



Objective

This study examined trends in serious work-related injury in British Columbia (BC) from 1997 to 2007.

Methods

Workers with a serious injury claim were identified from workers' compensation data for 1997 to 2007. Serious injuries were defined by a set of 275 ICD-9 diagnosis codes related to long return-to-work times and high claim costs.

Workforce estimates from Statistics Canada's Labour Force Survey were used to calculate rates of serious injury for each year by age, gender and occupation and were analyzed by groups of ICD-9 codes and accident type.

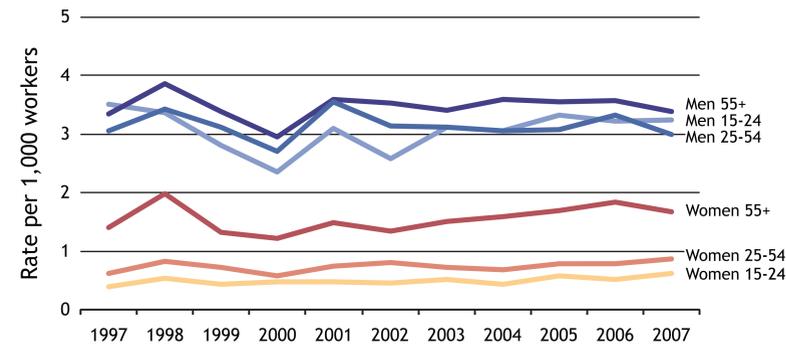
Results

98,950 claims were identified, an average of 4,712 claims per year. The serious injury rate was relatively constant between 1997 and 2007, ranging from 1.8 to 2.4 cases per 1,000 workers. The rate for men ranged from 2.8 to 3.7 per 1,000, while for women the rate was never more than 1.0 per 1,000. Rates for younger and older men were similar. Older women had a higher average rate (1.6 per 1,000) than younger women (0.5 per 1,000). Fractures are the most common serious injury.

Occupation

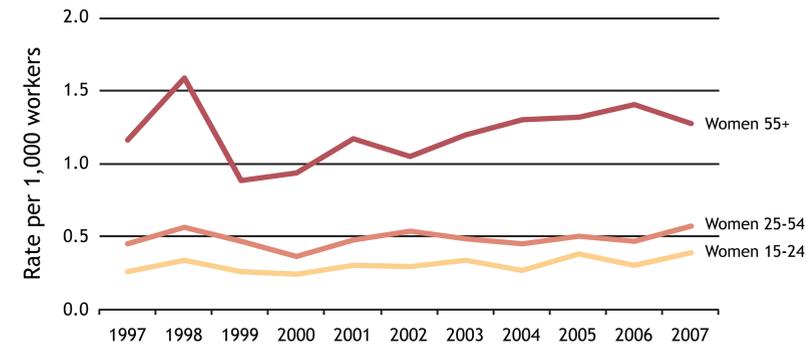
In 2007 the serious injury rate for men was highest in occupations related to trades and transport (6.9 per 1,000); resource-based occupations (e.g. mining, forestry, oil/gas; 5.3 per 1,000); and processing, manufacturing and utilities (8.2 per 1,000). For women the rate was highest in trades and transport (4.4 per 1,000); and processing, manufacturing and utilities (3.2 per 1,000).

Serious Injury Rate by Age and Sex 1997-2007



The serious injury rate has been stable over time. Rates for older and younger men are quite similar; whereas, rates for older women are noticeably higher than for younger women.

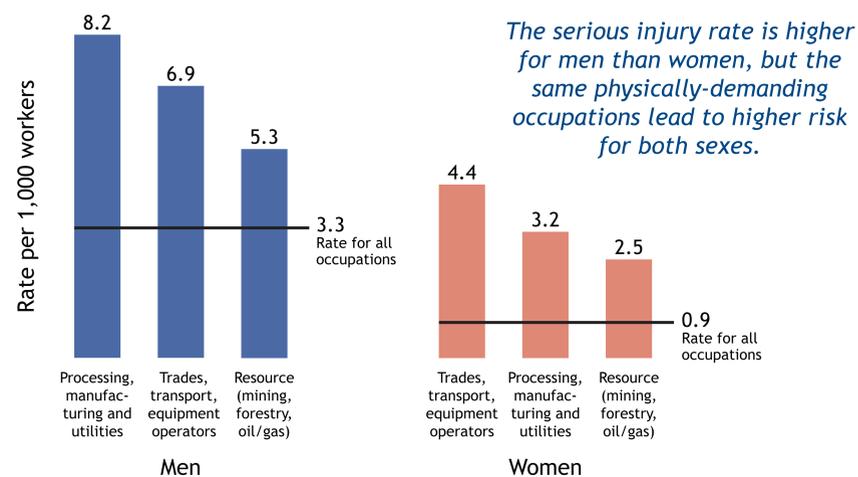
Fracture Rate in Women by Age 1997-2007



Fractures represent over 60% of all serious injuries. For women 55+ they represent 75% of all serious injuries; whereas, for men 55+ they represent only half of all serious injuries.

Serious Injury Rate by Sex and Occupation 2007

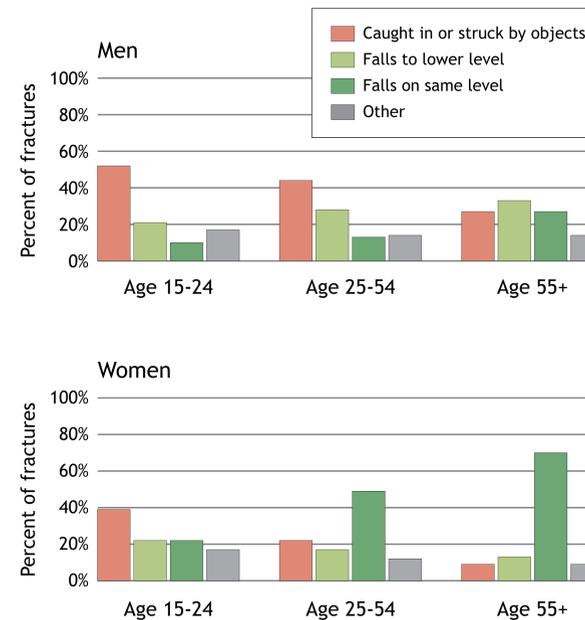
Rates are shown only for the three occupations with the highest rates



The serious injury rate is higher for men than women, but the same physically-demanding occupations lead to higher risk for both sexes.

The burden of injury in these high-risk occupations is much greater for men, because many more men work in these industries. For women, nearly 40% of all serious injuries occur in sales and service occupations.

Fractures by Age, Sex, and Accident Type 2007



As workers age, injuries from being caught in or struck by objects become less likely and injuries from falls become more likely.

This is particularly true for women, for whom injuries tend to result from falls on the same level.

Fractures

The majority of claims (60% of the overall serious injury rate) were for fracture of the upper or lower extremity. Fracture rates for younger and older men were similar. Older women had a higher rate (1.3 per 1,000) than younger women (0.3 per 1,000).

Falls to the same level accounted for 70% of fractures in older women. For younger women, only 22% of fractures were due to falls to the same level. Fractures due to contact with objects occurred more frequently in younger women (39%) versus older women (9%).

For women, 40% of fractures occurred in sales and service occupations. Fractures in physically demanding occupations occurred more frequently in younger (39%) versus older (13%) women. For men, the majority of fractures occurred in physically demanding occupations (83%), and these were similarly distributed among older versus younger men.

Conclusions

Overall work-related injury rates have declined in BC over the past decade, but the serious injury rate has remained stable. Rates are highest in physically demanding occupations and for men, and are higher for older women relative to younger women.

There is need for increased prevention in high-risk industries and for better understanding of the underlying nature and cause of injury, particularly for older women with fractures. Future work by the authors will incorporate additional measures of injury severity, including claim-cost and duration measures.

Acknowledgments

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