Occupational Injury and Illness in New Hampshire:

2000-2013 Data Report to Inform Programs and Policies

NH DIVISION OF
Public Health Services
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Department of Health & Human Services

New Hampshire Department of Health and Human Services
Division of Public Health Services
Bureau of Public Health Statistics and Informatics
Occupational Health Surveillance Program

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EXECUTIVE SUMMARY

This report contains data and information on occupational injuries and illnesses in New Hampshire, which marks an important step on the path to a safer and healthier work environment for New Hampshire workers. The report format used is based on the Council of State and Territorial Epidemiologists (CSTE) and the National Institute for Occupational Safety and Health—Centers for Disease Control and Prevention (NIOSH-CDC) *"Occupational Health Indicators: A Guide for Tracking Occupational Health Conditions and Their Determinants."*[1] This guide was produced by the NIOSH-States Occupational Health Surveillance Work Group, which was created to make recommendations to NIOSH concerning fundamental State-based surveillance activities, beginning with recommendations to identify occupational injuries, illnesses, and hazards to be placed under surveillance by states. The resulting occupational health indicators have been utilized by many states to produce state occupational health surveillance reports.

What is an Occupational Health Indicator?

An occupational health indicator is a specific measure of work-related disease or injury, or a factor associated with occupational health such as workplace exposures, hazards, or interventions, in a specified population. These indicators can be generated by states to track trends in the occupational health status of the working population.

Using the above framework, this report includes available New Hampshire data on many of the established occupational health injury and illness indicators, as well as indicators specific to New Hampshire's working population. These indicators illustrate the importance of collecting occupational health injury and illness data to inform prevention efforts aimed at eliminating or reducing work-related events.

Report Highlights

- From 2000 to 2012 there were 160 work-related fatalities in New Hampshire.
- There were over 171,000 emergency department hospital discharges for persons age 16 years and older, where the expected payer is workers' compensation (2000 to 2010).
- Of the 543 total hospital discharges between 2001 and 2010, over 83% of amputations were fingers, and over 14% were thumbs.
- The average workers' compensation award per covered New Hampshire worker in 2012 was $379.
- More than 53,000 New Hampshire workers are employed in high mortality risk occupations.
- More than 79,000 New Hampshire workers are employed in high mortality risk industries.
- 10 of the 20 CSTE/NIOSH occupational health indicators are Healthy People 2020 objectives.

INTRODUCTION

According to the Current Employment Statistics (CES) program, which is based on a monthly sample survey of employing establishments, the total average of New Hampshire employees for 2012 in all industries was 634,800 (New Hampshire Non-farm Wage and Salary Employment - Not Seasonally Adjusted).[2] The top five industries with the highest number of employees in New Hampshire in 2012 were as follows: Trade-Transportation and Utilities (135,800), Education and Health (114,300), Retail Trade (94,400), Manufacturing (66,000), and Professional and Business (68,200).[3] Fifty-two percent of New Hampshire's employed workers in 2012 were male and 48% were female. Among the total civilian non-institutional population, 69.6% of men and 61.5% of women were employed. Based on the civilian labor force, male and female unemployment rates are 6.2 and 4.9, respectively; 3.9% of New Hampshire workers were between the ages of 16 and 19 years of age. Among the civilian labor force in this age group, males have a 21.9 unemployment rate and females have a rate of 13.2 compared with the overall State of New Hampshire unemployment rate for 5.6.[4,5] Each year thousands of these workers are injured on the job or become ill as a result of exposure to health and safety hazards at work.

In New Hampshire, there were 37,411 workers employed in industries with a high risk for occupational morbidity in 2012, making up 6.8% of the workforce. During the same year, there were 70,406 workers employed in occupations with a high risk for occupational morbidity, making up 13.5% of the workforce. There were 79,186 workers employed in industries with a high risk for occupational mortality in 2012,or 13.0% of the workforce. Occupations with high risk of mortality employed 53,046 workers in 2012, which is 8.7% of the workforce in New Hampshire.[6]

The total number of fatal occupational injuries nationally was 4,628 in 2012.[7] There were 12 fatal occupational injuries in New Hampshire for 2012.[8] Since 2005, occupational fatalities in New Hampshire have been decreasing, until 2011–2012 where there were increases (2005-18, 2006-13, 2007-14, 2008-7, 2009-6, 2010-6, 2011-9, and 2012-12).[9]

In 2012, more than half of the 3 million injuries and illnesses occurring nationally in private industry required recuperation away from work beyond the day of the incident. These work-related events result in substantial human and economic costs, not only for workers and employers, but also for society as a whole.[10] Work injuries cost Americans $198.2 billion. That amounts to $1,379 per worker.[11] Workers' compensation claims alone in New Hampshire cost approximately $227.5 million in 2011.[12] That is an average cost of $380 per covered (non-agricultural) New Hampshire employee. The number of workers covered by workers' compensation insurance has increased, and while the frequency of claims has declined, the medical and wage-replacement costs per worker have increased, assuring continued economic impact of work-related injuries and illnesses on workers and employees.[13] ***While this occupational health indicator is useful for tracking change over time, the actual burden is much higher.*** Some workers are not covered (farmers, domestic help, railroad workers, federal employees, etc.), and claims are often not filed by eligible workers. Furthermore, indirect costs to workers, employers, and society are not included in this indicator.

New Hampshire's population has become more racially and ethnically diverse over the past 20 years. The rate of population change by race and ethnicity has not been the same across all New Hampshire communities. New Hampshire still has a predominately white, non-Hispanic population with just over 93.9% of residents reporting race/ethnicity as white, non-Hispanic on the 2010 U.S. Census. However, employment statistics available through the Bureau of Labor Statistics (BLS) website show that the percentage of New Hampshire workers who are white has decreased from 96% in 2008 to 95.5% in 2013.

Hispanic workers in 2008 were 1.6% of the workforce in New Hampshire and 3.1% in 2013.[14]

Underreporting to the Occupational Safety and Health Administration (OSHA) of occupational injuries and illnesses has been documented within the occupational health academic field.[15,16] The House Committee on Education and Labor has held extensive hearings on this issue with first-hand testimony from worker victims and OSHA employees. [17] These hearings on underreporting of occupational health events in the workplace highlight the need to improve occupational health surveillance at the national and state level.

There are a number of reasons for this problem.[18] The long interval between exposure to toxins and the development of disease has made it difficult to associate the exposures to the disease process. In addition, many diseases have multi-factorial causes making it difficult to determine the exact role of workplace exposures. The failure of health care providers to recognize the association of the disease and workplace exposures and the failure to report work-related diseases also contributes to the under reporting (many diseases, such as asthma, may not appear any different in their presentation whether it is work related or not). Developing a robust and comprehensive occupational health surveillance program is the key to uncovering the true magnitude and burden of work-related injury and disease in this country.

Work-related injuries and illnesses can be prevented with appropriate and targeted interventions. Successful approaches to making the workplace safer begin with having the most accurate and current occupational health surveillance data, which are necessary to understand the root causes of the problems that lead to occupational injury and illness. Federal occupational health surveillance reporting requirements result in data gaps and shortfalls that do not accurately capture the true burden of occupational health and illness. This can result in an inaccurate view that occupational health and illness is on a downward trend.

Indicators

Occupational health indicators can provide information about a population's health status with respect to workplace injuries and illnesses or to factors that can influence health. These indicators can either be measures of health (work-related disease or injury) or factors associated with health, such as workplace exposures, hazards or interventions, and socio-economic impact. The indicators represent a core set of data that, if collected at the state level, would assist in the development of programs to prevent workplace injuries and illnesses. While analyzing these core data points is part of a fundamental surveillance program, it is expected that states use them in conjunction with other guidelines for state-based surveillance and as a complement to overall state and national goals to improve the health of the population.

The occupational health indicators are estimated from many data sources. They are meant to provide an overview and general assessment of the occupational health status of New Hampshire over a span of years for which data are available. Each data source has its strengths and limitations.

This report includes a State Employment Profile and many of the core occupational health indicators for New Hampshire based on the most recent data available for each indicator. No single data source is currently adequate to characterize occupational health profiles in the State. Since not all 21 indicators can be analyzed according to the prescribed guidelines, we have included a variety of other data points and health outcomes using existing data sources. A description of the data sources used in generating these indicators is found on page 43.

Notes

Data are specific to New Hampshire unless indicated otherwise. Where applicable, differences in health indicators (for instance, between New Hampshire and the U.S.) are referred to as "significant" in the statistical sense. A statistically significant difference is one that would occur with less than five percent probability in the absence of a true difference. Differences computed from small samples or populations are less likely to be significant than those computed from larger numbers. The word "significant" is used only with this technical meaning and does not speak to the impact of a health condition on an individual, family, or community.

"Incidence" of a health condition refers to the number of new cases revealed or diagnosed during a specified time period. "Prevalence" refers to the number of cases existing at a specific time. "Mortality" refers to a health event resulting in death. Incidence, prevalence, and mortality are often presented as rates: the number of events per 1,000, 10,000, or 100,000 population.

Many of the rates presented are "age-adjusted," that is, the given rates are those that would occur if the population of New Hampshire had the same age distribution as that of the U.S. in the 2000 Census (the most recent available at this writing). Age adjustment allows for comparison between populations with different age distributions.

A "confidence interval" (CI) is a range of values within which the true rate is expected to fall. If the confidence intervals of two groups (such as New Hampshire and the U.S.) overlap, then any difference between the two rates is not statistically significant. All rates in this report are calculated at a 95% confidence level. For example, the age-adjusted New Hampshire inpatient hospital discharge rate is 72.1 (95% CI, 65.9–78.4) per 100,000 population. There is a 95% probability that the confidence interval contains the true adjusted rate.

New Hampshire inpatient and emergency department discharge data for 2010 was collected using a different method and is not comparable to previous years' data. It should be considered as a new baseline. It is also incomplete at this time as it only includes New Hampshire residents who were treated in hospitals located in New Hampshire. When 2010 hospital discharge data was used in graphs in this report, a space was left in time trends between 2009 and 2010 to show that the data points are not congruent.

New Hampshire Employment Profile 2000–2013

There are an estimated 740,000 civil, non-institutional workers in New Hampshire. Work-related injuries and illnesses are preventable, and control of occupational hazards is the most effective means of prevention. Research has shown that relationships exist between the demographic characteristics of workers and the risk of occupational illness or injury. Understanding the basic characteristics of the New Hampshire workforce is vital to assessing possible occupational health risks for New Hampshire's workers. The following data show the most recent demographic profile for New Hampshire.

Employment status of the NH civilian non-institutionalized population ages 16 and older, 2000-2013

Year	Civilian non-institutional population	Civilian labor force		Employment		Unemployment	
		Number	Percent	Number	Percent	Number	Percent
2000	939,000	686,000	73.0	666,000	71.0	19,000	2.8
2001	954,000	689,000	72.2	645,000	69.7	24,000	3.5
2002	989,000	706,000	71.4	672,000	68.0	33,000	4.7
2003	1,005,000	719,000	71.5	688,000	68.5	31,000	4.3
2004	1,018,000	724,000	71.1	698,000	68.5	27,000	3.7
2005	1,030,000	736,000	71.4	708,000	68.8	27,000	3.7
2006	1,041,000	738,000	71.0	714,000	68.6	25,000	3.4
2007	1,040,000	737,000	70.8	710,000	68.2	27,000	3.6
2008	1,045,000	740,000	70.8	712,000	68.1	28,000	3.8
2009	1,056,000	743,000	70.3	695,000	65.8	48,000	6.4
2010	1,063,000	747,000	70.3	702,000	66.1	44,000	5.9
2011	1,060,000	737,000	69.5	697,000	65.8	40,000	5.4
2012	1,067,000	740,000	69.4	698,000	65.5	42,000	5.6
2013	1,072,000	743,000	69.3	704,000	65.7	39,000	5.2

Numbers and percentages were taken directly from BLS tables, assuming age group is 16 and older since 15 and under are not eligible for unemployment benefits.
Source: Bureau of Labor Statistics, Current Population Survey: 2000-2002 http://www.bls.gov/opub/gp/pdf/gp00full.pdf to http://www.bls.gov/opub/gp/pdf/gp02full.pdf, 2003-2013 http://www.bls.gov/lau/table14full03.pdf to http://www.bls.gov/lau/table14full13.pdf

Workforce characteristics ages 16 and older New Hampshire and United States, 2008 and 2013

Characteristic	New Hampshire 2008	New Hampshire 2013	United States 2008	United States 2013
Total Work Force	740,000	743,000	145,095,000	143,903,000
% Male	52.5	52.3	53.3	53.0
% Female	47.5	47.7	47.3	47.0
% Ages 16-17	2.2	1.5	1.4	1.0
% Ages 18-64	93.8	92.3	94.5	93.6
% Ages 65 and older	4.0	6.2	4.1	5.3
% Self-employed	7.2	7.7	6.9	6.5
% Employed part-time	19.9	21.2	17.4	19.2
% Work < 40 hrs/week	38.2	32.4	30.8	33.7
% Work 40 hrs/week	33.3	35.7	42.7	42.3
% Work > 40 hrs/week	28.5	28.3	26.5	24.0

Numbers taken directly from BLS tables, assuming age group is 16 and older since 15 and under are not eligible for unemployment benefits.
Source of Total and Sex Data: Bureau of Labor Statistics, Current Population Survey: http://www.bls.gov/lau/table14full08.pdf , http://www.bls.gov/lau/table14full13.pdf
Source of Age Group Data: Data Ferrett: http://dataferrett.census.gov/
Source of Self-employed/Hourly Data: Bureau of Labor Statistics, Geographic Profile of Employment and Unemployment: http://www.bls.gov/opub/gp/pdf/gp08full.pdf, http://www.bls.gov/opub/gp/pdf/gp13full.pdf, Table 17- Total Employed, Table 21- Self-employed, Table 22-Number of Hours Worked, Table 16-Total Part-Time Workers.

INDUSTRY and OCCUPATION

Distribution of New Hampshire and United States workforce by major industry sectors 2008 and 2013

Industry	New Hampshire		United States	
	2008	2013	2008	2013
Number Employed	712,000	704,000	145,362,000	143,929,000
% Agriculture and related industries	0.8	0.6	1.5	1.5
% Mining (and logging)*	0.05	0.1	0.6	0.7
% Construction	7.4	6.8	7.5	6.4
% Manufacturing	13.8	13.1	11	10.3
% Wholesale and retail trade	15.3	15.8	14.2	13.7
% Transportation and utilities	3.9	4.2	5.3	5.2
% Information	2.7	2.0	2.4	2.1
% Financial activities	6.7	6.5	7.0	6.8
% Professional and business services	10.6	11.6	10.7	11.7
% Educational and health services	21.9	24.2	21.6	22.6
% Leisure and hospitality	8.0	7.5	8.8	9.4
% Other services	4.3	4.2	4.8	5.0
% Public administration	4.6	3.3	4.7	4.7

Source: Bureau of Labor Statistics, "Geographic Profile of Employment and Unemployment, 2013" 2008 and 2013, http://www.bls.gov/opub/gp/pdf/gp08full.pdf, http://www.bls.gov/opub/gp/pdf/gp13full.pdf, Table 20.
*2008 Mining alone, 2013 Mining and Logging

Distribution of New Hampshire and United States workforce by major occupation sectors 2008 and 2013

Occupation	New Hampshire		United States	
	2008	2013	2008	2013
Number Employed	712,000	704,000	145,362,000	143,929,000
% Management, business, and financial occupations	16.8	17.6	15.2	15.8
% Professional and related occupations	23.4	25.5	21.1	22.2
% Service occupations	14.6	14.5	16.8	18.0
% Sales and related occupations	10.9	11.8	11.2	10.7
% Office and administrative support occupations	13.6	11.7	13.2	12.4
% Farming, fishing, and forestry occupations	0.4	0.4	0.7	0.7
% Construction and extraction occupations	5.6	5.1	6.0	5.0
% Installation, maintenance, and repair occupations	3.6	3.4	3.5	3.4
% Production occupations	6.6	5.4	6.2	5.7
% Transportation and material moving occupations	4.6	4.5	6.1	6.1

Source: Bureau of Labor Statistics, "Current Population Survey" 2008 and 2013, http://www.bls.gov/lau/table08full.pdf, http://www.bls.gov/lau/table14full13.pdf, Table 18.

American Community Survey Demographic Language Data

Although the American Community Survey (ACS) produces population, demographic, and housing unit estimates, the 2010 Census provides the official counts of the population and housing units for the nation, states, counties, cities, and towns. For 2009, the Population Estimates Program provides intercensal estimates of the population for the nation, states, and counties. ACS estimates are subject to sampling variation and will not exactly match similar estimates from other sources.[19,20]

Source: ACS Table B16002, Household Language by Limited English Speaking Status

Households by English speaking status	Total households	Percent	95% LCI	95% UCI
English speaking only	462,000	88.9	87.9	89.8
Not limited English speaking household	50,000	9.6	8.9	10.3
Limited English speaking household	8,000	1.5	1.1	1.9

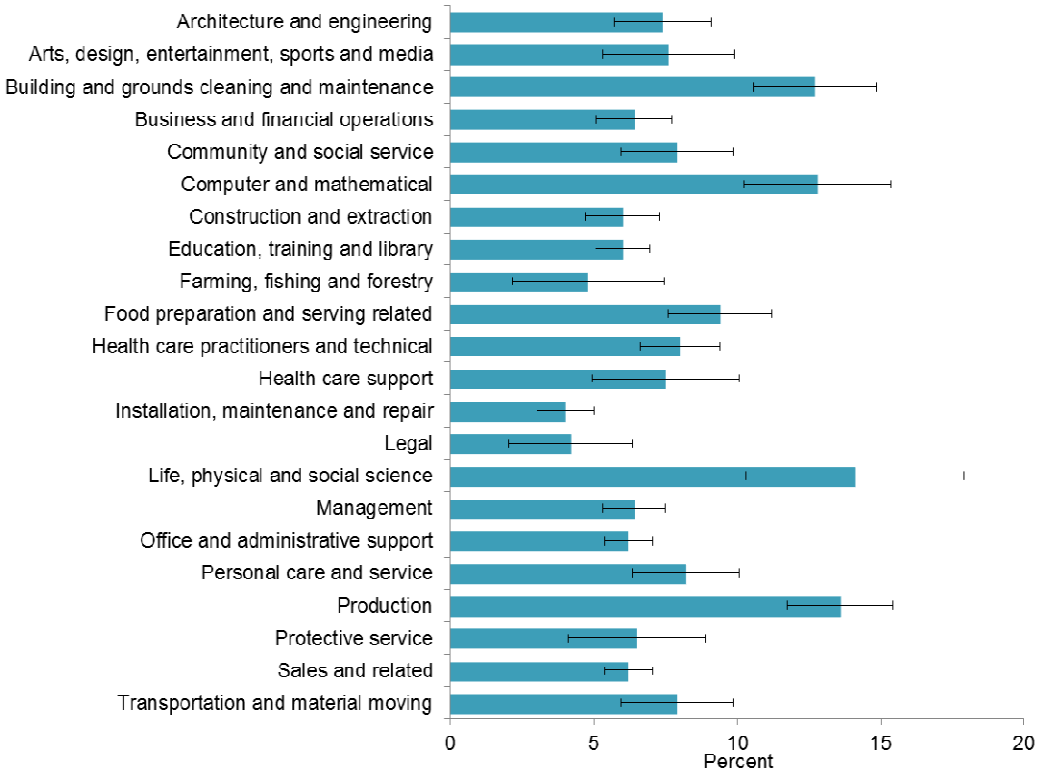
A "limited English speaking household" is one in which no member 14 years old and over (1) speaks only English or (2) speaks a non-English language and speaks English "very well." In other words, all members 14 years old and over have at least some difficulty with English. By definition, English-only households cannot belong to this group.

Limited English speaking households by language	Percent	95% LCI	95% UCI
Spanish	17.9	8.0	27.7
Other Indo-European languages	9.7	6.6	12.8
Asian and Pacific Island languages	21.6	12.2	31.1
*Other languages	21.4	0.0	43.6
All non-English languages	13.8	10.4	17.2

*Estimate is not statistically reliable.

“Percent” is the percentage of households where the given language is spoken at home and all members 14 years old and over have at least some difficulty with English.

Speaks a language other than English at home, by occupation—American Community Survey, New Hampshire, 2009-2013



Speak language other than English at home and speak English "not well" or "not at all" (age 16 and older)

Occupation	Percent	95% LCI*	95% UCI*
Building and grounds cleaning and maintenance	37.7	27.5	47.8
Construction and extraction	15.6	6.7	24.5
Food preparation and serving related	24.4	14.4	34.5
Office and administrative support	9.5	6.1	12.9
Production	23.4	16.6	30.2
Transportation and material moving	13.0	5.5	20.6

Source: Custom analysis of the 2009–2013 5-year American Community Survey (ACS) Public Use Microdata Sample (PUMS) file for New Hampshire. The ACS data can be accessed at: http://www.census.gov/acs/www/data_documentation/pums_data/.
*LCI and UCI are the Lower 95% Confidence Interval and Upper 95% Confidence Interval

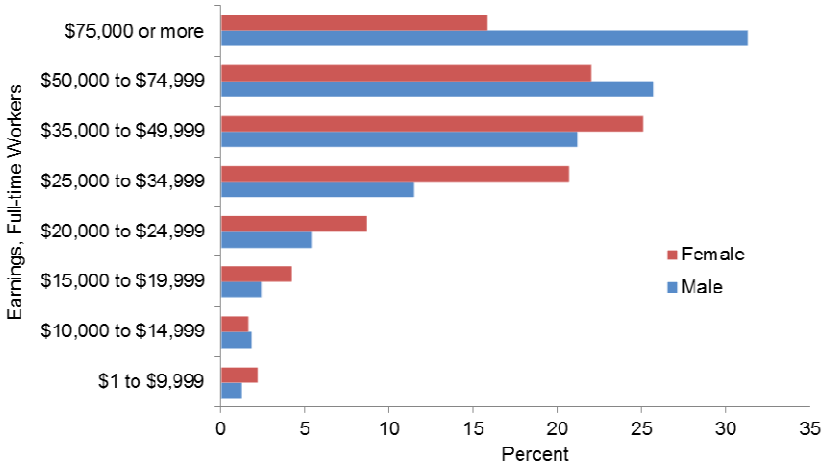
EDUCATION and INCOME

Estimated number of NH residents, age 25 and up, by education and employment status, 2013

Labor force participation by educational attainment	Percent of population	Not in labor force	95% LCI	95% UCI
Less than high school graduate	6.7	35.1	33.0	37.3
High school graduate	27.9	18.9	18.1	19.7
Some college or associate's degree	30.1	15.2	14.6	15.9
Bachelor's degree or higher	35.2	12.6	12.1	13.0

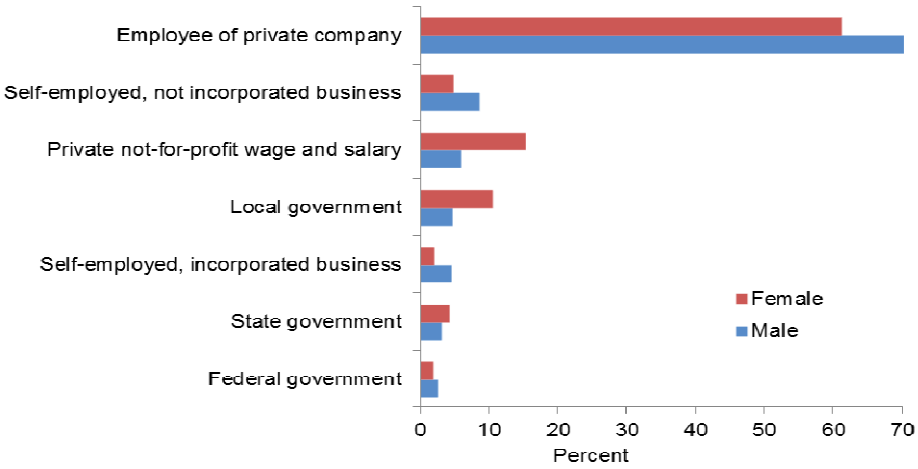
Source: American Community Survey Table B23006, One-Year Estimates 2013, Educational Attainment and Employment Status for the Population 25 to 64 Years

Median income by work experience in the past 12 months, NH population, 15 years old and over, by sex, 2013

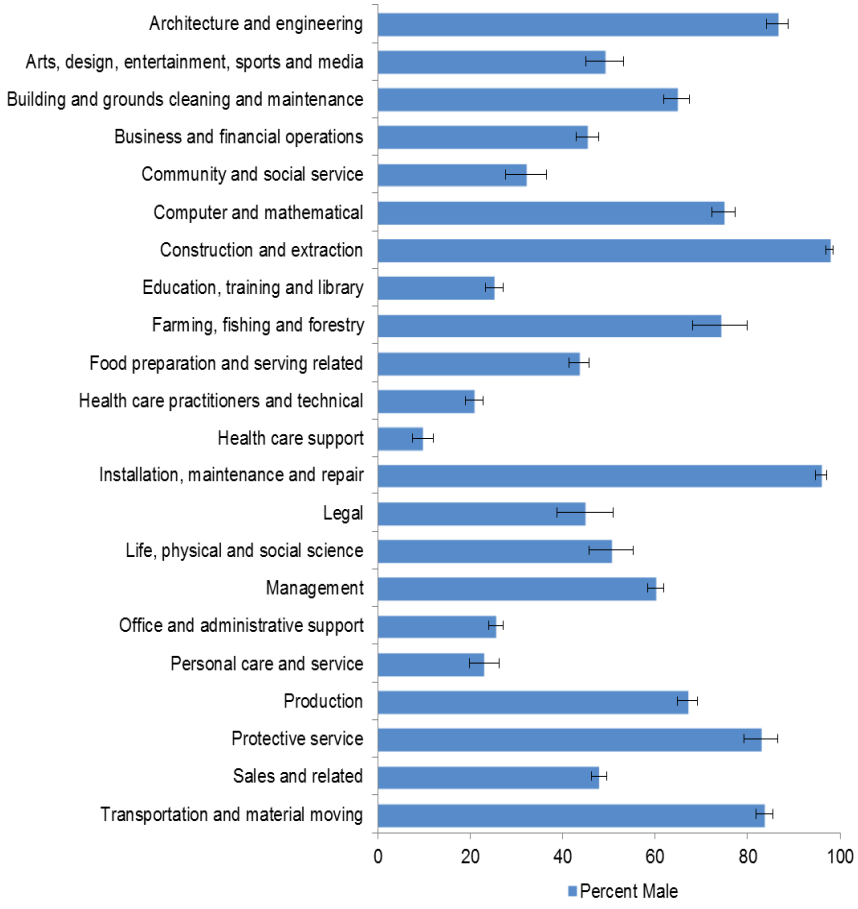


Source: ACS Table B19326, One-Year Estimates 2013, Median Income in the Past 12 Months (in 2013 Inflation-Adjusted Dollars) by Sex by Work Experience in the Past 12 Months for the Population 15 Years and Over with Income

Work experience by class of employee in the past 12 months, NH population, 15 years old and over, by sex, 2013

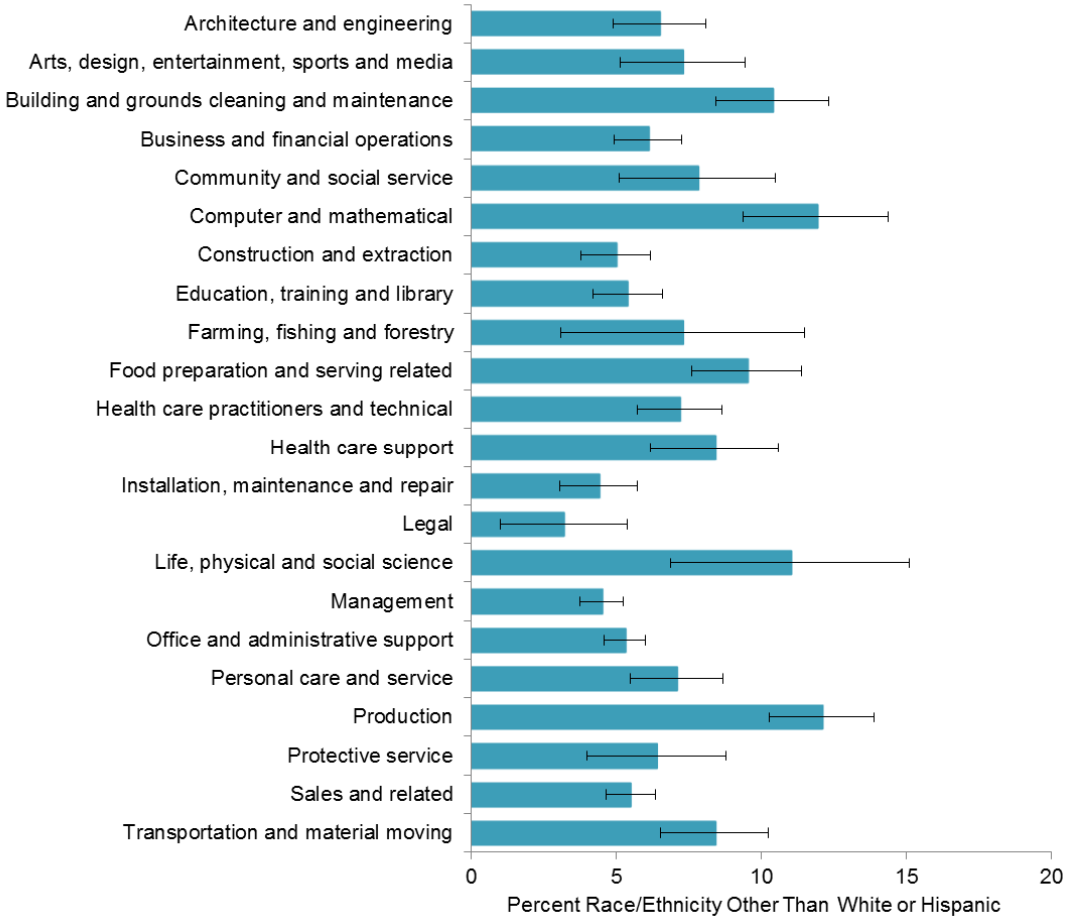


Percent of male New Hampshire employed population by occupation, 16 years old and over, 2013



Source: ACS Table B24080, One-Year Estimates 2013, Sex by Class of Worker for the Civilian Employed Population 16 Years and Over

Percent of New Hampshire employed population by occupation 16 years old and over, by race, not White or Hispanic, 2013



OCCUPATIONAL HEALTH INDICATORS FOR NEW HAMPSHIRE

Indicator 1: Non-Fatal Work-Related Injuries and Illnesses Reported by Private Sector Employers

Introduction: Thousands of workers are injured each day in the United States. The U.S. Bureau of Labor Statistics (BLS) annual Survey of Occupational Injury and Illness (SOII) estimates state non-fatal occupational injuries and illnesses (available from http://www.bls.gov/respondents/iif/). Because of funding/resource limitations, New Hampshire does not participate in the SOII program so there are no New Hampshire–specific data for evaluation of this indicator.

Indicator 2: Work-Related Hospitalizations (NH Hospital Data)

Introduction: More severe occupational injuries and illnesses may result in hospitalization. Since hospital discharge data are categorized by payer, it is possible to limit the data to just those patients whose discharges were billed to the State workers' compensation system. However, work-related hospitalizations may be under-represented due to utilization of other payer sources (out of pocket, patient's private insurance).

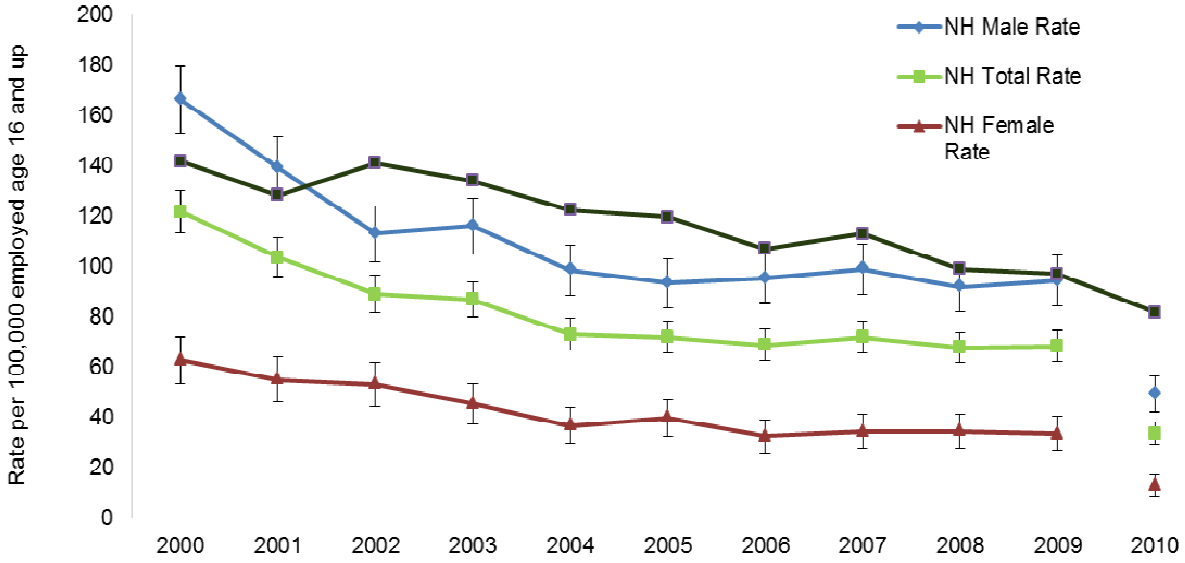
Indicator #2: Work-Related Hospitalizations
Numerator: Hospital discharges with primary payer coded as workers' compensation
Denominator: Employed persons age 16 years or older for the same calendar year
Measure: Annual crude rate per 100,000 employed persons age 16 and older
Exclude: Unknown age, out-of-state residents, and out-of-state hospitalizations

Annual number and rate* of inpatient hospitalizations for persons age 16 years and older, expected payer workers' compensation, 2000–2010

Year	Male			Female			Total		
	n	*Rate	95% CI	n	*Rate	95% CI	n	*Rate	95% CI
2000	586	166.5	153.0 - 180.0	72	62.9	54.9 - 71.7	813	122.1	113.7 - 130.5
2001	488	139.4	127.1 - 151.8	64	55.3	48.0 - 63.0	690	103.9	96.2 - 111.7
2002	405	113.1	102.1 - 124.1	62	53.4	46.4 - 60.8	600	89.3	82.1 - 96.4
2003	428	116.3	105.3 - 127.3	54	45.6	39.4 - 52.2	600	87.2	80.2 - 94.2
2004	367	98.7	88.6 - 108.7	44	37.0	31.4 - 43.1	511	73.2	66.9 - 79.6
2005	354	93.7	83.9 - 103.4	47	40.0	34.2 - 46.4	511	72.2	65.9 - 78.4
2006	360	95.5	85.6 - 105.4	39	32.8	27.8 - 38.4	493	69.0	63.0 - 75.1
2007	374	99.2	89.1 - 109.3	41	34.5	29.3 - 40.4	512	72.1	65.9 - 78.4
2008	344	92.0	82.3 - 101.7	42	34.8	29.6 - 40.6	485	68.1	62.1 - 74.2
2009	341	94.5	84.4 - 104.5	40	33.6	28.5 - 39.2	476	68.5	62.3 - 74.6
2010**	180	49.5	42.2 - 56.7	17	13.0	10.1 - 16.5	238	33.9	29.6 - 38.2

Source: NH Inpatient Hospital Discharge Data
n = number of hospitalizations
*Rate = Crude rate per 100,000 NH employees age 16 years and older
**2010 data was collected using a different method and is not comparable to previous year's data. It should be considered as a new baseline.

Annual rate of inpatient hospitalizations for persons age 16 years and older, expected payer workers' compensation, 2000–2010

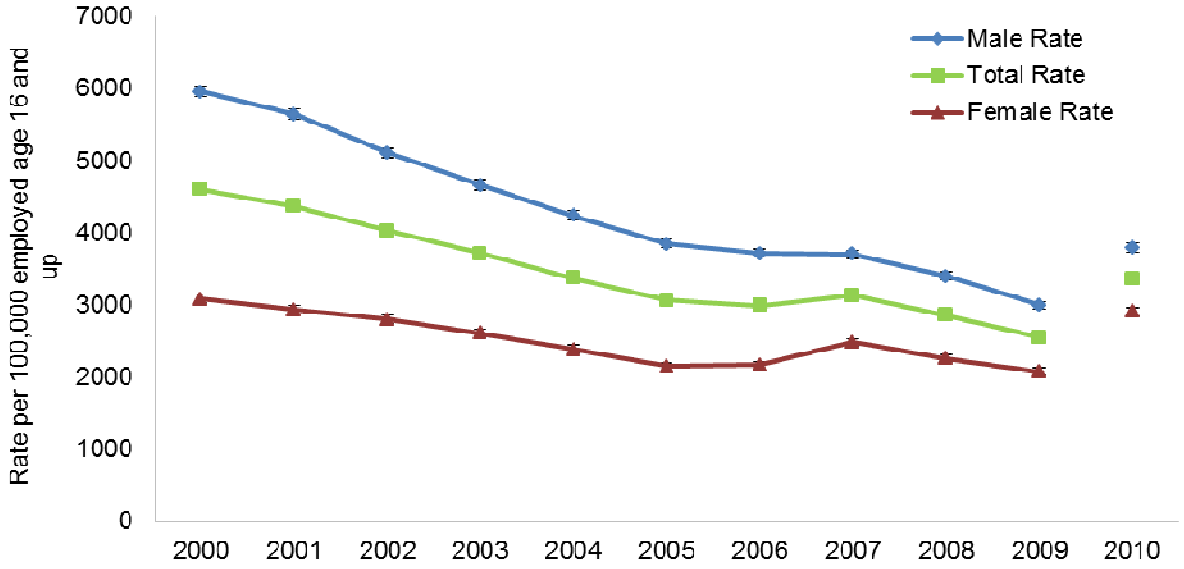


Annual number and rate* of emergency department discharges for persons age 16 years and older, expected payer workers' compensation, 2000–2010

Year	Male			Female			Total		
	n	*Rate	95% CI	n	*Rate	95% CI	n	*Rate	95% CI
2000	20,991	5963.4	5882.7 - 6044	9,687	3085	3023.6 - 3146.5	30,678	4606.3	4554.8 - 4657.9
2001	19,764	5646.9	5568.1 - 5725.6	9,239	2933	2873.2 - 2992.8	29,003	4367.9	4317.7 - 4418.2
2002	18,286	5107.8	5033.8 - 5181.9	8,800	2802.5	2744 - 2861.1	27,086	4030.7	3982.7 - 4078.7
2003	17,165	4664.4	4594.6 - 4734.2	8,373	2608.4	2552.5 - 2664.3	25,538	3711.9	3666.4 - 3757.4
2004	15,776	4240.9	4174.7 - 4307	7,773	2384.4	2331.3 - 2437.4	23,549	3373.8	3330.7 - 3416.9
2005	14,557	3851.1	3788.5 - 3913.6	7,122	2151.7	2101.7 - 2201.6	21,679	3062	3021.2 - 3102.8
2006	14,007	3715.4	3653.9 - 3776.9	7,315	2170.6	2120.9 - 2220.4	21,322	2986.3	2946.2 - 3026.4
2007	13,970	3705.6	3644.1 - 3767	8,258	2479.9	2426.4 - 2533.4	22,228	3130.7	3089.5 - 3171.9
2008	12,714	3399.5	3340.4 - 3458.6	7,631	2257.7	2207 - 2308.3	20,345	2857.4	2818.2 - 2896.7
2009	10,812	2995	2938.6 - 3051.5	6,925	2073.4	2024.5 - 2122.2	17,737	2552.1	2514.5 - 2589.6
2010**	13,823	3797.5	3734.2 - 3860.8	9,820	2905.3	2847.9 - 2962.8	23,643	3367.9	3325 - 3410.9

Source: NH Emergency Department Hospital Discharge Data
n = number of emergency department hospital discharges
*Rate = Crude rate per 100,000 NH employees age 16 years and older
**2010 data were collected using a different method and is not comparable to previous year's data. It should be considered as a new baseline.

Annual rate of emergency department discharges for persons age 16 years and older, expected payer workers' compensation, 2000–2010



Note: U.S. ED data not available

Indicator 3: Fatal Work-Related Injuries

Introduction: New Hampshire workers die each year from injuries received at work or illnesses caused by the work environment. One death is too many. Data tracking the number of workplace deaths is from the Census of Fatal Occupational Injuries (CFOI) administered by the Bureau of Labor Statistics (BLS). CFOI gathers data for all states and is a reliable count (not estimate) of all traumatic injury deaths related to work. Most of these deaths are transportation related or have occurred in the manufacturing, production/transportation, and service industries.

Indicator #3: Fatal Work-Related Injuries

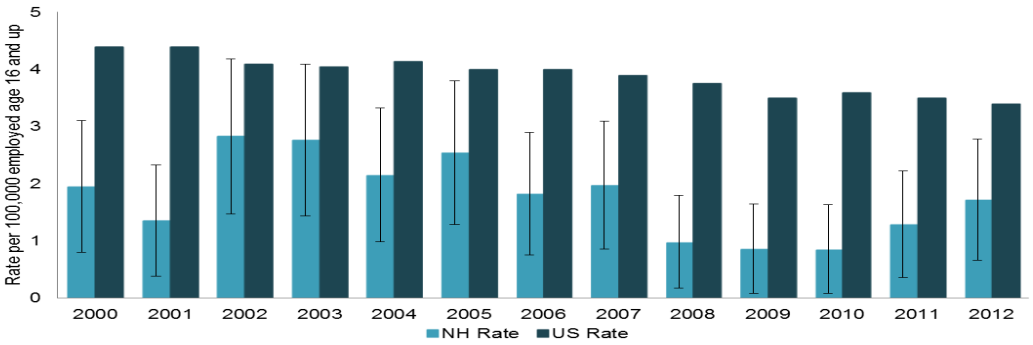
Numerator: Fatal Occupational Injuries as reported by the Bureau of Labor Statistics
Denominator: Employed persons age 16 years or older for the same calendar year
Measure: Annual crude death rate per 100,000 employed persons age 16 and older

New Hampshire and United States annual number and rate of fatal work-related injuries, 2000–2012

Year	New Hampshire					United States	
	n	Rate	95% CI			n	Rate
2000	13	2.0	1.0	-	3.3	5,920	4.4
2001	9**	1.4	0.6	-	2.6	5,900	4.4
2002	19	2.8	1.7	-	4.4	5,534	4.1
2003	19	2.8	1.7	-	4.3	5,575	4.1
2004	15	2.1	1.2	-	3.5	5,764	4.1
2005	18	2.5	1.5	-	4.0	5,734	4.0
2006	13	1.8	1.0	-	3.1	5,840	4.0
2007	14	2.0	1.1	-	3.3	5,657	3.9
2008	7**	1.0	0.4	-	2.0	5,214	3.8
2009	6**	0.9	0.3	-	1.9	4,551	3.5
2010	6**	0.9	0.3	-	1.9	4,690	3.6
2011	9**	1.3	0.6	-	2.5	4,693	3.5
2012	12	1.7	0.9	-	3.0	4,628	3.4

Source: Census of Fatal Occupational Injuries, Bureau of Labor Statistics, http://www.bls.gov/iif/oshwc/cfoi/tgs/2003/iiffi33.htm to http://www.bls.gov/iif/oshwc/cfoi/tgs/2012/iiffi33.htm.
n = number of work-related fatalities
*Rate = Crude rate per 100,000 NH employees age 16 years and older
**Counts lower than 10 events do not produce statistically reliable rates

Annual rate of fatal work-related injuries in NH and U.S., 2000–2012



Indicators 4-5: (Modified) Work-Related Amputations

Introduction: Data for work-related amputations with days away from work is not available through the U.S. Bureau of Labor Statistics as recommended for the construction of this indicator. In addition, data collected in the New Hampshire Workers' Compensation System on cases with days away from work are not currently available. Since the denominator of the number of full-time equivalent (FTE) employees is not available, rates cannot be generated.

As an alternate way of enumerating the number of work-related, non-fatal amputations in New Hampshire, hospital inpatient and emergency department (ED) discharge data were used. The ICD-9 diagnosis codes selected to define amputations are between 885 and 88799 for arm/hand/finger/thumb or between 895 and 89779 for leg/foot/toe. Principle Diagnosis and all Secondary Diagnosis Fields were used in this query.

Indicator #4-5, Modified: Work-Related Amputations
Numerator: Hospital discharges of patients who arrived at hospital with amputated appendage, with primary payer coded as workers' compensation
Denominator: Employed persons age 16 years or older for the same calendar year
Measure: Annual crude rate per 100,000 employed persons age 16 and older
Excluded: Patients with other injuries that later required an amputation

Of the 543 total of inpatient and ED discharges between 2001 and 2010, 83% of the amputations were fingers and 15% were thumbs. Total discharges for work-related amputations between year groupings did not show a statistically significant change.

For the annual number and rate of patients who arrived at the hospital with an amputated appendage, where expected payer is workers' compensation, there are no statistically significant differences between years.

Number and percent of patients who arrived at the hospital with an amputated appendage expected payer workers' compensation, 2001–2010

Year(s)	2001-2003		2004-2006		2007-2009		2010**	
Amputation of…	n	Percent	n	Percent	n	Percent	n	Percent
Foot	0	0	1	1	0	0	0	
Hand	3	2	0	0	1	1	0	
Toe	3	2	2	1	0	0	0	
Thumb	32	18	20	12	20	13	9	23
Finger	141	79	147	86	134	86	30	77
Grand Total	179		170		155		39	

Source: NH Emergency Department and Inpatient Hospital Discharge Data
n = number of emergency department plus inpatient hospital discharges
**2010 data was collected using a different method and is not comparable to previous year's data. It should be considered as a new baseline.

Annual number and rate of patients, who arrived at the hospital with an amputated appendage, expected payer workers' compensation, 2000–2010

Inpatient Plus Emergency Department Discharges					
Year	**n**	***Rate**	**95% CI**		
2000	78	11.7	9.3	-	14.6
2001	60	9.0	6.9	-	11.6
2002	60	8.9	6.8	-	11.5
2003	59	8.6	6.5	-	11.1
2004	63	9.0	6.9	-	11.5
2005	68	9.6	7.5	-	12.2
2006	39	5.5	3.9	-	7.5
2007	52	7.3	5.5	-	9.6
2008	51	7.2	5.3	-	9.4
2009	52	7.5	5.6	-	9.8
2010**	39	5.6	4.0	-	7.6

Source NH Emergency Department and Inpatient Hospital Discharge Data
n = number of emergency department plus inpatient hospital discharges
*Rate = Crude rate per 100,000 NH employees age 16 years and older
**2010 data was collected using a different method and is not comparable to previous year's data. It should be considered as a new baseline.

Indicator 6: (Modified) Hospitalizations for Work-Related Burns

Introduction: Work-related burns are not only extremely painful but also result in large amounts of lost work time. Hospital discharge data are useful to estimate the number of hospitalized burns in New Hampshire. Cases are identified by using standard diagnosis codes for burns with those injuries where the expected payer is workers' compensation.

The CSTE recommendations for this indicator exclude out-of-state hospitalizations. For this indicator, out-of-state inpatient hospitalizations of New Hampshire residents were included because New Hampshire is a small state. Hospitals with specialized burn units are close to its borders. Many serious burns would be transported to these hospitals even if the injury occurred in New Hampshire.

Indicator #6: Hospitalizations for Work-Related Burns
Numerator: Hospital discharges with primary diagnosis of burn injury (ICD-9 code between 940 and 94999) and with primary payer coded as workers' compensation.
Denominator: Employed persons age 16 years or older for the same calendar year
Measure: Annual crude rate per 100,000 employed persons age 16 and older
Exclude: Unknown age, out-of-state residents, and secondary diagnosis

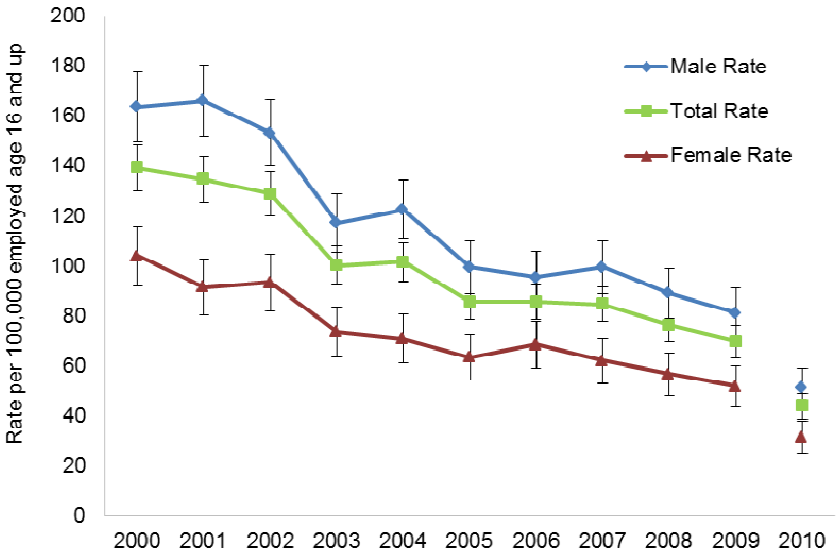
Annual number and crude rate of NH employees, hospitalizations for burns, expected payer workers' compensation paid, 2000–2010

Year	Emergency Department Discharges			Inpatient Hospitalization Discharges		
	n*	*Rate	95% CI	n*	*Rate	95% CI
2000	989	148.5	139.2 - 157.8	8	1.2	0.5 - 2.4
2001	955	143.8	134.7 - 152.9	9	1.4	0.6 - 2.6
2002	926	137.8	128.9 - 146.7	16	2.4	1.4 - 3.9
2003	743	108.0	100.2 - 115.8	16	2.3	1.3 - 3.8
2004	763	109.3	101.6 - 117.1	8	1.1	0.5 - 2.3
2005	657	92.8	85.7 - 99.9	9	1.3	0.6 - 2.4
2006	662	92.7	85.7 - 99.8	20	2.8	1.7 - 4.3
2007	652	91.8	84.8 - 98.9	12	1.7	0.9 - 3.0
2008	592	83.1	76.4 - 89.8	5	0.7	0.2 - 1.6
2009	530	76.3	69.8 - 82.8	6	0.9	0.3 - 1.9
2010**	345	49.1	44.0 - 54.3	0	0.0	0.0 - 0.0

Source NH Emergency Department and Inpatient Hospital Discharge Data
n* = numbers include in-state and out-of-state emergency department and inpatient hospital discharges
*Rate = Crude rate per 100,000 NH employees age 16 years and older
**2010 data was collected using a different method and is not comparable to previous year's data. It should be considered as a new baseline. Also 2010 data does not include out-of-state discharges at this time.
Note: Counts lower than 10 events do not produce statistically reliable rates.

Only the crude rates for emergency department discharges are shown in the graph below because there are no statistically significant changes in the inpatient discharge rates.

Annual rate of emergency department discharges for persons age 16 years and older for burns, expected payer workers' compensation, 2000–2010**



**2010 data was collected using a different method and is not comparable to previous year's data. It should be considered as a new baseline. Also 2010 data does not include out-of-state discharges at this time.

Indicator 7: Work-Related Musculoskeletal Disorders with Days Away from Work Reported by Employers

Introduction: Work-related musculoskeletal disorders are preventable, and control of occupational hazards is the most effective means of prevention. Estimating the burden and tracking of these injuries can help target prevention programs and activities. These data are collected via the U.S. Bureau of Labor Statistics (BLS) annual SOII.[21] Because of financial/resource limitations, New Hampshire does not participate in SOII so there are no data for evaluation of this indicator.

Indicator 8: Carpal Tunnel Syndrome Cases Filed with State Workers' Compensation System

Introduction: The New Hampshire Workers' Compensation System collects these data but carpal tunnel syndrome cases with days away from work are not currently available (see Indicator 19 Workers' Compensation Awards on page 35).

Indicator 9: Hospitalizations for Pneumoconiosis (Asbestosis)

Introduction: Asbestos is known to cause significant lung disease. A common disease resulting from asbestos exposure is asbestosis, a condition in which there is reduction in an individual's lung capacity. Asbestosis is one of many occupational lung diseases caused by dust exposure. These dust-related lung diseases are commonly referred to as 'pneumoconiosis.' In New Hampshire, the most common pneumoconiosis is asbestosis. Measuring morbidity and mortality from asbestosis is related to capturing hospitalizations with asbestosis (Indicator 9) and deaths with asbestosis (Indicator 10). There is a long interval between asbestos exposure and the occurrence of lung disease; therefore, rate trends may reflect exposures of 20 or more years ago.

Indicator #9: Hospitalizations from or with Pneumoconiosis
Numerators: All Hospital Discharges with primary or contributing (secondary) diagnosis of the following:
1. Total Pneumoconiosis, ICD9 Code: between 500.0 and 505.9
2. Coal workers' pneumoconiosis, ICD9 Code: 500
3. Asbestosis, ICD9 Code: 501
4. Silicosis, ICD9 Code: 502
5. Other and Unspecified pneumoconiosis, ICD9 Codes: Between 503 and 505.99

Denominator: Resident population age 15 years and older per calendar year
Measure of Frequency:
1. Annual number of hospitalizations, NH residents
2. Annual crude rate per 100,000 resident population 15 year old and older

Note: The parameter of primary payer being workers' compensation is not included. Out-of-State hospitalizations excluded.

Source for the following tables and graph: NH Emergency Department and Inpatient Hospital Discharge Data
n*= numbers of emergency department and inpatient hospital discharges
*Rate = **Crude rate per 1,000,000 NH residents age 15 years and older**
**2010 data was collected using a different method and is not comparable to previous year's data. It should be considered as a new baseline.
Note: Counts lower than 10 events do not produce statistically reliable rates.

Number inpatient discharges from or with pneumoconiosis, age 15 and older

Year	Inpatient total pneumoconiosis	Inpatient coal workers' pneumoconiosis	Inpatient asbestosis	Inpatient silicosis	Inpt other and unspecified pneumoconiosis
2000	69	4	63	2	0
2001	63	8	52	1	2
2002	95	6	76	13	0
2003	102	12	76	10	4
2004	88	4	77	7	0
2005	86	6	75	3	2
2006	70	2	67	1	0
2007	81	2	73	6	0
2008	73	2	68	3	0
2009	59	3	52	4	0
2010**	0	0	0	0	0

Number emergency department discharges from or with pneumoconiosis, age 15 and older

Year	ED total pneumoconiosis	ED coal workers' pneumoconiosis	ED asbestosis	ED silicosis	ED other and unspecified pneumoconiosis
2000	35	2	31	1	1
2001	36	2	34	0	0
2002	45	2	43	0	0
2003	40	0	39	1	0
2004	43	3	40	1	0
2005	37	3	31	3	1
2006	27	2	24	1	0
2007	30	0	30	0	0
2008	33	1	31	1	0
2009	26	1	21	3	1
2010**	1	0	1	0	0

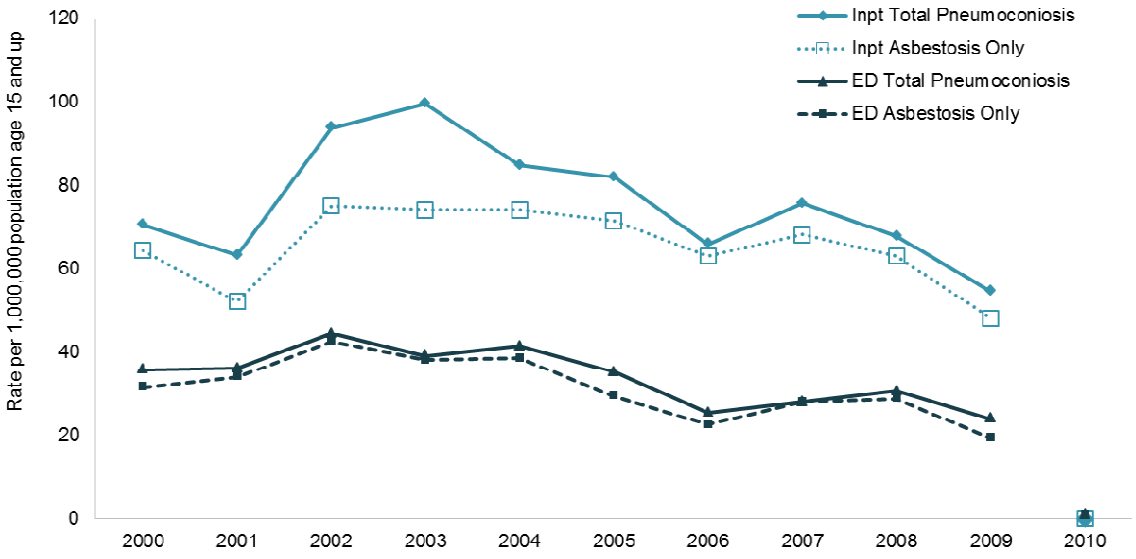
Rate per 1,000,000 census population, age 15 and older
hospital discharges from or with pneumoconiosis

Year	Inpatient hospital discharges					Emergency department hospital discharges				
	n	*Rate	95% CI			n	*Rate	95% CI		
2000	69	70.5	54.9	-	89.3	35	35.8	24.9	-	49.8
2001	63	63.2	48.5	-	80.8	36	36.1	25.3	-	50.0
2002	95	93.9	76.0	-	114.8	45	44.5	32.4	-	59.5
2003	102	99.5	80.2	-	118.8	40	39.0	27.9	-	53.1
2004	88	84.8	68.0	-	104.4	43	41.4	30.0	-	55.8
2005	86	81.9	65.5	-	101.2	37	35.2	24.8	-	48.6
2006	70	65.9	51.4	-	83.2	27	25.4	16.7	-	37.0
2007	81	75.6	60.1	-	94.0	30	28.0	18.9	-	40.0
2008	73	67.8	53.1	-	85.2	33	30.6	21.1	-	43.0
2009	59	54.6	41.5	-	70.4	26	24.0	15.7	-	35.2
2010**	0	0.0	0.0	-	0.0	1	0.9	0.0	-	5.1

Rate per 1,000,000 census population, age 15 and older
hospital discharges from or with asbestosis

Year	Inpatient hospital discharges					Emergency department hospital discharges				
	n	*Rate	95% CI			n	*Rate	95% CI		
2000	63	64.4	49.5	-	82.4	31	31.7	21.5	-	45.0
2001	52	52.1	38.9	-	68.4	34	34.1	23.6	-	47.6
2002	76	75.1	59.2	-	94.0	43	42.5	30.8	-	57.2
2003	76	74.2	58.4	-	92.8	39	38.1	27.1	-	52.0
2004	77	74.2	58.5	-	92.7	40	38.5	27.5	-	52.5
2005	75	71.4	56.2	-	89.6	31	29.5	20.1	-	41.9
2006	67	63.1	48.9	-	80.1	24	22.6	14.5	-	33.6
2007	73	68.2	53.4	-	85.7	30	28.0	18.9	-	40.0
2008	68	63.1	49.0	-	80.0	31	28.8	19.5	-	40.8
2009	52	48.1	35.9	-	63.1	21	19.4	12.0	-	29.7
2010**	0	0.0	0.0	-	0.0	1	0.9	0.0	-	5.1

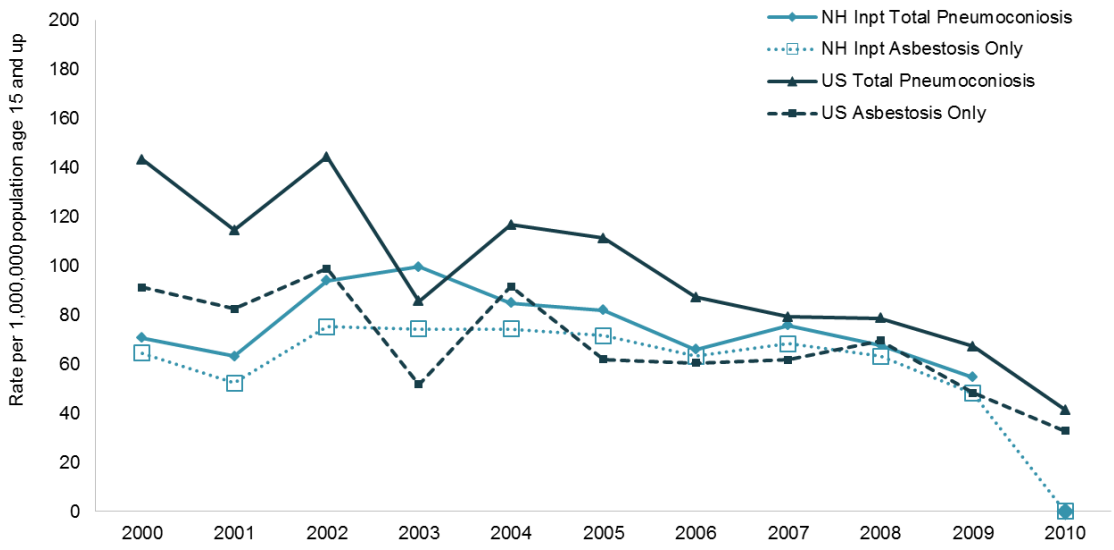
Total pneumoconiosis and asbestosis, hospital discharges,
NH residents, age 15 and older, 2000–2010



Total pneumoconiosis and asbestosis, inpatient hospital discharges, New Hampshire and United States residents, age 15 and older, 2000–2010

Year	NH Inpatient Hospital Discharge Rates		U.S. Inpatient Hospital Discharge Rates	
	Total pneumoconiosis	Asbestosis	Total pneumoconiosis	Asbestosis
2000	70.5	64.4	143.1	91.1
2001	63.2	52.1	114.4	82.4
2002	93.9	75.1	144.2	98.7
2003	99.5	74.2	85.5	51.6
2004	84.8	74.2	116.6	91.6
2005	81.9	71.4	111.1	61.8
2006	65.9	63.1	87.2	60.4
2007	75.6	68.2	79.1	61.7
2008	67.8	63.1	78.6	69.5
2009	54.6	48.1	67.2	48.2
2010**	0.0	0.0	41.4	32.7

Total pneumoconiosis and asbestosis, inpatient hospital discharges, New Hampshire and United States residents, age 15 and older, 2000–2010



There are no statistically significant changes from year to year in the rate of hospitalizations for total pneumoconiosis or asbestosis. Between 2000 and 2009, total inpatient and emergency department discharges for pneumoconiosis cases, 92% are males. Totaling males and females for the same period, 85% of the cases are 65 years old or older, 14% are between 35 and 64 years old, and less than 1% are ages 15 to 34 years.

Indicator 10: Mortality from or with Pneumoconiosis

Due to very small numbers, New Hampshire's data between 2000 and 2013 show there is no statistically significant difference in pneumoconiosis deaths. Therefore, we cannot report if the rate of death is increasing or decreasing. Pneumoconiosis has a long latency period. People suffering from this health condition may have been exposed many years ago.

Indicator #10: Mortality from or with Pneumoconiosis
Numerator: Deaths with ICD10 Codes between J60 and J66.8
Denominator: Resident population age 15 years and older per calendar year

Annual death count and rate per 1,000,000 NH and U.S. residents, age 15 years and older, from or with pneumoconiosis, 2000–2013

Year	New Hampshire					United States	
	n	*Rate	95% CI			n	Rate
2000	6	6.1	2.3	-	13.3	2,864	12.9
2001	6	6.0	2.2	-	13.1	2,747	12.2
2002	6	5.9	2.2	-	12.9	2,720	12.0
2003	7	6.8	2.7	-	14.1	2,639	11.5
2004	5	4.8	1.6	-	11.2	2,531	10.9
2005	9	8.6	3.9	-	16.3	2,430	10.3
2006	2	1.9	0.2	-	6.8	2,312	9.7
2007	6	5.6	2.1	-	12.2	2,194	9.1
2008	4	3.7	1.0	-	9.5	2,160	8.9
2009	6	5.5	2.0	-	12.1	1,998	8.2
2010	8	7.4	3.2	-	14.5	2,037	8.2
2011	2	1.8	0.2	-	6.6	n/a	n/a
2012	5	4.6	1.5	-	10.6	n/a	n/a
2013	3	2.7	0.6	-	7.9	n/a	n/a

Source: NH Vital Records, Death Certificate Data
n = number of pneumoconiosis fatalities
*Rate = **Crude rate per 1,000,000 NH residents age 15 years and older**
Note: Counts lower than 10 events do not produce statistically reliable rates

Indicator 11: Acute Work-Related Pesticide-Associated Illness and Injury Reported to Poison Control Centers

Introduction: Pesticides are workplace chemicals purposely designed to harm certain life forms. Hence, the active ingredients can pose risk of an acute exposure if not carefully applied. Pesticide-associated calls to poison control centers (PCCs) give counts of the types of pesticides involved in workplace exposures. However, PCC calls are thought to capture only a small percentage of actual exposures, and generally do not record any long-range symptoms or health effects. The NIOSH/AAPCC (American Association of Poison Control Centers) criteria classifies as 'pesticides' certain disinfectants, fungicides, fumigants, herbicides, insecticides, repellents, and rodenticides. While PCCs capture the types and active ingredients of a pesticide, the circumstance, occupation, and business and industrial identification associated with a call are not systematically known.

Indicator #11: Incidence of Acute Work-Related Pesticide-Associated Illness and Injury Reported to Poison Control Centers
Numerator: Reported cases of work-related pesticide poisoning
Denominator: Employed persons age 16 years and older for the same calendar year
Measures of Frequency:
1. Annual number of reported cases of work-related pesticide poisoning (numerator)
2. Annual incidence rate of reported cases of work-related pesticide poisoning per 100,000 employed persons age 16 years or older

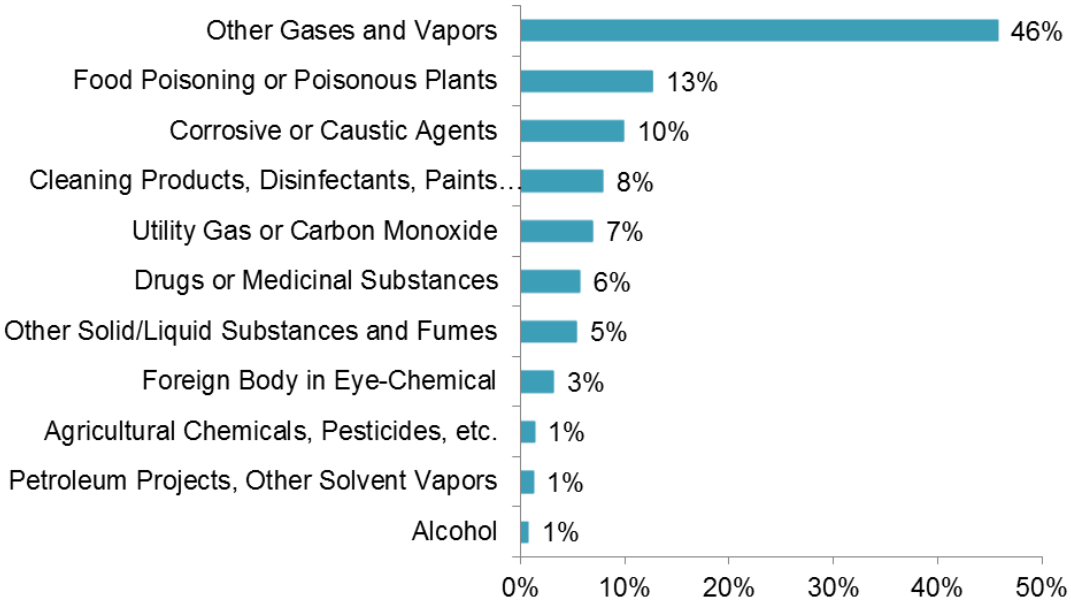
New Hampshire and United States occupational pesticide cases 2000–2011

Year	New Hampshire		United States	
	n	*Rate	n	*Rate
2000	12	1.80	2,827	2.10
2001	9	1.36	2,474	1.80
2002	18	2.68	2,528	1.90
2003	7	1.02	2,503	1.82
2004	14	2.01	2,476	1.78
2005	3	0.42	2,593	1.80
2006	7	0.98	3,545	2.45
2007	8	1.13	2,458	1.68
2008	7	0.98	2,171	1.50
2009	5	0.72	2,040	1.50
2010	13	1.85	2,871	2.07
2011	12	1.72	2,833	2.01

Source: Bureau of Labor Statistics
n = Number of work-related poisonings reported to poison control center
*Rate = Crude rate per 100,000 NH employees age 16 years and older
Note: Counts lower than 10 events do not produce statistically reliable rates

Additional Occupational Poisoning Cases Utilizing Hospital Discharge Data

Percent of total hospital discharges (ED plus inpatient), for accidental poisonings by substance, workers' compensation as expected payer, Age 16 and older
Years 2000–2010 (n = 864)



Source for above graphs: NH Emergency Department plus Inpatient Hospital Discharge Data
*Rate = Crude rate per 100,000 NH employees age 16 years and older
**2010 data was collected using a different method and is not comparable to previous year's data. It should be considered as a new baseline.

Indicator 12: Incidence of Malignant Mesothelioma

Introduction: Malignant mesothelioma, while relatively rare, is a fatal cancer largely attributable to workplace exposures to asbestos. Tracking malignant mesothelioma should be undertaken to document the burden of occupational disease, to design, target, and evaluate the impact of prevention efforts over time, and to identify previously unrecognized settings in which workers may continue to be at risk of asbestos exposure.

In New Hampshire, counts per year by gender are very small and therefore only the Crude Incidence Rate for the total incidences by year is shown in the graph below. The total rate has not significantly changed from year to year, however the total numbers are small and may not produce reliable, statistically significant rates. Mesothelioma has a long latency period (10–20 years) so current rates may not be indicative of current exposures. For three years, 2007, 2008 and 2010, NH's rate was significantly higher than the U.S. rate. Years of ship building and asbestos exposure in New Hampshire may have contributed to these higher incidence rates.

Indicator #12: Incidence of Malignant Mesothelioma
Numerator: Incident Cases with Mesothelioma (from the New Hampshire Cancer Registry)
Denominator: Resident population age 15 years and older per calendar year
Measures of Frequency: Annual number of deaths and Annual Crude Rate per 1,000,000 residents

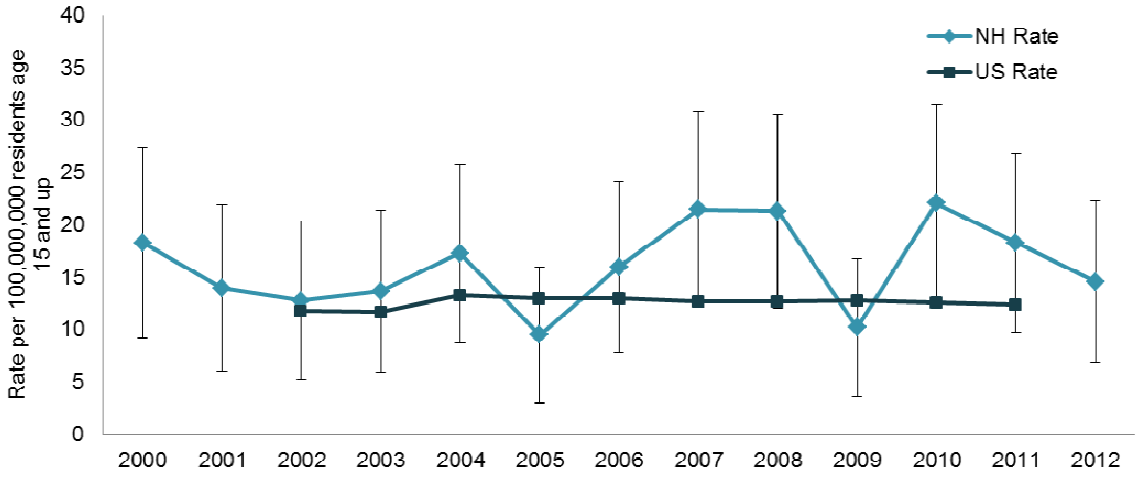
Annual incidence and rate per 1,000,000 NH and U.S. residents, age 15 years and older, with malignant mesothelioma, 2000– 2012

Year	New Hampshire				United States				Statistical Comparison NH to U.S.
	Incidence	*Rate	95% CI		Incidence	*Rate	95% CI		
2000	18	18.3	11.2	28.4	NA	NA	NA	NA	NA
2001	14	14.0	8.0	23.0	NA	NA	NA	NA	NA
2002	13	12.8	7.2	21.4	2,683	11.8	11.4	12.3	Similar
2003	14	13.7	7.8	22.4	2,689	11.7	11.3	12.2	Similar
2004	18	17.3	10.6	26.9	3,091	13.3	12.9	13.8	Similar
2005	10	9.5	4.9	17.0	3,056	13.0	12.5	13.5	Similar
2006	17	16.0	9.6	25.1	3,092	13.0	12.5	13.5	Similar
2007	23	21.5	14.0	31.7	3,051	12.7	12.2	13.1	**Higher**
2008	23	21.3	13.9	31.5	3,084	12.7	12.2	13.1	**Higher**
2009	11	10.2	5.4	17.7	3,143	12.8	12.4	13.2	Similar
2010	24	22.1	14.5	32.4	3,126	12.6	12.2	13.0	**Higher**
2011	20	18.3	11.5	27.8	3,108	12.4	12.0	12.9	Similar
2012	16	14.6	8.6	23.1	NA	NA	NA	NA	NA

Source: NH State Cancer Registry Data, U.S. incidence data from National NIOSH comparison data, NH population denominator: Claritas, U.S. population denominator: United States Department of Health and Human Services (U.S. DHHS), Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Bridged-Race Population Estimates, United States July 1st resident population by state, county, age, sex, bridged-race, and Hispanic origin. Compiled from 1990-1999 bridged-race intercensal population estimates (released by NCHS on 7/26/2004); revised bridged-race 2000-2009 intercensal population estimates (released by NCHS on 10/26/2012); and bridged-race Vintage 2013 (2010-2013) postcensal population estimates (released by NCHS on 6/26/2014). Available on CDC WONDER Online Database.

U.S. rate calculation method: Swift MB (2009) , Commun Stat-Theor M, 38, 748-759. R Core Team (2014). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. Fay M (2014), rateratio.test: Exact rate ratio test. R package version 1.0-2.
*Rate = **Crude rate per 1,000,000 NH residents, age 15 years and older**
Note: Counts lower than 10 events do not produce statistically reliable rates

Annual rate per 1,000,000 NH and U.S. residents, age 15 years and older, with malignant mesothelioma, 2000-2012



Indicator 13: Elevated Blood Lead Levels among Adults

Introduction: Lead poisoning among adults is primarily due to occupational or hobby-related exposure. Lead adversely affects multiple organ systems and can cause permanent damage. Exposure to lead in adults can cause anemia, nervous system dysfunction, kidney damage, hypertension, decreased fertility, and miscarriage. Workers bringing lead dust home on their clothing can expose their children to lead. The blood lead level (BLL) is the best biological indicator of recent lead exposure. A BLL of 25 micrograms per deciliter (µg/dL) or greater for adults is considered "elevated." The Federal Occupational Safety and Health Administration (OSHA) requires that employers regularly monitor the BLLs of workers where airborne lead in the workplace exceeds certain levels. When a worker's BLL is 40 µg/dL or greater, the employer is required to offer an annual medical exam and other medical interventions, depending on the BLL. Adverse health effects have been found with cumulative exposure at BLLs lower than 25 µg/dL. The average BLL for the general population is less than 2 µg/dL. Individuals with ongoing elevated BLLs are at greater risk for adverse health effects and are an indication that long-term airborne lead exposure continues to be a problem in lead industries.

All elevated BLLs are reported to NH Division of Public Health Services. Cases presented below represent residents age 16 years or older (working age). Follow up with healthcare providers for cases above 10 µg/dL should be conducted to determine occupational versus non-occupational exposure.

Indicator #13: Elevated Blood Lead Levels among Adults
Numerator: Annual number of residents with elevated blood lead levels
1. All reported state residents age 16 years or older, with a blood lead level of > 25 µg/dL due to occupation
2. All reported state residents age 16 years or older, with a blood lead level of > 40 µg/dL due to occupation
Denominator: Employed population age 16 years or older for the same calendar year

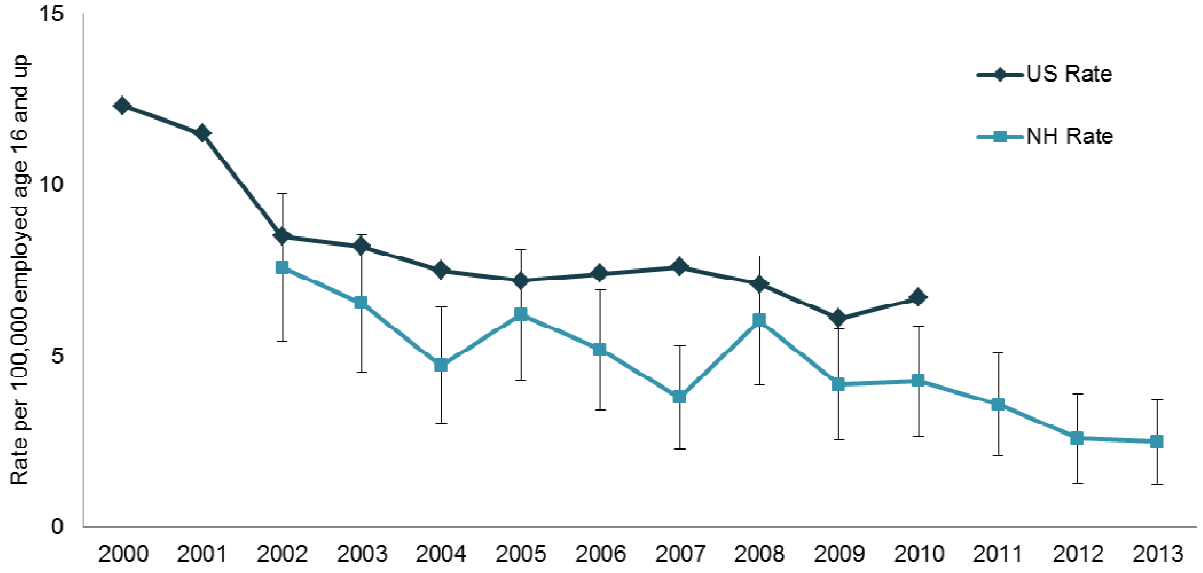
Measures of Frequency: Annual prevalence rate per 100,000 employed persons age 16 years or older

Annual prevalence count and rate of elevated blood lead levels per 100,000 employed workers, age 16 years and older, New Hampshire and United States, 2000–2013

Year	BLL >= 25 mcg/dL					BLL >= 40 mcg/dL				
	New Hampshire			United States		New Hampshire			United States	
	n	*Rate	95% CI	n	Rate	n	*Rate	95% CI	n	Rate
2000	n/a	n/a	n/a - n/a	11,077	12.3	n/a	n/a	n/a - n/a	2,125	2.4
2001	n/a	n/a	n/a - n/a	9,943	11.5	n/a	n/a	n/a - n/a	2,009	2.3
2002	51	7.6	5.7 - 10.0	9,915	8.5	10	1.5	0.7 - 2.7	1,768	1.5
2003	45	6.5	4.8 - 8.8	9,884	8.2	6	0.9	0.3 - 1.9	1,649	1.4
2004	33	4.7	3.3 - 6.6	9,170	7.5	0		-	1,425	1.2
2005	44	6.2	4.5 - 8.3	8,902	7.2	5	0.7	0.2 - 1.6	1,498	1.2
2006	37	5.2	3.6 - 7.1	9,555	7.4	5	0.7	0.2 - 1.6	1,463	1.1
2007	27	3.8	2.5 - 5.5	9,898	7.6	6	0.8	0.3 - 1.8	1,618	1.2
2008	43	6.0	4.4 - 8.1	9,325	7.1	5	0.7	0.2 - 1.6	1,486	1.1
2009	29	4.2	2.8 - 6.0	7,676	6.1	5	0.7	0.2 - 1.7	1,122	0.4
2010	30	4.3	2.9 - 6.1	8,432	6.7	3	0.4	0.1 - 1.2	1,313	1.0
2011	25	3.6	2.3 - 5.3	n/a	n/a	2	0.3	0.0 - 1.0	n/a	n/a
2012	18	2.6	1.5 - 4.1	n/a	n/a	2	0.3	0.0 - 1.0	n/a	n/a
2013	18	2.5	1.5 - 4.0	n/a	n/a	6	0.9	0.0 - 1.9	n/a	n/a

Source: http://www.cdc.gov/niosh/topics/ABLES/ables.html
Note: Counts lower than 10 events do not produce statistically reliable rates

Annual prevalence rate of elevated blood lead levels greater than or equal to 25 mcg/dL per 100,000 employed workers, age 16 years and older, New Hampshire and United States, 2000–2013



Indicator 14: Percentage of Workers Employed in Industries at High Risk for Occupational Morbidity

In New Hampshire, there were 35,548 workers employed in industries with a high risk for occupational morbidity in 2008. That is 6.0% of the workforce in New Hampshire. In 2010, there were 39,741 workers employed in industries with a high risk for occupational morbidity. That is 7.1% of the workforce in New Hampshire. In 2012, there were 37,441 workers employed in industries with a high risk for occupational morbidity. That is 6.8% of the workforce in New Hampshire.

Indicator 15: Percentage of Workers Employed in Occupations at High Risk for Occupational Morbidity

In New Hampshire, there were 53,762 workers employed in occupations with a high risk for occupational morbidity in 2008. That is 10.0% of the workforce in New Hampshire. In 2010, there were 67,310 workers employed in occupations with a high risk for occupational morbidity. That is 12.7% of the workforce in New Hampshire. In 2012 there were 70,406 workers employed in occupations with a high risk for occupational morbidity. That is 13.5% of the workforce in New Hampshire.

Indicator 16: Percentage of Workers Employed in Industries and Occupations at High Risk for Occupational Mortality

In New Hampshire, there were 78,735 workers employed in industries with a high risk for occupational mortality in 2008. That is 12.7% of the workforce in New Hampshire. Occupations with high risk of mortality employed 47,194 workers in 2008. That is 7.6% of the workforce in New Hampshire.

In 2010, in New Hampshire, there were 70,118 workers employed in industries with a high risk for occupational mortality. That is 11.7% of the workforce. Occupations with high risk of mortality employed 53,414 New Hampshire workers in 2010. That is 8.9% of the workforce.

In 2012, in New Hampshire, there were 79,186 workers employed in industries with a high risk for occupational mortality. That is 13.0% of the workforce. Occupations with high risk of mortality employed 53,046 New Hampshire workers in 2012. That is 8.7% of the workforce.

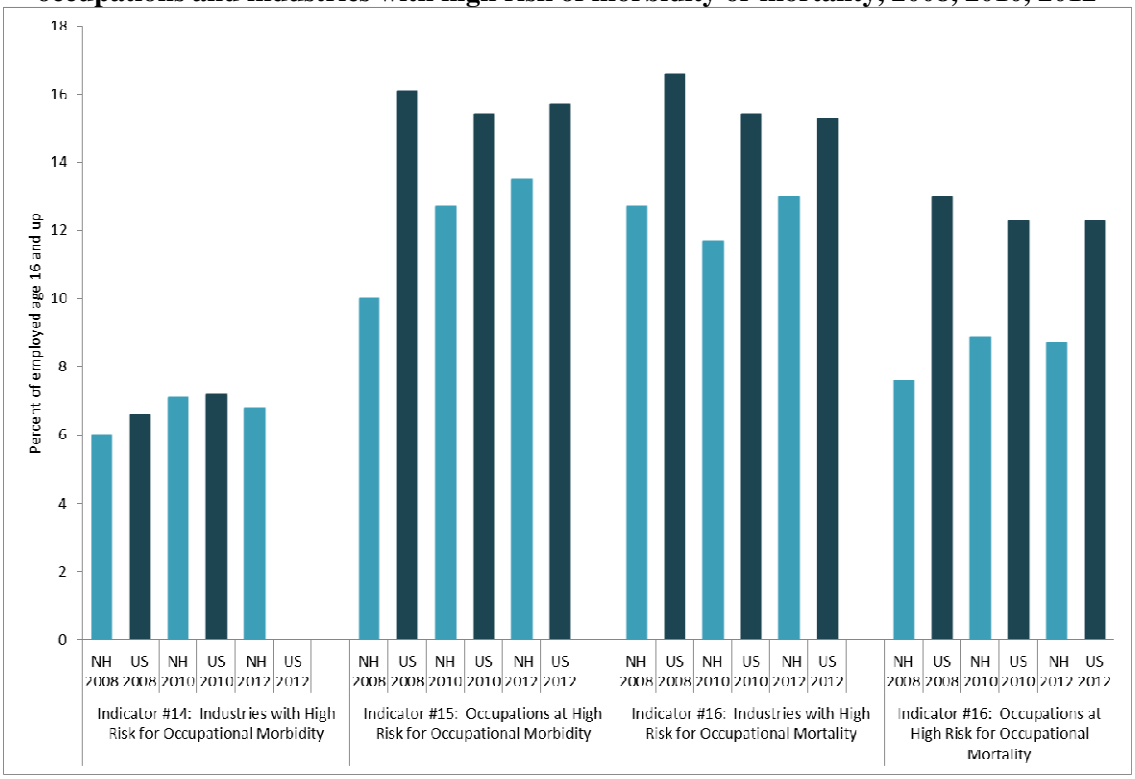
NOTE: All four of these indicators are independent of each other. So, for example, a secretary who works in the logging industry would be counted as working in a high risk industry for mortality even though this person is at low risk of mortality from an occupational standpoint. The same is true for occupations.

Indictors 14–16, New Hampshire and United States workers employed in occupations and industries with high risk of morbidity or mortality, 2008, 2010, 2012

Workers employed in…		Indicator #14: Industries with High Risk for Occupational Morbidity	Indicator #15: Occupations at High Risk for Occupational Morbidity	Indicator #16: Industries with High Risk for Occupational Mortality	Indicator #16: Occupations at High Risk for Occupational Mortality
New Hampshire	2008 n	35,548	53,726	78,735	47,194
	2008%	6.0	10.0	12.7	7.6
	2010 n	39,741	67,310	70,118	53,414
	2010%	7.1	12.7	11.7	8.9
	2012 n	37,441	70,406	78,186	53,046
	2012%	6.8	13.5	13.0	8.7
United States	2008 n	7,998,334	18,373,120	20,643,751	16,140,941
	2008%	6.6	16.1	16.6	13
	2010 n	8,045,439	16,679,132	18,124,738	14,471,156
	2010%	7.2	15.4	15.4	12.3
	2012 n	n/a	17,600,379	18,713,621	15,073,127
	2012%	n/a	15.7	15.3	12.3

Source: Bureau of the Census County Business Patterns (CBP)

Indictors 14–16, New Hampshire and United States workers employed in occupations and industries with high risk of morbidity or mortality, 2008, 2010, 2012



Indicator 17: Occupational Safety and Health Professionals

Introduction: Physicians with training and/or special interest in occupational medicine provide primary, secondary, and tertiary occupational health preventative services. In 1989, the American Medical Association recommended that there be one physician per 1,000 employees. Occupational health nurses provide a great deal of onsite occupational health care. Industrial hygienists and safety professionals are typically the primary individuals responsible for evaluating and monitoring workplace exposures and making recommendations to prevent occupational injuries and illnesses.

Occupational Safety and Health Professionals
New Hampshire and United States, 2008 and 2010

Members of…	New Hampshire				United States	
	2008 Members	2010 Members	2008 *Rate	2010 *Rate	2008 *Rate	2010 *Rate
American Board of Preventive Medicine	11	11	1.5	1.6	1.9	2.1
American College of Occupational and Environmental Medicine	16	14	2.2	2.0	3.0	2.9
American Board of Occupational Health Nurses	55	52	7.7	7.4	4.0	3.9
American Association of Occupational Health Nurses	68	n/a	9.6	n/a	5.4	n/a
American Board of Industrial Hygiene	37	35	5.2	5.0	4.8	5.2
American Industrial Hygiene Association	29	31	4.1	4.4	6.1	5.6
Board Certified Safety Health Professionals	81	81	11.4	11.6	7.9	8.8
American Society of Safety Engineers	205	213	28.8	30.4	22.0	22.5

Source: CSTE and BLS, *Crude Rate per 100,000 Employed People 16+ years old

Indicator 18: OSHA Enforcement Activities

Introduction: In 1970, Congress established the Occupational Safety and Health Administration (OSHA). The OSHA mission is to "assure so far as possible every working man and woman in the nation safe and healthful working conditions." This mandate involves the application of a set of tools by OSHA (e.g., standards development, enforcement, compliance assistance). OSHA conducts both referral and non-referral inspections on work sites. Work sites are selected into an emphasis program for non-referred inspections, randomly and on the basis of industry incidence rates of injuries. Investigations are inspections triggered by three events: fatality, catastrophe, or referral (including outside health/safety agency or media). All of the above on-site activities are called inspections for statistical databases.

Estimated annual number and percentage of private sector establishments and employees in New Hampshire inspected under OSHA jurisdiction 2001–2013

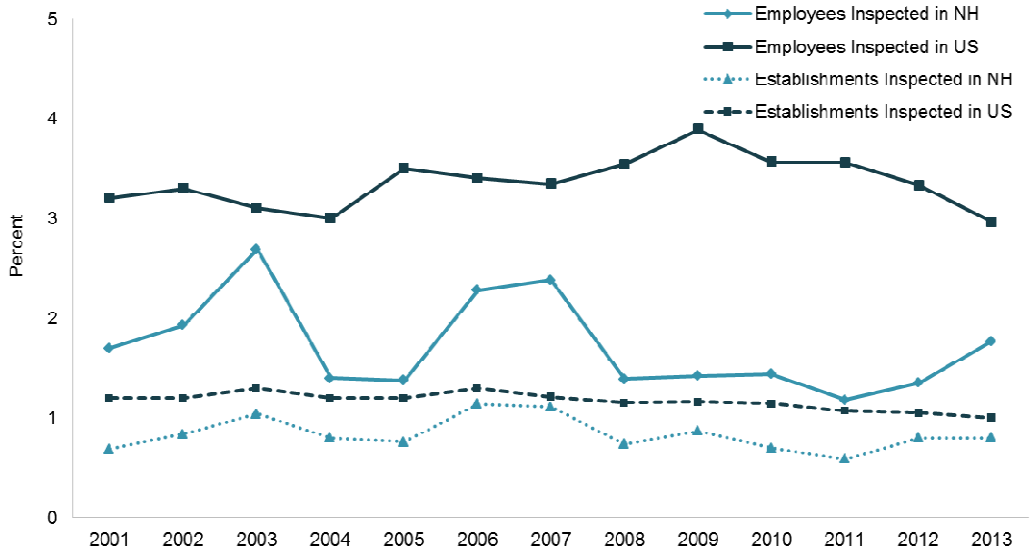
Year	Number of Inspections	Number of Establishments Eligible for Inspections (Excl. Farms and Mines)	Percent of Establishments Inspected	Number of Employees Inspected	Number of Employees Eligible for Inspection (Excl. Farms and Mines)	Percent of Employees Inspected
2001	303	43,912	0.69	9,018	529,686	1.70
2002	367	43,706	0.84	10,054	520,169	1.93
2003	458	44,105	1.04	13,990	519,205	2.69
2004	359	44,803	0.80	7,390	528,260	1.40
2005	344	45,104	0.76	7,397	534,952	1.38
2006	526	46,000	1.14	12,320	540,333	2.28
2007	515	46,493	1.11	12,896	542,710	2.38
2008	346	46,752	0.74	7,532	540,537	1.39
2009	402	46,018	0.87	7,358	516,501	1.42
2010	320	45,470	0.70	7,375	512,342	1.44
2011	270	45,475	0.59	6,115	519,109	1.18
2012	370	46,266	0.80	7,079	525,998	1.35
2013	372	46,750	0.80	9,408	532,722	1.77

Estimated annual number and percentage of private sector establishments and employees in the United States inspected under OSHA jurisdiction 2001–2013

Year	Number of Inspections	Number of Establishments Eligible for Inspections (Excl. Farms and Mines)	Percent of Establishments Inspected	Number of Employees Inspected	Number of Employees Eligible for Inspection (Excl. Farms and Mines)	Percent of Employees Inspected
2001	87,881	7,658,853	1.20	3,435,512	n/a	3.20
2002	93,890	7,773,800	1.20	3,481,170	n/a	3.30
2003	91,536	7,897,678	1.30	3,316,191	n/a	3.10
2004	96,838	8,364,795	1.20	3,905,987	n/a	3.00
2005	96,238	8,211,286	1.20	3,777,751	n/a	3.50
2006	107,610	8,421,089	1.30	3,756,054	n/a	3.40
2007	104,010	8,595,768	1.21	3,769,881	112,736,945	3.34
2008	100,548	8,702,901	1.16	3,961,060	111,871,827	3.54
2009	100,245	8,621,891	1.16	4,107,815	105,709,540	3.89
2010	98,788	8,607,674	1.15	3,739,298	104,954,020	3.56
2011	93,231	8,686,344	1.07	3,799,759	106,863,628	3.56
2012	91,550	8,734,543	1.05	3,637,571	109,256,356	3.33
2013	88,239	8,818,558	1.00	3,301,630	111,552,868	2.96

Source: OSHA inspection data and Bureau of Labor Statistics

Estimated annual percentage of private sector establishments and employees in New Hampshire and United States inspected under OSHA jurisdiction 2001–2013



Indicator 19: Workers' Compensation Awards

Introduction: In 2008, workers' compensation awards to injured New Hampshire employees totaled $250,226,000. That is an average cost of $403 per covered New Hampshire employee. In 2012 the total amount of workers' compensation paid decreased to $229,024,000, with an average cost per covered worker also decreasing to $ 379. The benefits include payments for medical care and wage-replacement to workers or their surviving dependants. The number of workers covered by workers' compensation insurance has decreased between 2008 and 2012, and the frequency of claims has declined. The medical and wage-replacement costs per worker have also decreased between 2008 and 2012 after increases in 2009 and 2010. The economic impact of work-related injuries and illnesses on workers and employees is ever present.[22]

Workers' Compensation Benefits Paid per Covered Worker, New Hampshire and United States 2008-2012

Year	New Hampshire			United States		
	Workers' Compensation Total Benefits Paid	Workers' Compensation Covered Workers	Workers' Compensation Benefits Paid per Covered Worker	Workers' Compensation Total Benefits Paid	Workers' Compensation Covered Workers	Workers' Compensation Benefits Paid per Covered Worker
2008	$250,226,000	621,000	$402.94	$58,750,379,000	130,643,000	$449.70
2009	$246,755,000	597,000	$413.32	$58,435,367,000	124,856,000	$468.02
2010	$251,667,000	593,000	$424.40	$58,465,069,000	124,454,000	$469.77
2011	$231,800,000	598,000	$387.63	$61,040,807,000	125,833,000	$485.09
2012	$229,024,000	605,000	$378.55	$61,856,754,000	127,904,000	$483.62

Source: Sengupta, I., Reno V, Burton JF., Workers Compensation: Benefits, Coverage, and Costs, 2012, August 2014, National Academy of Social Insurance

Total Injuries Reported to New Hampshire Workers' Compensation, Fiscal Year 2001–2013

Injuries reported to the Department of Labor decreased to 39,502 in FY 2012 from injuries reported for 2011 with an incidence rate of 6.2. In FY 2013, the number of injuries reported was 38,998 with an incidence rate of 6.1. The chart below represents a decrease in the incidence rate of injuries reported over the past 5 years with an increase in non-agricultural employment in fiscal year 2013.

The pattern of incidence rates of lost time cases seems to be consistent over the period of the last five fiscal years, which is reflected in the section below. In FY 2012 there were 3,535 injuries that represented cases where the employee was disabled from work or out of work due to their injury for four or more days. There were 3,530 lost time cases in FY 2013.[23]

The table and graph below represent the overall decrease in the incidence rate of injuries reported over the past 13 years. There is a statistically significant decrease in reported injuries between 2001 and 2006. Between 2006 and 2008 the rate remained stable at 7.3. There has not been a statistically significant rate decrease since 2009. The pattern of incidence rates of lost time cases consistently decreased between fiscal years 2001–2009. The rate remained stable in FY2008 and 2009 at 0.56. The rate then increased in 2010 to 0.62 and decreased in 2011 to 0.60, but increased in 2012 and again in 2013.

Injury rate from the New Hampshire Department of Labor, 56th to 60th biennial reports

Reported injuries						Compensable disabilities	
Fiscal year	**Injuries reported**	**Non-agricultural employees**	***Rate**	**Lower 95% CI**	**Upper 95% CI**	**Lost time**	***Rate**
2001	57,077	628,450	9.1	9.0	9.2	5,289	0.84
2002	52,765	620,800	8.5	8.4	8.6	4,665	0.75
2003	52,366	617,775	8.5	8.4	8.5	4,650	0.75
2004	50,334	620,508	8.1	8.0	8.2	3,916	0.63
2005	47,711	632,783	7.5	7.5	7.6	3,733	0.59
2006	46,473	638,425	7.3	7.2	7.3	3,644	0.57
2007	46,832	642,408	7.3	7.2	7.4	3,543	0.55
2008	46,921	644,442	7.3	7.2	7.3	3,574	0.56
2009	42,184	654,008	6.5	6.4	6.5	3,860	0.56
2010	39,399	623,300	6.3	6.3	6.4	3,863	0.62
2011	39,954	631,200	6.3	6.3	6.4	3,810	0.60
2012	39,502	641,600	6.2	6.1	6.2	3,535	0.89
2013	38,998	644,000	6.1	6.0	6.1	3,530	0.91

Source: New Hampshire Department of Labor, 56th to 60th Biennial Report
*Incidence rates are per 100 employees.

Total annual workers' compensation benefit paid out for direct losses in New Hampshire, 1997–2012

Year	Total Paid Out
1997	$149,252,541
1998	$146,366,459
1999	$155,752,534
2000	$157,765,656
2001	$171,805,723
2002	$173,592,437
2003	$181,268,664
2004	$176,355,359
2005	$178,870,260
2006	$179,237,459
2007	$175,263,530
2008	$196,043,393
2009	$194,768,531
2010	$198,794,947
2011	$193,604,595
2012	$190,897,981

Source: New Hampshire Department of Labor, 56th to 60th Biennial Reports

Injuries Reported to New Hampshire Worker's Compensation, 2001–2013

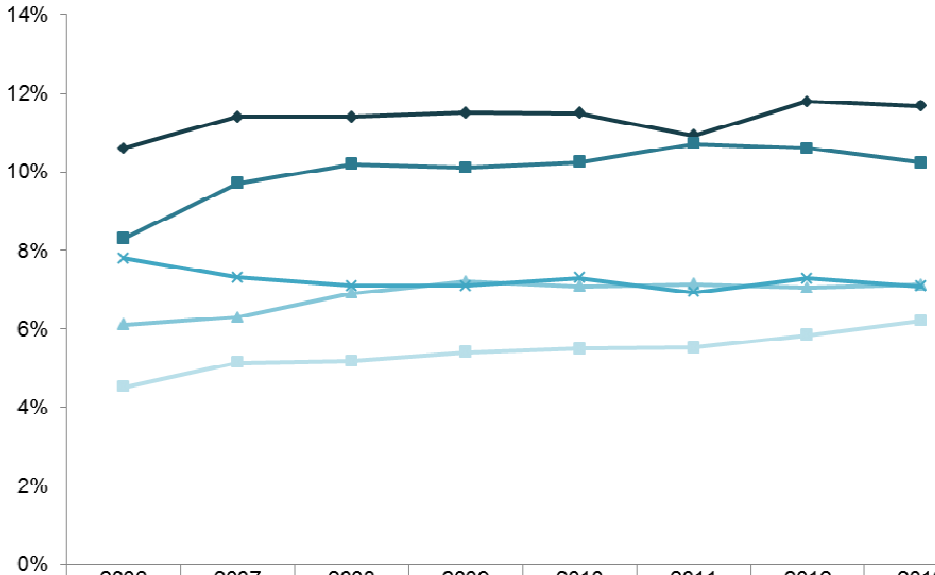
The following information includes statistics developed from the First Reports of Injury (FROI) received from employers. These reports must be sent in within 5 days of the employer receiving notice of the injury. The number of "unknown outcome" in the third report is large since the employer may not know the outcome at the time of completing the report.

The graphs below show the percent of total injuries for the top 5 body parts and causes and outcomes of injury. When "other, unknown," or "not applicable" ended up in the top five, the next identifiable item was selected from the list. Those unidentified categories are usually a compilation of several less significant injury causes or outcomes. There were changes made to the data collection and coding system between 2006 and 2007, which most likely accounts for the sharp variations in rates.

For more detailed information, refer to the NH Department of Labor Biennial Reports that can be found on the internet at: http://www.labor.state.nh.us/BiennialRpt.pdf.

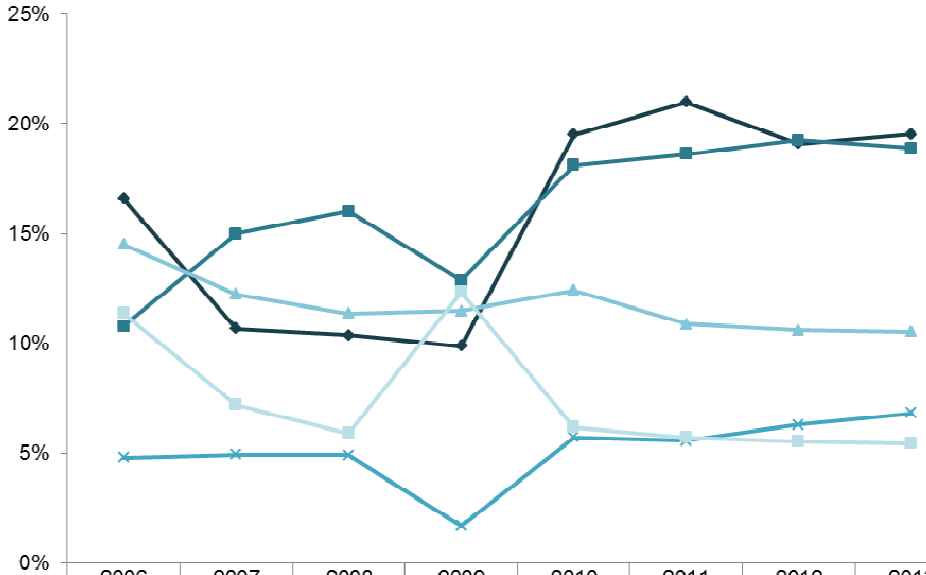
(Data labeled as Unknown, Other, or Not Applicable in the following graphs were excluded because they do not give enough detail about the injuries.)

Top 5 body parts injured, annual percent of total injuries reported, 2006–2013



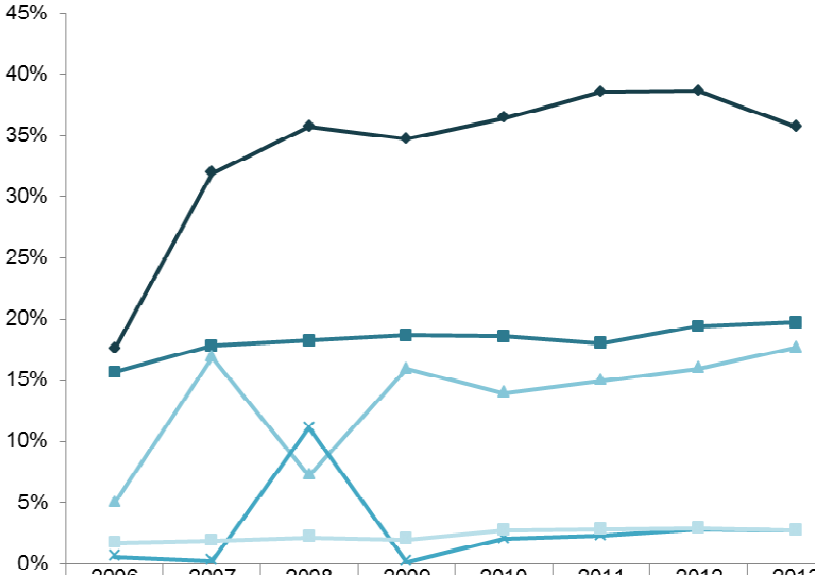
	2006	2007	2008	2009	2010	2011	2012	2013
Finger	10.6%	11.4%	11.4%	11.5%	11.5%	10.9%	11.8%	11.7%
Lower Back	8.3%	9.7%	10.2%	10.1%	10.3%	10.7%	10.6%	10.2%
Knee	6.1%	6.3%	6.9%	7.2%	7.1%	7.1%	7.1%	7.1%
Hand	7.8%	7.3%	7.1%	7.1%	7.3%	6.9%	7.3%	7.1%
Arm	4.5%	5.1%	5.2%	5.4%	5.5%	5.5%	5.8%	6.2%

Top 5 causes of injury, annual percentage of total injuries reported, 2006–2013



	2006	2007	2008	2009	2010	2011	2012	2013
Slip or Fall	16.6%	10.7%	10.4%	9.9%	19.5%	21.0%	19.1%	19.5%
Lifting Action	10.8%	15.0%	16.0%	12.9%	18.1%	18.6%	19.3%	18.9%
Hit by Object	14.5%	12.2%	11.4%	11.5%	12.4%	10.9%	10.6%	10.5%
Person	4.8%	4.9%	4.9%	1.7%	5.7%	5.6%	6.3%	6.8%
Sharp object	11.4%	7.2%	5.9%	12.3%	6.2%	5.7%	5.5%	5.4%

Top 5 outcomes of injury, annual percentage of total injuries reported, 2006–2013



	2006	2007	2008	2009	2010	2011	2012	2013
Muscle Pull/Strain	17.5%	31.9%	35.7%	34.7%	36.4%	38.5%	38.6%	35.7%
Cut or Punture	15.7%	17.8%	18.2%	18.6%	18.6%	18.0%	19.4%	19.8%
Bruise	4.9%	16.9%	7.2%	15.9%	13.9%	14.9%	16.0%	17.7%
Splinter	0.5%	0.2%	11.1%	0.1%	2.0%	2.3%	2.8%	2.7%
Broken or Fractured Bone	1.6%	1.8%	2.1%	1.9%	2.7%	2.7%	2.8%	2.6%

Indicator 20: Work-Related Low Back Disorder Hospitalizations

Introduction: Each year 15–20% of Americans report back pain, resulting in over 100 million workdays lost and more than 10 million physician visits. National Health Interview Survey (NHIS) data estimates that two-thirds of all low back pain cases are attributable to occupational activities. The cost of back pain is also disproportionate, as it represents about 20% of workers' compensation claims, but nearly 40% of the costs. In 2003, 3.2% of the total U.S. workforce experienced a loss in productive time due to back pain. The total cost of this productive time lost to back pain is estimated to be in excess of $19.8 billion dollars.[1]

This indicator has two measures: 1) Surgical low back disorder hospitalizations; and 2) all low back disorder hospitalizations. Initially surgical cases are identified. Then to obtain all low back disorder hospitalizations, non-surgical cases are identified and added to the surgical cases. Certain hospitalizations are excluded because the conditions are likely related to trauma or a non-occupational disease.

Indicator #20: Work-Related Low Back Disorder Hospitalizations
Numerator: Hospital discharges for low back disorders with primary payer coded as workers' compensation.
Denominator: Resident population age 16 years and older per calendar year

[1] http://www.cdc.gov/nchs/nhis/about_nhis.htm

Measure of Frequency:

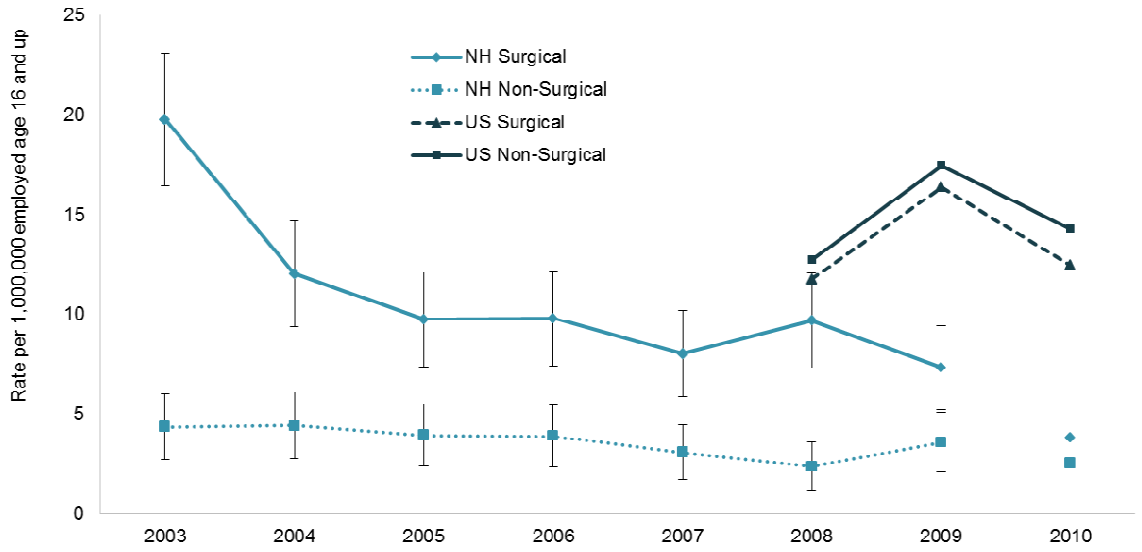
1. Surgical Low Back Disorder: Annual number and rate of work-related surgical low back disorder hospitalizations for persons age 16 years or older.
2. Low Back Disorders: Annual number and rate of work-related low back disorder hospitalizations for persons age 16 years or older without surgical procedure.

Annual number and crude rate of NH employees, hospitalizations for low back disorder, expected payer workers' compensation, 2003–2010

Year	Non-Surgical			Surgical			Total		
	n	*Rate	95% CI	n	*Rate	95% CI	n	*Rate	95% CI
2003	30	4.4	2.9 - 6.2	136	19.8	16.4 - 23.1	166	24.1	20.5 - 27.8
2004	31	4.4	3.0 - 6.3	84	12.0	9.6 - 14.9	115	16.5	13.5 - 19.5
2005	28	4.0	2.6 - 5.7	69	9.7	7.6 - 12.3	97	13.7	11.1 - 16.7
2006	28	3.9	2.6 - 5.7	70	9.8	7.6 - 12.4	98	13.7	11.1 - 16.7
2007	22	3.1	1.9 - 4.7	57	8.0	6.1 - 10.4	79	11.1	8.8 - 13.9
2008	17	2.4	1.4 - 3.8	69	9.7	7.5 - 12.3	86	12.1	9.7 - 14.9
2009	25	3.6	2.3 - 5.3	51	7.3	5.5 - 9.6	76	10.9	8.6 - 13.7
2010**	18	2.6	1.5 - 4.1	27	3.8	2.5 - 5.6	45	6.4	4.7 - 8.6

Source: NH Inpatient Hospital Discharge Data
n = number of hospitalizations
*Crude rate per 100,000 NH employees age 16 years and older
**2010 data was collected using a different method and is not comparable to previous year's data. It should be considered as a new baseline.

Annual rate of NH and U.S. employees, hospitalizations for low back disorder surgical and non-surgical procedures, expected payer workers' compensation, 2003–2010



Between 2003 and 2009, surgical procedures of low back disorders declined significantly. There was no significant change in the rate of non-surgical procedures year to year.

Indicator 21: Asthma among Adults Caused or Made Worse By Work

Introduction: Asthma is a chronic inflammatory disease of the airways that affects more than 18 million adults in the United States (CDC, 2010). Work-related asthma is preventable but often goes undiagnosed by physicians. Research has shown that work-related asthma can have adverse effects on the worker, including increased morbidity, adverse socioeconomic impacts and difficulty getting and sustaining work. Estimating the burden of asthma caused or made worse by work can help target prevention programs and activities.

Data for this indicator are taken from the Asthma Call-back Survey (ACBS) of the Behavioral Risk Factor Surveillance System (BRFSS) survey. BRFSS is a cross-sectional telephone health survey of non-institutionalized adults 18 years or older collected on a monthly basis in all 50 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and Guam. Not all states participate in the ACBS. In 2010, 39 States participated in the ACBS, 40 in 2011 and 42 in 2012. Because it is a telephone health survey, individuals must have a telephone to participate. It is also only conducted in select languages which can vary by State; therefore it does not include individuals who speak all languages. The data are subject to the bias of self-reported data.

U.S. data are only available for this indicator for 2011-2012.

Indicator 21: Asthma among Adults Caused or Made Worse By Work
Numerator: Ever-employed adults with current asthma who report that their asthma was caused or made worse by exposures at work.
Denominator: Ever-employed adults (18 years or older) with current asthma.
Measure: Weighted estimate of the number and percent of ever-employed adults with current asthma who report that their asthma was caused or made worse by exposures at work

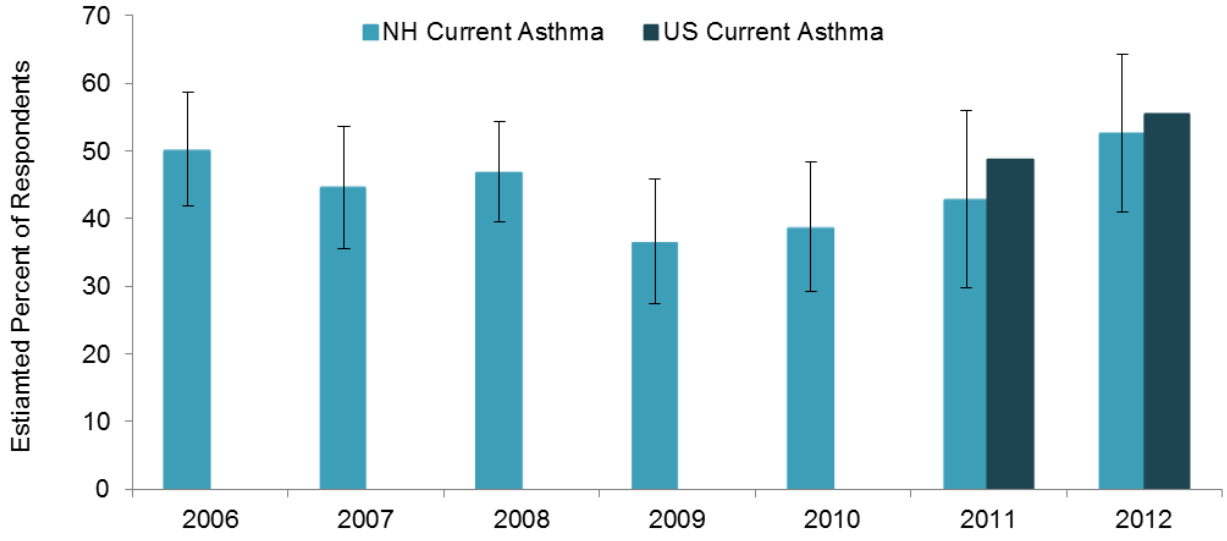
Estimated number and percent of New Hampshire residents reporting their asthma was caused or made worse by any job for current[1] and former[2] asthma status among adults[3] ever diagnosed with asthma, 2006–2012

Year	Current				Former			
	Sample Size±	%	SE§	95% CI†	Sample Size	%	SE	95% CI
2006	219	50.2	4.3	(41.8 - 58.6)	79	27.4	7.6	(12.5 - 42.3)
2007	219	44.6	4.6	(35.6 - 53.6)	85	N/A	N/A	(N/A - N/A)
2008	308	46.9	3.8	(39.5 - 54.3)	112	14.8	3.4	(8.1 - 21.5)
2009	244	36.6	4.7	(27.4 - 45.8)	81	22.8	6.8	(9.5 - 36.1)
2010	268	38.8	4.9	(29.2 - 48.4)	81	25.4	6.0	(13.6 - 37.2)
2011	207	42.8	6.7	(29.7 - 55.9)	59	N/A	N/A	(N/A - N/A)
2012	258	52.6	5.9	(41.0 - 64.2)	45	N/A	N/A	(N/A - N/A)

Source: BRFSS Asthma Call-back Survey Land Line Sample, New Hampshire, http://www.cdc.gov/BRfSS/acbs/index.htm, as assess on 12/24/2014.
[1] "Yes" response to "Do you still have asthma?"
[2] "No" response to "Do you still have asthma?"
[3] Aged ≥ 18 years
± Sample size excludes "DK/Refused"
§ Standard error
† Confidence interval

N/A: Estimate not available (N/A) if the unweighted sample size for the denominator was < 50 or if the relative standard error was > 0.30

Estimated percent of New Hampshire and United States residents reporting their asthma was caused or made worse by any job for current asthma status among adults ever diagnosed with asthma, 2006–2012



Source: BRFSS Asthma Call-back Survey Land Line Sample, New Hampshire, http://www.cdc.gov/BRfSS/acbs/index.htm, as assess on 12/24/2014.

CONCLUSION AND RECOMMENDATIONS

The indicators presented in this report provide an overview of the occupational health status of New Hampshire workers over a span of years. However, these data are far from complete and do not give a totally accurate picture of the true nature of occupational illnesses and injuries in New Hampshire. The trends suggest a decrease in many of the occupational injury and illness rates in New Hampshire, but due to chronic underreporting and lack of enforcement at the federal and state level, we are unable to document the true incidence and severity of the problem. Data are often unavailable to specifically identify the industries at highest risk and to document the type of industry or occupation a person might work in. Detailed information about subgroups of the working population at risk and how the injury occurred are also absent from these data systems. Information about less common injuries and illnesses is poorly estimated.

Given what we do know, however, we can at least identify higher risk populations and industries to target for prevention measures. We must be proactive as industries and jobs change in our State and vigilant in collecting accurate, timely and meaningful data to better inform our intervention efforts. We will continue to collaborate with our partners and key stakeholders to ensure that resources continue to be invested in occupational health surveillance at the state level.

DATA SOURCE DESCRIPTIONS

Hospital Discharge Data 2000–2009 (Inpatient and Emergency Department): Health Statistics and Data Management Section (HSDM), Bureau of Disease Control and Health Statistics (BDCHS), Division of Public Health Services (DPHS), New Hampshire Department of Health and Human Services (NH DHHS), and the Bureau of Data and Systems Management (BDSM), Office of Medicaid Business and Policy (OMBP), New Hampshire Department of Health and Human Services (NH DHHS), with assistance from a DHHS contractor, Analyzed by NH DPHS Injury Surveillance Program.

Hospital Discharge Data 2010 (Inpatient and Emergency Department): Health Statistics and Data Management Section (HSDM), Bureau of Disease Control and Health Statistics (BDCHS), Division of Public Health Services (DPHS), New Hampshire Department of Health and Human Services (NH DHHS), Analyzed by NH DPHS Injury Surveillance Program.

Mortality Data: Health Statistics and Data Management Section (HSDM), Bureau of Disease Control and Health Statistics (BDCHS), Division of Public Health Services (DPHS), New Hampshire Department of Health and Human Services (NH DHHS), and the Bureau of Data and Systems Management (BDSM), New Hampshire Department of Health and Human Services (NH DHHS), and the New Hampshire Department of State, Division of Vital Records Administration. Underlying cause of death is classified in accordance with the International Classification of Disease, Tenth Revision (ICD-10).

Cancer Incidence Data: Health Statistics and Data Management Section (HSDM), Bureau of Disease Control and Health Statistics (BDCHS), Division of Public Health Services (DPHS), New Hampshire Department of Health and Human Services (NH DHHS), and the New Hampshire State Cancer Registry (NHSCR). Invasive Cancer is classified in accordance with the International Classification of Disease-Oncology-Third Edition (ICD-O-3) and SEER Staging as defined in 2000.

Employment estimates used to calculate rates: Bureau of Labor Statistics' Current Population Survey.
Adult Blood Lead Data: Numbers of cases with elevated blood lead levels: Adult Blood Lead Epidemiology Surveillance (ABLES) program.
Poison Center Data: Northern New England Poison Center with assistance from Health Statistics and Data Management Section (HSDM), Bureau of Disease Control and Health Statistics (BDCHS), Division of Public Health Services (DPHS), New Hampshire Department of Health and Human Services (NH DHHS). Funding for data sharing project was provided by U.S. Health Services Administration.

Behavioral Risk Factor Surveillance System Survey Data (BRFSS): Health Statistics and Data Management Section (HSDM), Bureau of Disease Control and Health Statistics (BDCHS), Division of Public Health Services (DPHS), New Hampshire Department of Health and Human Services (NH DHHS), and the Centers for Disease Control and Prevention (CDC), U.S. Department of Health and Human Services, Atlanta, Georgia.

State of New Hampshire, Department of Labor, Data for FY2001 to FY2004 are from the "56th Biennial Report, July 1, 2003-June 30, 2005." November 2005. Data for FY2005 and FY2006 are from the "57th Biennial Report, July 1, 2005–June 30, 2007." November 2007. Data for FY2007 to FY 2011 are from the "59th Biennial Report, July 1, 2009–June 30, 2011." December 2011, and data for FY2012 to FY2013 are from the "60th Biennial Report, July 1, 2011–June 30, 2013." November 2012.

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[3] BLS:– Employment status of the civilian non-institutional population by sex, race, Hispanic or Latino ethnicity, marital status, and detailed age, 2012 annual averages. http://www.bls.gov/lau/table14full12.pdf

[4] BLS:– Employment status of the civilian non-institutional population by sex, race, Hispanic or Latino ethnicity, marital status, and detailed age, 2012 annual averages. http://www.bls.gov/lau/table14full12.pdf

[5] BLS:– Employment status of the civilian non-institutional population by sex, race, Hispanic or Latino ethnicity, marital status, and detailed age, 2012 annual averages. http://www.bls.gov/lau/table14full12.pdf

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[23] State of New Hampshire, Department of Labor, Data for FY2001 to FY2004 are from the "56th Biennial Report, July 1, 2003-June 30, 2005." November 2005. Data for FY2005 and FY2006 are from the "57th Biennial Report, July 1, 2005-June 30, 2007." November 2007.– Data for FY2007 to FY 2011 are from the "59th Biennial Report, July 1, 2009 -June 30, 2011."– December 2011, and data for FY2012 to FY2013 are from the "60th Biennial Report, July 1, 2011-June 30, 2013." November 2012.