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

<table>
<thead>
<tr>
<th></th>
<th>Homeless</th>
<th>Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td></td>
</tr>
<tr>
<td>Number of ED visits</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>ED visit rate*</td>
<td>6.7</td>
<td>0</td>
</tr>
<tr>
<td>95% CI</td>
<td>4.2-12.4</td>
<td>0.0-1.8</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td></td>
</tr>
<tr>
<td>Number of ED visits</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>ED visit rate*</td>
<td>0.9</td>
<td>0</td>
</tr>
<tr>
<td>95% CI</td>
<td>0.03-5.6</td>
<td>0.0-3.7</td>
</tr>
</tbody>
</table>

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.

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