Prevention and first aid for child thermal injuries – what is new, what is possible?

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- Under 10 years burns are a major cause of death
- 5th most common cause of non-fatal childhood injuries
- Stigma, disability, rejection
- Substantial inequalities with steep social gradient
- Children disproportionately affected - vulnerability, sensitivity
- Evidence from systematic reviews & meta-analyses
- HIC interventions yet to be widely applied elsewhere
**TABLE 1.2**

Unintentional injury death rates per 100,000 children\(^a\) by cause and country income level, World, 2004

<table>
<thead>
<tr>
<th></th>
<th>UNINTENTIONAL INJURIES</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Other(^b)</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Road traffic</td>
<td>Drowning</td>
<td>Fire burns</td>
<td>Falls</td>
<td>Poisons</td>
<td></td>
<td>TOTAL</td>
</tr>
<tr>
<td>HIC</td>
<td>7.0</td>
<td>1.2</td>
<td>0.4</td>
<td>0.4</td>
<td>0.5</td>
<td>2.6</td>
<td>12.2</td>
</tr>
<tr>
<td>LMIC</td>
<td>11.1</td>
<td>7.8</td>
<td>4.3</td>
<td>2.1</td>
<td>2.0</td>
<td>14.4</td>
<td>41.7</td>
</tr>
<tr>
<td>World</td>
<td>10.7</td>
<td>7.2</td>
<td>3.9</td>
<td>1.9</td>
<td>1.8</td>
<td>13.3</td>
<td>38.8</td>
</tr>
</tbody>
</table>
Injuries and child development - the susceptibility of the child

- Not just small adults
- Anatomical and physical characteristics
- Physical abilities - gross and fine motor skills
- Curious
- Cognitive abilities
- Speech and language development
- Social and emotional development
- Risk behaviours
Unintentional injury deaths, under 5s
England and Wales, 1979 - 2012

Number of deaths

Year

Distribution of scalds by age group

Scalds by Age Group

% of Burns  % of Population

Under 5: 53%
5 to 9: 6%
10 to 14: 6%
15 to 24: 7%
25 to 34: 4%
35 to 44: 15%
45 to 54: 6%
55 to 64: 8%
65 to 74: 14%
75 to 84: 2%
85+: 1%

iBID, UK
Keeping Children Safe is.....

- a 5 year NIHR Programme Grant for Applied Research
- a series of 17 interlinked studies
- 6 linked research questions
- being conducted in four research centres in England:
  - Nottingham, Bristol, Norwich and Newcastle.

Studies included:
Systematic reviews, meta-analyses, 3 case-control studies, surveys and interviews with parents, surveys and interviews with children’s centre staff, IPB developed, randomised controlled trial
Keeping Children Safe at Home case-control study

**Aim:** to examine the relationship between modifiable risk factors and scald injuries in young children.

**Main findings:**
- Hot drinks can scald young children up to 15 minutes after they have been made
- Keep kettles/saucepans out of reach/back of work surface
- Safety gates at kitchen door reduced incidence of scald
- Supervision of babies/young children when running a bath
- Never pass hot dishes/drinks over child’s head.
Children’s Burns Research Centre

**Mission:** to develop a UK research centre of world-leading excellence

**Who are we:** a consortium of 4 universities and a health trust

**Funding:** The Healing Foundation charity for five years with support from the Welsh Assembly (Government)

**Research themes:**

- clinical management
- psychosocial adjustment & rehabilitation
- prevention

http://www.bristol.ac.uk/social-community-medicine/childrens-burns/
First-aid evidence

1. **COOL** for 20 minutes under running water

2. **CALL** for help – 111, 999, or local GP for advice

3. **COVER** with cling film or clean non-fluffy cloth

BBA First Aid Position Statement 2014.
Burn First Aid

If your child or someone you know is burned, take the following action:

Remove clothing and jewellery
- Immediately remove clothing and jewellery from the burnt area.
- Clothing can hold heat on the burnt area. If swelling occurs, jewellery can block blood flow to the burnt area.

Cool with running water
- Apply cold running water for 20 minutes.
- Keep the rest of the patient warm to prevent hypothermia.

Cover and protect the burnt area
- Use clingwrap or a clean cloth to wrap the burnt area.
- Do NOT use ice, oil, creams or other substances.

Seek medical attention
- Seek medical attention for all burns to children or the elderly or for adult burns larger than a 50 cent coin.

What to do if your child is burned

Do not use ice

For further information
www.coolburns.com.au

Burn First Aid and Injury Prevention

Queensland Government

Centre for Children’s Burns & Trauma Research

Queensland Children’s Medical Research Institute

Tomorrow’s Queensland: strong, green, smart, healthy and fair
Structured process of combining evidence with practical service delivery

The Injury Prevention Briefing (IPB)

Injury Prevention Briefing

Preventing unintentional injuries to the under fives: a guide for practitioners

Mike Hayes
Child Accident Prevention Trust

Denise Kendrick
University of Nebraska

Tally Desve
University of the West of England Bristol

keeping children SAFE AT HOME
Development of the IPB

- **Workshops** with practitioners in four cities in England
- **Research results**
  - Interviews with children’s centre staff
  - Three multicentre case-control studies. Data collection in seven English cities
  - Decision modelling and cost effectiveness studies
  - Literature reviews
Strengths of method

• Research based, focuses on effective interventions
• Developed through collaboration with potential users
• Target audiences – range of practitioners providing support for families
• pdf version available free at http://tiny.cc/kcspage
Barriers to child injury prevention

Nationally/internationally

- **Advocacy**: not seen as important/lack of engagement
- **Epidemiology and research**: lack of accurate data; specific to individual contexts hampering adaptation to other settings
- **Policy**: even if legislation in place, enforcement lacking

Parents/in practice

- **Awareness**: lack of knowledge about hazards
- **Finance/resources**: personal, organisational, safety schemes
- **Supervision**: constant supervision cited but not possible
Possible interventions – difficult to embed into practice?

- Education
- Enforcement
- Engineering
Preventable injury?

How to get the message out there?
Small changes.....

• Think big, act small
• Cross organisational working
• Three levels of intervening:
Small changes…..

• Think big, act small
• Cross organisational working
• Three levels of intervening:
  – Local participation
  – Legislation (evidence needed!)
  – Education and training
• Determination
• We have to believe we will succeed.
Thank you. Any questions?

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