

## Indicator 8: Carpal Tunnel Syndrome Cases Identified in Workers' Compensation Systems

### Significance

Carpal tunnel syndrome may be caused by repetitive movements, placing hands or limbs in awkward positions or using equipment that vibrates. Symptoms include burning, tingling, and numbness in fingers and can lead to difficulty in gripping and holding objects. Work-related carpal tunnel syndrome can be prevented through the identification and control of occupational hazards and the implementation of safety procedures and regulations.

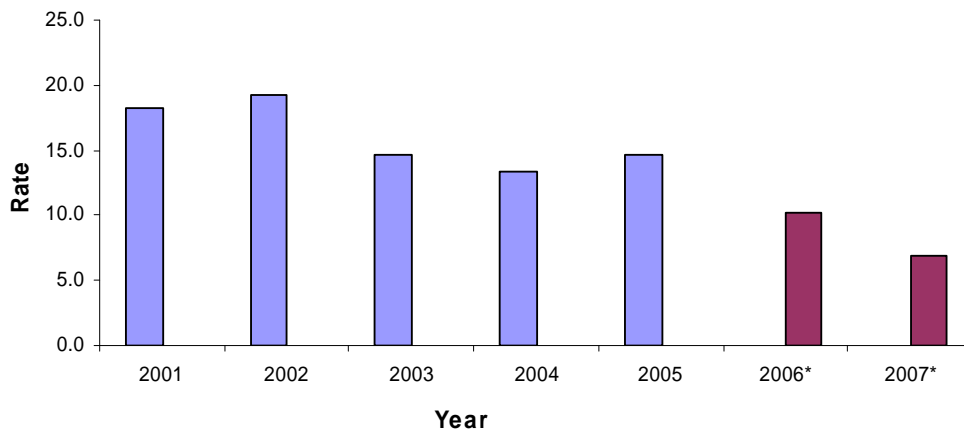
### Methods

The Colorado Department of Labor, Division of Workers' Compensation, reported the number of compensation claims filed for carpal tunnel syndrome from 2001 to 2007. In 2006, utilizing Council for State and Territorial Epidemiologists guidance, the case definition for carpal tunnel syndrome was changed to more accurately characterize carpal tunnel syndrome identified in the workers' compensation system. As a result, it is not possible to analyze trends in incidence of carpal tunnel syndrome cases filed from 2001-2007.

Cases of carpal tunnel syndrome were selected based on acceptance status in the workers' compensation system and resulting in 3 or more days of lost work time. Carpal tunnel syndrome claims were included regardless of employer size, claimant age or claimant state of residence. Federal employees and selected industries, as well as independent contractors, are exempt from filing under state workers' compensation laws and so are not included. Claims were selected based on the date of injury. Claims filed by employees of self-insured employers are included. Rates were calculated using, as the denominator, the numbers of workers covered by workers' compensation, provided by the National Academy of Social Insurance (NASI).

### Results

**Figure 8.1. Annual incidence rate of carpal tunnel syndrome cases filed with workers' compensation per 100,000 workers covered, Colorado, 2001-2007**



Source: Colorado Department of Labor, Division of Workers' Compensation (numerator)  
National Academy of Social Insurance (NASI) estimate of workers covered by workers' compensation (denominator)  
\* Carpal tunnel case definition modified in 2006 to follow Council for State and Territorial Epidemiologists guidance

**Table 8.1 Carpal Tunnel Syndrome Cases Filed with State Workers' Compensation  
Colorado, 2001-2007**

<b>Year</b>	<b>Number of carpal tunnel filed</b>	<b>Annual incidence rate of carpal tunnel filed per 100,000 workers covered</b>
<b>2001</b>	393	18.3
<b>2002</b>	404	19.2
<b>2003</b>	302	14.6
<b>2004</b>	279	13.3
<b>2005</b>	313	14.6
<b>Average 2001-2005</b>	338.2	16.0
<b>2006</b>	223	10.2
<b>2007</b>	155	6.9
<b>Average 2006-2007</b>	189	8.5

*Source: Colorado Department of Labor, Division of Workers' Compensation (numerator)*

*National Academy of Social Insurance (NASI) estimate of workers covered by workers' compensation (denominator)*

*\*\* Carpal tunnel case definition modified in 2006 to follow the Council for State and Territorial Epidemiologists guidance*

- From 2006-2007 in Colorado, an estimated 8.5 per 100,000 Colorado workers reported work-related carpal tunnel syndrome. (Table 8.1 and Figure 8.1)

#### **Data Sources**

- Colorado Department of Labor, Division of Workers' Compensation (numerator)
- National Academy of Social Insurance (NASI) estimate of workers covered by workers' compensation (denominator)

#### **Limitations**

- It is not possible to determine trends in reported cases of carpal tunnel syndrome from 2001-2007 because the case definition used to calculate cases of carpal tunnel syndrome in Colorado's workers' compensation system was modified in 2006.
- The number of claims filed to workers' compensation may be underestimated because not all individuals with work-related injuries and illnesses file for workers' compensation.
- The number of claims filed to workers' compensation may be underestimated due to the fact that the treating physician may or may not recognize the condition as work-related.
- Those workers who are self-employed (farmers, independent contractors), who work in small businesses or who are federal employees may not be covered by state workers' compensation insurers and therefore are not included in these estimates.
- Differences in eligibility criteria and availability of data on workers' compensation programs in various states limit these data from being compared with other states or with overall US data.

#### **Recommendations**

- Report the incidence of carpal tunnel syndrome by industry, occupation, age, gender, race/ethnicity and other characteristics.
- Identify factors that contribute to carpal tunnel syndrome to target prevention efforts.
- Educate primary care physicians and workers on the relationship between work-place exposure and risks and the development of carpal tunnel syndrome.