Heat related mortality in Estonia

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Background

- Climate Change
- Demographic transition
- Urbanisation
Outline

• Susceptible groups

• Why?

• When?

• Heat related mortality in Estonia
Susceptible groups

- Elderly
- Medical condition
- Women
- Children
- Socio-economy
Elderly

- Both medical and social factors
- Physiological impairments
- Dementia
- Widowed
- Increased dependency
Pre-existing medical conditions

- Cardiovascular disease
- Respiratory disease
- Psychiatric disease
- COPD
When

• Immediate effect

• Duration of heat wave

• When heat wave occurs

• Intensity
Heat related mortality in Estonia

<table>
<thead>
<tr>
<th></th>
<th>COASTAL</th>
<th>INLAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (SD)</td>
<td>10.2 (9.66)</td>
<td>10.0 (10.4)</td>
</tr>
<tr>
<td>Min</td>
<td>-20.4</td>
<td>-25.3</td>
</tr>
<tr>
<td>Max</td>
<td>32.4</td>
<td>34.3</td>
</tr>
<tr>
<td>95th %-ile</td>
<td>25.1</td>
<td>27.3</td>
</tr>
<tr>
<td>Heat Wave days</td>
<td>191</td>
<td>200</td>
</tr>
<tr>
<td>98th %-ile</td>
<td>25.7</td>
<td>27.9</td>
</tr>
<tr>
<td>Heat Wave days</td>
<td>66</td>
<td>65</td>
</tr>
</tbody>
</table>
Heat related mortality in Estonia
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Response curve at lag 0 Coastal

Response curve at lag 0 Inland
Heat related mortality in Estonia
Heat related mortality in Estonia

• When investigating the relative risks of mortality during heat waves we report similar relative risks before and after the heat wave of 2010.

<table>
<thead>
<tr>
<th></th>
<th>Coastal Region (RR and 95% CI)</th>
<th>Inland Region (RR and 95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>95th percentile</td>
<td>98th percentile</td>
</tr>
<tr>
<td>1997 – 2013</td>
<td>1.11 (1.07-1.15)</td>
<td>1.11 (1.05-1.18)</td>
</tr>
<tr>
<td>1997 - 2009</td>
<td>1.12 (1.08-1.17)</td>
<td>1.11 (1.04-1.18)</td>
</tr>
<tr>
<td>2011 - 2013</td>
<td>1.09 (1.00-1.19)</td>
<td>1.10 (0.94-1.28)</td>
</tr>
</tbody>
</table>
Human factor

• Others ...
• ... but not me!
• Communication and information very important
• Design of information