

Occupational Health UPDATE

Summary of occupational health trends for North Carolina for 2009

Occupational Surveillance Unit, Occupational and Environmental Epidemiology Branch, N.C. Division of Public Health

More information about occupational surveillance is found at <http://epi.publichealth.nc.gov/oii.html>

Background

Each day, U.S. workers suffer injury, disability, and death from workplace incidents. In 2009, the U.S. Bureau of Labor Statistics reported 4,551 work-related deaths according to the Census of Fatal Occupational Injuries (CFOI) program. While most workplace-associated injuries and illnesses are preventable, they are common and can result in death, disability, lost wages, and change in the quality of life for the worker and their family. In North Carolina, both fatal and nonfatal work-related injury and illness rates have decreased in recent years (OEEB, 2010). However, injury rates remain high for certain occupational sectors. This report summarizes occupational illness and injury data in North Carolina in 2009.

Methods

We used the Council of State and Territorial Epidemiologist's (CSTE) *Occupational Health Indicators* (OHIs) to assist in monitoring and measuring work-related injuries and illnesses in North Carolina (CSTE, 2008). We calculated rates for select indicators and for some, compared rates across different occupational sectors and historically used baseline data for years 2003 – 2008 (OEEB, 2010). Additional data elements were evaluated when possible to help describe occupational risk factors. All tables and figures referenced in subsequent sections can be found in the Appendix.

Results

1. Employment Demographics Profile; 2009

- North Carolina is the 10th most populous state in the United States and has approximately 4,096,000 employed persons (1, 2).
- The state's labor force is growing faster than the national average and has transitioned from traditional labor-intensive industries to knowledge-based or service-related industries (3).
- Composition of the state's workforce by sex, age, race and ethnicity has changed modestly over time (Table 1). Workers are mostly white, with males and females being almost equally distributed in the workforce (2, 4).
- Seniors (age 65 and above) accounted for 4 percent of the North Carolina workforce and remain the state's fastest growing sector.
- Education and health services followed by state and local government employed the most workers (Table 2).

- In 2009, professional and related occupations followed by service occupations were the types of jobs most frequently performed (5).

2. Nonfatal Work-Related Injuries and Illnesses; 2009

Analyses of overall workplace injury and illness trends:

- The North Carolina rate was 3,100 injuries per 100,000 full time equivalent (FTE) workers, a 20 percent decrease. The North Carolina rate was slightly below the national rate of 3,600/100,000 FTE workers.
- The highest annual incidence rate was for the agriculture, forestry, fishing and hunting sector with a rate of 6,100/100,000 FTE workers; higher than the national rate of 5,300/100,000 FTE workers (1) and nearly twice the overall North Carolina rate.

Analyses of cases involving days missed from work:

- The North Carolina rate was 800 cases involving missed work days per 100,000 FTE workers, a 21 percent decrease. The North Carolina rate was below the national rate of 1,100/100,000 FTE workers.
- For 2009, the highest annual incidence rate was for the transportation and warehousing sector with a rate of 2,000 cases involving missed work days per 100,000 FTE workers; slightly lower than the national rate of 2,300/100,000 FTE workers (1).
- The events or exposures most responsible for nonfatal occupational injuries and illnesses with days missed from work were: contact with object/equipment (25%), overexertion (24%), and fall on the same level (17%) (2).

3. Work-Related Hospitalizations; 2009

- The North Carolina rate was 77 hospitalizations per 100,000 employed persons, an 18% decrease.
- Intervertebral disk disorders (damage to cushions in between the bones of the spine) accounted for the largest proportion of work-related hospital discharges (16%).
- The leading cause of work-related injuries was accidental falls (1, 2).

4. Fatal Work-Related Injuries; 2009

- There were 129 fatalities in North Carolina, a rate of 3.3 deaths per 100,000 FTE, a 23 percent decrease.
- The North Carolina rate is consistent with the national rate (1, 2).
- In 2009, the highest fatality rate was for the agriculture, forestry, fishing and hunting sector with a rate of 32.6 deaths per 100,000 FTE (Figure 1); higher than the national fatality rate of 27.2/100,000 FTE (1, 3); and 10 times higher than the overall state rate.
- The event or exposure most responsible for fatalities was transportation incidents (1) (Figure 2).

5. Economic Costs of Work-Related Injuries and Illnesses; Analysis of Worker's Compensation trends: 2009

- A total of \$1,408,926,000 was spent for Workers' Compensation benefits (1), a 9 percent increase in benefits. However, from 2008 to 2009, benefit costs declined in North Carolina.

Conclusion:

The information presented in this report provides an overview of the occupational health status of workers in North Carolina in 2009. Data sources used in this report suggest that the composition of the workforce remains stable. Workers are mostly white and genders are almost evenly distributed. Older workers remain the fastest growing employee sector compared to other age groups. North Carolina has transitioned from traditional labor-intensive industries to service-related industries. Education and health services and state/local government are the top two employers in North Carolina. Nonfatal and fatal injury and illness rates are declining. When specific industry sectors in North Carolina are compared, some are experiencing high rates of nonfatal and fatal injuries such as agriculture, forestry, fishing and hunting, and transportation and warehousing. Rates of more serious injuries, as captured by work-related hospitalizations, are declining as well. Lastly, costs associated with worker injury rose since baseline but have recently declined in 2009. Slowdowns in injury and death rates and costs have been attributed to a decline in employment (1, 2, 3).

Limitations:

Data for each indicator are generated from several sources; each with limitations that affect interpretation. Information on each data source can be found at the end of the report and in the OHI technical document. Given the limitations of the data sources available, the indicator data in this report are believed to be conservative and likely an underestimate.

Appendix

Table 1

North Carolina Workforce, 2009	
	%
Male	52
Female	48
Age (years)	
16 - 17	1
18 - 64	95
65+	4
Race/ethnicity	
White	75
Black	20
Other	2
Hispanic	6

Note: Percents may not add to 100 due to rounding.

Table 2

Distribution of Employed Persons in North Carolina by Major Industry Sector, 16 Years of Age and Older, 2009			
	Total	Public ††	Private
<i>(in thousands)</i>	4,102 †	660	3,442
Category	%	%	%
Education and health services	25	58	19
Retail trade	12	1	14
Manufacturing	12	0	14
Professional and business services	9	3	11
Leisure and hospitality	9	2	10
Construction	8	3	9
Financial activities	6	1	7
Public administration †††	5	29	0
Other services	4	0	5
Transportation, warehousing	3	4	3
Wholesale	3	0	3
Information	2	0	3
Agriculture, forestry, fishing and hunting	1	0	1
Utilities	1	0	1
Mining	0	0	0

Distribution of Employed Persons by Occupational Group, 16 Years of Age and Older, 2009			
	Total	Public	Private
<i>(in thousands)</i>	4,102	660	3,442
Category	%	%	%
Professional and related occupations	22	47	17
Service occupations	17	18	17
Management, business, and financial occupations	16	14	16
Office and administrative support occupations	12	10	12
Sales and related occupations	12	1	14
Production occupations	6	1	7
Construction and extraction occupations	6	3	6
Transportation and material moving occupations	5	3	6
Installation, maintenance, and repair occupations	4	2	5
Farming, fishing, and forestry occupations	0	0	1

† Calculations based on BLS microdata extracted through DataFerrett
 †† The Public Sector includes state and local government.
 ††† Public Administration only captures parts of government that pertain to justice, order and public safety. It excludes government employees that have a private sector equivalent (e.g., construction, utilities, transportation & warehousing.)
 Note: Percents may not add to 100 due to rounding.

Figure 1

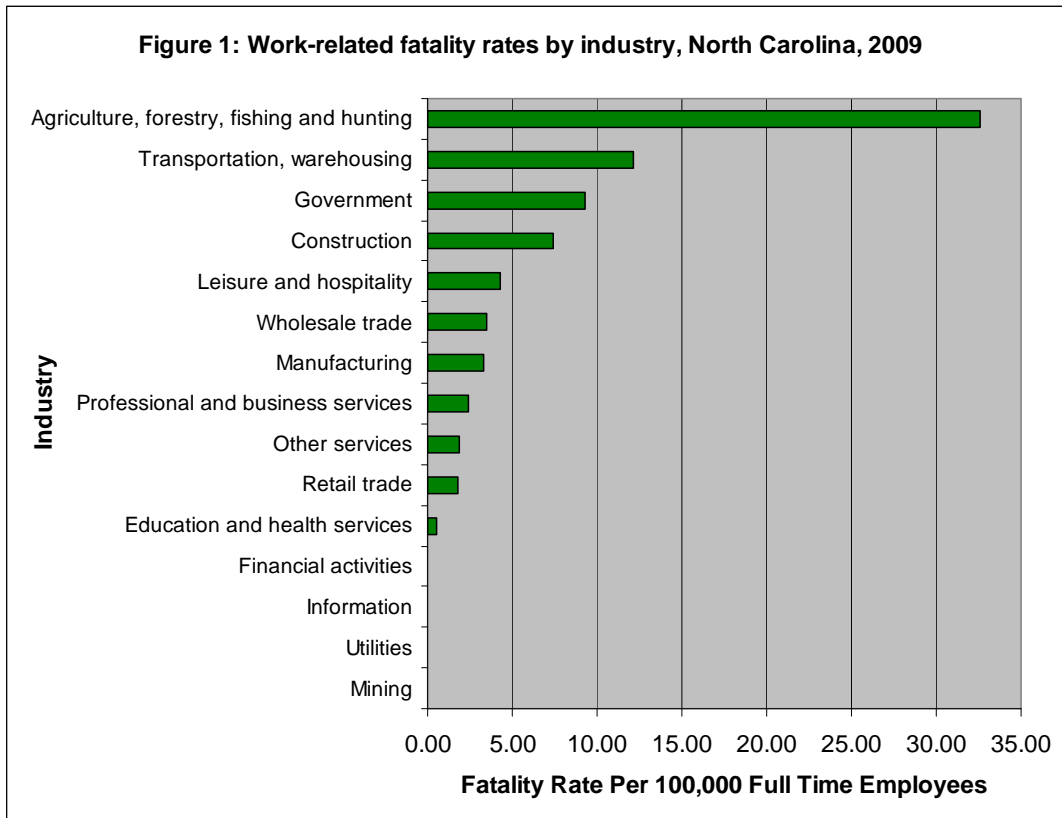
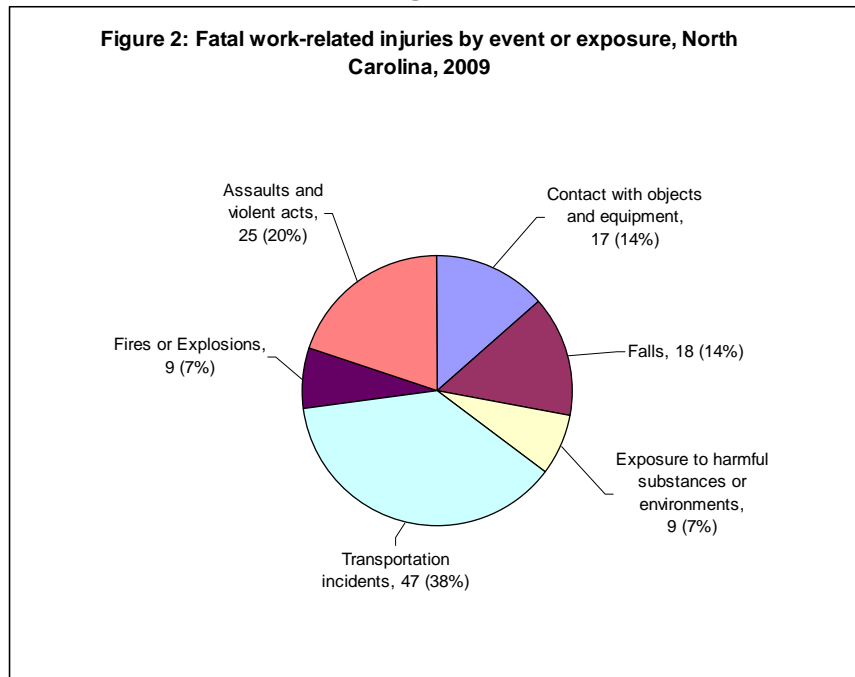


Figure 2



Sources:

Background and Methods

1. Higgins S. (2010). Occupational health trends report 2003 – 2008. Raleigh NC: NC DHHS. Available: <http://epi.publichealth.nc.gov/oii/pdf/OccupationalTrends2010.pdf>
2. CSTE (2010). Occupational health indicators: A guide for tracking work-related health effects and their determinants. Available at: <http://www.cste.org/webpdfs/OHIdocumentrevised2008.pdf>

Employment Demographics Profile

1. Kaiser State Health Facts. Total Number of Residents. States (2008- 2009), U.S. (2009). <http://statehealthfacts.org/comparetable.jsp?ind=1&cat=1&sub=1&yr=199&typ=1&sort=a>
2. Bureau of Labor Statistics (BLS). BLS Geographic Profiles of Employment and Unemployment. Table 14. States employment status of the civilian noninstitutional population by sex, race, Hispanic or Latino ethnicity and marital status, 2004 & 2009 annual averages. <http://www.bls.gov/opub/gp/pdf/gp04full.pdf>
http://www.bls.gov/opub/gp/pdf/gp09_14.pdf
3. N.C. Department of Commerce (2009). *2009 NC Economic Index*. <http://www.nccommerce.com>
4. Bureau of Labor Statistics. Geographic Profile of Employment and Unemployment; Employment status of civilian, noninstitutional population by sex, race, Hispanic or Latino ethnicity, marital status, and detailed age. (2004 – 2009) annual averages. North Carolina. <http://www.bls.gov/qps/#tables>
5. U.S. Census Bureau, Current Population Survey 2009; extracted via DataFerrett.

Non-fatal Work Related Injuries and Illnesses Reported by Employers

1. Bureau of Labor Statistics (BLS). Survey of Occupational Injury and Illness. Table 6. Incidence Rates of Nonfatal Occupational Injuries and Illnesses by Industry and Case Types. <http://www.bls.gov/iif/oshstate.htm#NC> .
2. Bureau of Labor Statistics (BLS). OSH and CFOI Profiles and Charts, [OSH @BLS.GOV](http://www.bls.gov/iif/oshstate.htm#NC). Table1. Number of Nonfatal Occupational Injuries and Illnesses Involving Days Away From Work by Selected Worker and Case Characteristics and Industry, North Carolina, Private Industry.

Work-Related Hospitalizations

1. North Carolina State Center for Health Statistics 2009 North Carolina Inpatient Hospital Discharge Data.
2. Bureau of Labor Statistics (BLS). BLS Geographic Profiles of Employment and Unemployment; Employment status of the civilian noninstitutional population by sex, race, Hispanic or Latino ethnicity, marital status, and detailed age, annual averages. <http://www.bls.gov/gps/#tables>

Fatal Work-Related Injuries

1. Bureau of Labor Statistics (BLS). Census of Fatal Occupational Injuries in North Carolina. <http://www.bls.gov/iif/oshwc/foi/tgs/2009/iiffi37.htm>
2. Bureau of Labor Statistics (BLS). BLS Geographic Profiles of Employment and Unemployment; Employment status of the civilian noninstitutional population by sex, race, Hispanic or Latino ethnicity, marital status, and detailed age, annual averages. <http://www.bls.gov/gps/#tables>
3. U.S. Census Bureau, Current Population Survey 2009; extracted via DataFerrett.

Economic Costs of Injuries and illnesses

1. National Academy of Social Insurance, (2011) Workers compensation; benefits, coverage and cost, 2009. http://www.nasi.org/sites/default/files/research/Workers_Comp_Report_2009.pdf

Conclusion

1. Bureau of Labor Statistics (2011). Census of Fatal Occupational Injuries summary, 2010. Economic News Release. August 25, 2011. <http://www.bls.gov/news.release/foi.nr0.htm> .
2. Bureau of Labor Statistics (2010). Nonfatal occupational injuries and illnesses requiring days away from work, 2009. Economic News Release. November 9, 2010. <http://www.bls.gov/news.release/osh2.nr0.htm>
3. National Academy of Social Insurance, (2011). Workers compensation; benefits, coverage and cost, 2009. http://www.nasi.org/sites/default/files/research/Workers_Comp_Report_2009.pdf

Prepared by:

Sheila Higgins RN MPH COHN-S and Tanya Barros MPH, Occupational and Environmental Epidemiology Branch, North Carolina Division of Public Health.

February, 2012



State of North Carolina • Beverly Eaves Purdue, Governor
Department of Health and Human Services

Albert A. Delia, Acting Secretary

Division of Public Health • Laura Gerald, MD, MPH, State Health Director

Occupational and Environmental Epidemiology

www.ncdhhs.gov • www.publichealth.nc.gov

The Department of Health and Human Services does not discriminate on the basis of race, color, national origin, sex, religion, age, or disability in employment or the provision of services.

February 2012