



## Using the 2008 NH Behavioral Risk Factor Surveillance System (BRFSS) to estimate the number of work-related injuries with associated payer

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### Introduction

Work-related injuries are a major cause of morbidity in the United States. The Bureau of Labor Statistics (BLS) reported the rate of nonfatal workplace injuries and illnesses among private industry employers at 3.6 cases per 100 full-time equivalent (FTE) workers in 2009. This was a decline from 3.9 cases in 2008 and 4.2 cases in 2007.<sup>1</sup> Despite this decline, many studies have suggested that these numbers are underestimates because many injured workers do not file for workers' compensation when injured at work. For example, Rosenman et al. found the estimates of work-related injuries and illnesses in Michigan to be three times greater than the official estimate derived from the BLS annual survey.<sup>2</sup> Azaroff et al discuss the various filters applied to disclosure of work-related injury and illness.<sup>3</sup> These include fear of retaliation where workers who report health problems or injuries to their supervisor may risk disciplinary action, denial of overtime or promotional opportunities, stigmatization, harassment, or even job loss.<sup>3</sup> Other factors include lack of knowledge of the workers' compensation system and administrative obstacles that discourage injured workers from completing the claim filing process.<sup>4</sup>

### 2008 NH Behavioral Risk Factor Surveillance System (BRFSS)

For the first time, the 2008 NH BRFSS survey included questions about workplace injury and payment for related treatment. The questions were intended to measure the prevalence of workplace injuries serious enough to require medical advice or treatment during the previous 12 months and the source of payment for treatment. The NH BRFSS is part of a national, state-based system of tele-

phone health surveys, conducted annually by all States, the District of Columbia, and three U.S. Territories, with support from the Centers for Disease Control and Prevention (CDC). It is a survey of adults aged 18 or older not residing in group quarters or institutions. States have the option of adding questions to the end of the state BRFSS questionnaire. The injury and workers' compensation questions were part of the New Hampshire state added questions for 2008. (See Appendix for questions).

### Results

In 2008, 6,892 adults were interviewed for the NH BRFSS survey. The workplace injury questions were asked of adults reporting they were employed for wages at some time in the previous 12 months (3,735 respondents).

Data collected for self-employed workers were excluded from all analyses because self-employed workers usually are not required to have workers' compensation insurance.

Nearly 5 percent of workers reported they had been injured at work in the past 12 months seriously enough to require medical advice or treatment. These numbers are consistent with the BRFSS results reported by 10 other states in 2007 (California, Connecticut, Kentucky, Massachusetts, Michigan, New Jersey, New York, Oregon, Texas, and Washington) with the proportion of workers who were injured at work during the preceding 12 months ranging from 4.0 to 6.9 percent (Kentucky and New York, respectively).<sup>5</sup>

In our study, the prevalence of injury was significantly

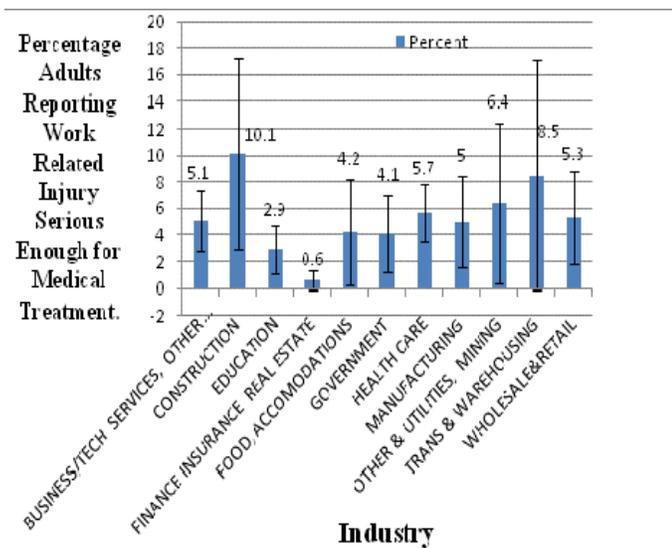


Fig. 1: Percent of adults reporting injury at work by Industry

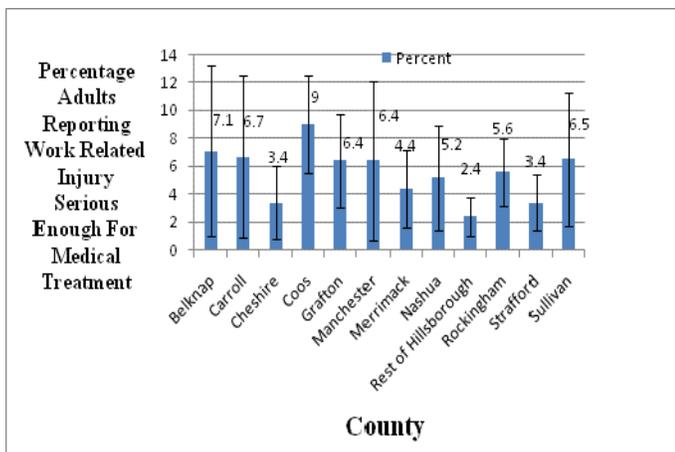


Fig. 2: Percent of adults reporting injury at work by County.

higher among males than females. Prevalence was lower among those with a college degree or more compared to those with less than a high school diploma; and those with incomes of \$50,000 or more compared to those with incomes of \$25,000 to less than \$50,000. Work-related injury was more prevalent among individuals between the ages of 25-34 years, 35-44 years, and 45-54 years (6.3%, 5.7%, and 5.1%, respectively).

A majority of workers with an injury were likely eligible for workers' compensation benefits. About half (54%) reported their treatment was paid all, or in part, by workers' compensation. The remaining injured workers reported their treatment was paid for by private or government insurance (25%) or by other means (21%). Due to the small number of respondents reporting on payment for treatment, the resulting estimates may be unstable.

Table 1: Percent of adults reporting they were injured at work in the past year seriously enough to require medical advice or treatment, 2008 NH BRFSS.

Characteristics	Percentage(%)	95% Confidence Interval
<b>New Hampshire Adults</b>	4.9	3.9 - 5.9
<b>Age</b>		
18 to 24	3.0	0.0 - 6.2
25 to 34	6.3	3.4 - 9.1
35 to 44	5.7	3.6 - 7.8
45 to 54	5.1	3.3 - 6.9
55 to 64	3.9	2.3 - 5.4
65 or older	3.8	1.6 - 6.0
<b>Education</b>		
Less than HS or GED	14.0	5.2 - 22.8
HS or GED	6.5	4.0 - 9.1
Some college or tech school	6.8	4.6 - 9.1
College grad (4 years or more)	2.3	1.4 - 3.2
<b>Income</b>		
Less than \$25,000	6.2	2.7 - 9.8
Less than \$50,000	7.8	5.1 - 10.4
\$50,000 or more	4.1	2.9 - 5.2
<b>Sex</b>		
Male	6.0	4.3 - 7.7
Females	3.8	2.9 - 4.7
<b>Marital status</b>		
Married	4.4	3.3 - 5.5
Other marital status	5.9	4.0 - 7.9

## **Discussion**

While respondents employed for wages are likely to be covered by the New Hampshire workers' compensation system, our study estimated that, only about half of those employed for wages and injured seriously enough to require medical treatment had some or all of their medical treatment paid for by workers' compensation. This represents a substantial financial burden falling on private and public insurers as well as on individual families paying for costs out of pocket.

The highest prevalence of injury was in the construction and warehouse industries. While this is not surprising given the nature of this work, future education and prevention programs may be of benefit in these areas. Workplace injury can be prevented if steps are taken to reduce hazards.

## **Study Limitations**

The results of our study are based on self-reported injury and may be subject to under- or over-reporting by respondents. For example, some respondents may not be aware that their injury was work-related (for example, back pain). Second, the questions did not ask about illnesses, only about injuries serious enough to require medical care. These issues likely resulted in an underestimate of workplace related health conditions. Third, the study was limited by small numbers of respondents employed for wages and reporting injury.

## **Recommendations**

Our findings provide insight into the burden of work place injuries in New Hampshire and the magnitude of under-reporting of workers' compensation claims. In the future, questions should be expanded to include work-related illness as well as injury and to estimate all injuries, not only those requiring medical treatment. Questions should also be asked over two or more years to increase the number of respondents available for analysis.

## **References:**

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## Appendix

Respondents reporting they were: employed for wages, self-employed, out of work for less than 1 year, a homemaker, a student, retired, or unable to work, were asked:

*“We would like to know if you have worked in the last year. During the past twelve months, have you been employed for any period of time, part time, full time or self-employed?”*

If the respondent answered either employed (for wages or self employed): they were asked follow – up questions regarding workplace injury. This study was based on the following follow-up questions:

*“What kind of business or industry do you work in?”*

**The options included:** Agriculture, fishing, hunting; Business and technical services; Construction; Education; Finance, Insurance, ; Real Estate; Food Service; Government (local, state, federal); Health care; Manufacturing; Other Service Industry; Transportation and warehousing; Utilities or mining; Wholesale or retail sales; Accommodations (hotel, motel).

*“During the past 12 months, that is since one year before today’s date, were you injured seriously enough while performing your job that you got medical advice or treatment?”*

If the response was yes then the respondents were asked about the method of payment for their treatment:

*“For your most recent work-related injury, who paid for your treatment?”*

The options were worker’s compensation paid all; worker’s compensation paid some but denied some; my health insurance; (Note: Can also be spouse’s or domestic partner’s insurance); Medicare or Medicaid; you or your family - out of pocket; your employer without a worker’s compensation claim; or who will pay is still in process or not resolved.

This project was supported by Cooperative Agreement Numbers 5U58DP122787 and 1U60OH009853 from the Centers for Disease Control and Prevention (CDC) and the National Institute for Occupational Safety and Health (NIOSH). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of CDC or NIOSH.