

# EMERGENCY DEPARTMENT VISITS FOR COLD - RELATED INJURIES AMONG HOMELESS ADULTS: A 5 - YEAR COHORT STUDY IN TORONTO, CANADA

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*This study was conducted to inform cold-weather planning from a health perspective.*

## Methods

1189 homeless men and women with universal healthcare insurance in Toronto, Canada, were recruited. The study population's health care utilization was ascertained over a **5-year** follow-up period (2005-9) using comprehensive databases. An age- and sex-matched control group of persons living in low income neighborhoods of Toronto was selected via their postal code of residence.

Cold-related visits to any Emergency Department (ED) in Ontario were identified if the diagnosis was attached to an ICD-10 code associated with cold exposure. ED visit rates were compared using Poisson means.

## Results

	Homeless	Controls
Males		
Number of ED visits	15	0
ED visit rate*	6.7	0
95% CI	4.2-12.4	0.0-1.8
Females		
Number of ED visits	1	0
ED visit rate*	0.9	0
95% CI	0.03-5.6	0.0-3.7

*ED visit rates for cold-related injuries.*

*\* Rate per 1,000 person years of observation*

ED visit rates were:

- Significantly higher among homeless men compared to low-income men ( $p < 0.001$ )
- Significantly higher among homeless men compared to homeless women ( $p = 0.03$ )
- Not significantly different among homeless women compared to non-homeless women ( $p = 1.0$ )

## Conclusions

- In Toronto, the absolute rate of ED visits for cold-related injuries among homeless persons was low.
- The majority of ED visits for cold-related injuries were related to frostbite.
- Homeless men have the greatest risk of cold-related injuries, and interventions should focus on this group.

## Possible Actions

- Improve understanding of potential barriers to shelter usage and consider opportunities to improve access (e.g. "open door" policies)
- Intervene early for those who are seen repeatedly for cold-related injuries with holistic interventions (i.e. a targeted intervention team at hospital EDs)
- Educate homeless persons and providers on the risks of substance use and how to recognize adverse effects during cold weather.
- Utilize street teams to increase outreach and opportunities to seek shelter.