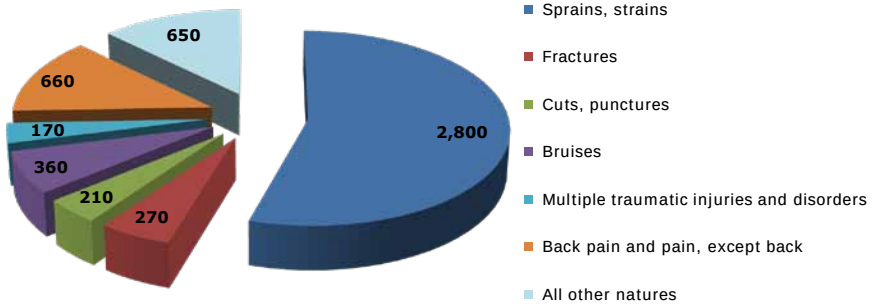


Figure 4.24. Nonfatal injuries/illnesses by source of injury/illness, NAICS 4248, 2005.

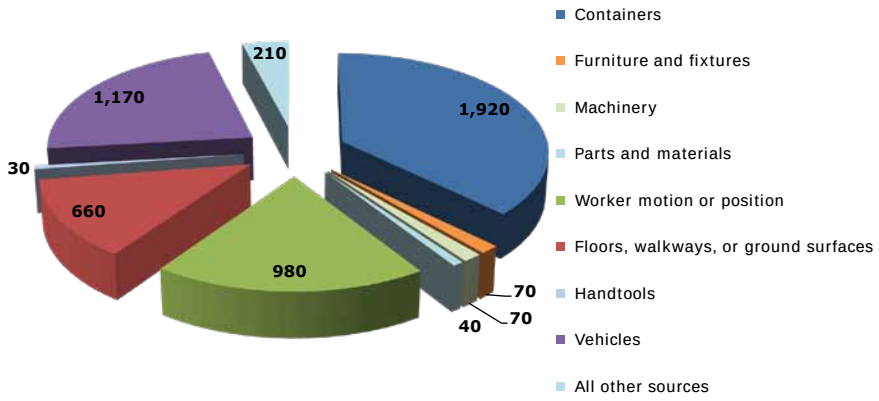


Figure 4.25. Nonfatal injuries/illnesses by event/exposure, NAICS 4248, 2005.

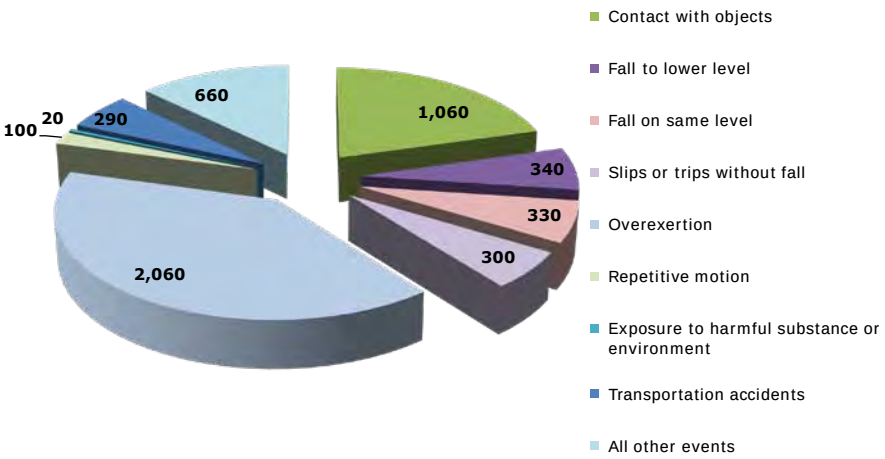
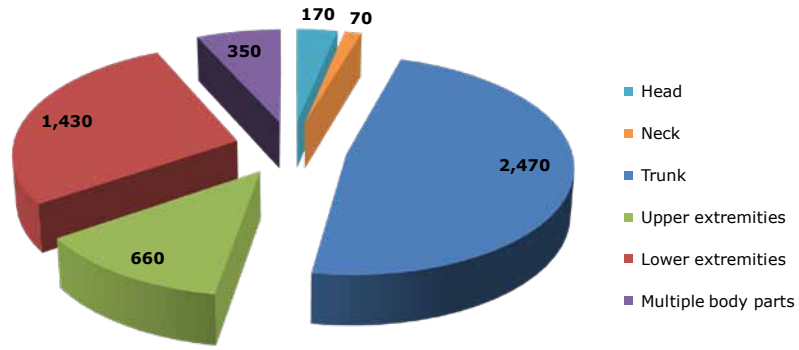


Figure 4.26. Nonfatal injuries/illnesses by part of body involved, NAICS 4248, 2005.



Grocery and related product merchant wholesalers *(NAICS 4244)*

Figure 4.27. Nonfatal injuries/illnesses by age, NAICS 4244, 2005.

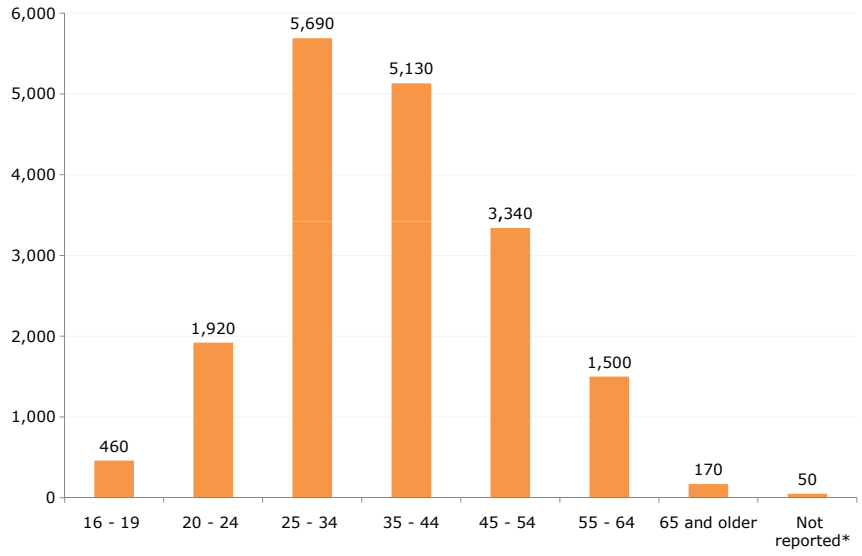


Figure 4.28. Nonfatal injuries/illnesses by gender, NAICS 4244, 2005.

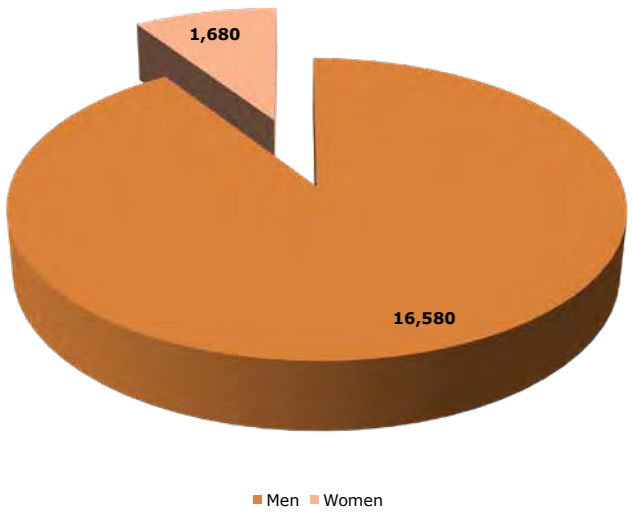


Figure 4.29. Nonfatal injuries/illnesses by race/ethnicity, NAICS 4244, 2005.

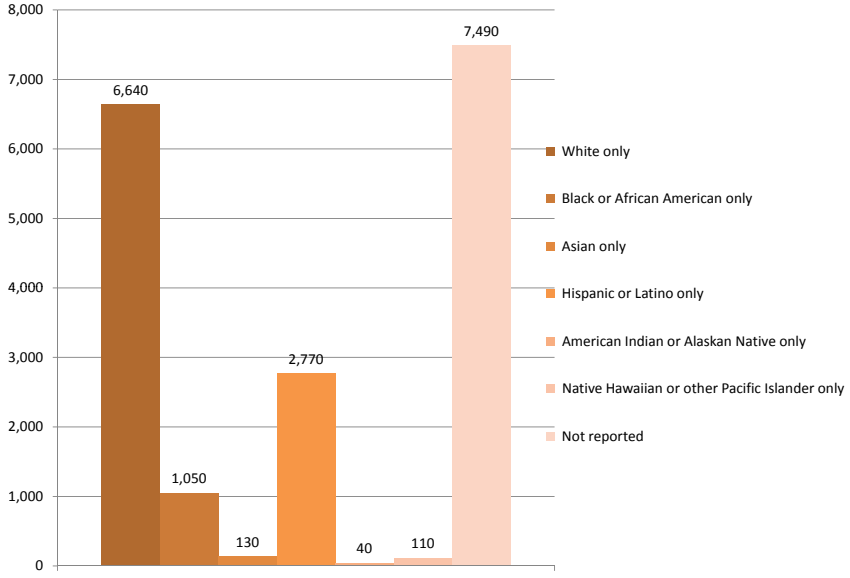
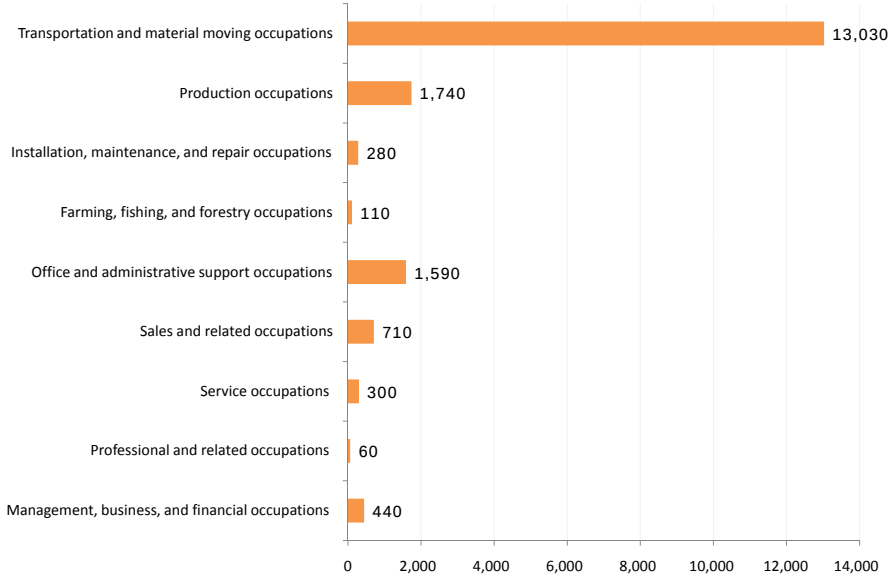


Figure 4.30. Nonfatal injuries/illnesses by occupation, NAICS 4244, 2005.



Grocery and related product merchant wholesalers *(NAICS 4244)*

Figure 4.31. Nonfatal injuries/illnesses by nature of injury/illness, NAICS 4244, 2005.

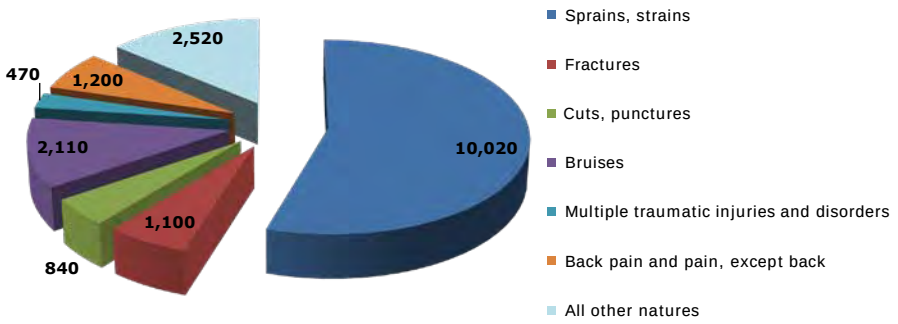


Figure 4.32. Nonfatal injuries/illnesses by source of injury/illness, NAICS 4244, 2005.

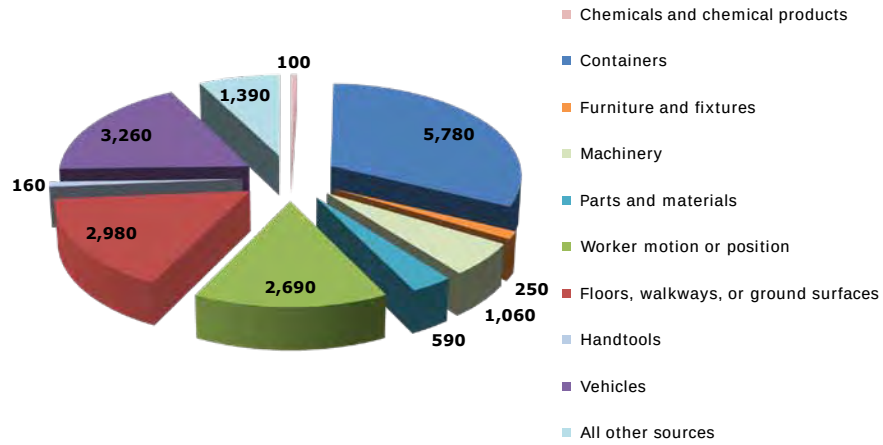


Figure 4.33. Nonfatal injuries/illnesses by event/exposure, NAICS 4244, 2005.

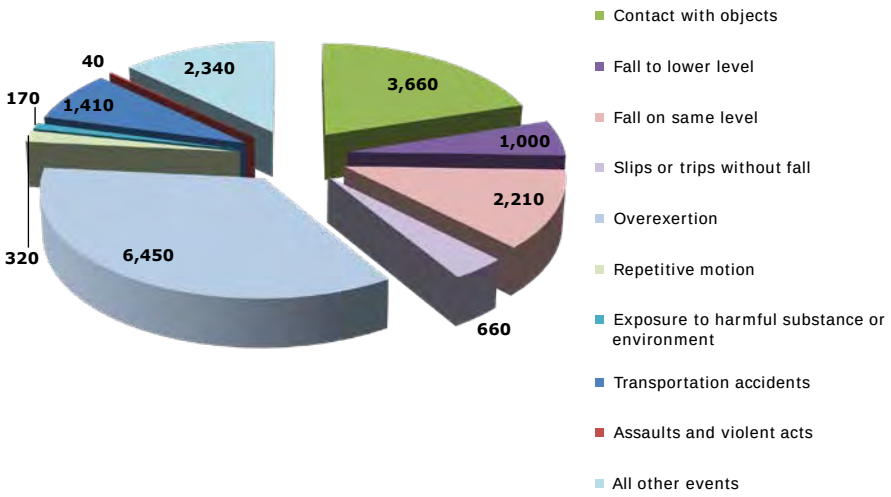
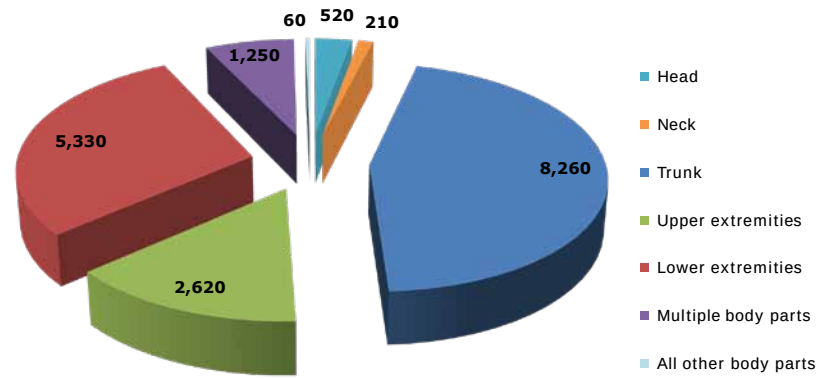


Figure 4.34. Nonfatal injuries/illnesses by part of body involved, NAICS 4244, 2005.



Metal and mineral [except petroleum] merchant wholesalers *(NAICS 4235)*

Figure 4.35. Nonfatal injuries/illnesses by age, NAICS 4235, 2005.

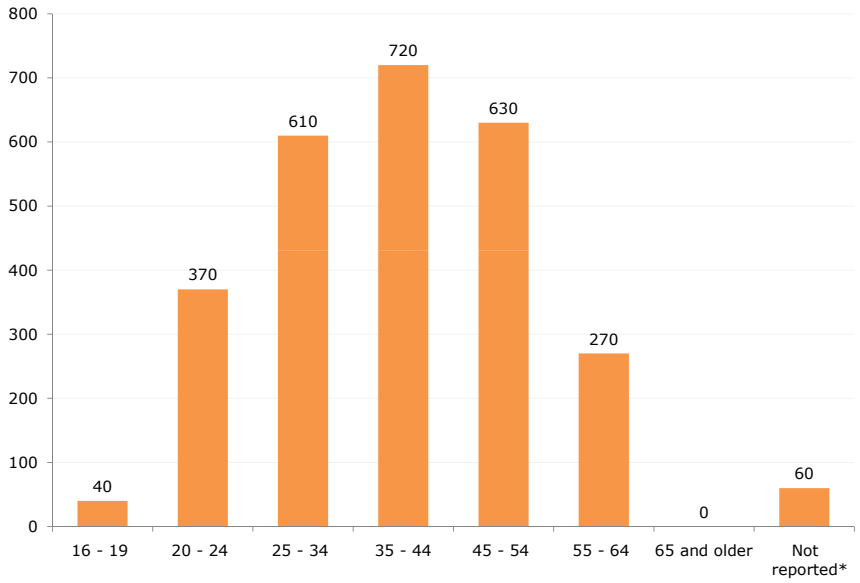


Figure 4.36. Nonfatal injuries/illnesses by gender, NAICS 4235, 2005.

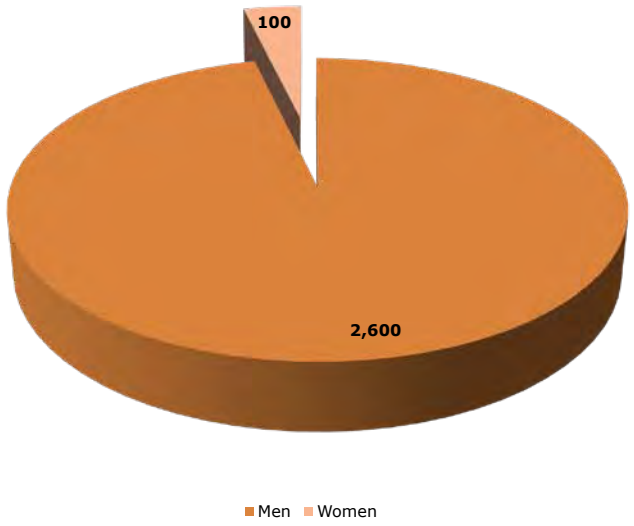


Figure 4.37. Nonfatal injuries/illnesses by race/ethnicity, NAICS 4235, 2005.

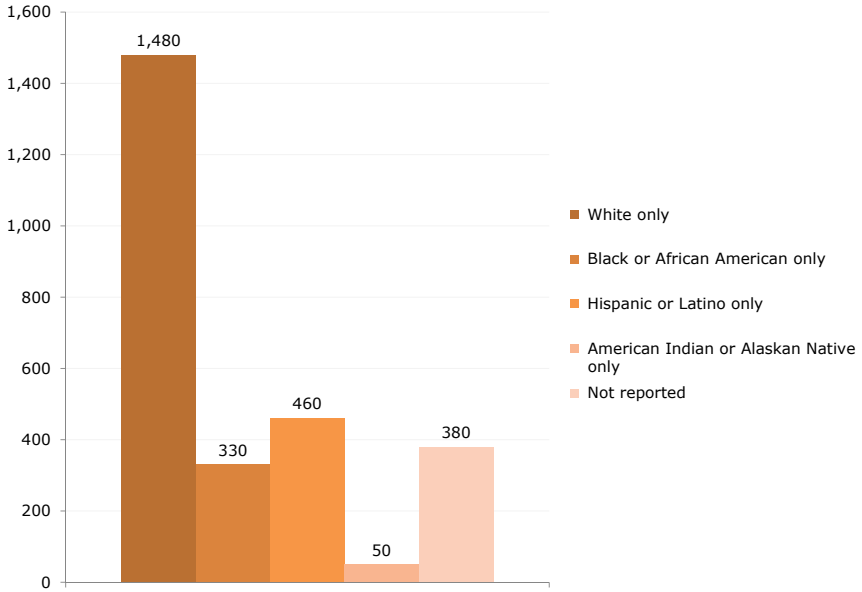
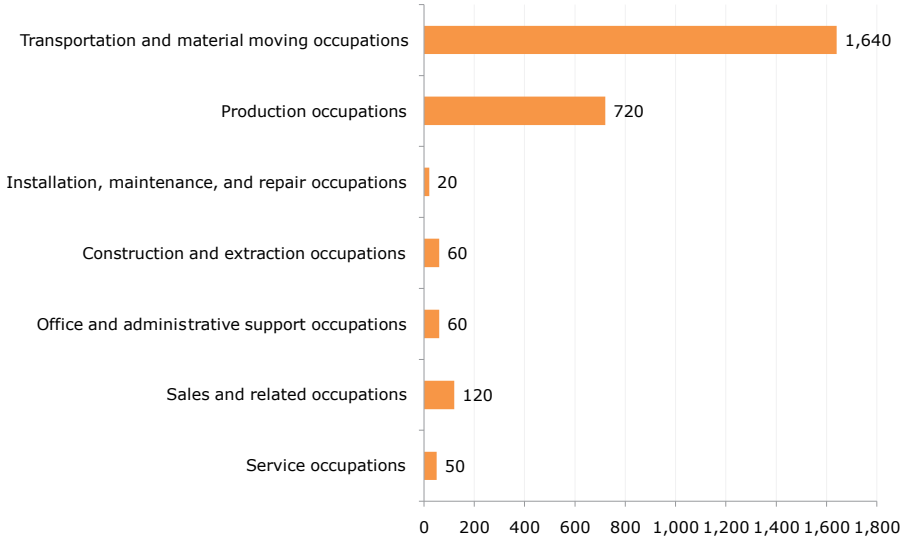


Figure 4.38. Nonfatal injuries/illnesses by occupation, NAICS 4235, 2005.



Metal and mineral [except petroleum] merchant wholesalers *(NAICS 4235)*

Figure 4.39. Nonfatal injuries/illnesses by nature of injury/illness, NAICS 4235, 2005.

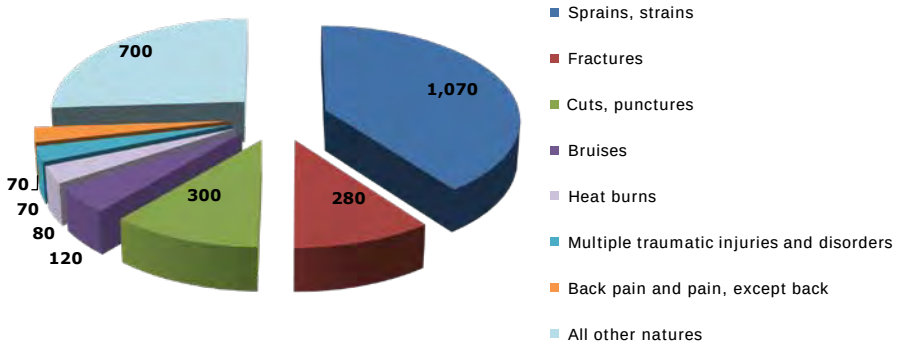


Figure 4.40. Nonfatal injuries/illnesses by source of injury/illness, NAICS 4235, 2005.

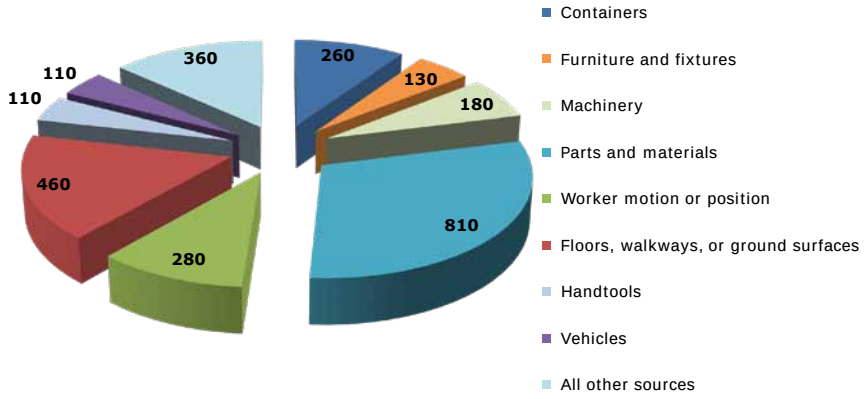


Figure 4.41. Nonfatal injuries/illnesses by event/exposure, NAICS 4235, 2005.

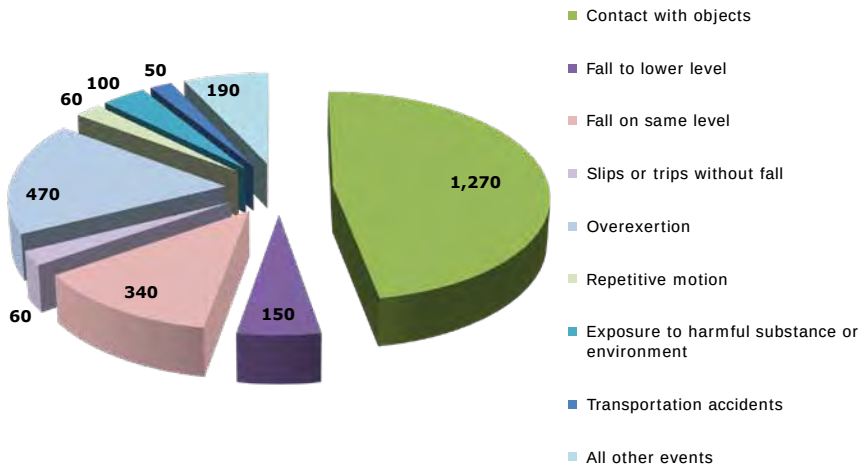
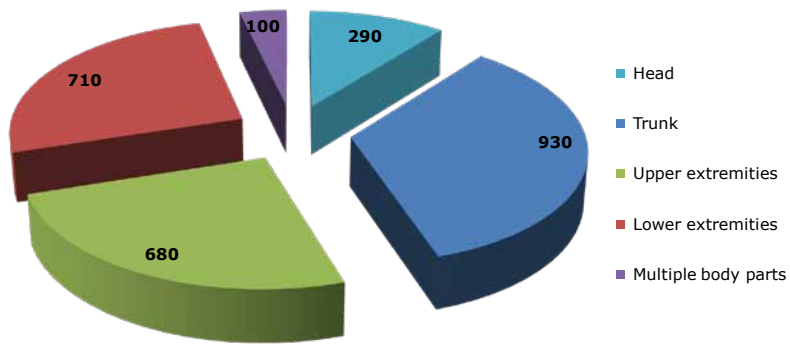


Figure 4.42. Nonfatal injuries/illnesses by part of body involved, NAICS 4235, 2005.



Lumber and other construction materials merchant wholesalers *(NAICS 4233)*

Figure 4.43. Nonfatal injuries/illnesses by age, NAICS 4233, 2005.

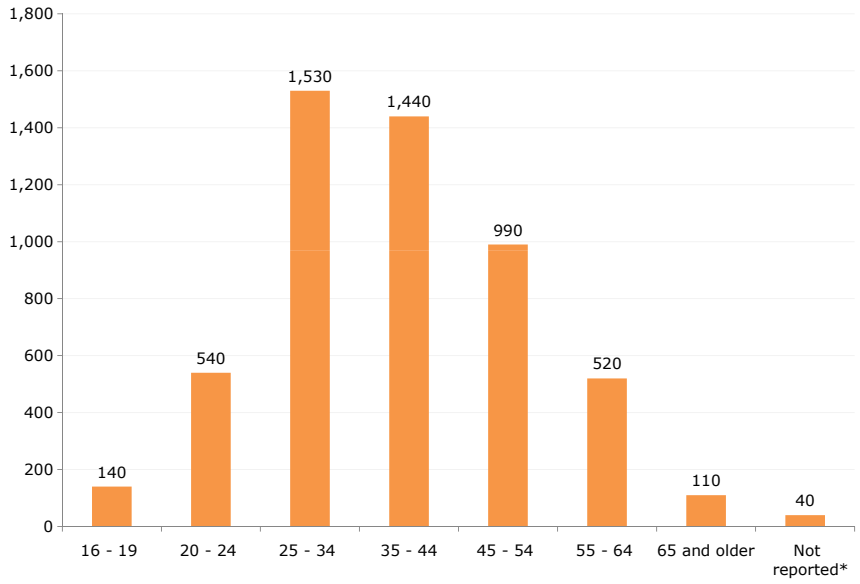


Figure 4.44. Nonfatal injuries/illnesses by gender, NAICS 4233, 2005.

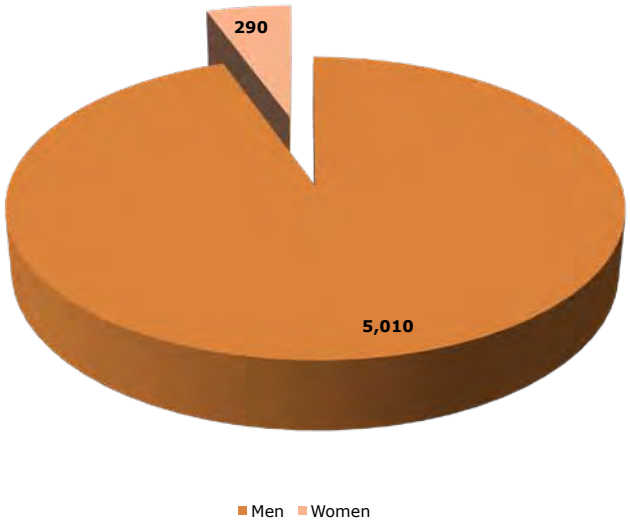


Figure 4.45. Nonfatal injuries/illnesses by race/ethnicity, NAICS 4233, 2005.

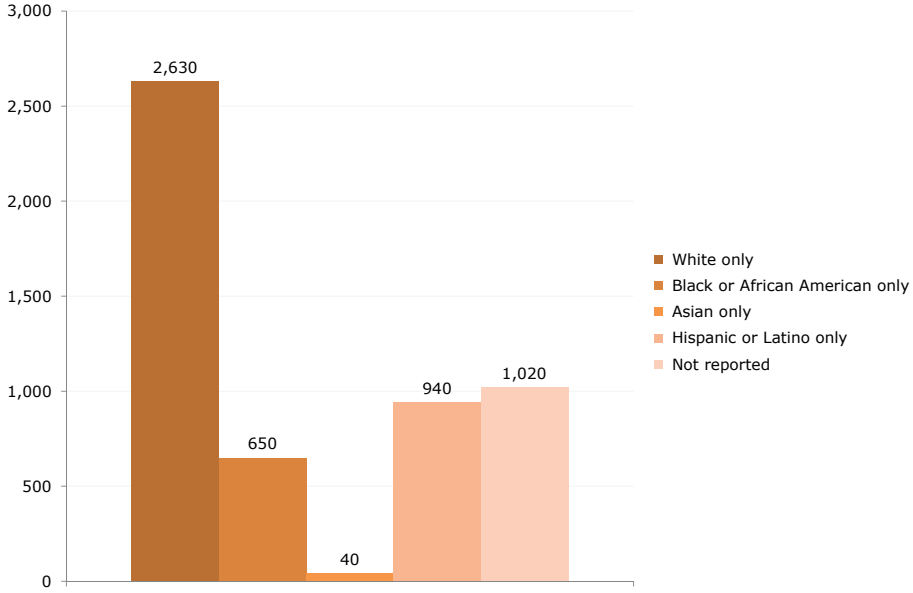
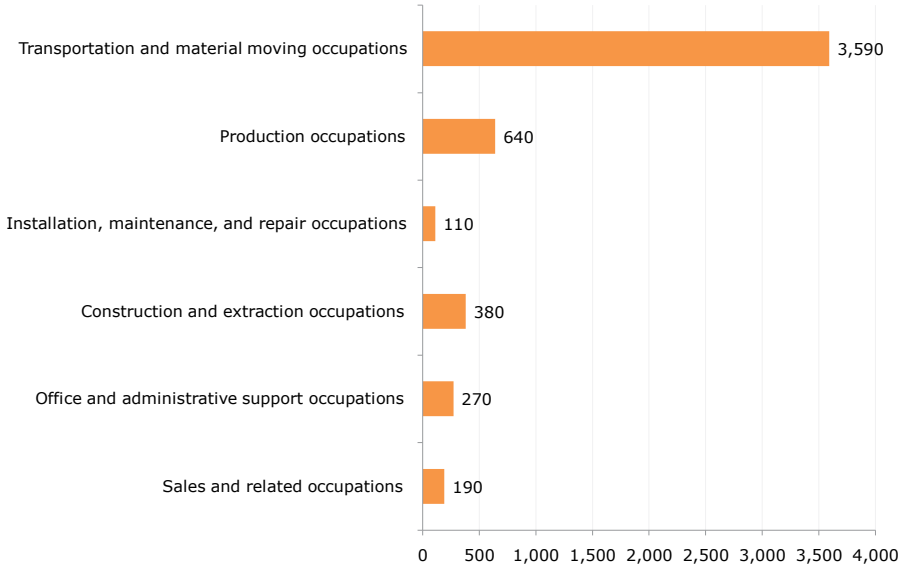


Figure 4.46. Nonfatal injuries/illnesses by occupation, NAICS 4233, 2005.



Lumber and other construction materials merchant wholesalers *(NAICS 4233)*

Figure 4.47. Nonfatal injuries/illnesses by nature of injury/illness, NAICS 4233, 2005.

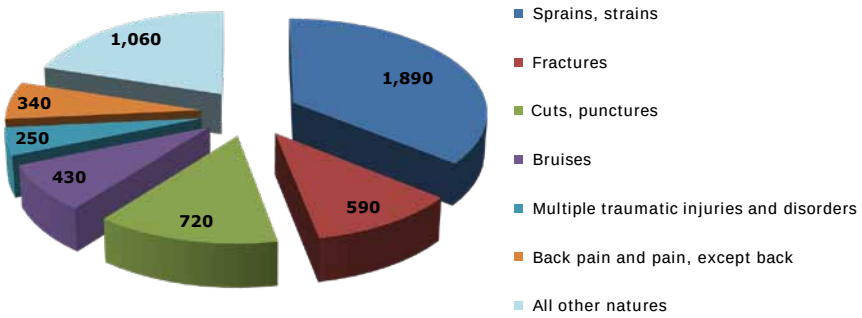


Figure 4.48. Nonfatal injuries/illnesses by source of injury/illness, NAICS 4233, 2005.

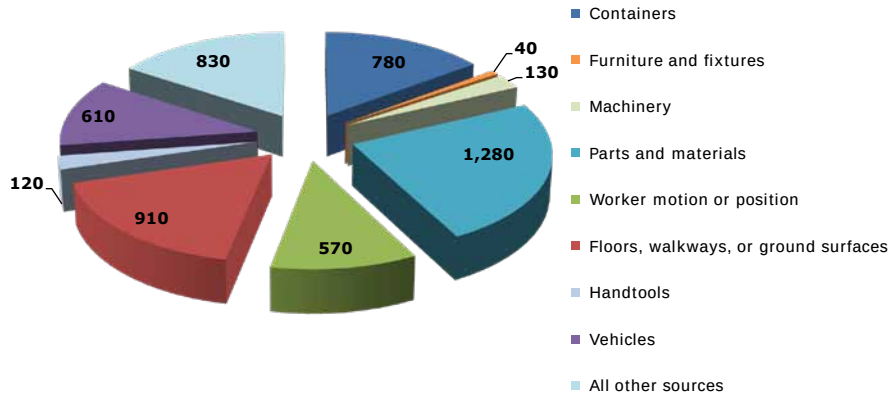


Figure 4.49. Nonfatal injuries/illnesses by event/exposure, NAICS 4233, 2005.

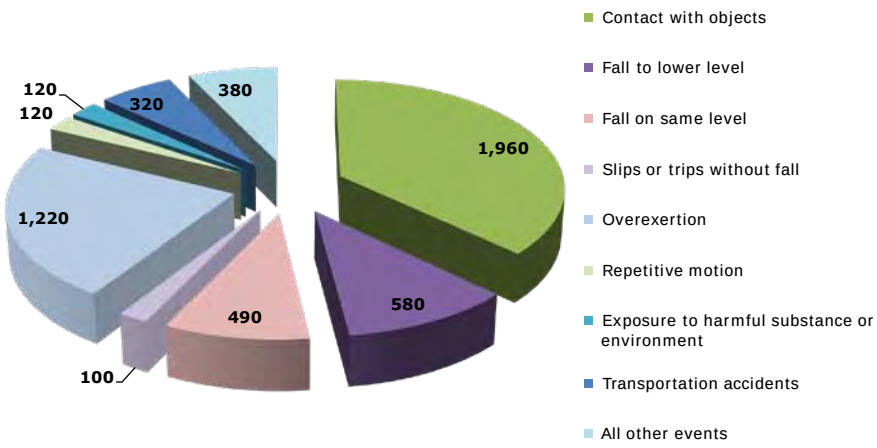
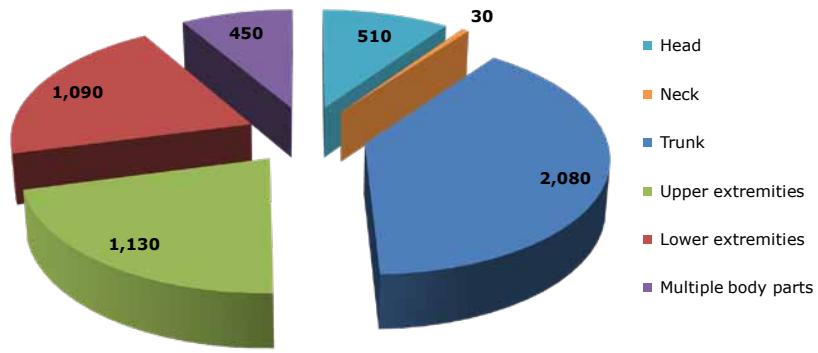


Figure 4.50. Nonfatal injuries/illnesses by part of body involved, NAICS 4233, 2005.



Farm product raw material merchant wholesalers *(NAICS 4245)*

Figure 4.51. Nonfatal injuries/illnesses by age, NAICS 4245, 2005.

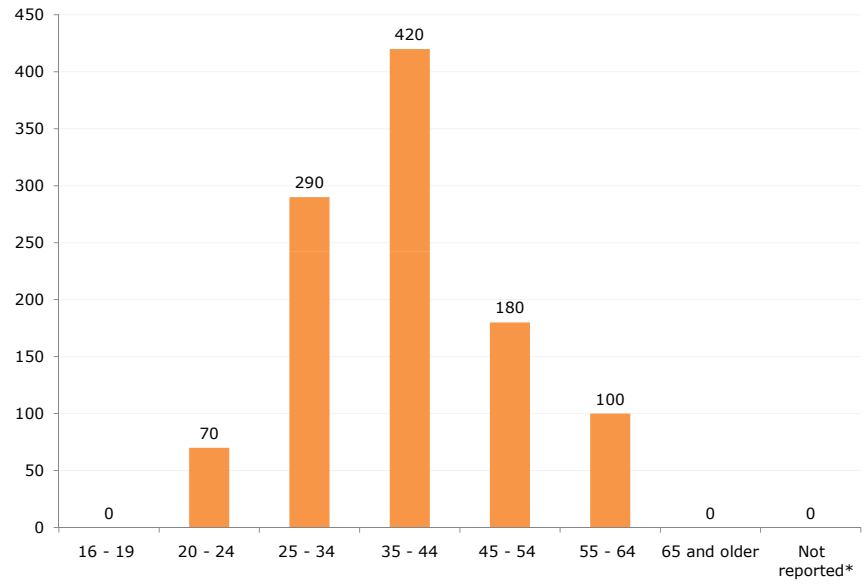


Figure 4.52. Nonfatal injuries/illnesses by gender, NAICS 4245, 2005.

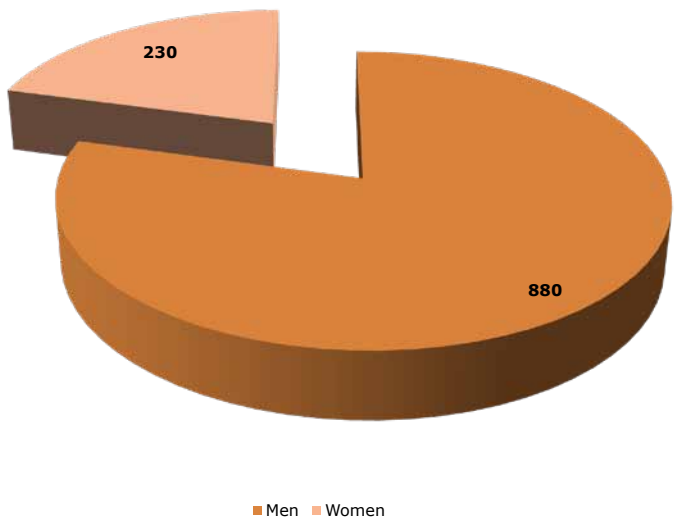


Figure 4.53. Nonfatal injuries/illnesses by race/ethnicity, NAICS 4245, 2005.

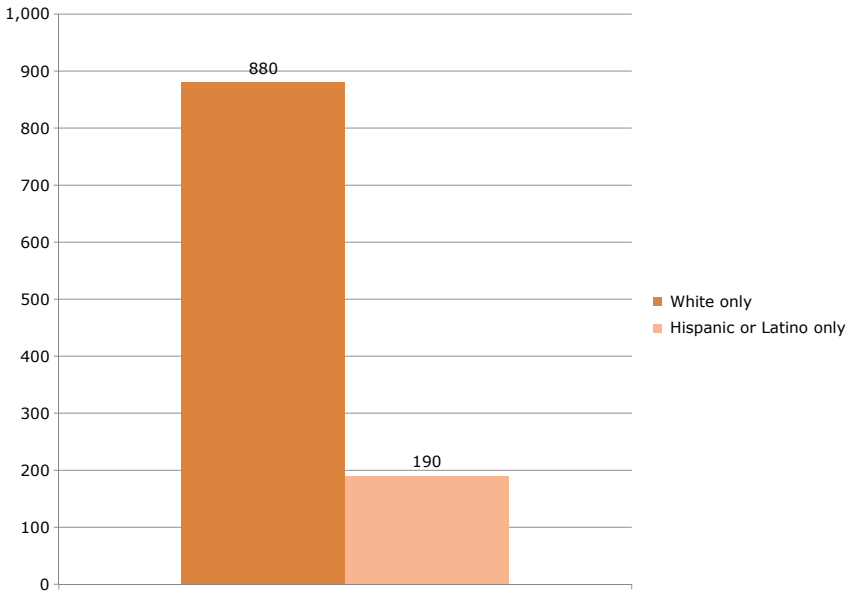


Figure 4.54. Nonfatal injuries/illnesses by occupation, NAICS 4245, 2005.

Farm product raw material merchant wholesalers *(NAICS 4245)*

Figure 4.55. Nonfatal injuries/illnesses by nature of injury/illness, NAICS 4245, 2005.

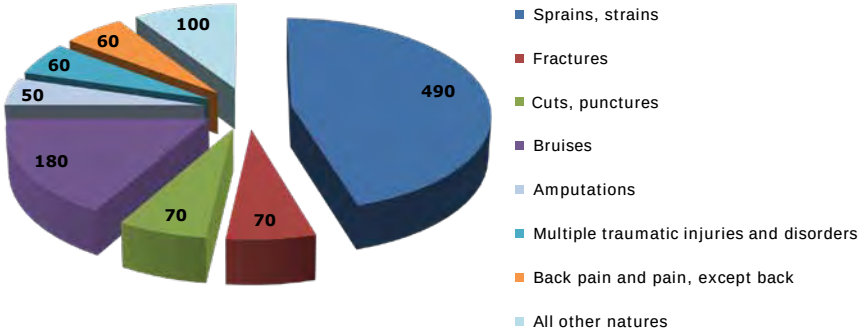


Figure 4.56. Nonfatal injuries/illnesses by source of injury/illness, NAICS 4245, 2005.

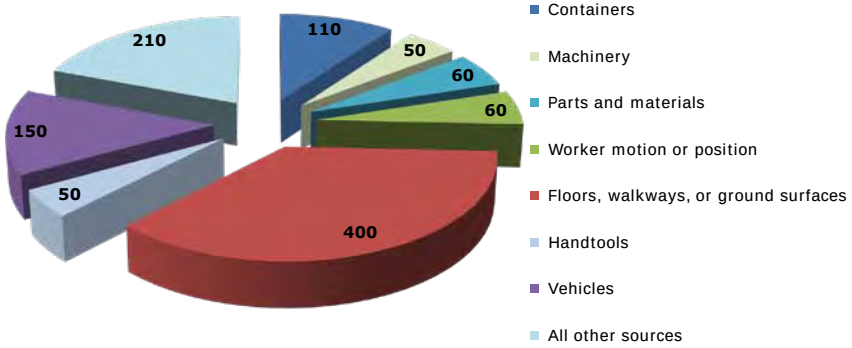


Figure 4.57. Nonfatal injuries/illnesses by event/exposure, NAICS 4245, 2005.

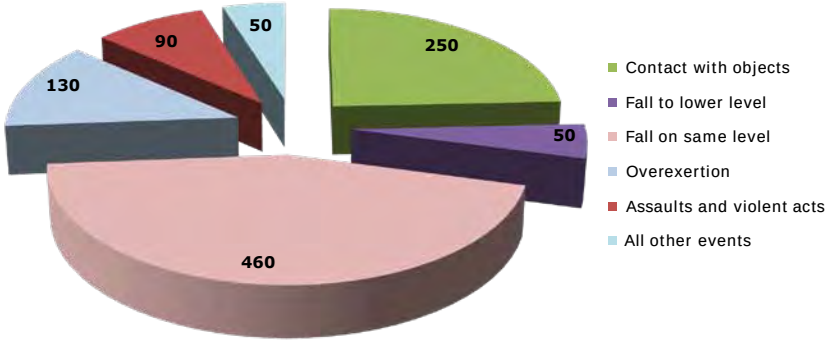
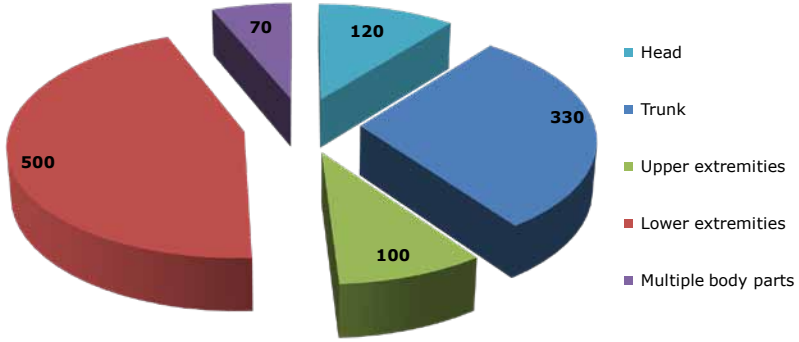


Figure 4.58. Nonfatal injuries/illnesses by part of body involved, NAICS 4245, 2005.



Motor vehicles and motor vehicle parts and supplies merchant wholesalers *(NAICS 4231)*

Figure 4.59. Nonfatal injuries/illnesses by age, NAICS 4231, 2005.

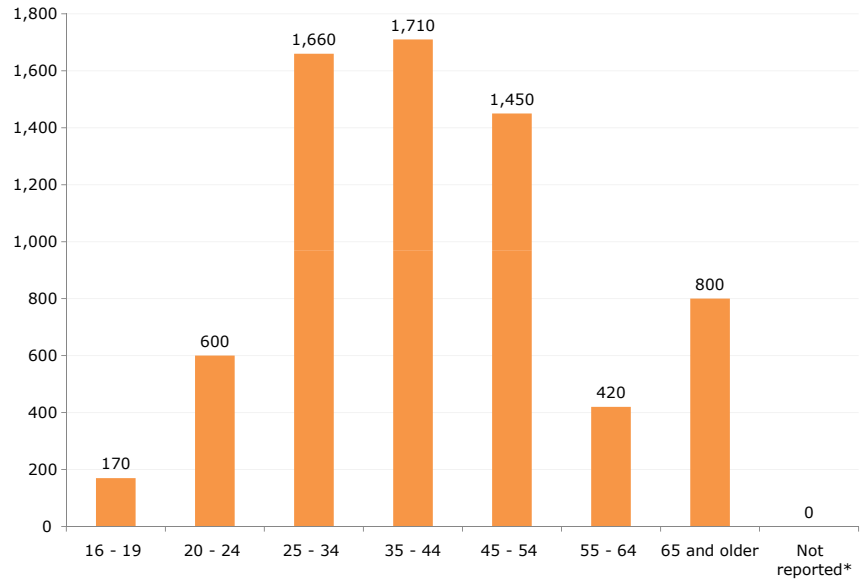


Figure 4.60. Nonfatal injuries/illnesses by gender, NAICS 4231, 2005.

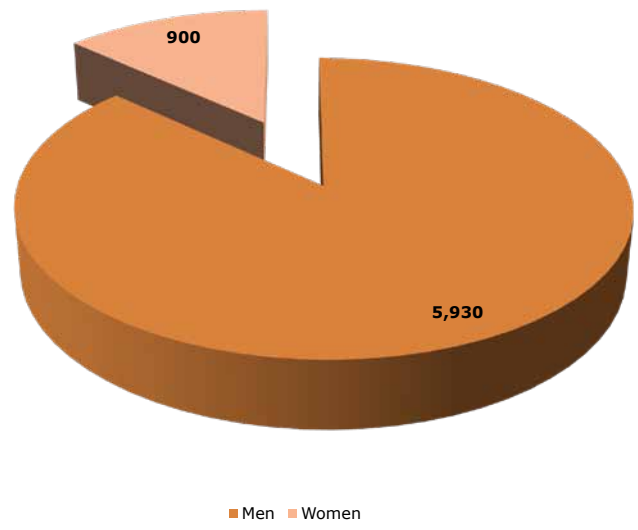


Figure 4.61. Nonfatal injuries/illnesses by race/ethnicity, NAICS 4231, 2005.

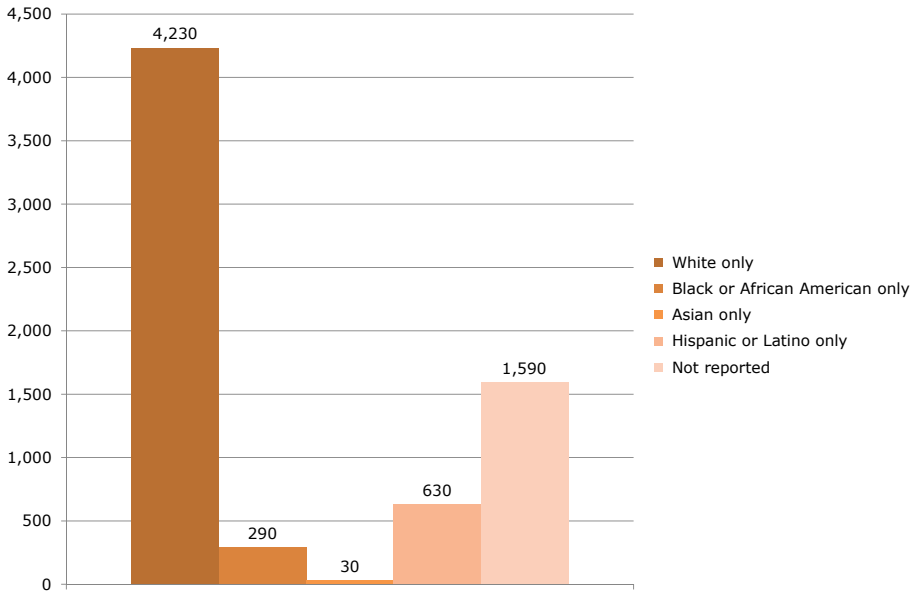
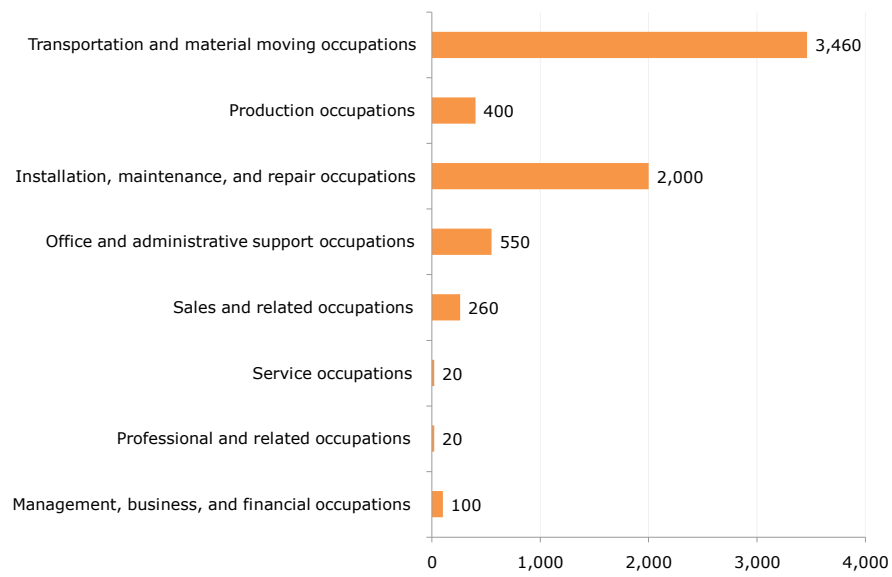


Figure 4.62. Nonfatal injuries/illnesses by occupation, NAICS 4231, 2005.



Motor vehicles and motor vehicle parts and supplies merchant wholesalers *(NAICS 4231)*

Figure 4.63. Nonfatal injuries/illnesses by nature of injury/illness, NAICS 4231, 2005.

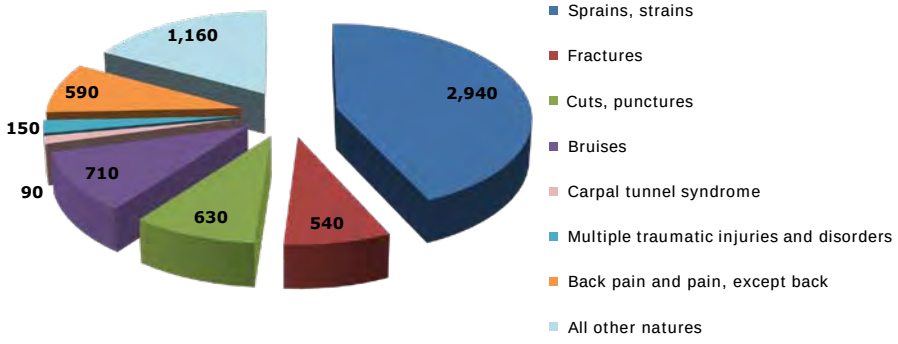


Figure 4.64. Nonfatal injuries/illnesses by source of injury/illness, NAICS 4231, 2005.

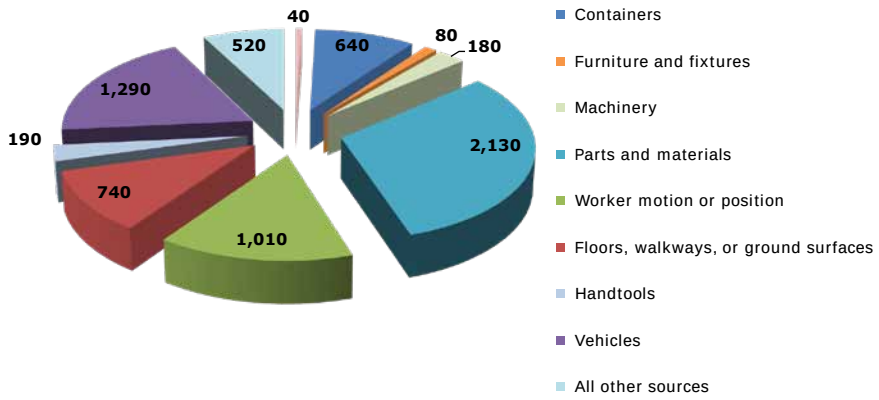


Figure 4.65. Nonfatal injuries/illnesses by event/exposure, NAICS 4231, 2005.

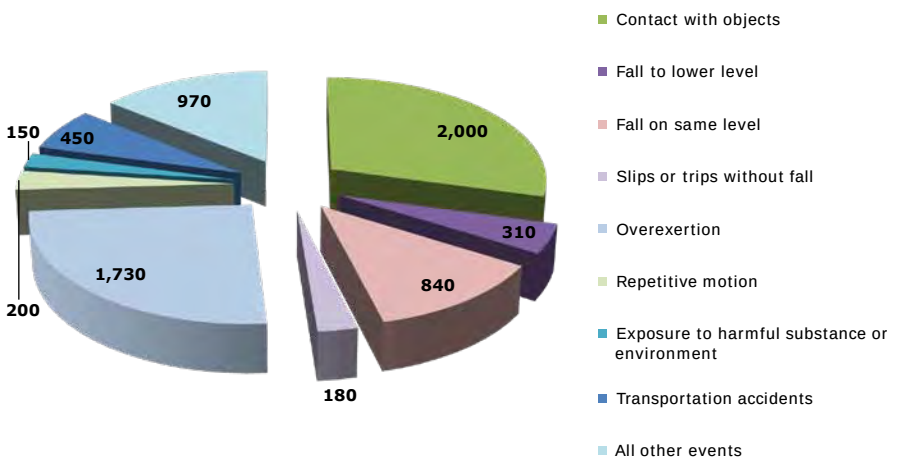
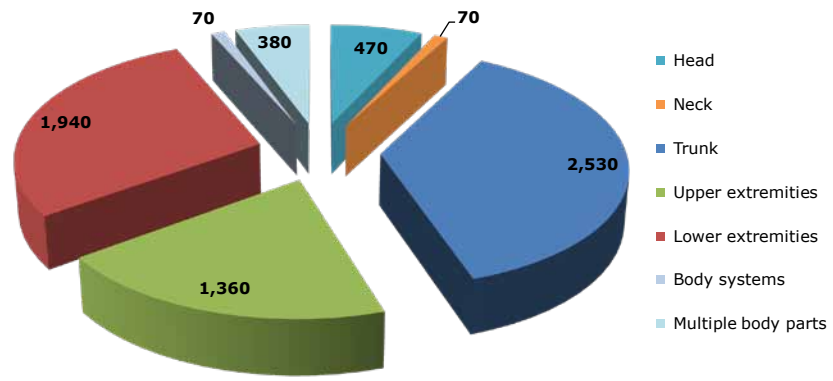


Figure 4.66. Nonfatal injuries/illnesses by part of body involved, NAICS 4231, 2005.



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Nonfatal Injuries/Illnesses in Selected High-Risk Retail Trade Industries

Home centers (NAICS 44411)
Warehouse clubs and superstores (NAICS 45291)
Other building material dealers (NAICS 44419)
Tire dealers (NAICS 44132)
Supermarkets and other grocery [except convenience stores] (NAICS 44511)
Hobby, toy, and game stores (NAICS 45112)
New car dealers (NAICS 44111)
Department stores (NAICS 4521)

Nonfatal Injuries/Illnesses in Selected Retail Trade Industries

Retail Component: Overview of Contents

This section presents key injury/illness data for the eight retail industries- listed below. Each of the eight industries is identified with a 5-digit NAICS code[1]. The eight were chosen from the set of 75 industries that comprise the retail sector because their injury/illness rates were higher than average, and in the case of the industry identified as the new car dealers industry (NAICS 44111), the number of injury/illness cases also was considered high. To gain a better understanding of the reasons for the elevated levels of injury and illness, additional analyses of the BLS datasets were undertaken and reported here. The analyses focused on (1) identifying the demographic features of the workforce, as well as on (2) identifying the characteristics of the workers' injuries/illnesses. The analyses were performed to provide further insight into the risk factors responsible for the level and extent of injuries and illnesses in the retail trade sector. This information can also be used to identify priorities for further analysis, research, and prevention. All data presented are for the baseline year of 2005, unless otherwise noted.

Home centers *(NAICS 44411)*

Warehouse clubs and superstores *(NAICS 45291)*

Other building material dealers *(NAICS 44419)*

Tire dealers *(NAICS 44132)*

Supermarkets and other grocery [except convenience stores] *(NAICS 44511)*

Hobby, toy, and game stores *(NAICS 45112)*

New car dealers *(NAICS 44111)*

Department stores *(NAICS 4521)*

Demographic Factors

(Figures 4.67 through 4.130)

For each of the eight retail industries, the following set of data and associated figures provide injury/illness information on what is known about the demographic factors extracted from the incident reports: namely, age, gender, race/ethnicity, and occupation.

Worker age

Injuries/illnesses occurred more frequently among younger workers than older workers in the high-risk retail trade industries. As expected, the number of injuries and illnesses reported for the youngest age group (16–19) was greater in those industries in which younger workers are most often employed: the supermarket and other grocery industry (NAICS 44511), the department stores industry (NAICS 4521), the warehouse clubs and superstores industry (NAICS 45291), and the home centers industry (NAICS 44411). Although the actual injury/illness rates were moderately low, employees in the peak earning years from ages 25 through 54 had more injuries/illnesses than workers both younger and older. The severity of those middle-aged workers' injuries/illnesses, however, was usually less than that for older workers, as measured in terms of DAW. Four industries, namely, the supermarkets and other grocery [except convenience stores] industry (NAICS 44511), the hobby, toy, and game stores industry (NAICS 45112), the new car dealers industry (NAICS 44111), and the department stores industry (NAICS 4521), all had a higher-average-aged workforce up and though the mid-50's. Those industries with an

older workforce experienced proportionally more injuries/illnesses in those same age ranges. An interesting observation about the hobby, toy, and game stores industry (NAICS 45112), was that their injury/illness numbers were flat across the age ranges of 25 through 54, suggesting age, at least during that those years, did not have much of an impact on the overall number of injury/illnesses cases to any extent. In general, the age of the workers seems to have a greater impact on the distribution of injuries and illnesses found with the retail sector than was found in the previous analysis of the wholesale sector. Moreover, the injury/illness rate for workers both younger than 20 and for workers older than 65 was higher for the retail industries than for the wholesale industries.

Worker gender

The percentage of cases in which females as compared to males had injuries/illness ranged from a low of 3% (the tire dealers industry, NAICS 44132) - to- 68% (the hobby, toy and game stores industry, NAICS 45112). Other industries in which females had a high percentage of injuries/illnesses included the department stores industry (NAICS 4521; 68%), the warehouse clubs and superstores industry (NAICS 45291; 57%), and the supermarkets and other grocery (except convenience) stores industry (NAICS 44511; 49%). In general, the injury/illness rates for male and female workers in the retail industries were proportionally more even than what was found with the wholesale industries, in which males were at a higher risk.

Worker Race/ethnicity

A noticeable amount of race/ethnicity information was missing in the current analysis of injuries/illnesses data for the retail industries, as was observed with the wholesale industries. Measures of "not reported" ranged from 17% to 60%. For the cases for which race/ethnicity data were reported, the majority of workers were white, followed by Hispanic/Latino, black or African American, and Asian workers. In terms of injuries/illnesses that were reported, the tire dealers industry (NAICS 44132) had injury/illness cases in which black or African American workers were identified, and as such, had the second highest number of injuries/illnesses cases, which was small, in comparisons with the number of injuries/illnesses cases in the white only category. In the hobby, toy, and game stores industry (NAICS 45112), Asian workers had the third highest number of injuries/illnesses, following white only, and Hispanic or Latino.

Worker occupation

The occupation known as "sales and related occupations" is either the first or second most common occupation in the retail trade sector. Other common occupations in this sector include: transportation and material moving occupations, installation, maintenance and repair, as well as office and administrative support functions. Sales and related occupations was the leading occupation in terms of the number of cases of injuries/illnesses in the following industries: warehouse clubs and superstores (NAICS 45291), supermarket and other grocery (except convenience) stores (NAICS 44511), and department stores (NAICS 4521). Transportation and material handling occupations had more injuries/illnesses in the home centers industry (NAICS 44411) and in the other building material dealers industry (NAICS 44419). Installation, maintenance, and repair occupations had greater number of injuries/illnesses in the tire dealers industry (NAICS 44132) and in the new car dealers industry (NAICS 44111. In the hobby, toy, and game stores industry (NAICS 45112), office and administrative support occupations had highest number of injuries/illnesses cases, followed closely by sales and related occupations.

1 More detailed information on the structure and coding of the industries based on the NAICS is found in the Glossary under Sector, Subsector.

Injury/Illness Characteristics for the Retail Sector

(Figures 4.67 through 4.130)

For each of the eight retail industries that are presented in this chapter, the following set of data and associated figures provide key injury/illness information on what is known about the four main features that characterize an injury/illness: namely, the nature of the injury/illness, the source of injury/illness, the event or exposure, and the body part affected. Such information, extracted from the incident reports, is particularly useful in developing appropriate controls and interventions. All data presented are for the baseline year of 2005, unless otherwise noted.

Overview

In the retail trade, as was found in the analysis of the wholesale sector, sprains and strains were the most frequently reported "nature of injury/illness" condition, followed by cuts/lacerations, punctures, bruises, contusion and fractures. The leading "source" of injury/illness was containers; followed by floor, ground surfaces. A number of events/exposures contribute to the cases of injuries/illnesses reported. They included: contact with objects, overexertion, followed by fall-on-the-same-level. The trunk was the most frequently reported injured body part.

This snapshot of the retail sector, as was found in the preceding analysis of the wholesale sector, suggests that the prevalent mode of injury/illness faced in most retail industries is associated with the handling and movement of products. The task of handling and moving products can lead to sprains and strains which often impact the trunk (primarily the back). In jobs or task such as manually moving materials, the most frequently identified "exposure or event" is characterized as overexertion. The handling and movement of products can also lead to an acute or traumatic injury. In this case the exposure or event is not an overexertion, but a contact-with-object condition.

Nature of injury/illness

As was found with the wholesale sector, the condition known as "sprains and strains" was the most frequently identified condition for all eight of the current set of high-risk retail industries. Sprains/strains is one of many conditions that is included in the BLS definitions used to characterize the injuries/illnesses cases for the BLS definition of "nature"[1]. The percentages of sprain/strain injuries ranged from as small as 25% of all the injuries/illnesses incurred by workers in the hobby, toy, and the game stores industry (NAICS 45112) to slightly more than half at 53% of the injuries/illnesses incurred by workers in the home centers industry (NAICS 44411). In the other six high-risk industries, sprains/strains represented a remarkably consistent proportion of total injuries/illnesses, ranging from 38% to 45% of all injuries/illnesses reported. Various combinations of cuts/punctures and bruises were second or third on the list of most commonly reported nature of injury/illness conditions listed.

Source of injury/illness

The most frequently identified "sources" of injury/illness among the eight high-risk retail industries were containers, parts/material, and floors, walkways, or ground surfaces. Containers were the leading source of injury/illness in the warehouse clubs and superstores industry (NAICS 45291); in the supermarket and grocery (except convenience) stores industry (NAICS 44511); in the hobby, toy, and game stores industry (NAICS 45112); and in the department stores industry (NAICS 4521). Parts and materials were the leading source of injury/illness in the tire dealers industry (NAICS 44132), in the home centers industry (NAICS 44411), and in the other building material dealers industry (NAICS 44419). Although floors, walkways, or ground surfaces were not the most frequently identified source for injury/illness; it was with the exception of the new car dealer industry (NAICS 44111), the second or third most prevalent source of identified injury/illness. Finally, the source of injury/illness known as worker motion or position was identified often enough in the current list of eight high-risk retail industries to be listed in the third or fourth position as a common source of injury illness.

Event/exposure

Contact-with-objects was identified as the primary event/exposure in six of the eight retail industries in the current analysis. Those six retail industries included: the new car dealers industry (NAICS 44111), the tire dealers industry (44132), the other building material dealers industry (NAICS 44419), the supermarket and other grocery (except convenience) stores industry (NAICS 44511), the hobby, toy, and game stores industry (NAICS 45112), and the department stores industry (NAICS 4521). Again, in six of the eight retail industries, the event/exposure known as overexertion accounted for the second highest number of injuries/illnesses. For example, in the industry labeled- other building material dealers (NAICS 44419), contact with objects

accounted for 32% of the cases, and overexertion accounted for 30%. Overexertion was the leading event/ exposure contributing to injuries/illnesses in the home centers industry (NAICS 44411) and in the warehouse clubs and superstores industry (NAICS 45291). Another important event/exposure contributing to injury/illness was the event/exposure described as a fall on the same level. This event/exposure was the third most frequently identified event/exposure in this present collection of high-risk retail industries that are being examined here.

Part of body

Again, as was found with the previously presented wholesale industries, the trunk (including back) was the body part most often injured, followed by either the lower extremities or upper extremities. An exception was the hobby, toy, and game stores industry (NAICS 45112), in which the head was the leading body part involved in 30% of all injuries), followed by the trunk at 22%.

Some Concluding Thoughts about the Retail Sector

The retail sector is important because it is large and pervasive. The sector itself is a growth sector; as a result, even a relatively small increase in injury rates and accompanying days away from work will have significant impact on working families and society. A review of the tabular data presented in this report highlights numerous high-risk retail industries. Although it is generally accepted that preventing occupational injuries/ illnesses can reduce labor costs to employers, limited data are available to estimate the costs of occupational illnesses/diseases, and many of those costs are borne outside workers' compensation programs. Information on the costs of fatal injuries for both the wholesale and retail trades, however, is somewhat easier to estimate and is currently (2008) at $6.5 billion. Although, the overall incidence rates in the WRT sector are low, the cumulative burden is great, and the sector merits further research and intervention.

A note about industry-level analyses—it is important that employers, and safety and health professionals, understand the nature and characteristics of the work environments that exist in this vast wholesale and retail trade sector. The present analysis provides one model for investigating the demographics and characteristics of fatality, injury, and illness data. It is based on examining BLS data for a small sample of 14 wholesale/retail industries for the base-line year of 2005. If available, company or facility-level data are an invaluable component to supplement BLS data for understanding the injury/illness risks, as well as identify opportunities for prevention.

A recent report by Anderson et al. (2010)[2] provides additional information on fatal and nonfatal occupational injuries and illnesses in the wholesale and retail trade sector.

1 Occupational Injury and Illness Classification Manual, U.S. Department of Labor, Bureau of Labor Statistics, December 1992.

2 Putz-Anderson V, Schulte PA, Sestito J, Linn H, Nguyen LS [2010]. Occupational fatalities, injuries, illnesses, and related economic loss in the wholesale and retail trade sector. Source Am J Industrial Med 53(7):673-685.

Figure 4.67. Nonfatal injuries/illnesses by age, NAICS 44411, 2005.

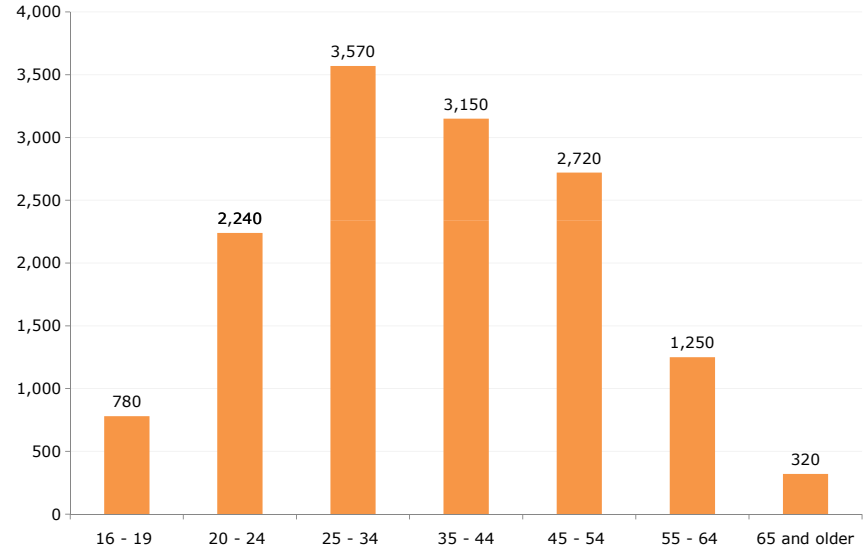


Figure 4.68. Nonfatal injuries/illnesses by gender, NAICS 44411, 2005.

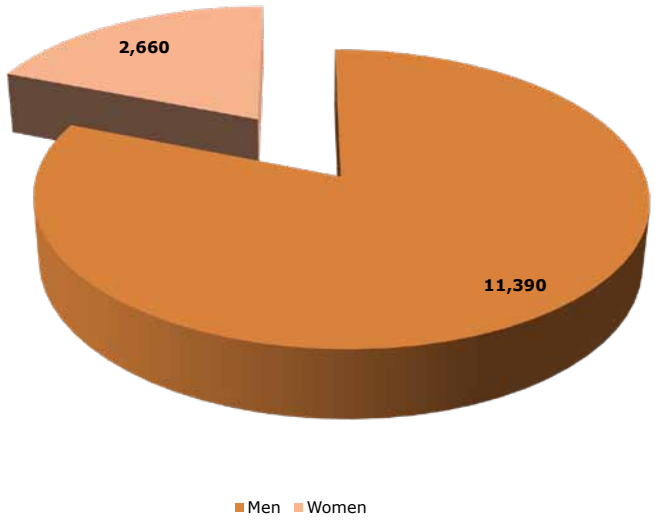


Figure 4.69. Nonfatal injuries/illnesses by race/ethnicity, NAICS 44411, 2005.

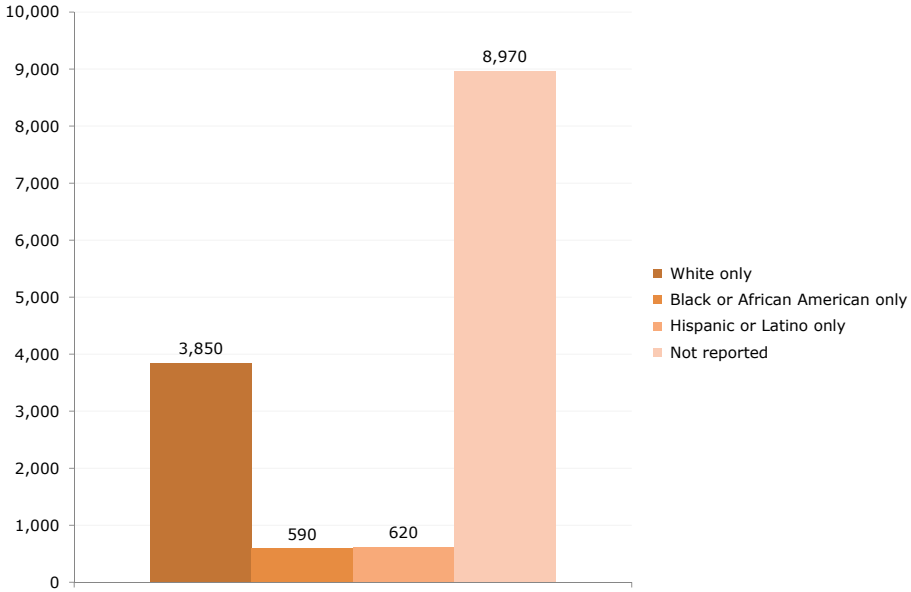
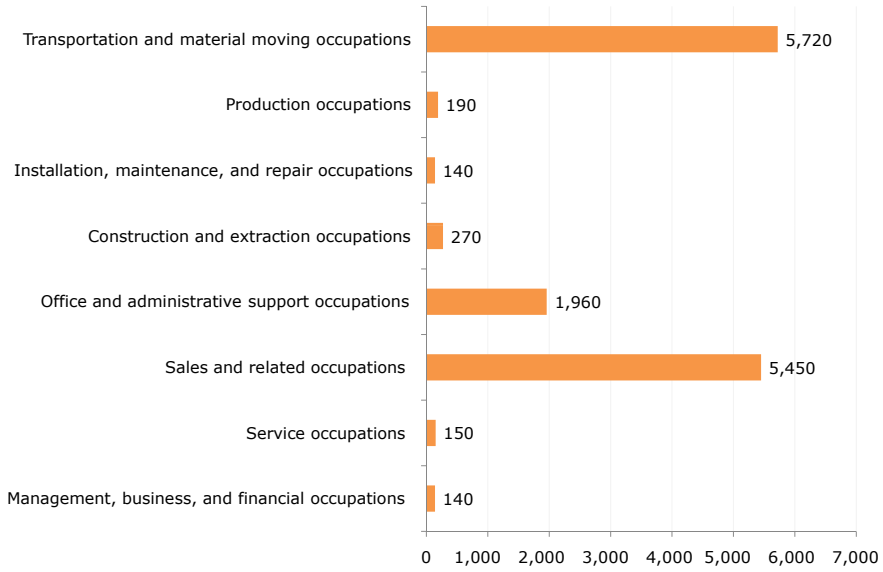


Figure 4.70. Nonfatal injuries/illnesses by occupation, NAICS 44411, 2005.



Home centers *(NAICS 44411)*

Figure 4.71. Nonfatal injuries/illnesses by nature of injury/illness, NAICS 44411, 2005.

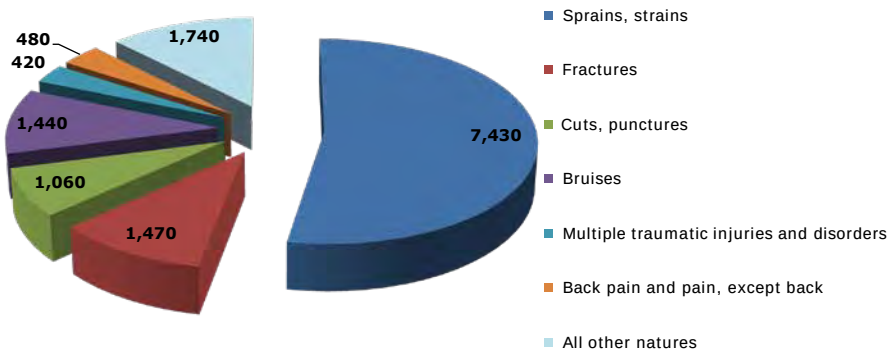


Figure 4.72. Nonfatal injuries/illnesses by source of injury/illness, NAICS 44411, 2005.

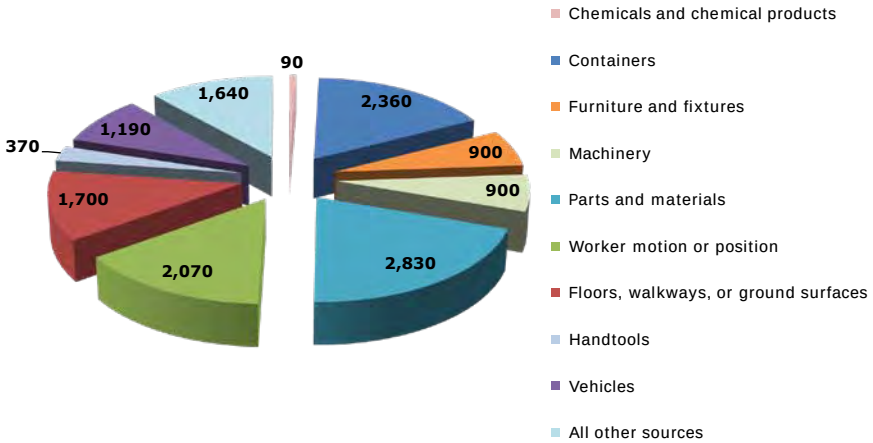


Figure 4.73. Nonfatal injuries/illnesses by event/exposure, NAICS 44411, 2005.

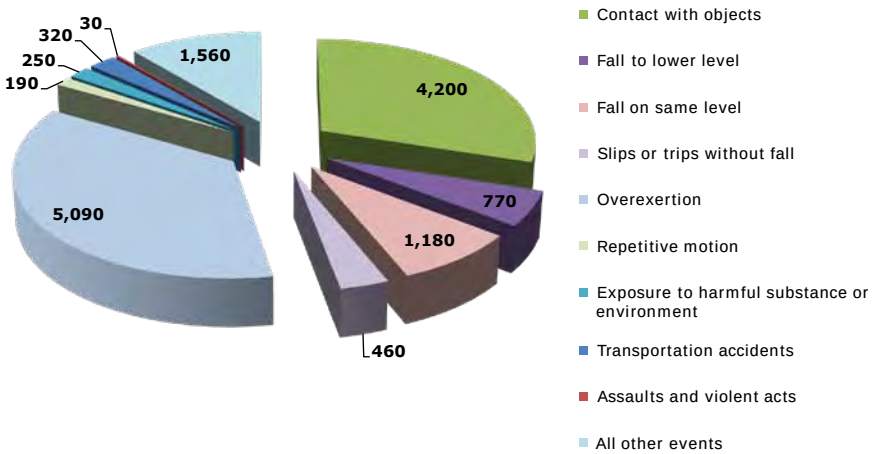
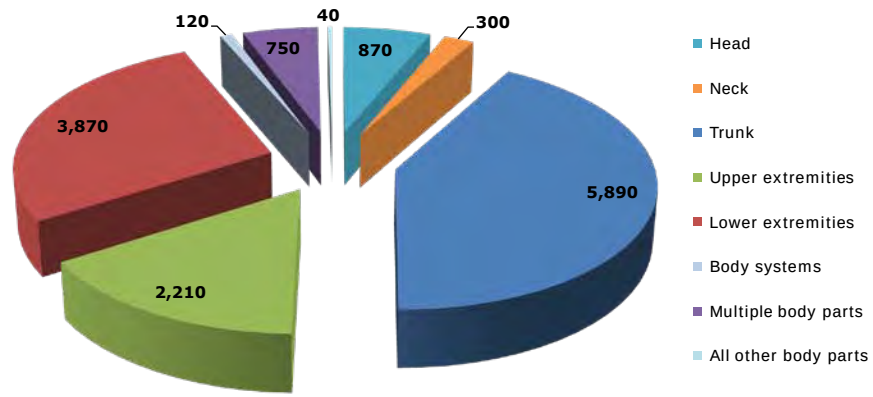


Figure 4.74. Nonfatal injuries/illnesses by part of body involved, NAICS 44411, 2005.



Warehouse clubs and superstores *(NAICS 45291)*

Figure 4.75. Nonfatal injuries/illnesses by age, NAICS 45291, 2005.

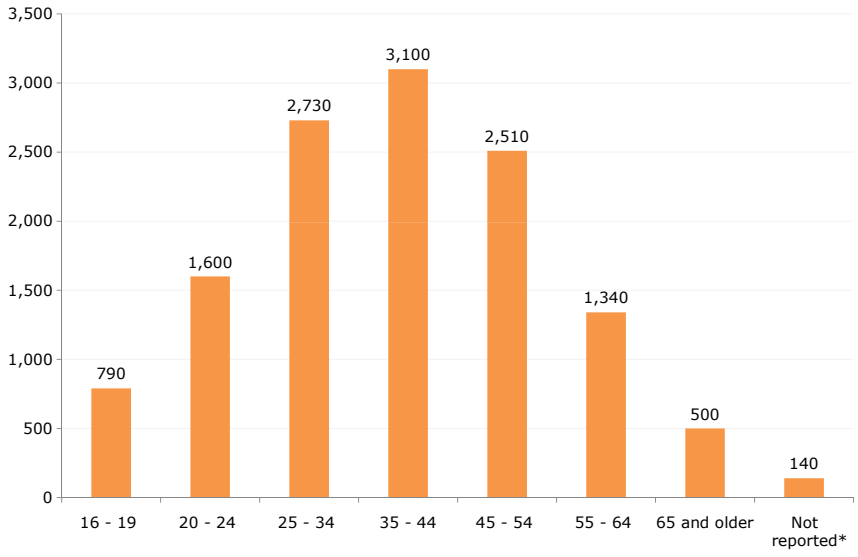


Figure 4.76. Nonfatal injuries/illnesses by gender, NAICS 45291, 2005.

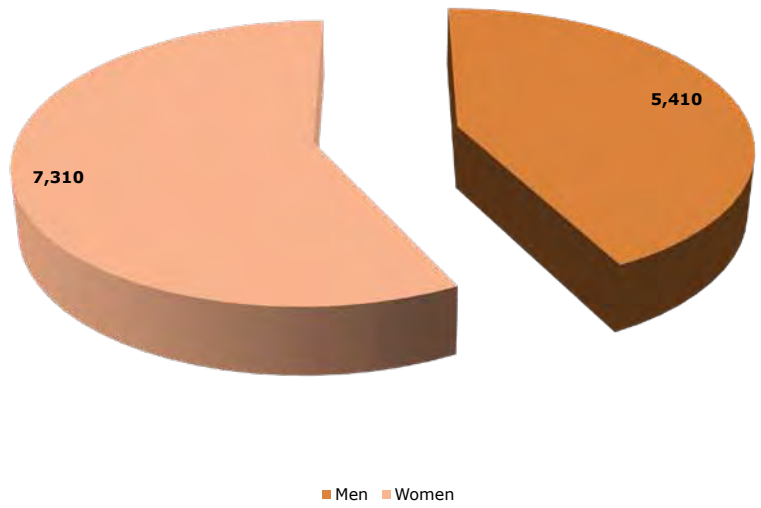


Figure 4.77. Nonfatal injuries/illnesses by race/ethnicity, NAICS 45291, 2005.

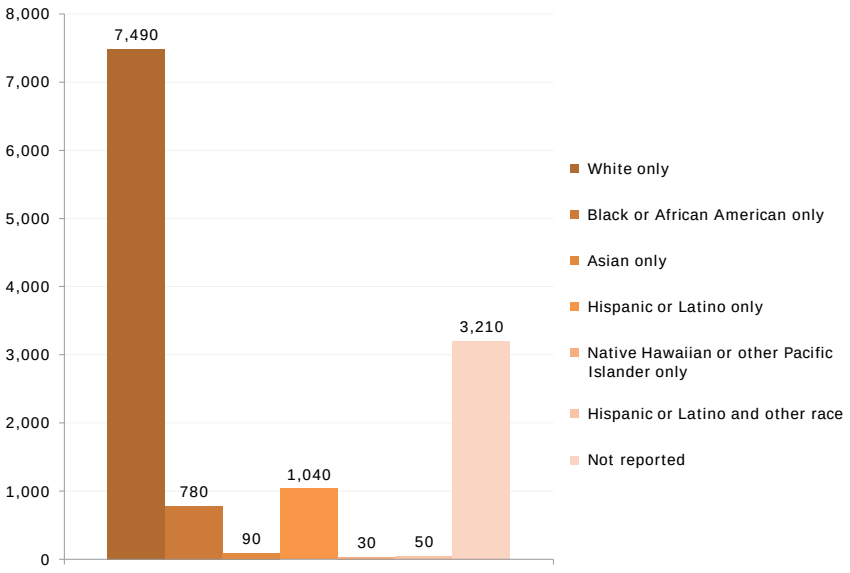
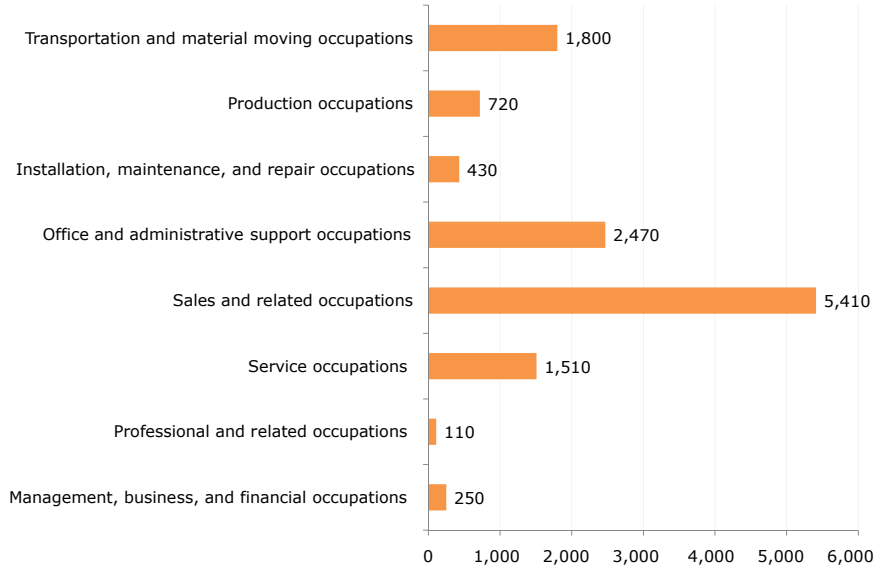


Figure 4.78. Nonfatal injuries/illnesses by occupation, NAICS 45291, 2005.



Warehouse clubs and superstores *(NAICS 45291)*

Figure 4.79. Nonfatal injuries/illnesses by nature of injury/illness, NAICS 45291, 2005.

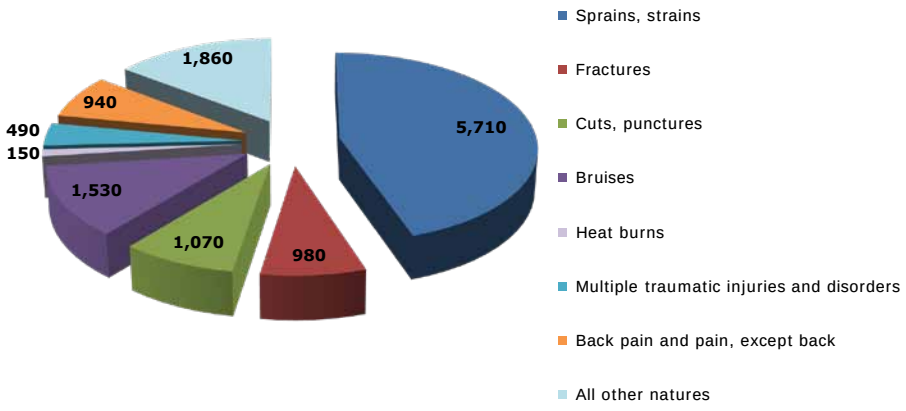


Figure 4.80. Nonfatal injuries/illnesses by source of injury/illness, NAICS 45291, 2005.

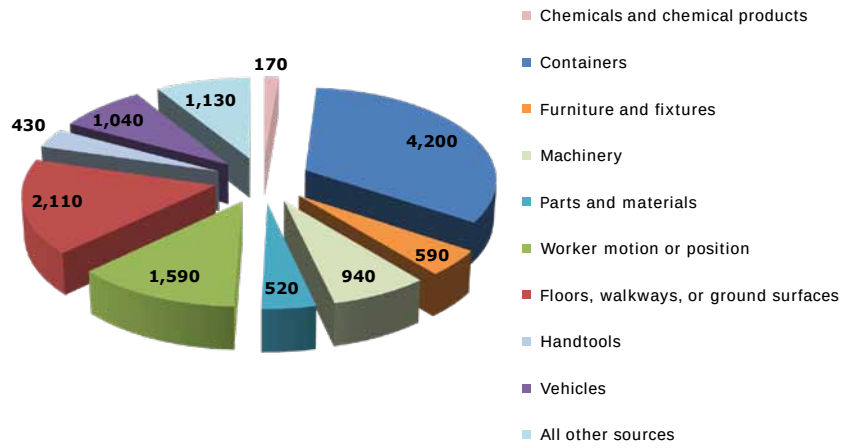


Figure 4.81. Nonfatal injuries/illnesses by event/exposure, NAICS 45291, 2005.

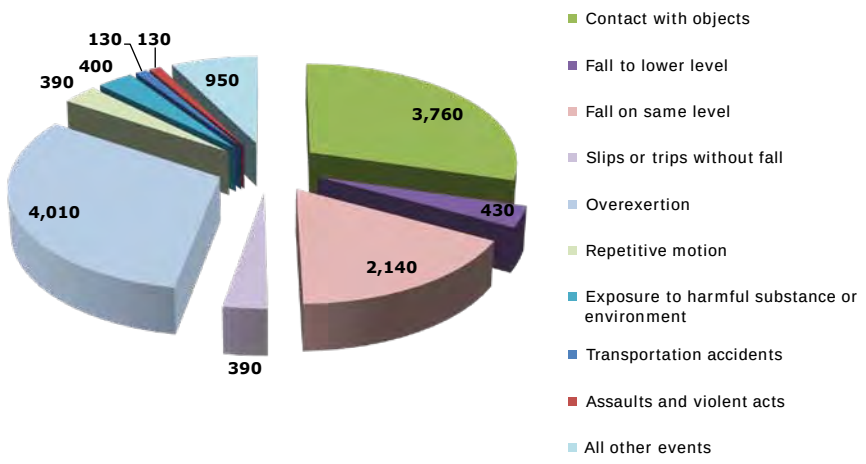
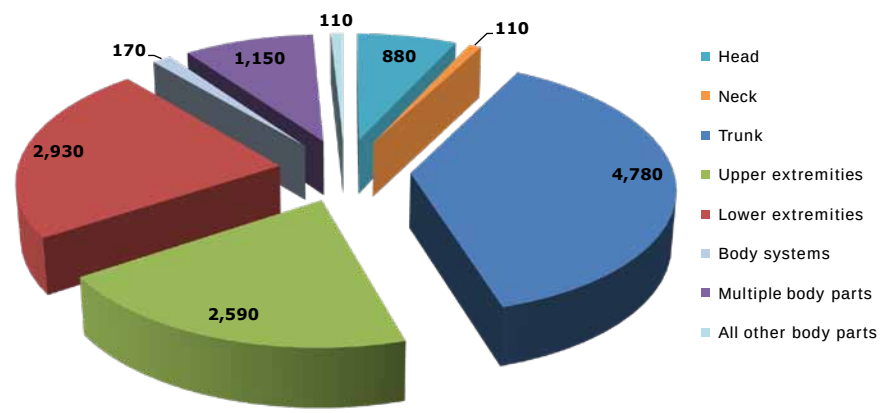


Figure 4.82. Nonfatal injuries/illnesses by part of body invovled, NAICS 45291, 2005.



Other building material dealers *(NAICS 44419)*

Figure 4.83. Nonfatal injuries/illnesses by age, NAICS 44419, 2005.

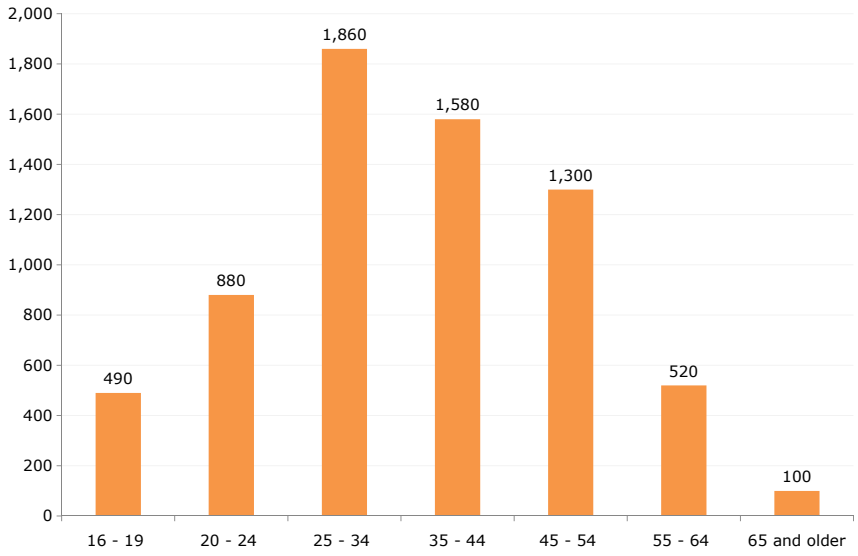


Figure 4.84. Nonfatal injuries/illnesses by gender, NAICS 44419, 2005.

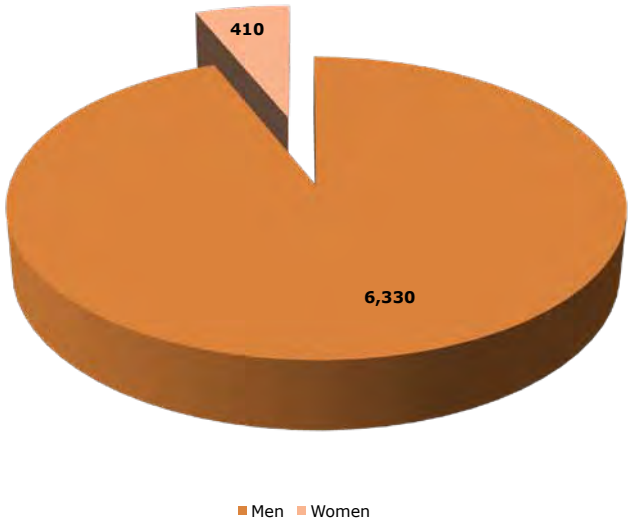


Figure 4.85. Nonfatal injuries/illnesses by race/ethnicity, NAICS 44419, 2005.

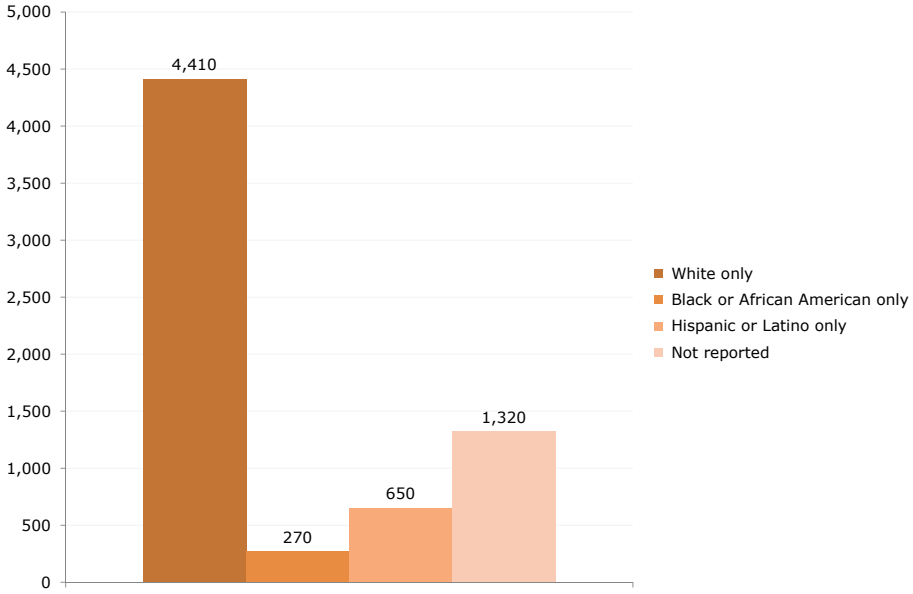
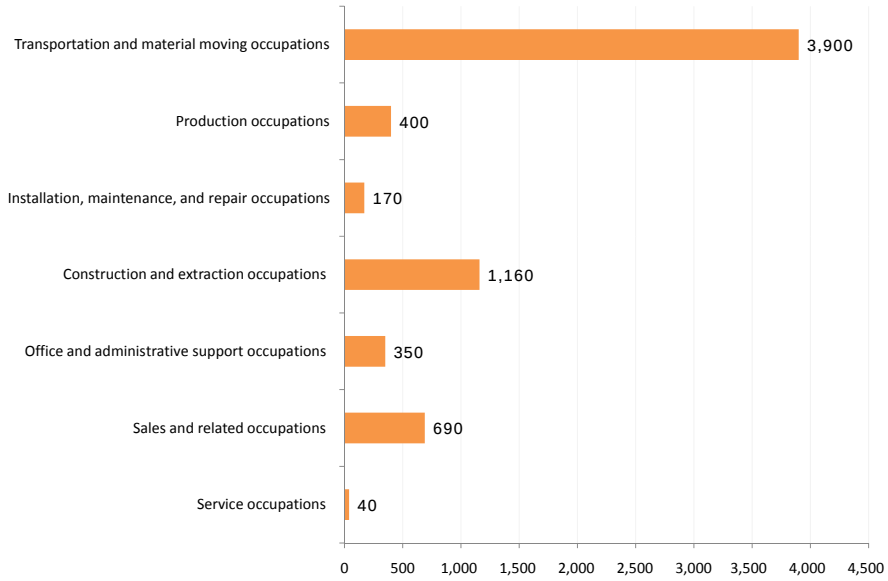


Figure 4.86. Nonfatal injuries/illnesses by occupation, NAICS 44419, 2005.



Other building material dealers *(NAICS 44419)*

Figure 4.87. Nonfatal injuries/illnesses by nature of injury/illness, NAICS 44419, 2005.

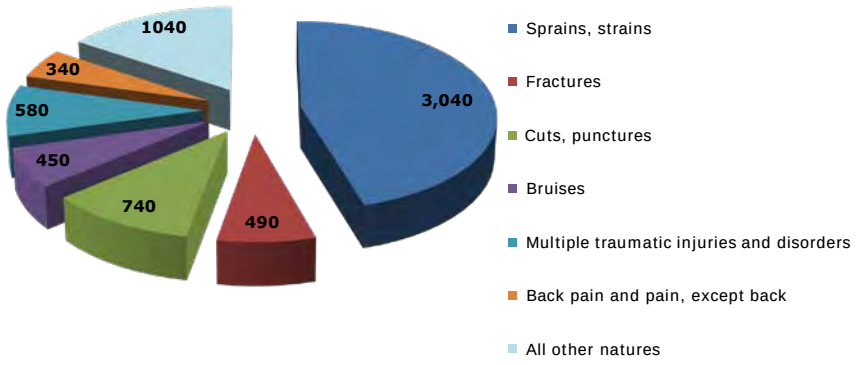


Figure 4.88. Nonfatal injuries/illnesses by source of injury/illness, NAICS 44419, 2005.

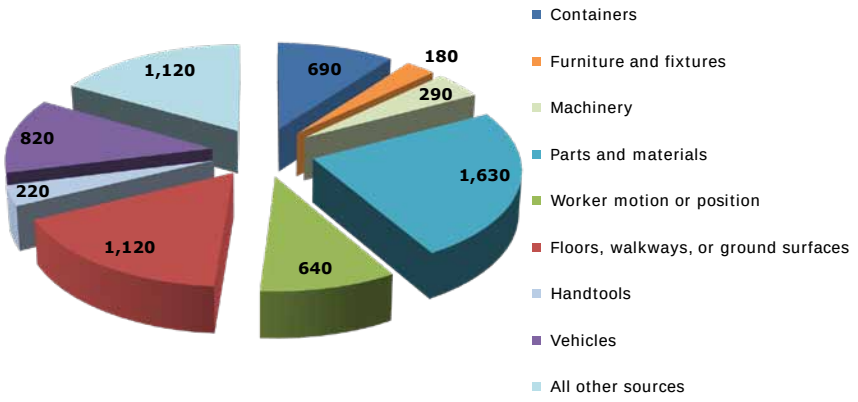


Figure 4.89. Nonfatal injuries/illnesses by event/exposure, NAICS 44419, 2005.

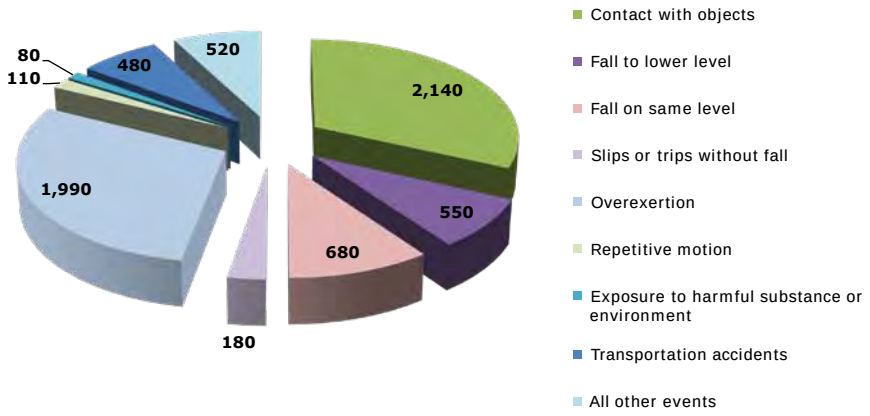
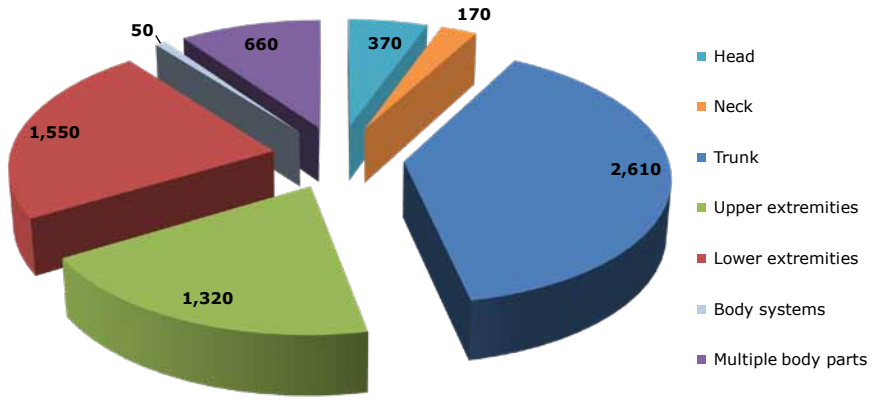


Figure 4.90. Nonfatal injuries/illnesses by part of body involved, NAICS 44419, 2005.



Tire dealers *(NAICS 44132)*

Figure 4.91. Nonfatal injuries/illnesses by age, NAICS 44132, 2005.

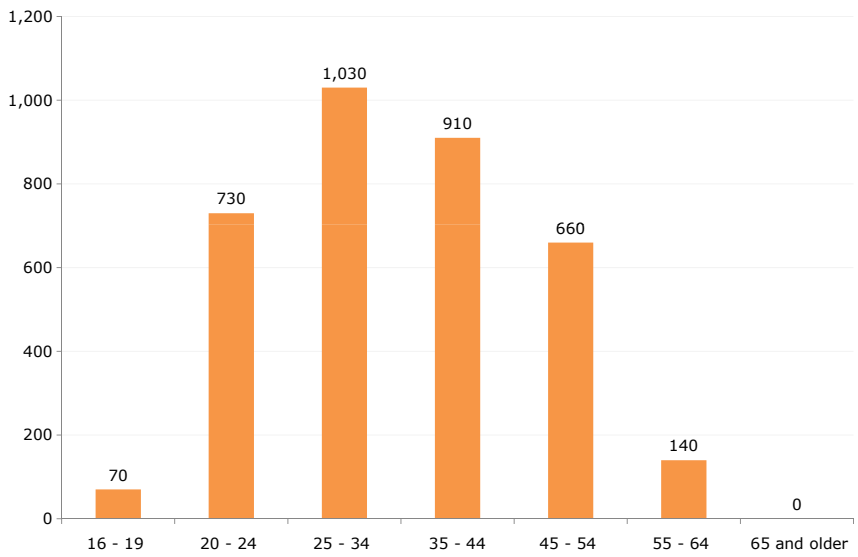


Figure 4.92. Nonfatal injuries/illnesses by gender, NAICS 44132, 2005.

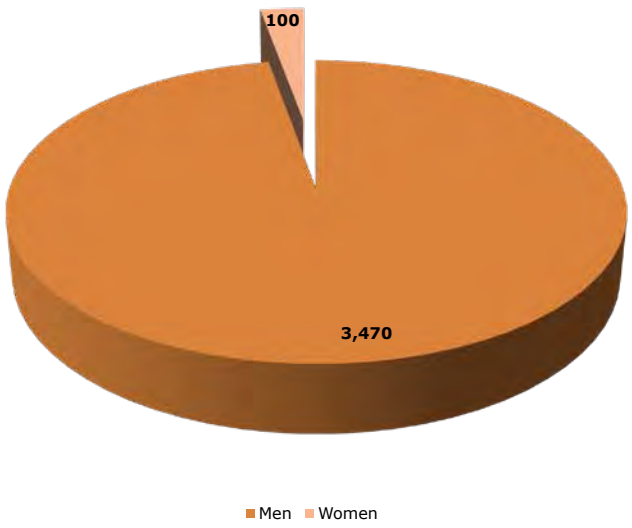


Figure 4.93. Nonfatal injuries/illnesses by race/ethnicity, NAICS 44132, 2005.

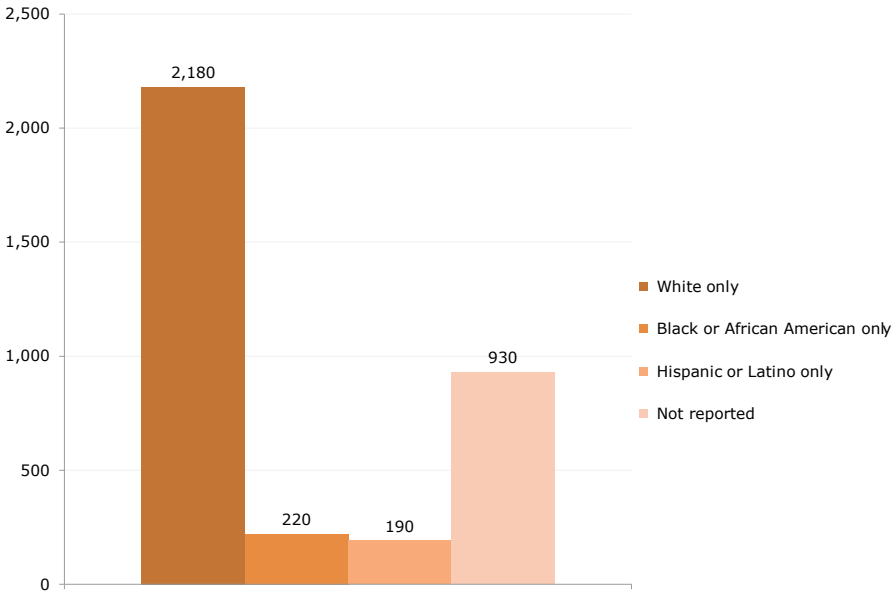
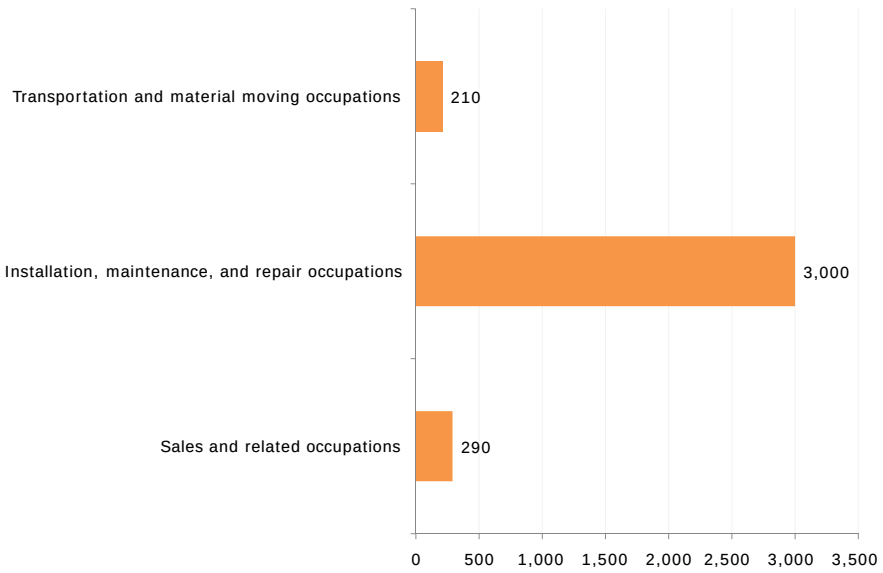


Figure 4.94. Nonfatal injuries/illnesses by occupation, NAICS 44132, 2005.



Tire dealers *(NAICS 44132)*

Figure 4.95. Nonfatal injuries/illnesses by nature of injury/illness, NAICS 44132, 2005.

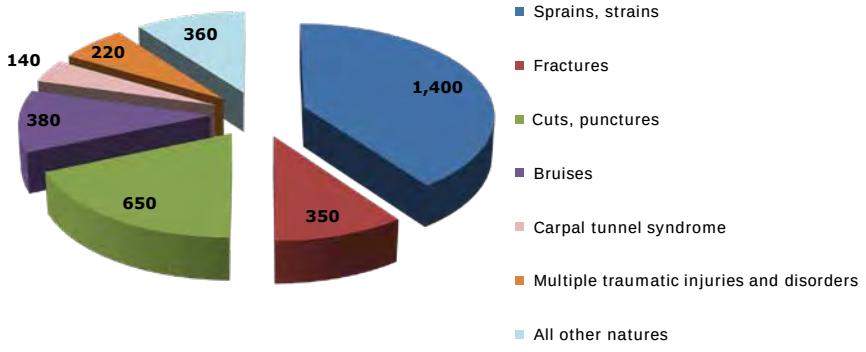


Figure 4.96. Nonfatal injuries/illnesses by source of injury/illness, NAICS 44132, 2005.

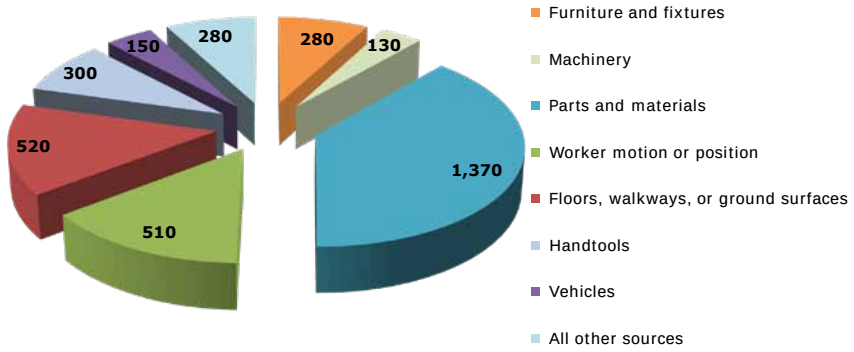


Figure 4.97. Nonfatal injuries/illnesses by event/exposure, NAICS 44132, 2005.

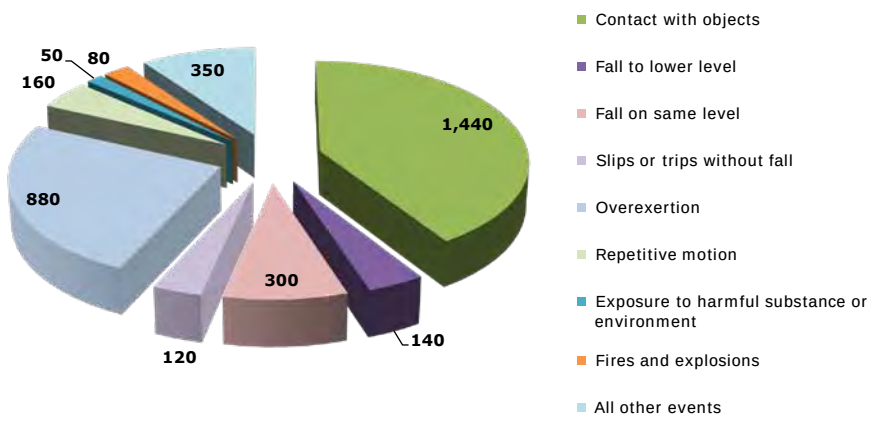
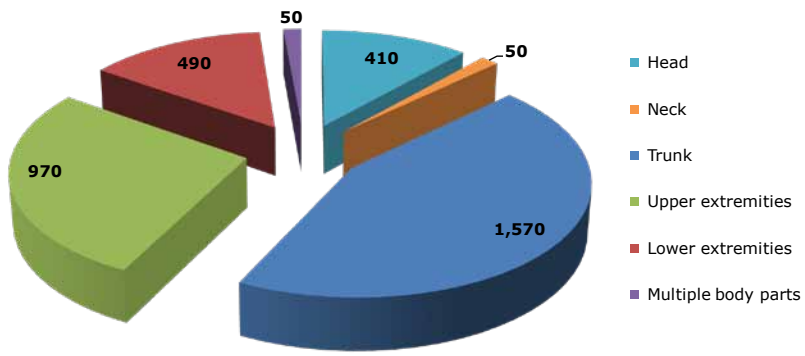


Figure 4.98. Nonfatal injuries/illnesses by part of body involved, NAICS 44132, 2005.



Supermarket and other grocery [except convenience] stores *(NAICS 44511)*

Figure 4.99. Nonfatal injuries/illnesses by age, NAICS 44511, 2005.

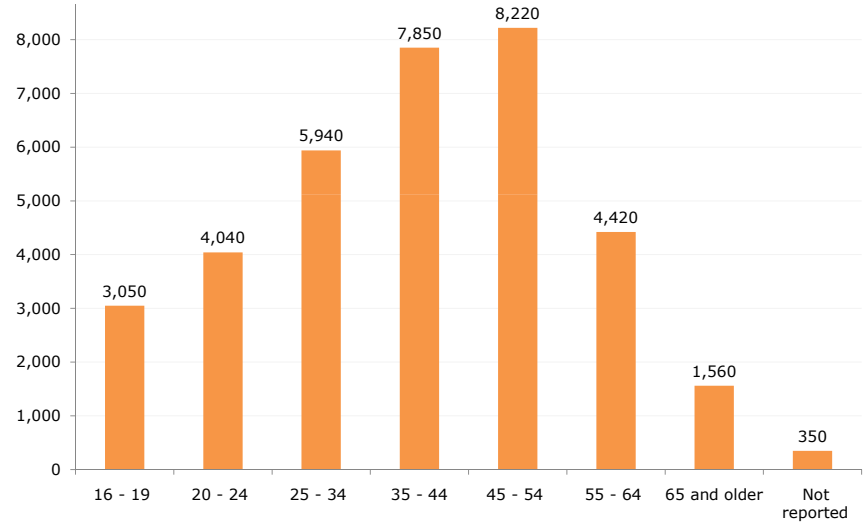


Figure 4.100. Nonfatal injuries/illnesses by gender, NAICS 44511, 2005.

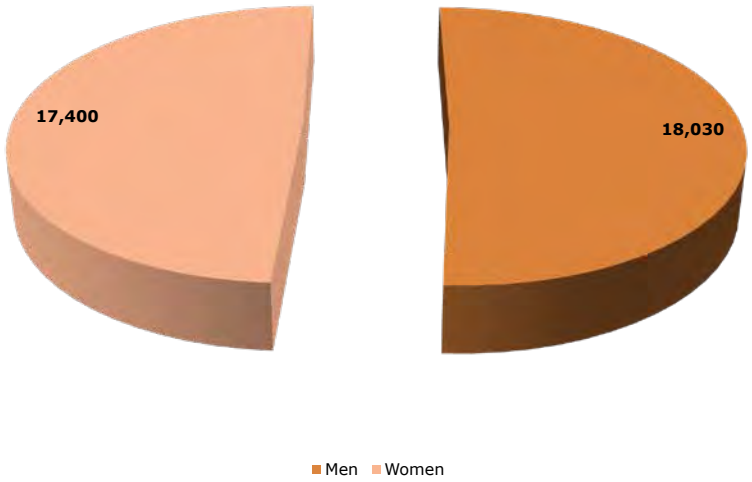


Figure 4.101. Nonfatal injuries/illnesses by race/ethnicity, NAICS 44511, 2005.

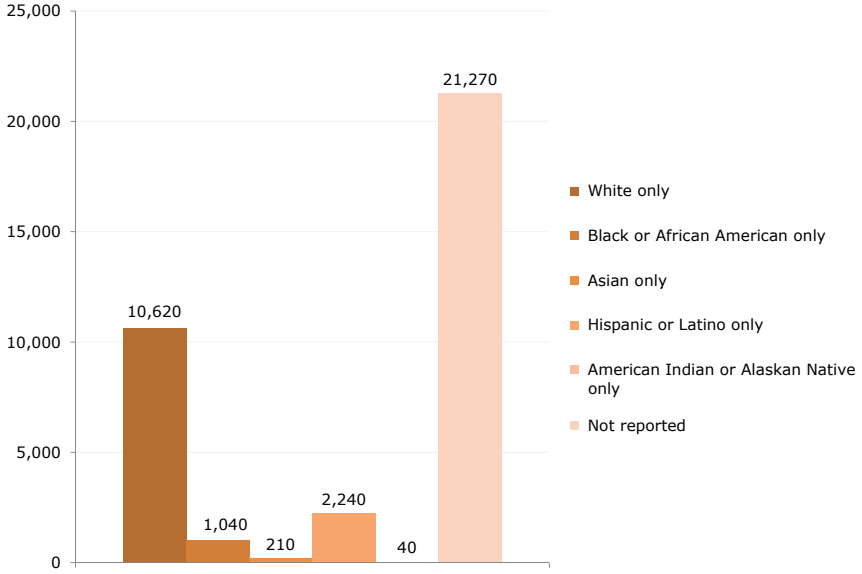
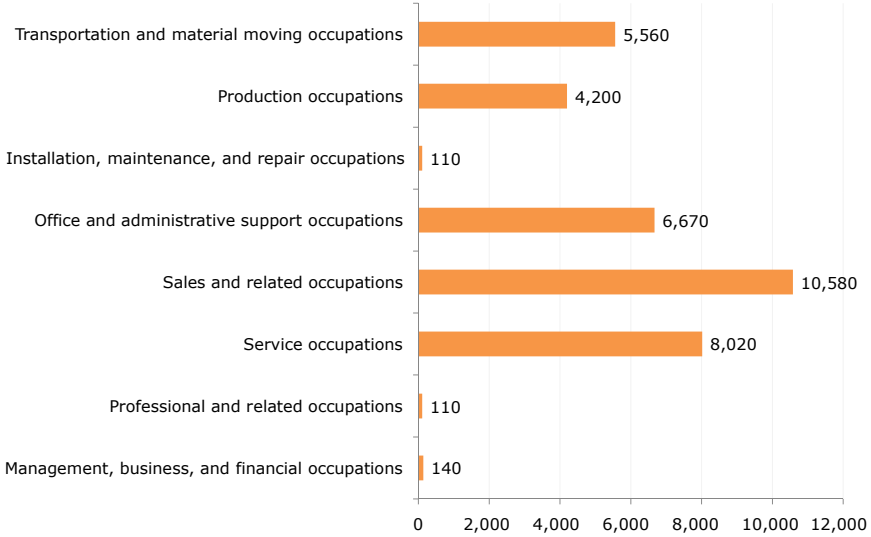


Figure 4.102. Nonfatal injuries/illnesses by occupation, NAICS 44511, 2005.



Supermarket and other grocery [except convenience] stores *(NAICS 44511)*

Figure 4.103. Nonfatal injuries/illnesses by nature of injury/illness, NAICS 44511, 2005.

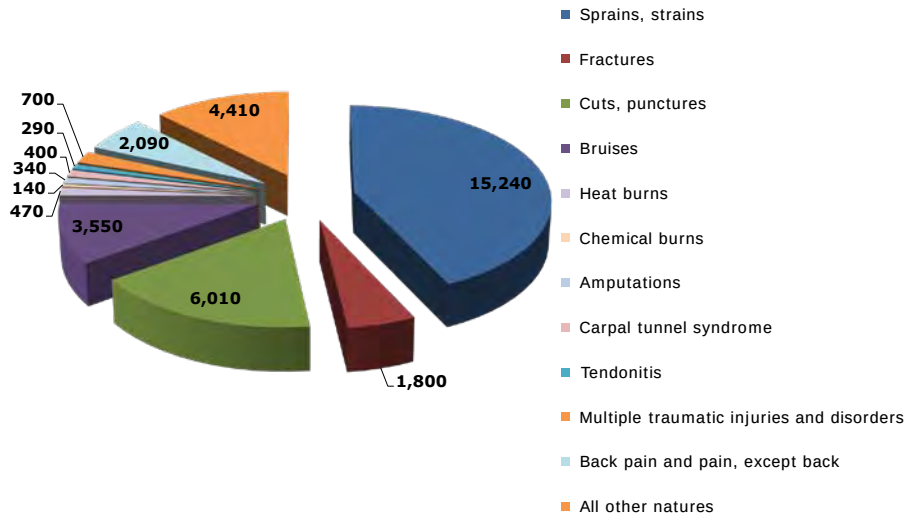


Figure 4.104. Nonfatal injuries/illnesses by source of injury/illness, NAICS 44511, 2005.

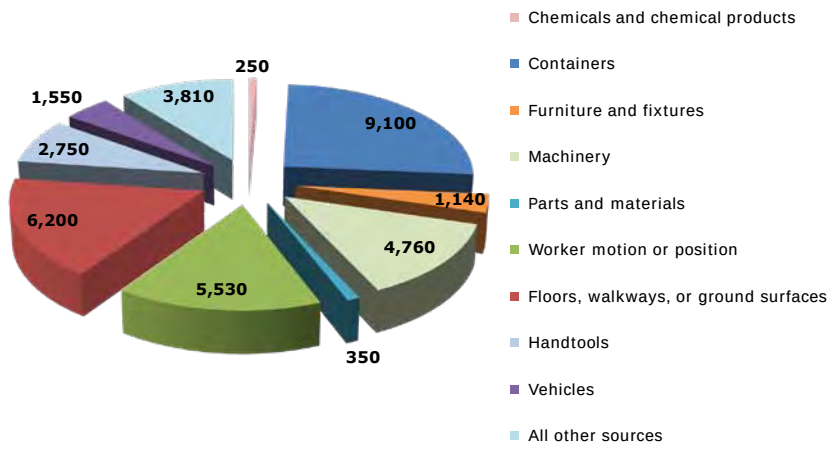


Figure 4.105. Nonfatal injuries/illnesses by event/exposure, NAICS 44511, 2005.

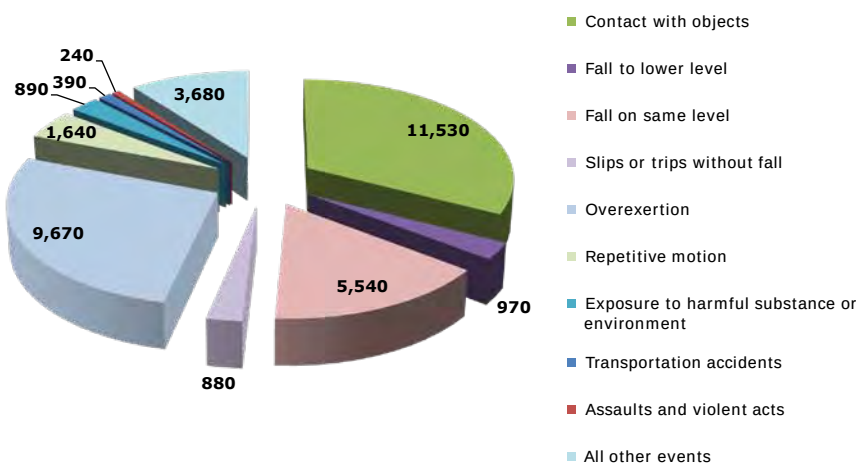
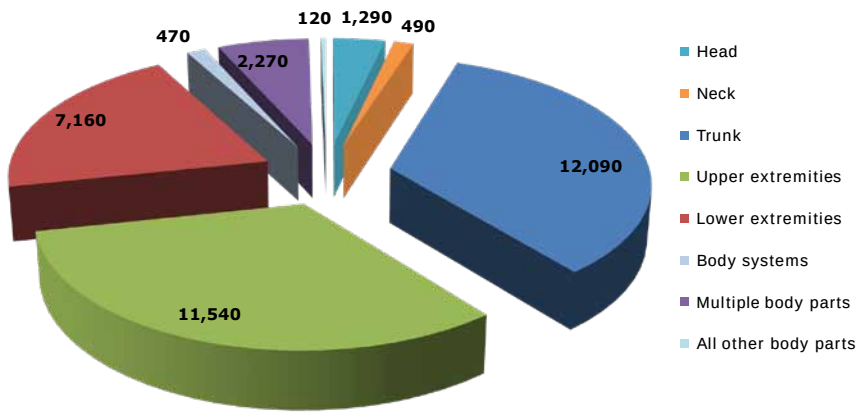


Figure 4.106. Nonfatal injuries/illnesses by part of body involved, NAICS 44511, 2005.



Hobby, toy, and game stores *(NAICS 45112)*

Figure 4.107. Nonfatal injuries/illnesses by age, NAICS 45112, 2005.

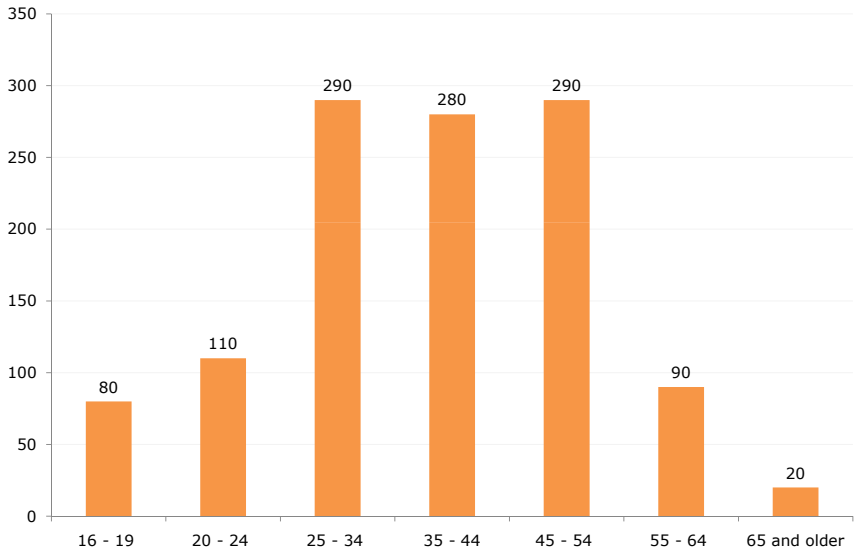


Figure 4.108. Nonfatal injuries/illnesses by gender, NAICS 45112, 2005.

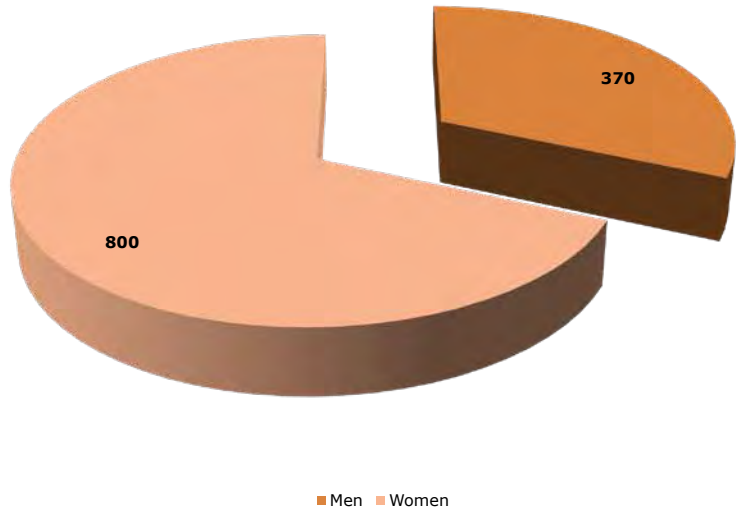


Figure 4.109. Nonfatal injuries/illnesses by race/ethnicity, NAICS 45112, 2005.

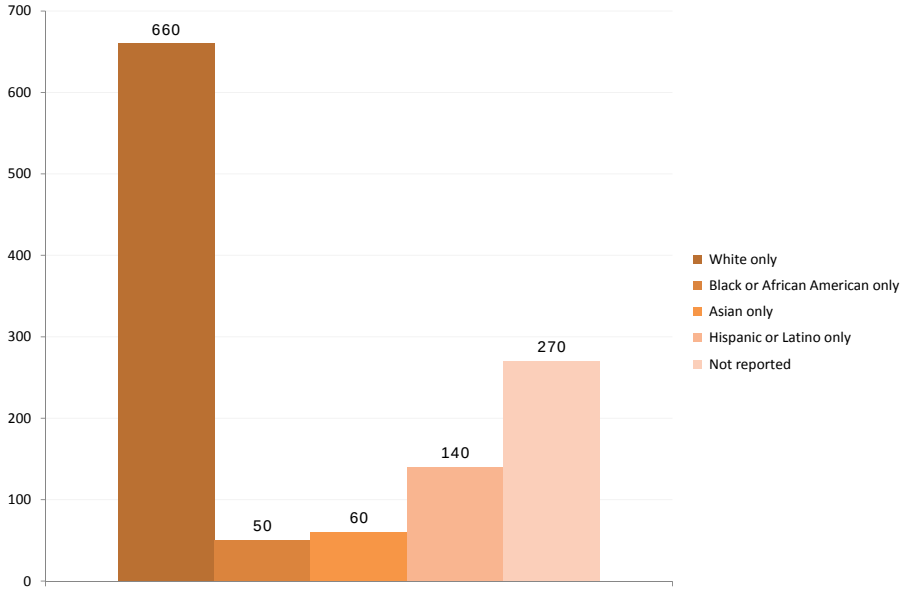
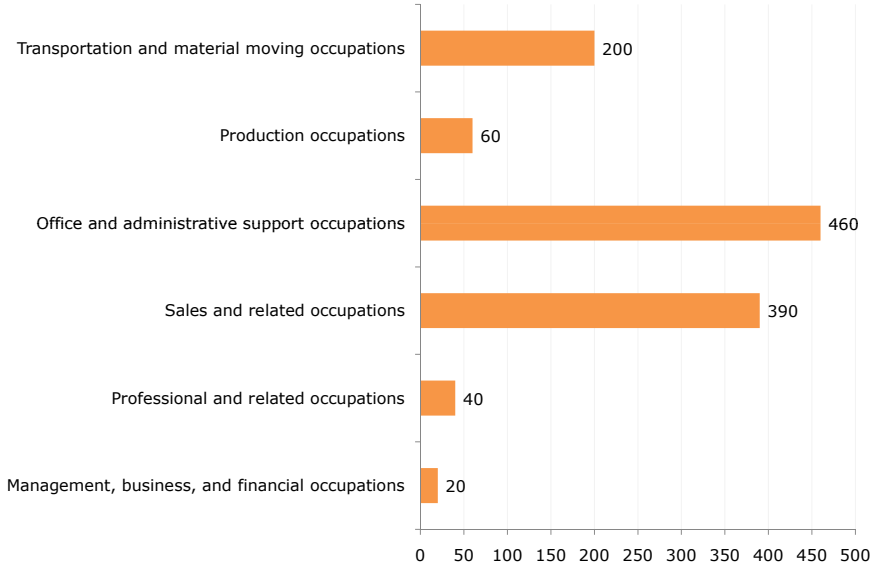


Figure 4.110. Nonfatal injuries/illnesses by occupation, NAICS 45112, 2005.



Hobby, toy, and game stores *(NAICS 45112)*

Figure 4.111. Nonfatal injuries/illnesses by nature of injury/illness, NAICS 45112, 2005.

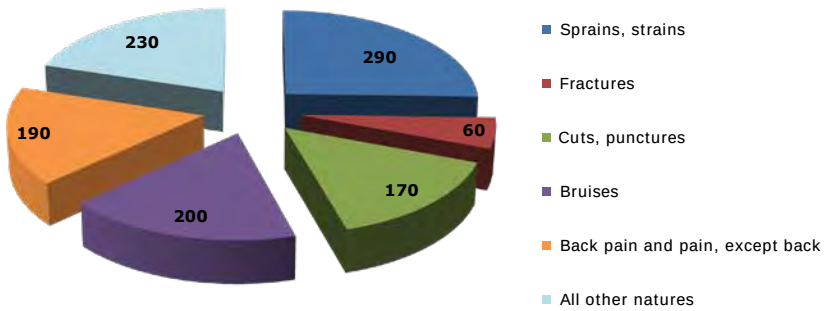


Figure 4.112. Nonfatal injuries/illnesses by source of injury/illness, NAICS 45112, 2005.

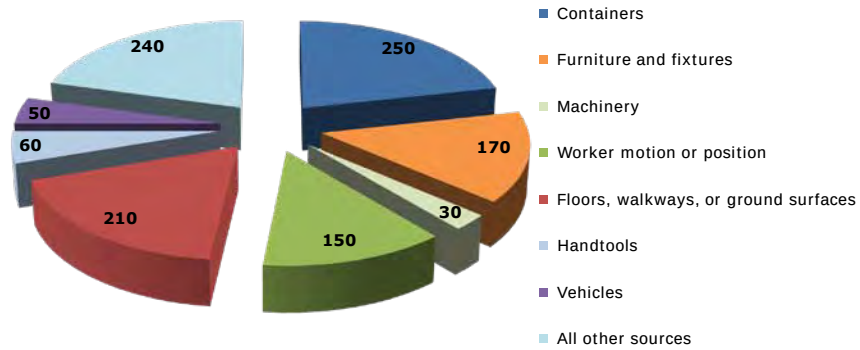


Figure 4.113. Nonfatal injuries/illnesses by event/exposure, NAICS 45112, 2005.

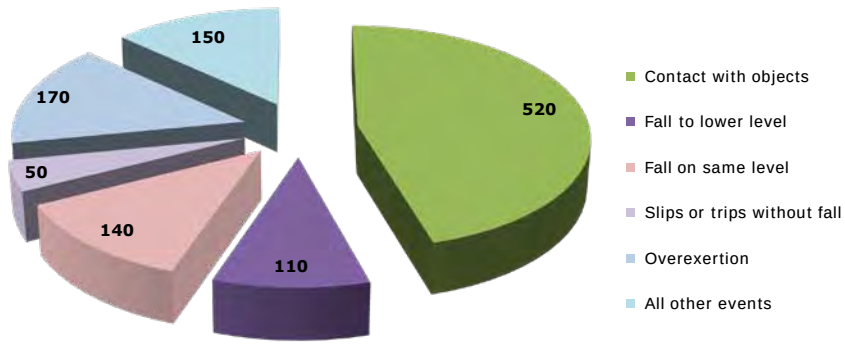
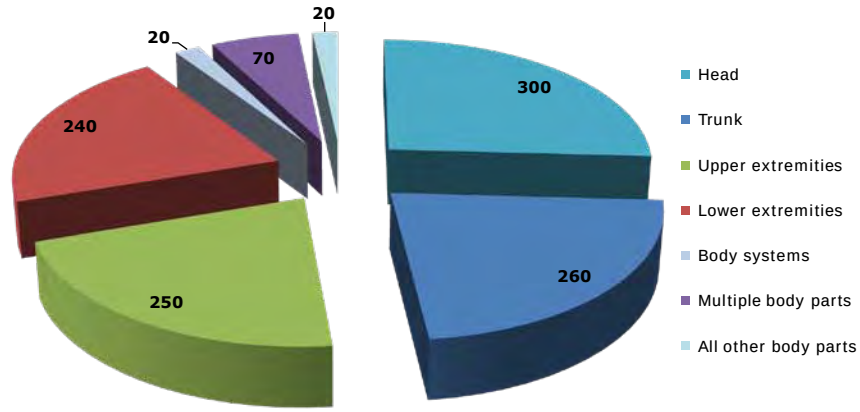


Figure 4.114. Nonfatal injuries/illnesses by part of body involved, NAICS 45112, 2005.



New car dealers *(NAICS 44111)*

Figure 4.115. Nonfatal injuries/illnesses by age, NAICS 44111, 2005.

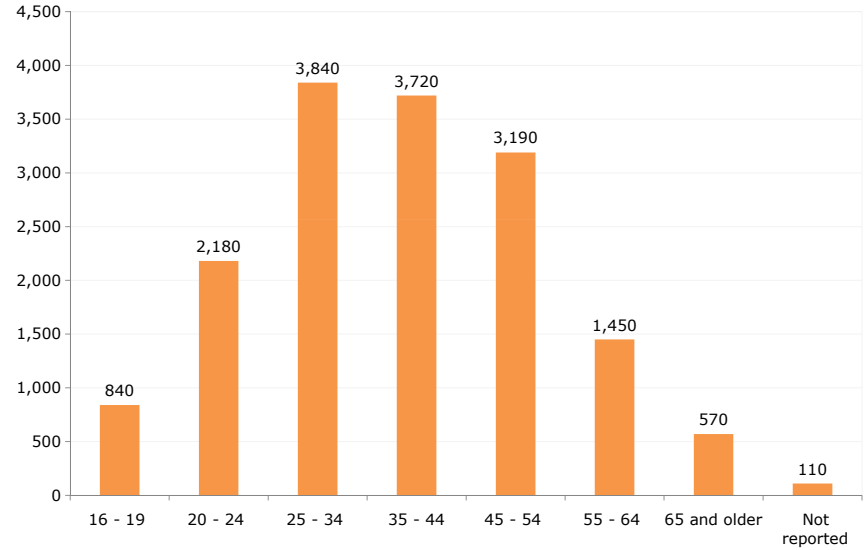


Figure 4.116. Nonfatal injuries/illnesses by gender, NAICS 44111, 2005.

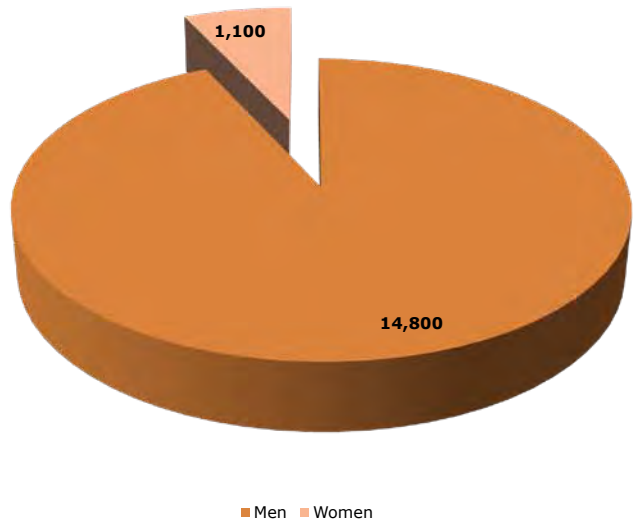


Figure 4.117. Nonfatal injuries/illnesses by race/ethnicity, NAICS 44111, 2005.

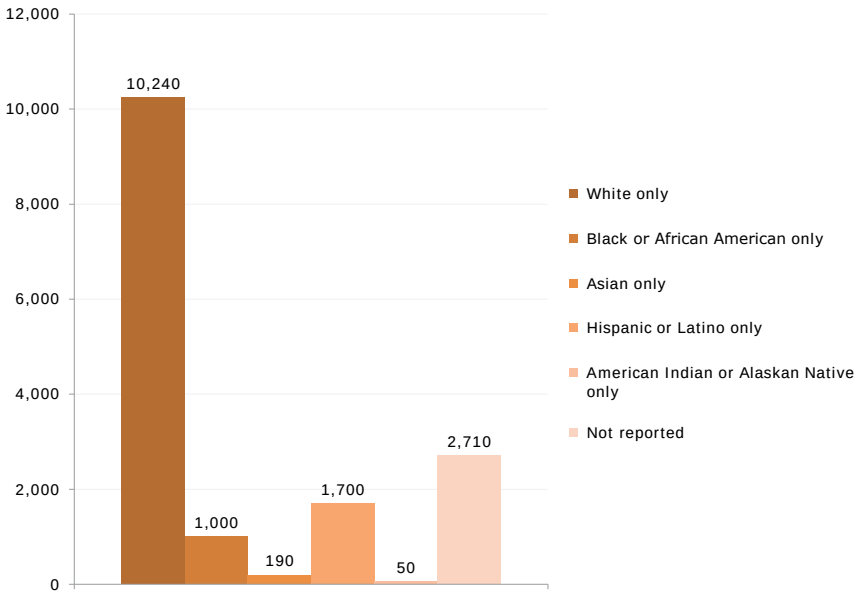
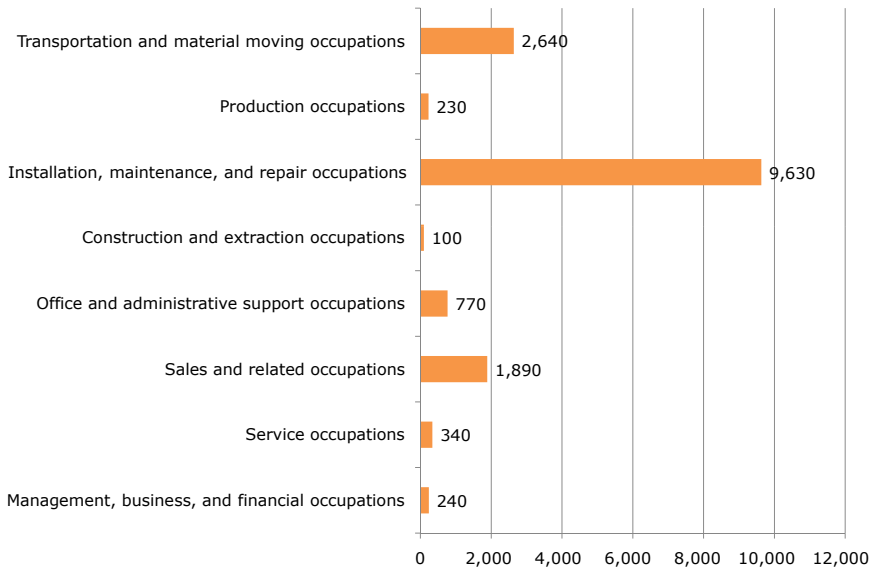


Figure 4.118. Nonfatal injuries/illnesses by occupation, NAICS 44111, 2005.



New car dealers *(NAICS 44111)*

Figure 4.119. Nonfatal injuries/illnesses by nature of injury/illness, NAICS 44111, 2005.

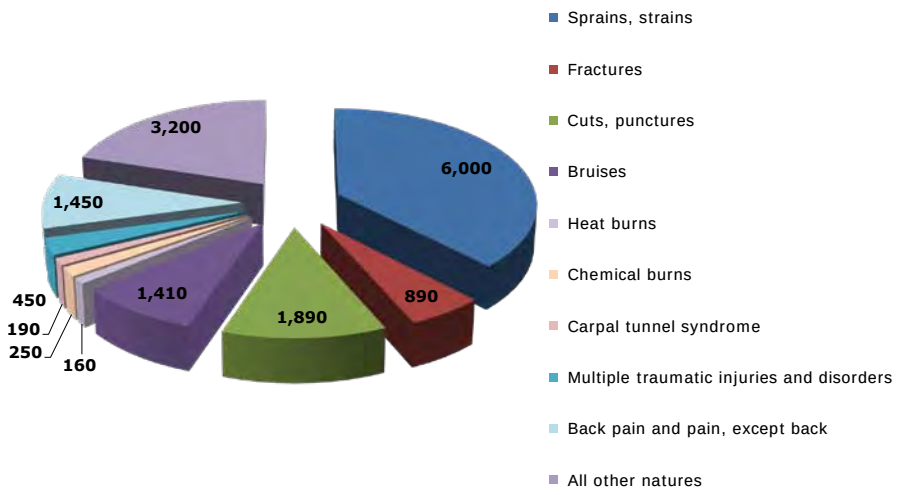


Figure 4.120. Nonfatal injuries/illnesses by source of injury/illness, NAICS 44111, 2005.

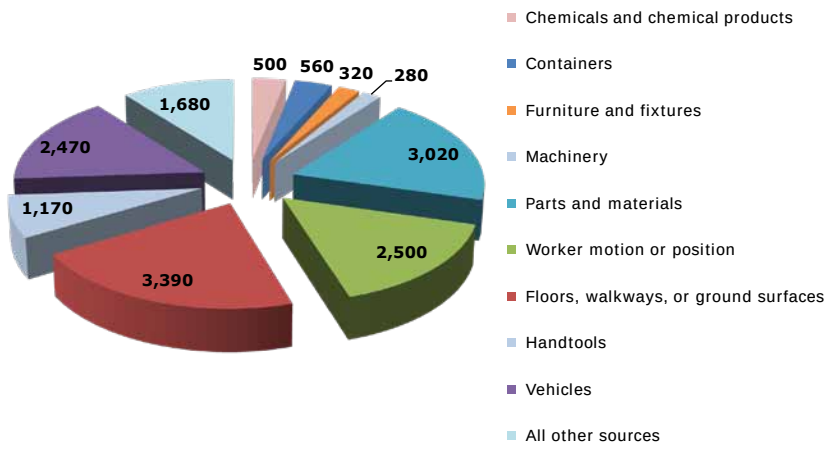


Figure 4.121. Nonfatal injuries/illnesses by event/exposure, NAICS 44111, 2005.

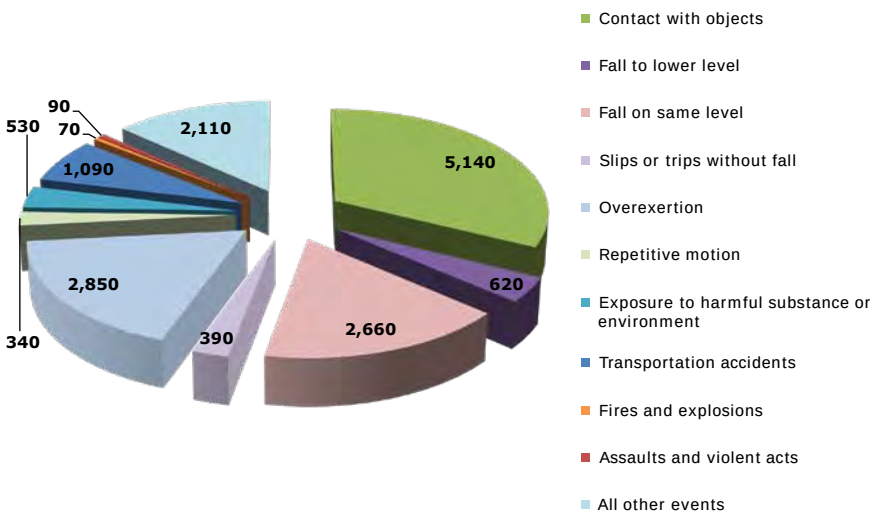
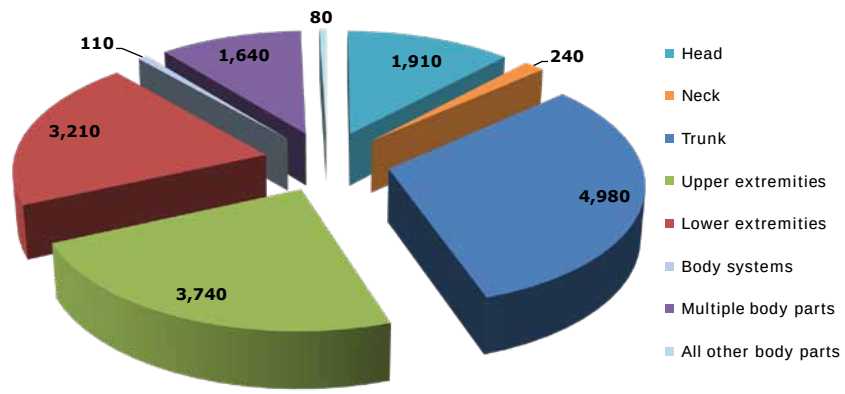


Figure 4.122. Nonfatal injuries/illnesses by part of body involved, NAICS 44111, 2005.



Department stores *(NAICS 45211)*

Figure 4.123. Nonfatal injuries/illnesses by age, NAICS 45211, 2005.

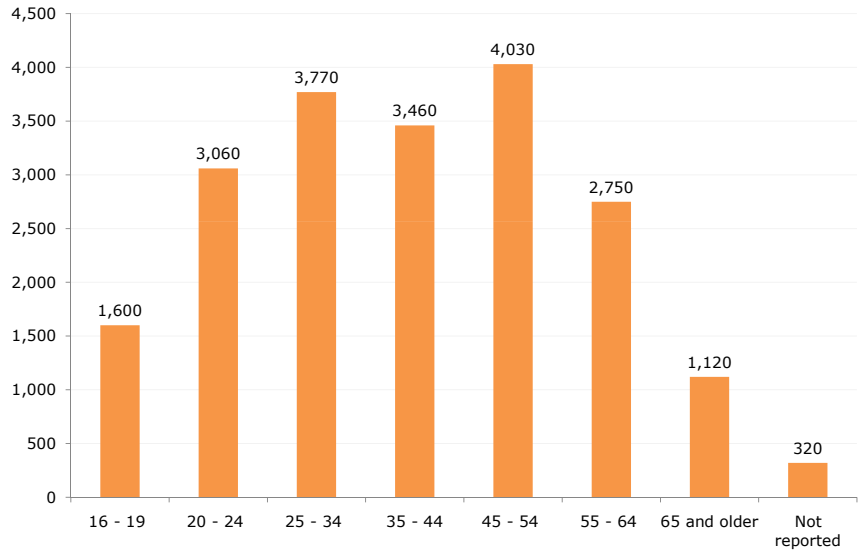


Figure 4.124. Nonfatal injuries/illnesses by gender, NAICS 45211, 2005.

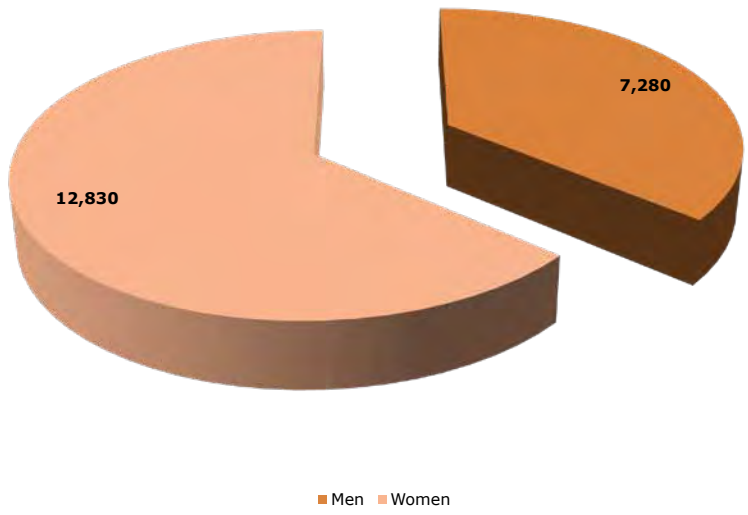


Figure 4.125. Nonfatal injuries/illnesses by race/ethnicity, NAICS 45211, 2005.

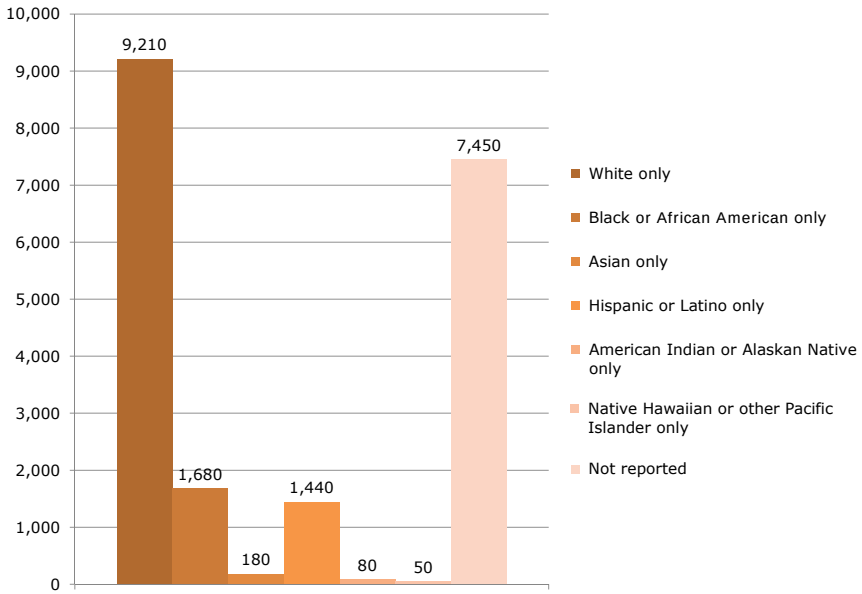
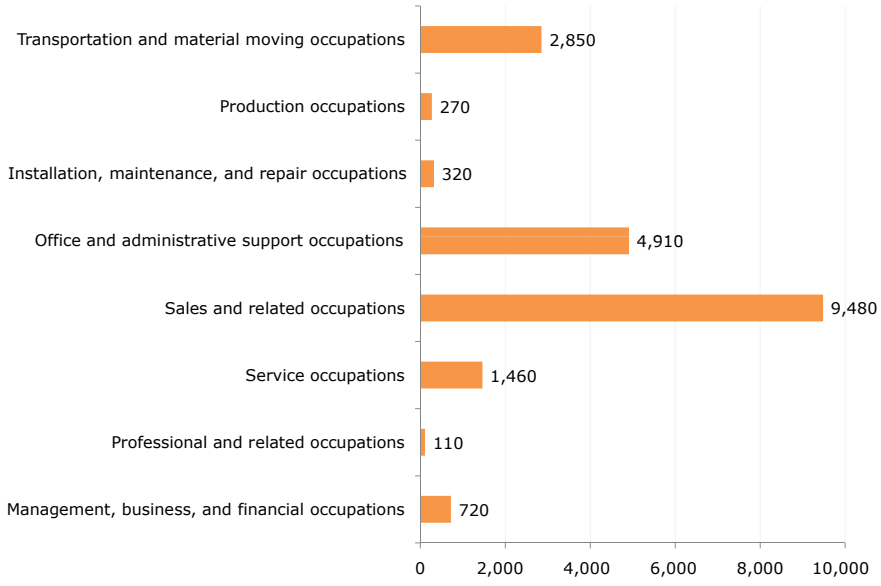


Figure 4.126. Nonfatal injuries/illnesses by occupation, NAICS 45211, 2005.



Department stores *(NAICS 45211)*

Figure 4.127. Nonfatal injuries/illnesses by nature of injury/illness, NAICS 45211, 2005.

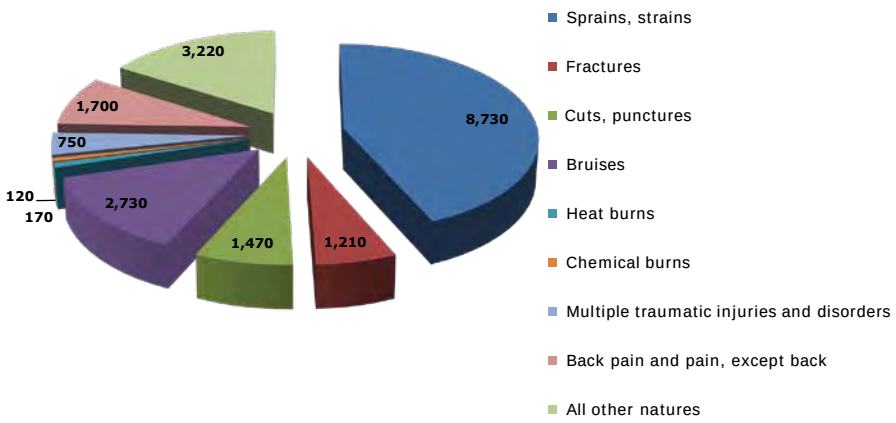


Figure 4.128. Nonfatal injuries/illnesses by source of injury/illness, NAICS 45211, 2005.

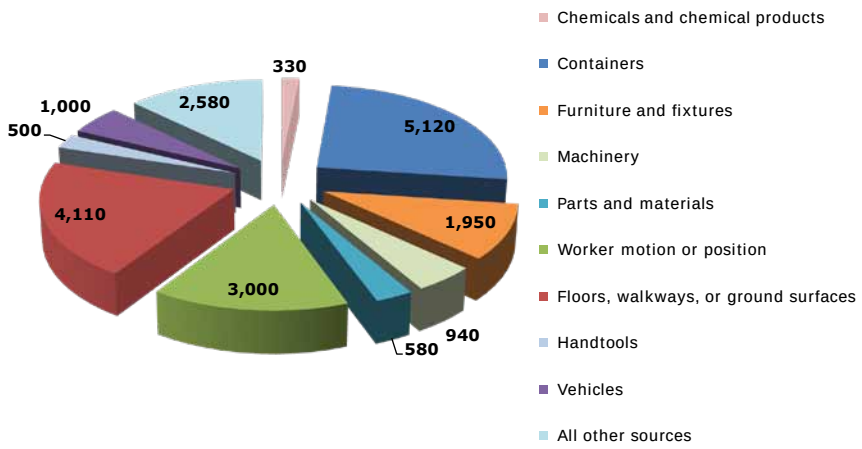


Figure 4.129. Nonfatal injuries/illnesses by event/exposure, NAICS 45211, 2005.

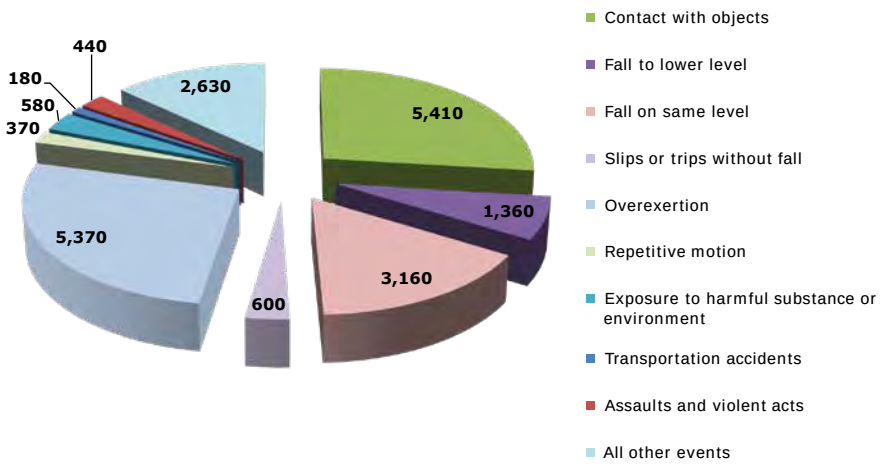
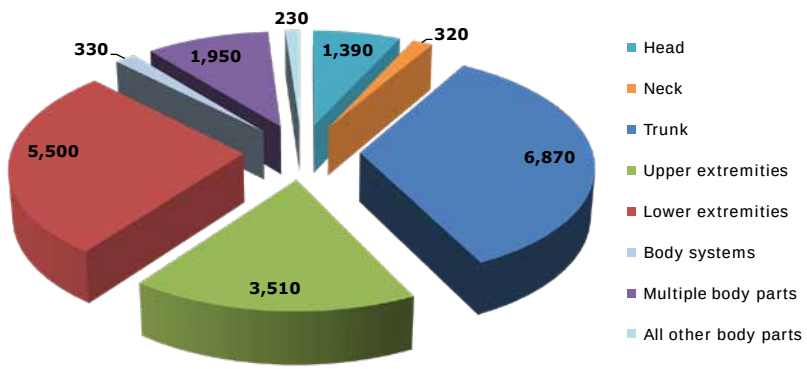


Figure 4.130. Nonfatal injuries/illnesses by part of body involved, NAICS 45211, 2005.



Chapter 4 References

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7. BLS [2005]. Case and Demographic Characteristics for Work-related Injuries and Illnesses Involving Days Away from Work. Table R38. Number of nonfatal occupational injuries and illnesses involving days away from work by industry and race or ethnic origin of worker, 2005. Online at: www.bls.gov/iif/oshwc/osh/case/ostb1694.pdf. *(Figures 4.21, 4.29, 4.37, 4.45, 4.53, 4.61, 4.69, 4.77, 4.85, 4.93, 4.101, 4.109, 4.117, 4.125)*

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(Figures 4.26, 4.34, 4.42, 4.50, 4.58, 4.66, 4.74, 4.82, 4.90, 4.98, 4.106, 4.114, 4.122, 4.130)

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Appendix

Wholesale and Retail Trade Sectors, Subsectors, and Industries by NAICS Code

Appendix: Wholesale and Retail Trade Sectors, Subsectors, and Industries by NAICS Code

42 Wholesale Trade

423 Merchant Wholesalers, Durable Goods

4231 Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers

42311 Automobile and Other Motor Vehicle Merchant Wholesalers

423110 Automobile and Other Motor Vehicle Merchant Wholesalers

42312 Motor Vehicle Supplies and New Parts Merchant Wholesalers

423120 Motor Vehicle Supplies and New Parts Merchant Wholesalers

42313 Tire and Tube Merchant Wholesalers

423130 Tire and Tube Merchant Wholesalers

42314 Motor Vehicle Parts (Used) Merchant Wholesalers

423140 Motor Vehicle Parts (Used) Merchant Wholesalers

4232 Furniture and Home Furnishing Merchant Wholesalers

42321 Furniture Merchant Wholesalers

423210 Furniture Merchant Wholesalers

42322 Home Furnishing Merchant Wholesalers

423220 Home Furnishing Merchant Wholesalers

4233 Lumber and Other Construction Materials Merchant Wholesalers

42331 Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers

423310 Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers

42332 Brick, Stone, and Related Construction Material Merchant Wholesalers

423320 Brick, Stone, and Related Construction Material Merchant Wholesalers

42333 Roofing, Siding, and Insulation Material Merchant Wholesalers

423330 Roofing, Siding, and Insulation Material Merchant Wholesalers

42339 Other Construction Material Merchant Wholesalers

423390 Other Construction Material Merchant Wholesalers

4234 Professional and Commercial Equipment and Supplies Merchant Wholesalers

42341 Photographic Equipment and Supplies Merchant Wholesalers

423410 Photographic Equipment and Supplies Merchant Wholesalers

42342 Office Equipment Merchant Wholesalers

423420 Office Equipment Merchant Wholesalers

42343 Computer and Computer Peripheral Equipment and Software Merchant Wholesalers

423430 Computer and Computer Peripheral Equipment and Software Merchant Wholesalers

42344 Other Commercial Equipment Merchant Wholesalers

423440 Other Commercial Equipment Merchant Wholesalers

42345 Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers

423450 Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers

42346 Ophthalmic Goods Merchant Wholesalers

423460 Ophthalmic Goods Merchant Wholesalers

42349 Other Professional Equipment and Supplies Merchant Wholesalers

423490 Other Professional Equipment and Supplies Merchant Wholesalers

4235 Metal and Mineral (Except Petroleum) Merchant Wholesalers

42351 Metal Service Centers and Other Metal Merchant Wholesalers

423510 Metal Service Centers and Other Metal Merchant Wholesalers

42352 Coal and Other Mineral and Ore Merchant Wholesalers

423520 Coal and Other Mineral and Ore Merchant Wholesalers

4236 Electrical and Electronic Goods Merchant Wholesalers

42361 Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers

423610 Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers

42362 Electrical and Electronic Appliance, Television, and Radio Set Merchant Wholesalers

423620 Electrical and Electronic Appliance, Television, and Radio Set Merchant Wholesalers

42369 Other Electronic Parts and Equipment Merchant Wholesalers

423690 Other Electronic Parts and Equipment Merchant Wholesalers

4237 Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers

42371 Hardware Merchant Wholesalers

423710 Hardware Merchant Wholesalers

42372 Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers

423720 Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers

42373 Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers

423730 Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers

42374 Refrigeration Equipment and Supplies Merchant Wholesalers

423740 Refrigeration Equipment and Supplies Merchant Wholesalers

4238 Machinery, Equipment, and Supplies Merchant Wholesalers

42381 Construction and Mining (Except Oil Well) Machinery and Equipment Merchant Wholesalers

423810 Construction and Mining (Except Oil Well) Machinery and Equipment Merchant Wholesalers

42382 Farm and Garden Machinery and Equipment Merchant Wholesalers

423820 Farm and Garden Machinery and Equipment Merchant Wholesalers

42383 Industrial Machinery and Equipment Merchant Wholesalers

423830 Industrial Machinery and Equipment Merchant Wholesalers

42384 Industrial Supplies Merchant Wholesalers

423840 Industrial Supplies Merchant Wholesalers

42385 Service Establishment Equipment and Supplies Merchant Wholesalers

423850 Service Establishment Equipment and Supplies Merchant Wholesalers

42386 Transportation Equipment and Supplies (Except Motor Vehicle) Merchant Wholesalers

423860 Transportation Equipment and Supplies (Except Motor Vehicle) Merchant Wholesalers

4239 Miscellaneous Durable Goods Merchant Wholesalers

42391 Sporting and Recreational Goods and Supplies Merchant Wholesalers

423910 Sporting and Recreational Goods and Supplies Merchant Wholesalers

42392 Toy and Hobby Goods and Supplies Merchant Wholesalers

423920 Toy and Hobby Goods and Supplies Merchant Wholesalers

42393 Recyclable Material Merchant Wholesalers

423930 Recyclable Material Merchant Wholesalers

42394 Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers

423940 Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers

42399 Other Miscellaneous Durable Goods Merchant Wholesalers

423990 Other Miscellaneous Durable Goods Merchant Wholesalers

424 Merchant Wholesalers, Nondurable Goods

4241 Paper and Paper Product Merchant Wholesalers

42411 Printing and Writing Paper Merchant Wholesalers

424110 Printing and Writing Paper Merchant Wholesalers

42412 Stationery and Office Supplies Merchant Wholesalers

424120 Stationery and Office Supplies Merchant Wholesalers

42413 Industrial and Personal Service Paper Merchant Wholesalers

424130 Industrial and Personal Service Paper Merchant Wholesalers

4242 Drugs and Druggists Sundries Merchant Wholesalers

42421 Drugs and Druggists Sundries Merchant Wholesalers

424210 Drugs and Druggists Sundries Merchant Wholesalers

4243 Apparel, Piece Goods, and Notions Merchant Wholesalers

42431 Piece Goods, Notions, and Other Dry Goods Merchant Wholesalers

424310 Piece Goods, Notions, and Other Dry Goods Merchant Wholesalers

42432 Mens' and Boys' Clothing and Furnishings Merchant Wholesalers

424320 Mens' and Boys' Clothing and Furnishings Merchant Wholesalers

42433 Womens', Children's, and Infants' Clothing and Accessories Merchant Wholesalers

424330 Womens', Children's, and Infants' Clothing and Accessories Merchant Wholesalers

42434 Footwear Merchant Wholesalers

424340 Footwear Merchant Wholesalers

4244 Grocery and Related Product Merchant Wholesalers

42441 General Line Grocery Merchant Wholesalers

424410 General Line Grocery Merchant Wholesalers

42442 Packaged Frozen Food Merchant Wholesalers

424420 Packaged Frozen Food Merchant Wholesalers

42443 Dairy Product (Except Dried or Canned) Merchant Wholesalers

424430 Dairy Product (Except Dried or Canned) Merchant Wholesalers

42444 Poultry and Poultry Product Merchant Wholesalers

424440 Poultry and Poultry Product Merchant Wholesalers

42445 Confectionery Merchant Wholesalers

424450 Confectionery Merchant Wholesalers

42446 Fish and Seafood Merchant Wholesalers

424460 Fish and Seafood Merchant Wholesalers

42447 Meat and Meat Product Merchant Wholesalers

424470 Meat and Meat Product Merchant Wholesalers

42448 Fresh Fruit and Vegetable Merchant Wholesalers

424480 Fresh Fruit and Vegetable Merchant Wholesalers

42449 Other Grocery and Related Products Merchant Wholesalers

424490 Other Grocery and Related Products Merchant Wholesalers

4245 Farm Product Raw Material Merchant Wholesalers

42451 Grain and Field Bean Merchant Wholesalers

424510 Grain and Field Bean Merchant Wholesalers

42452 Livestock Merchant Wholesalers

424520 Livestock Merchant Wholesalers

42459 Other Farm Product Raw Material Merchant Wholesalers

424590 Other Farm Product Raw Material Merchant Wholesalers

4246 Chemical and Allied Products Merchant Wholesalers

42461 Plastics Materials and Basic Forms and Shapes Merchant Wholesalers

424610 Plastics Materials and Basic Forms and Shapes Merchant Wholesalers

42469 Other Chemical and Allied Products Merchant Wholesalers

424690 Other Chemical and Allied Products Merchant Wholesalers

4247 Petroleum and Petroleum Products Merchant Wholesalers

42471 Petroleum Bulk Stations and Terminals

424710 Petroleum Bulk Stations and Terminals

42472 Petroleum and Petroleum Products Merchant Wholesalers (Except Bulk Stations and Terminals)

424720 Petroleum and Petroleum Products Merchant Wholesalers (Except Bulk Stations and Terminals)

4248 Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers

42481 Beer and Ale Merchant Wholesalers

424810 Beer and Ale Merchant Wholesalers

42482 Wine and Distilled Alcoholic Beverage Merchant Wholesalers

424820 Wine and Distilled Alcoholic Beverage Merchant Wholesalers

4249 Miscellaneous Nondurable Goods Merchant Wholesalers

42491 Farm Supplies Merchant Wholesalers

424910 Farm Supplies Merchant Wholesalers

42492 Book, Periodical, and Newspaper Merchant Wholesalers

424920 Book, Periodical, and Newspaper Merchant Wholesalers

42493 Flower, Nursery Stock, and Florists Supplies Merchant Wholesalers

424930 Flower, Nursery Stock, and Florists Supplies Merchant Wholesalers

42494 Tobacco and Tobacco Product Merchant Wholesalers

424940 Tobacco and Tobacco Product Merchant Wholesalers

42495 Paint, Varnish, and Supplies Merchant Wholesalers

424950 Paint, Varnish, and Supplies Merchant Wholesalers

42499 Other Miscellaneous Nondurable Goods Merchant Wholesalers

424990 Other Miscellaneous Nondurable Goods Merchant Wholesalers

425 Wholesale Electronic Markets and Agents and Brokers

4251 Wholesale Electronic Markets and Agents and Brokers

42511 Business to Business Electronic Markets

425110 Business to Business Electronic Markets

42512 Wholesale Trade Agents and Brokers

425120 Wholesale Trade Agents and Brokers

44-45 Retail Trade

441 Motor Vehicle and Parts Dealers

4411 Automobile Dealers

44111 New Car Dealers

441110 New Car Dealers

44112 Used Car Dealers

441120 Used Car Dealers

4412 Other Motor Vehicle Dealers

44121 Recreational Vehicle Dealers

441210 Recreational Vehicle Dealers

44122 Motorcycle, Boat, and Other Motor Vehicle Dealers

441221 Motorcycle, ATV, and Personal Watercraft Dealers

441222 Boat Dealers

441229 All Other Motor Vehicle Dealers

4413 Automotive Parts, Accessories, and Tire Stores

44131 Automotive Parts and Accessories Stores

441310 Automotive Parts and Accessories Stores

44132 Tire Dealers

441320 Tire Dealers

442 Furniture and Home Furnishings Stores

4421 Furniture Stores

44211 Furniture Stores

442110 Furniture Stores

4422 Home Furnishings Stores

44221 Floor Covering Stores

442210 Floor Covering Stores

44229 Other Home Furnishings Stores

442291 Window Treatment Stores

442299 All Other Home Furnishings Stores

443 Electronics and Appliance Stores

4431 Electronics and Appliance Stores

44311 Appliance, Television, and Other Electronics Stores

443111 Household Appliance Stores

443112 Radio, Television, and Other Electronics Stores

44312 Computer and Software Stores

443120 Computer and Software Stores

44313 Camera and Photographic Supplies Stores

443130 Camera and Photographic Supplies Stores

444 Building Material and Garden Equipment and Supplies Dealers

4441 Building Material and Supplies Dealers

44411 Home Centers

444110 Home Centers

44412 Paint and Wallpaper Stores

444120 Paint and Wallpaper Stores

44413 Hardware Stores

444130 Hardware Stores

44419 Other Building Material Dealers

444190 Other Building Material Dealers

4442 Lawn and Garden Equipment and Supplies Stores

44421 Outdoor Power Equipment Stores

444210 Outdoor Power Equipment Stores

44422 Nursery, Garden Center, and Farm Supply Stores

444220 Nursery, Garden Center, and Farm Supply Stores

445 Food and Beverage Stores

4451 Grocery Stores

44511 Supermarkets and Other Grocery (Except Convenience) Stores

445110 Supermarkets and Other Grocery (Except Convenience) Stores

44512 Convenience Stores

445120 Convenience Stores

4452 Specialty Food Stores

44521 Meat Markets

445210 Meat Markets

44522 Fish and Seafood Markets

445220 Fish and Seafood Markets

44523 Fruit and Vegetable Markets

445230 Fruit and Vegetable Markets

44529 Other Specialty Food Stores

445291 Baked Goods Stores

445292 Confectionery and Nut Stores

445299 All Other Specialty Food Stores

4453 Beer, Wine, and Liquor Stores

44531 Beer, Wine, and Liquor Stores

445310 Beer, Wine, and Liquor Stores

446 Health and Personal Care Stores

4461 Health and Personal Care Stores

44611 Pharmacies and Drug Stores

446110 Pharmacies and Drug Stores

44612 Cosmetics, Beauty Supplies, and Perfume Stores

446120 Cosmetics, Beauty Supplies, and Perfume Stores

44613 Optical Goods Stores

446130 Optical Goods Stores

44619 Other Health and Personal Care Stores

446191 Food (Health) Supplement Stores

446199 All Other Health and Personal Care Stores

447 Gasoline Stations

4471 Gasoline Stations

44711 Gasoline Stations with Convenience Stores

447110 Gasoline Stations with Convenience Stores

44719 Other Gasoline Stations

447190 Other Gasoline Stations

448 Clothing and Clothing Accessories Stores

4481 Clothing Stores

44811 Mens' Clothing Stores

448110 Mens' Clothing Stores

44812 Womens' Clothing Stores

448120 Womens' Clothing Stores

44813 Children's and Infants' Clothing Stores

448130 Children's and Infants' Clothing Stores

44814 Family Clothing Stores

448140 Family Clothing Stores

44815 Clothing Accessories Stores

448150 Clothing Accessories Stores

44819 Other Clothing Stores

448190 Other Clothing Stores

4482 Shoe Stores

44821 Shoe Stores

448210 Shoe Stores

4483 Jewelry, Luggage, and Leather Goods Stores

44831 Jewelry Stores

448310 Jewelry Stores

44832 Luggage and Leather Goods Stores

448320 Luggage and Leather Goods Stores

451 Sporting Goods, Hobby, Book, and Music Stores

4511 Sporting Goods, Hobby, and Musical Instrument Stores

45111 Sporting Goods Stores

451110 Sporting Goods Stores

45112 Hobby, Toy, and Game Stores

451120 Hobby, Toy, and Game Stores

45113 Sewing, Needlework, and Piece Goods Stores

451130 Sewing, Needlework, and Piece Goods Stores

45114 Musical Instrument and Supplies Stores

451140 Musical Instrument and Supplies Stores

4512 Book, Periodical, and Music Stores

45121 Book Stores and News Dealers

451211 Book Stores

451212 News Dealers and Newsstands

45122 Prerecorded Tape, Compact Disc, and Record Stores

451220 Prerecorded Tape, Compact Disc, and Record Stores

452 General Merchandise Stores

4521 Department Stores

45211 Department Stores

452111 Department Stores (Except Discount Department Stores)

452112 Discount Department Stores

4529 Other General Merchandise Stores

45291 Warehouse Clubs and Supercenters

452910 Warehouse Clubs and Supercenters

45299 All Other General Merchandise Stores

452990 All Other General Merchandise Stores

453 Miscellaneous Store Retailers

4531 Florists

45311 Florists

453110 Florists

4532 Office Supplies, Stationery, and Gift Stores

45321 Office Supplies and Stationery Stores

453210 Office Supplies and Stationery Stores

45322 Gift, Novelty, and Souvenir Stores

453220 Gift, Novelty, and Souvenir Stores

4533 Used Merchandise Stores

45331 Used Merchandise Stores

453310 Used Merchandise Stores

4539 Other Miscellaneous Store Retailers

45391 Pet and Pet Supplies Stores

453910 Pet and Pet Supplies Stores

45392 Art Dealers

453920 Art Dealers

45393 Manufactured (Mobile) Home Dealers

453930 Manufactured (Mobile) Home Dealers

45399 All Other Miscellaneous Store Retailers

453991 Tobacco Stores

453998 All Other Miscellaneous Store Retailers (Except Tobacco Stores)

454 Nonstore Retailers

4541 Electronic Shopping and Mail-Order Houses

45411 Electronic Shopping and Mail-Order Houses

454111 Electronic Shopping

454112 Electronic Auctions

454113 Mail-Order Houses

4542 Vending Machine Operators

45421 Vending Machine Operators

454210 Vending Machine Operators

4543 Direct Selling Establishments

45431 Fuel Dealers

454311 Heating Oil Dealers

454312 Liquefied Petroleum Gas (Bottled Gas) Dealers

454319 Other Fuel Dealers

45439 Other Direct Selling Establishments

454390 Other Direct Selling Establishments

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