

Taking pressure off A&E by investing in the prevention of unintentional injuries to under 5s

# action on accidents

to relieve pressure on **A&E**

## Summary

The Royal Society for the Prevention of Accidents (RoSPA) and the Royal College of Emergency Medicine (RCEM) are calling for a £20million per year nationwide programme to reduce unintentional (accidental) injuries to under-5s. Such a programme would be effective in reducing harm to our children, would save cost and would take pressure off hospital Emergency Departments (A&E).

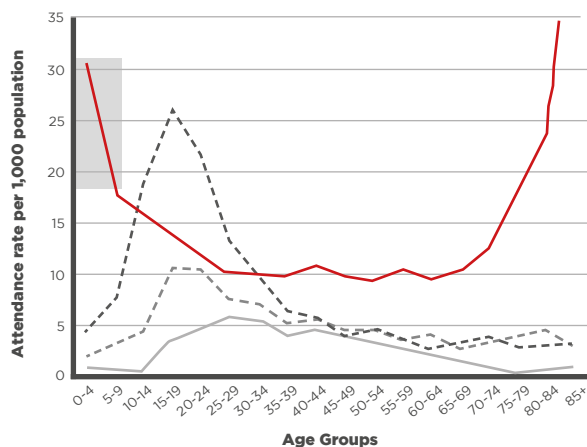
## What's the problem?

A&E departments treat a disproportionate number of unintentional injuries within three age groups: under-5s, 15-24s and the over 70s (see graph).

### Unintentional injury rates from Oxford University Hospitals NHS Trust Emergency Departments (A&E) John Radcliffe and Horton General

1<sup>st</sup> Jan 2012 - 31<sup>st</sup> Dec 2012

Home —  
Leisure - - -  
Road - - -  
Work —



Of these, **injury prevention programmes aimed at the under-5s in the home** offer the best opportunity to reduce harm, A&E attendances and hospital admissions because:

#### • Data

Based on recent RCEM/Queen Mary University of London (QMUL) data from Oxfordshire<sup>1</sup>, unintentional injury in the under-5s accounts for 7%<sup>2</sup> of A&E attendances. Of these incidents, 18% were in the more severe triage codes signifying at least a threat to life or limb and/or severe pain. These would have required far more resources to treat than most A&E attendances. Approximately 10% of all A&E attendances result in an overnight hospital admission.

#### • Receptiveness

Parents of 7 to 12 month old children 'begin to worry about safety in the home' and need information, advice, education and reassurance<sup>3</sup>. They are receptive to key messages and pass on the knowledge gained to friends and family. This can be part of life-long learning.

#### • Disability

Preventing harm to our children at the beginning of life prevents injuries that would otherwise cause life-long impairment<sup>4</sup>. Very young children are particularly prone to falling and to suffering head injuries, with severe consequences.

#### • Impact

Injury prevention programmes which combine education for parents and professionals as well as some safety equipment for the most vulnerable families, are effective and inexpensive to deliver and have been shown to achieve a 29% reduction in hospital admissions<sup>5</sup>.

#### • Cost of treatment

The Department of Health reference costs for NHS treatment in 2013-14 give the average cost of an A&E attendance as £124 and a non-elective inpatient short stay as £1,542. The 'Cost to society' (which is calculated using TRL's methodology) is far higher. Based on these figures, the annual costs of emergency hospital treatment for under-5s in England are:

All (tier 1, 2 & 3) hospital Emergency Departments	NHS cost of treatment using DoH Reference Costs <sup>6</sup> for 2013/14	Cost to society using TRL PPR483 <sup>7</sup>
		<b>£140 million<sup>8</sup></b>



The Royal College of Emergency Medicine

**ROSPA**  
The Royal Society for the Prevention of Accidents

## Location, causation and types of injuries to under-5s

- 72% of unintentional injuries to under-5s occur in the home with another 9% in leisure (including gardens and playgrounds).
- 49% of total injuries are caused by falls from less than 1m. Head injuries are both the most common (30% of total injuries)

and the most serious injuries, often requiring admission to hospital. These falls cause relatively few limb fractures.

- 1-2 year olds account for just over half (51.8%) of all the unintentional injuries within the under-5 age group.

- Under-5s also suffer life-changing injuries from scalds, burns, asphyxiation and poisoning. Just over 5% sustain fractures to the skull, shoulders, arms, wrists, legs, ankles and feet.

## What's the solution?

RoSPA's experience of nearly a century of injury prevention and the successful implementation of the Safe At Home Scheme (2008-2011), show that a combination of education, information and some safety equipment, targeted at the most vulnerable families in areas with the highest injury rates, can produce outstanding results (52% reduction in hospital admission in the under-5s in Liverpool, at peak). A nationwide network of such partners as local authorities, housing associations and the Fire and Rescue Service showed what could be achieved.

The ideal intervention involves a home visit by a RoSPA-trained safety educator, explaining the individual hazards which each family faces, and arranging the fitting of safety equipment (e.g. stairgates, fireguards) in some cases. We see these people as 'buddies' to health visitors supporting safety (the most likely cause of harm) while the health visitor focuses on child health. In Birmingham, RoSPA is currently demonstrating a low-cost, volunteer-based model - LifeForce - in which local champions are trained to help keep their communities safe in this way.

To be effective, we need a sustained national programme which builds on this experience and delivers year-on-year improvements in the way we educate and inform parents on accident prevention, empowering them to take responsibility

for themselves and their loved ones. They need to understand that accidents don't have to happen and their capacity to avoid unintentional injury is significant.

RoSPA calculates that an annual £20million programme would address this problem at sufficient scale to make a huge difference to our children and to the NHS in England. Here are the key metrics:

- A 30% reduction in emergency treatment for under-5s would reduce the overall burden on A&E by approximately 2%<sup>9</sup> (165,000 attendances and 14,600 admissions) - a very good place to start - before we turn our attention to the other peaks in the graph. This is a realistic aspiration.
- The break-even point for this programme, measured in costs to the NHS, would be a 15% reduction in emergency treatment for the under-5s<sup>10</sup>.
- The break-even point for this programme, measured in costs to the state (including long-term care, rehabilitation and disability benefits) is estimated to be a 5-10% reduction in accidents for the under-5s.
- The break-even point for this programme, measured in 'Cost to society', would be a 0.5% reduction in accidents for the under-5s.

## There is simply no better way to achieve such a measurable impact on our children, our NHS and our society, with this scale of resources.

### Contacts

**RoSPA** Errol Taylor, Deputy CEO,  
etaylor@rospa.com

**RCEM** Gordon Miles, CEO,  
Gordon.Miles@rcem.ac.uk

### Acknowledgments:

This factsheet has been written thanks to the work of Dr Tom Hughes and his colleagues at the John Radcliffe and Horton General Hospitals, Oxfordshire, Graham Kirkwood and Professor Allyson Pollock of the Global Public Health Unit at Queen Mary, University of London, Dr Simon Howes at the Royal College of Emergency Medicine and Errol Taylor at The Royal Society for the Prevention of Accidents.

**1** Data is available from the Oxford University Hospitals NHS Foundation Trust which received 78% of all Oxfordshire hospitals A&E attendances in 2013/14.

**2** 2,255 or 6.7% of Oxfordshire's A&E attendances in 2012/13 were by under 5s requiring hospital treatment for an unintentional injury.

**3** Department of Health research "Parents' views on the maternity journey and early parenthood"

**4** Preventing injuries to under 5s offers the best potential in terms of reducing premature mortality and morbidity measured by Preventable Years of Life Lost (PrYLLs) and Disability Adjusted Life Years (DALYs)

**5** E.g. the Safe At Home programme, described in RoSPA's Big Book of Accident Prevention <http://www.rospa.com/RoSPAWeb/docs/public-health/big-book/index.html>

**6** [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/380322/01\\_Final\\_2013-14\\_Reference\\_Costs\\_publication\\_v2.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/380322/01_Final_2013-14_Reference_Costs_publication_v2.pdf)

**7** See table 11 of the TRL (Transport and Road Laboratory) report "PPR483, Re-valuation of Home Accidents". TRL's calculation for the Cost to Society includes financial estimates for lost output, medical & support costs and the value society places on the avoidances of injury. Serious injuries are assumed to require a hospital admission and are valued by TRL at £33,200. Less serious injuries are assumed to be treated in A&E are valued by TRL at £10,600.

**8** There is a total of 244 hospital Emergency Departments (181 tier 1 and 63 tier 2 & 3). Given that in Oxfordshire there were 2,255 A&E attendances costing £124 and approximately 200 hospital admissions costing £1,542,

extrapolation gives a national estimate of £140million.

**9** Multiplying Oxfordshire's 2,255 A&E attendances and approximately 200 hospital admissions by 244 hospital Emergency Departments, gives a national estimate of 550,000 A&E attendances and 48,800 hospital admissions for under 5 year olds requiring treatment for an unintentional injury. A 30% reduction equates to 165,000 fewer A&E attendances and 14,600 fewer hospital admissions. 550,000 is 2.2% of the total of 24.5million A&E attendances across all of the UK's hospital Emergency Departments in 2012/13.

**10** 15% of the £140million estimated cost to the NHS is £21million.

