Ladders: A Weapon of Mass Destruction?

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ROYAL ADELAIDE HOSPITAL
Ladders

- Young fit people with isolated orthopaedic injuries?
- Darwinian selection for ethnic elderly males, climb the ladder, reach for the olive!
Study details

- Retrospective case review RAH Trauma Service
- July 2000-December 2003
- Fall from ladder, scaffold, building, tree
- 282 patients fulfilled criteria
Figure 1: Presentations due to falls from heights as a percentage of the overall trauma presentations.
Table 1: Population demographics of injured patients

<table>
<thead>
<tr>
<th>Gender</th>
<th>Count</th>
<th>Injured Count</th>
<th>Injured Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>115</td>
<td>141</td>
<td>256 (91.0%)</td>
</tr>
<tr>
<td>Female</td>
<td>5</td>
<td>21</td>
<td>26 (9.0%)</td>
</tr>
</tbody>
</table>
Table 2: Mechanism of falls at work and home

<table>
<thead>
<tr>
<th>Fall from</th>
<th>Work</th>
<th>home</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree</td>
<td>7</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>Building</td>
<td>74</td>
<td>70</td>
<td>144</td>
</tr>
<tr>
<td>Ladder</td>
<td>30</td>
<td>79</td>
<td>109</td>
</tr>
<tr>
<td>Scaffold</td>
<td>9</td>
<td>4</td>
<td>13</td>
</tr>
</tbody>
</table>
Spectrum of injuries

- Six major intra-abdominal injuries sustained by patients at home
- 4 spleen required surgery
- 1 bladder rupture
- 1 liver laceration both managed conservatively
Hospital stay

- 197 patients (70%) were admitted >24 hours
- Median 3 days
- LOS increased with age and ISS
The Impact of Drugs (Other than Alcohol) on Road Crashes, Assaults and Other Trauma

A Prospective Trauma Toxicology Study

Awaiting release of final report
Death rate

- Home 4.6/100 patients injured
- Work 4.2/100 patients injured
- Deaths from home injuries had median age 20yrs > than working group
Table 5: Distribution of deaths by mechanism and group

<table>
<thead>
<tr>
<th>Place</th>
<th>Number of deaths (% of total injured)</th>
<th>Median age in years (range)</th>
<th>Median ISS (range)</th>
<th>Fall from: n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tree</td>
</tr>
<tr>
<td>Work</td>
<td>5 (4.2)</td>
<td>53 (44 – 74)</td>
<td>25 (25 – 54)</td>
<td>1 (20.0)</td>
</tr>
<tr>
<td>Home</td>
<td>8 (4.9)</td>
<td>73 (49 – 86)</td>
<td>26 (16 – 54)</td>
<td>1 (12.5)</td>
</tr>
<tr>
<td>All</td>
<td>13 (4.6)</td>
<td>62 (44 – 86)</td>
<td>26 (16 – 54)</td>
<td>2 (15.3)</td>
</tr>
</tbody>
</table>
Conclusions

- What are the accidents due to?
- Ladder
- Improper use
- Lack of safety devices/supervision
- Weather
- Pre-existing medical condition
- ETOH/drugs
solutions

- Hospital posters, televisions
- Media awareness campaign
  - tv, local/state newspaper
- Pamphlets, hospital, GP, hardware store
- Council, services, help for elderly
- Attorney General, ie baby bath seat
Further research

- Traumatox out soon
- Prospective study with questionnaire to patient
- Identify specific variables to target
- Remember your age and don’t see yourself as Superman!
The only conference you need to attend in 2006

TRAUMA

2006

28 September to 1 October 2006
GOLD COAST QUEENSLAND AUSTRALIA

2nd Combined Australasian Trauma Society (ATS) and Early Management of Severe Trauma (EMST) Conference
<table>
<thead>
<tr>
<th>No of injuries</th>
<th>Work</th>
<th>Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minors</td>
<td>13</td>
<td>19</td>
</tr>
<tr>
<td>1</td>
<td>53</td>
<td>64</td>
</tr>
<tr>
<td>2</td>
<td>34</td>
<td>62</td>
</tr>
<tr>
<td>3</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
Overview

• Ladders are bad
• People die falling off ladders
• These are preventable deaths
• These are elderly
• We can do something about this
• We need to understand more about this
Why do it?

- Apparent increase in numbers
- Apparent increase in elderly injured/dying
- Hospital stay length
- Use of blood products
- Can we do something to prevent?
Why do it?

- Backyard Blitz, Rennovate or Detonate
- Better Homes and Gardens
- Bushfires, leaves in gutters
- DIY