
Injury Prevention Briefing

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

Mike Hayes

Child Accident Prevention Trust

Denise Kendrick

University of Nottingham

Toity Deave

University of the West of England Bristol



June 2014

The *Keeping Children Safe at Home* project

The *Keeping Children Safe at Home* (KCS) project was a major research programme designed to investigate several aspects of the prevention of unintentional injuries in the home to pre-school children. It was led by Professor Denise Kendrick, University of Nottingham. It involved research teams at Newcastle University, University of the West of England Bristol, Norfolk and Norwich University Hospitals NHS Foundation Trust, Nottinghamshire Healthcare NHS Trust, Child Accident Prevention Trust and University of Leicester.

The programme:

- was a 5 year programme (running from 2009 to 2014).
- was funded by the National Institute for Health Research (part of the NHS).
- involved local parents to help design the study.
- was reviewed and approved by local Research Ethics Committees and Research and Development Departments.

Further information about the programme can be found at <http://www.nottingham.ac.uk/research/groups/injuryresearch/projects/kcs/index.aspx>

Electronic version

A pdf version of this document is freely available at <http://www.nottingham.ac.uk/research/groups/injuryresearch/projects/kcs/index.aspx>. This version contains navigation tools that allow the user to move easily through the document.

Acknowledgements

This Injury Prevention Briefing has been made possible through the contributions of many people, in particular the following members of the *Keeping Children Safe at Home* research team:

Joanne Ablewhite, Penny Benford (University of Nottingham)

Trudy Goodenough, Elizabeth Towner (University of the West of England, Bristol)

Richard Reading, Gosia Majsak-Newman, Lisa McDaid (Norfolk and Norwich University Hospitals NHS Foundation Trust)

Elaine McColl (Newcastle University), Adrian Hawkins, Paul Hindmarch (Newcastle upon Tyne Hospitals NHS Foundation Trust)

And the staff at numerous children's centres who participated in workshops that helped with its development.

Disclaimer

This guide presents independent research funded by the National Institute for Health Research (NIHR) under its Programme Grants for Applied Research Programme (Reference Number RP-PG-0407-10231). The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health.

Contents

SECTION A: INTRODUCTION

Outline of the Injury Prevention Briefing
Aim and target audience of the Injury Prevention Briefing
How we prepared this briefing
Cross-cutting issues
Making the case for action.....
Evaluation methods
Creative ways of reaching target audiences
How does the promotion of childhood injury prevention fit into the policy framework for children’s health and well-being?
The principles of and approaches to prevention
Partners in prevention
Parenting challenges.....
Prevention activities.....
Using the IPB for other purposes, e.g. staff training

SECTION B: ACTIVITIES TO HELP PARENTS

General lessons from <i>Keeping Children Safe at Home</i> research.....
General activities
Activities for specific injuries.....
CROSS-CUTTING ACTIVITIES
Activity 1 – Exploring child development.....
Activity 2 – What is appealing to children but may harm them?
Activity 3 – Checking home safety
Activity 4 – Where are your harmful products?
Activity 5 – Designing an unsafe kitchen
Activity 6 – Home safety equipment – what do families need?
FALLS PREVENTION ACTIVITY
Activity 7 – Preventing falls – more than just using safety gates!
SCALD PREVENTION ACTIVITIES
Activity 8 – How far does a hot drink spread?
Activity 9 – How long does a hot drink stay hot?
FIRE SAFETY ACTIVITIES
Activity 10 – The importance of smoke alarms
Activity 11 – A family fire escape plan

SECTION C: BACKGROUND INFORMATION

POISONINGS
FALLS.....
SCALDS.....
FIRE-RELATED INJURIES.....
PLANNING, IMPLEMENTING AND EVALUATING ACTIVITIES
THE PRINCIPLES OF AND APPROACHES TO PREVENTION
21 SOURCES OF SPECIALIST ADVICE AND INFORMATION

Section A: INTRODUCTION

Accidents and injuries – predictable and preventable

A few words of explanation

In this Injury Prevention Briefing (IPB), we use the terms *accidents* and *unintentional injuries* (or just *injuries*). These can be controversial so a few words of explanation may help.

Accident is the generic term we use to describe an event that is unintended and that may or may not lead to *injuries*. Such events may be falls, poisonings, strangulations, etc.

Injuries or *unintentional injuries* are the consequences of *accidents*, although not all *accidents* result in *injuries*.

Intentional injuries, the consequences of child abuse, bullying, fights between children, etc, are outside the scope of this resource.

It is important to remember that *accidents* are **predictable** events and are frequently **preventable**. If they do occur the *injuries* can be avoided or reduced in severity.

They are **predictable** because we know who is most likely to have an *accident*, and why, where and when they are most likely to happen.

The fact that *accidents* are preventable is what we need to get across to families, dispelling the myth that they just happen and there is nothing we can do about them.

Outline of the Injury Prevention Briefing

This guide is aimed at people who have the opportunity to help families keep their pre-school children as safe at home as is practical. The target audiences are managers and practitioners of organisations such as children's centres, health visiting teams, family support agencies and fire and rescue services.

Although its focus is on four specific types of accidents, it contains information that is widely relevant, including the factors that place some children at greater risk than others, to help workers target their efforts as accurately as possible.

The IPB is divided into three sections:

- **Section A.** An introduction that presents information about the general aspects of children's accidents and injuries.
- **Section B.** A series of activities that can be run to help parents and carers gain an understanding of:
 - cross-cutting topics - the links between accidents and child development, things that may appeal to babies and young children but may be harmful, and the broader aspects of home safety and safety products.

Some of these prevention activities can be used for more than one type of accident and injury so they have been included in this section rather than in the specific injury-related sections.

- injury topic-related issues - reducing poisonings, falls, scalds and fire-related injuries.

- **Section C.** Supporting information about these four injuries. This section also contains a short checklist to help practitioners plan, implement and evaluate activities; advice on where to find specialist advice and resources – websites, organisations, etc; and a commentary on the principles of and approaches to prevention, expanding on the text in this chapter.

The aim of the prevention activities is to help parents think about safety rather than simply give them the answers.

While providing a list of dos and don'ts may be quick and easy, encouraging parents to think about the way their children behave and the safety consequences is likely to have a more sustained effect.

The activities are adaptable, capable of being used in different formats (e.g. as practical demonstrations, displays, quizzes, etc), in different locations (children's centre, the family home, at events, etc), and with groups or individuals.

Aim and target audience of the Injury Prevention Briefing

This Injury Prevention Briefing (IPB) provides information about the importance of home injuries to pre-school children and how these injuries can be prevented, drawing on evidence from multiple sources.

The target audience of the IPB is children's centres, health visiting teams, family support agencies, fire and rescue services and other organisations that have the opportunity to provide help in preventing accidental injuries among pre-school children.

Surveys as part of the *Keeping Children Safe at Home* programme show that the great majority of children's centres and many other organisations recognise that accident prevention is a high priority and undertake child accident prevention activities.

This briefing is intended to extend the work that they do, helping them to use effective methods to address real issues, overcome some of the barriers that they tell us they face and share knowledge about the facilitators that are available.

The majority would like more education for parents and to have it tailored to different stages of child development. They suggested that health visitors or the children's centres would be the right people/places to deliver this.

Conclusion from KCS interview with parents

The topics covered by this IPB are limited to those that were the focus of the *Keeping Children Safe at Home* programme: falls, poisonings, scalds and fire-related injuries. These are the most common types of injuries that result in emergency department attendance or hospital admission in children aged under 5 years. It is not a comprehensive guide to preventing all accidents to children.

Not all children are the same so a one-size-fits-all approach to child safety is not possible. Further, we cannot prevent all accidents, except by stopping children doing the things that they need to do to grow and learn. Having said this, we should concentrate on preventing deaths, and serious and disabling injuries. Being open about these points can help to make prevention a more realistic issue with parents who may otherwise feel that we are aiming for the impossible.

The child's character was perceived as an important factor in relation to injury risk. A range of terms were used to describe how children in a family were different from one another, such as 'well behaved', 'energetic', 'curious', 'more daring', 'clumsy'.

Conclusion from KCS interview with parents

How we prepared this briefing

This briefing has been prepared as part of the *Keeping Children Safe at Home* programme. This was a major project funded by the National Institute for Health Research, part of the NHS. It was a collaboration between four universities (Nottingham, University of the West of England (UWE) Bristol, Newcastle and Leicester), Norfolk and Norwich University Hospitals NHS Foundation Trust and the Child Accident Prevention Trust. The programme aimed to improve our understanding of children's accidents, what works to prevent these and how those with a role in promoting child health can be effective in preventing accidents.

The IPB brings together the scientific evidence on what works, or can be regarded as best practice, with the practical experience of people who already provide injury prevention programmes, including children's centres and health visiting teams and the organisations they may work with to help prevent accidents.

To ensure that the IPB is an authoritative source of advice and guidance, evidence from a variety of studies, surveys and events was used in defining the IPB's scope and content. These included:

- Five major studies of the most common injuries that pre-school children who attend hospital A&E departments suffered and a comparison of these children and their carers' safety practices with their counterparts who were not injured.

- Systematic reviews of the scientific literature to explore what interventions work in preventing falls, poisoning, scalds and injuries from house fires and what health promotion approaches work best with families of pre-school children.
- Economic assessments of different prevention approaches.
- Surveys of and interviews with children's centre managers and staff about injury prevention initiatives in their centres and what helps them deliver injury prevention.
- Surveys of parents of pre-school children about their home safety practices, e.g. their ownership and maintenance of smoke alarms, whether they have prepared a fire escape plan, the safety equipment they own, where they store hazardous products, whether they have safety "rules", etc.
- Interviews with parents of children who have had injuries and those that have not to find out what would help parents prevent accidents.
- A trial set in 36 children's centres that evaluated the effect of providing an IPB on the prevention of fire-related injuries, with training and support to help children's centres to use the IPB.
- Workshops and focus groups involving local practitioners and policy makers in Nottingham, Bristol, Norwich and Newcastle, that explored how to implement programmes in children's centres, how to reach families in the community and what the content of this IPB should be.

Cross-cutting issues

Some issues apply to virtually all types of accidents and injuries. An understanding of these issues is key to getting the right information across to families. In fact, prevention messages may be more to do with introducing families to child development and its consequences than telling them what to do and what not to do.

The links between accidents and child development

When studying the four types of injuries covered in this IPB, it is obvious that many accidents are strongly associated with the natural and predictable stages of physical and intellectual development of children. For example:

- Young babies are largely immobile but are susceptible to the actions (and inactions) of their carers and siblings who will carry them – and occasionally drop them.
- As babies start to wriggle and roll, they may fall from beds and other furniture where they may have been placed to have their nappies changed and for many other reasons. Their mobility can also result in strangulation if there are cords from objects such as blinds, cot bumpers, toys and clothing in their cots.
- Crawling babies may also be able to climb with the risk of falls.

- Mobility also allows access to objects. It is natural for babies and young children to explore taste and texture by putting things into their mouths, risking ingestion, suffocation and poisoning.
- Crawling and walking can lead to falls down unguarded stairs.
- The wish to explore combined with the attractiveness of objects that may be brightly coloured, have cartoon characters on them, resemble toys, etc can result in injuries such as serious burns when they reach out for mugs of hot drinks on low tables, pan handles on cookers, etc.
- With increasing manual dexterity but a lack of understanding of risk, young children may try and play with matches, lighters, knives and other hazardous objects if they are not stored safely.
- Young children rapidly become able to walk, run and climb so falls from heights, trips and stumbles, etc are very common.
- Medicines and household chemicals such as cleaning products are often stored in child-resistant containers. These are not completely childproof so some children will be able to access the contents, a greater number being able to do this as children get older. Putting things into their mouth is normal so playing with tablets or swallowing toxic liquids can result in harm.

The links between accidents, injuries and child development are explored in detail in the Child Accident Prevention Trust publication *Accidents and child development*.

The causes of accidents are not all the same. Some are a natural result of child development as described above but others are due to adult actions (or inactions). Sometimes parents do not anticipate their child's development nor realise that the risk of their child having an injury can change very quickly as their child learns new skills. Sometimes parents do not fully appreciate the consequences of their actions (or inactions). This "failure" is not a criticism of parental behaviour as we often learn about caring for children through "mistakes" or "near misses".

Accidents and deprivation

Children from the poorest families are known to suffer more accidents and more serious accidents than their more affluent counterparts. Research has shown that this social class gradient is true for injuries that result in children being taken to their family doctor, being admitted to hospital and dying from injuries. The difference between the death rate in children in the most affluent and poorest families is greater for injuries than for any other cause of death in childhood.

This is important when deciding on which families to focus attention. Local accident information may not be sufficient to allow precise targeting, especially when studying more serious injuries, because the number of more serious injuries in a local area is likely to be small. It is therefore important to target injury prevention towards the most disadvantaged areas and families and not simply rely on the number of injuries in small areas.

Children and parents with disabilities

Physical and behavioural disabilities are complex issues and beyond the scope of this IPB to discuss in depth. Suffice to say that one should remember that not all children behave similarly or have the same physical and behavioural characteristics as their peers. These traits may require special consideration when putting injury prevention measures in place.

In addition, some carers may not be capable of implementing some actions in an emergency. For example, if a fire escape plans requires a person to carry a baby or even to search for a toddler under the bed, they may not be able to do this easily or promptly. Their needs should be taken into account when providing advice and support.

Other cross-cutting issues

Local conditions vary and these may be important in implementing the safety messages in this IPB. Some locality features may enhance the risk of injuries to pre-school children – for example, the nature of the housing stock, socio-economic conditions, cultural differences within the population, urban / rural localities, and whether there are temporary migrant groups in the locality.

Making the case for action

The scale of the problem

Unintentional injury is a major challenge for the health and well-being of pre-school children. It is one of the leading causes of death in children aged 1 - 4 years in the UK. Falls, poisonings and thermal injuries are the most common injuries resulting in hospital A&E department attendance and hospital admission in pre-school children.

Each year, many children die from unintentional injuries at home or in leisure environments. Children and young people who survive a serious unintentional injury can experience long-lasting pain and may need lengthy treatment and numerous stays in hospital. They could be permanently disabled or disfigured and their injuries may have an impact on their social and psychological wellbeing. A child burned in early infancy may carry the scars for the rest of his/her life.

Local data

Using local data can be important. Its use can ensure that activities are responsive to local issues, whether they are revealed through the views of the community, or data from hospitals or other sources. Ofsted encourages the use of local data, but may fail to recognise the problems that this creates.

Each year, an average upper tier local authority in England will have about 270 injury-related admissions of children under 5 years. When these are broken

down by accident type, the numbers quickly become too small to give clear guidance on local needs and on prevention programmes. Thankfully, fatalities are even rarer – an average council area will see about one home accident death among the under 5s every 2 years – far too few to base action on.

The absence of comprehensive local data can be a problem when trying to make the case for action. While hospitals, often through the local council's public health team, will usually be able to provide data on admissions resulting from accidents, this data will not be very detailed in terms of the injury circumstances, may be limited because of confidentiality and is likely to cover small numbers of events, especially when specific types of accidents are being reviewed.

Accident and emergency department cases, which are much more numerous with about 20 attendances for each admission, are rarely collected in a form that allows easy local analysis.

Using hospital data at a very local level, for example the catchment area of a children's centre, either to identify the need for action or to measure the impact of programmes, is virtually impossible as the numbers involved would be meaningless in statistical terms.

As a result, alternatives to injury data may need to be used. The relationship between deprivation and injury is well established so if one is trying to identify where programmes need to be put in place such data that is usually held by public health teams or council planning departments can be helpful.

Further, using measures such as practices that link with common accidents and their prevention, for example, the ownership of safety gates, knowledge of a fire escape plan or the safe storage of poisons, can allow us to identify the need for interventions and act as measures of their effectiveness.

The challenge can be to convince senior managers and budget-holders that programmes should be based on measures that are not local, i.e. the national situation, or on "softer" measures such as safety behaviours. An analogy that may be useful is that of lung cancer. Local smoking cessation programmes are not judged by their effect on the lung cancer death rate or the number of admissions to hospital with lung cancer in their local area. Instead, they are judged on the number of smokers who have used their services who stop smoking. The effectiveness of local avoidable injury programmes can be more usefully gauged by measuring important safety behaviours that we know are strongly linked to avoidable injuries. This includes, for example, having fitted and working smoke alarms, using safety gates or storing medicines safely (above adult eye level or in locked cupboards, drawers or cabinets).

The burden of injury – costs and consequences

Accidents result in far more than the immediate need for medical treatment. They can result in:

- Pain (from injury or subsequent treatment).
- Fear / anxiety - a dog bite may mean that the child has a lasting fear of dogs.
- Physical disability and, in the extreme, a resulting need for housing adaptations.
- Emotional effects.
- Education – loss of schooling.
- Disruption to usual routine for the child and family.
- Family stress and the breakdown of relationships.
- Financial costs - to the family, NHS and emergency services.

While statistics are one way of illustrating the need for action, case studies that bring home the impact of accidents can also be a powerful tool. Finding a child and/or parent who can describe the consequences of an injury can get the message across more vividly than a list of numbers on a piece of paper.

Evaluation methods

Evaluation of a programme needs to be built in from the start. It is important to document all activities and to consider which elements work and for whom.

A local evaluation of the programme may be useful for inclusion in local reports, such as an Ofsted report for a children's centre.

Outcome measures

It will not be possible for an individual children's centre or other local agency to demonstrate that a programme on a single injury prevention topic has an impact on reducing outcomes such as the specific injuries in its catchment area. The numbers in any one area are likely to be too small to allow this. More realistic intermediate outcome measures include the number of families with, for example, functioning smoke alarms at every level in their homes, or safety gates at the top and bottom of the stairs. More intermediate outcome measures are described in each injury topic chapter of this IPB.

Process measures

Documentation of the process of the intervention can be helpful. Some suggestions of questions are given below:

Training sessions for practitioners

- Was training for practitioners conducted?
- Who initiated the training?
- Who conducted the training?
- What messages were included in the training?
- How long did the session last?

- How many people attended the training session/s?
- Was the training acceptable to the target group?
What elements were considered good, what were considered less good? Were there any omissions?
What would you do differently if you were to deliver this training again?

Small group work with parents in, for example, a children's centre

- Who initiated the small group session?
- Who conducted the small group session?
- What messages were included in the session?
- How long did the session last?
- How many people attended the session/s?
- Was the training acceptable to the target group?
What elements were considered good, what were considered less good? Were there any omissions?
What would you do differently if you were to deliver this small group session again?

One-to-one contacts with parents in a children's centre and other formal setting

- How did these occur?
- How many contacts were made with parents and by whom?

-
- Have you had any feedback from parents about how useful they found the one-to-one contacts? What would you do differently if you were to provide one-to-one contacts in the future?

One-to-one contacts with parents in their homes

- Did any home fire risk or general safety check visits to families' homes take place by fire and rescue service staff and/or others?
- Did family support staff or health visitors have the opportunity to include messages about child safety in their home visits that were not related to injury prevention?
- Have you had any feedback from parents about how useful they found the one-to-one contacts? What would you do differently if you were to provide one-to-one contacts in the future?

Other

- Were parents involved in planning the programme?
- Did any parents act as Parent-Peer Supporters or Parent Advocates for the programme?
- Was any use made of 'opportunity windows' or other brief interventions when interest in the subject was high?
- Were there any ways in which it was possible to involve 'hard to reach' groups?
- Were there any barriers that hindered the adoption of the programme in a children's centre or other setting?

- Were there any facilitators that encouraged the adoption of the programme in a children's centre or other setting?
- What advice would you give to another setting in running the programme?

Creative ways of reaching target audiences

Accident prevention is no different from other health promotion activities. There is scope for using inventive approaches to getting messages across as you know your audience better than anyone. There are many ways that accident prevention information can be presented. Creativity can be the key.

If information is presented personally, either to one person or to a group, both the initial advice and responses to follow-up questions may have to have regard for issues such as:

- personal circumstances. These may differ so answers have to be personalised, having regard for topics such as family size and the age of the children in the family, type and ownership of housing (social, private rented, etc), the ability of the family to buy or be allowed to fit safety equipment, etc.
- changes in safety equipment, practices and advice. These change over time as new equipment becomes available or research shows that what we thought was the best approach has changed.

The best ways of reaching parents may vary for the different populations served by children's centres and

other agencies. Individual centres or health visiting teams may be able to work creatively with other partners to involve some traditionally 'hard to reach' groups. Both opportunistic and planned approaches may be possible for:

- small group work with parents in children's centres and other settings, e.g. health centres, clinics or nurseries.
- one-to-one work with parents in children's centres, health centres, clinics and other settings.
- one-to-one work with parents in the home environment.

Messages need to be reinforced in different settings, with an emphasis on the consistency of messages being delivered. Use needs to be made of 'opportunity windows' when interest in subject is high, such as a serious fire or fall from a window that hits the headlines in the media, especially in your area, news about the risks associated with button batteries, or Child Safety Week.

Innovative ways of working with parents may include:

- A parent who has experienced a house fire or injury to their child being willing to act as a peer supporter to the programme in the children's centre and other setting. Their experience could be developed as a constructive case study.
- Consulting the setting's parents advisory group for different ways of reaching parents in their neighbourhood.

- Parents being willing to act as champions or advocates for different injury topics, for example working with a tenants' association on home fire safety and safety measures.
- Popular activities within the setting, e.g. first aid, being used as an entrée to discussions about injury prevention. Healthy eating sessions could include messages related to deep frying and healthier alternatives.

Remember that no one knows all the answers. The key is often to know where to find the answers or how others have addressed similar problems, using other local agencies or individuals, reliable websites, national organisations such as Child Accident Prevention Trust, RoSPA, Lullaby Trust, etc. Contact details and web addresses can be found in Section C.

Parents often learn about parenting and keeping children safe by being parents. They may receive advice from friends and other family members, especially grandparents, but this advice may be out of date or incomplete. Competing with such advice, especially when you know it to be inappropriate, can be challenging.

How does the promotion of childhood injury prevention fit into the policy framework for children's health and wellbeing?

Different parts of the UK have different policies that can be used as a framework for promoting and undertaking the prevention of unintentional injuries. These policies fall into a number of areas: public health, early years and health and wellbeing policies, provision of good quality housing, etc.

NICE Guidance

The National Institute for Health and Care Excellence (NICE) published public health guidance *PH29 Strategies to prevent unintentional injuries among children and young people aged under 15* in November 2010.

Evidence published since the development of the document was reviewed in 2013 but did not result in any changes to the recommendations (*Strategies to prevent unintentional injuries among children and young people aged under 15: Evidence Update February 2013*). A second document, *PH30 Preventing unintentional injuries among under-15s in the home: guidance*, was also published in 2010.

PH29 recommends that local and national plans and strategies for children and young people's health and wellbeing include a commitment to preventing unintentional injuries.

Emphasis is also given to targeting injury prevention towards the most vulnerable groups to reduce inequalities in health.

Partnership working is seen as key to the prevention of injuries, with support for cross-departmental and cross-agency working to achieve national and local commitments. Support for local partnerships is recommended, including those with the voluntary sector, and there is an expectation that partners work together to ensure children and young people can lead healthy, active lives.

The two NICE documents were also published in April 2011 by NHS Health Scotland as *Scottish Briefing on NICE public health guidance 29: Strategies to prevent unintentional injuries among children and young people aged under 15* and *Scottish Briefing on NICE public health guidance 30: Preventing unintentional injuries in the home among children and young people aged under 15: home safety assessments and providing safety equipment*.

The principles of and approaches to prevention

While not every reader will have the opportunity to apply all of the principles and approaches described here, it may be useful to understand these topics so that the opportunities and responsibilities that others may have will be understood. This can be helpful when working in partnership or when one's own opportunities may not be sufficient to implement

measures of the greatest effectiveness. A more extensive commentary on principles and approaches is presented in Section C. The key approaches and principles to consider include:

Primary, secondary and tertiary prevention

- Primary prevention - trying to prevent the occurrence of the accident from which an injury can result.
- Secondary prevention - reducing the risk of injury once the event has occurred.
- Tertiary prevention - providing appropriate treatment and/or rehabilitation following an injury may reduce the adverse effects and long-term consequences of that injury.

Approaches to prevention – the Es

- Education and awareness-raising, including training. The targets for this approach are extensive, ranging from children and parents to decision-makers, budget-holders and elected representatives.
- Empowerment – giving families the opportunities to act for themselves.
- Environmental modification and engineering – changing the environments, including the home, and products that children may come into contact with, even though they might not be primarily intended for children.
- Enforcement – ensuring that the laws, regulations and standards covering products, services (such as child care) and environments are obeyed.

Active and passive prevention

- Protection that is provided without an individual needing to do anything or not having to act repeatedly is called passive prevention.
- Injury prevention measures that requires individuals to change their behaviour or to take action repeatedly are known as active measures.

Partners in prevention

Preventing unintentional injuries to young children is an activity that benefits from cooperation and collaboration between agencies and professions. Many agencies, from the statutory and voluntary sectors, support families so have the opportunity to lead or contribute.

The key to successful collaboration is a mutual understanding of who is leading the exercise, the aim of the collaboration, and the roles of each collaborator. The degree of collaboration may range from just sharing information on what each is doing to sharing budgets and carrying out group activities. It is important that all concerned are giving similar advice and know who to refer families to for help when needed.

A handful of localities have injury prevention coordinators who can ensure that activities are optimised and can also act as a local centre of knowledge and resources.

Examples of agencies and occupations with opportunities to undertake or support accident prevention

A&E departments

Childminders

Children's centres (in the centre and through outreach activities)

Community midwives

Family Nurse Partnerships

Fire and rescue services

GPs

Health visiting teams

Home safety officers

Housing associations

Housing departments

Nurseries

Pharmacists

Public health departments

Road safety officers

Social services

Tenant organisations

Trading standards departments

Voluntary organisations such as Home-Start

This list is illustrative, not comprehensive. The opportunities of each agency and occupation will vary from one area to another, depending on resources, priorities, etc

Parenting challenges

Caring for a new baby or a young, active child can be a challenge, especially when it is the first child as the parents have no experience of what to expect and how to act.

There was also a lack of confidence from several parents about which safety strategies worked best. This seemed to be primarily interviewees who were first time mums.

Conclusion from KCS interview with parents

As part of the *Keeping Children Safe at Home* programme, parents reported they felt that child factors such as inquisitiveness and child energy increased the risk of injury, as did the number of children in the household and the child being able to do more than the parent anticipated.

For families who are under stress for whatever reason – multiple demands, lack of money, the cost of safety equipment, living in poor housing that may be overcrowded, living in rented accommodation where changes cannot be made, maternal fatigue, unemployment, not being close to their extended families, only a single parent in the home, where the mother is young and hence inexperienced, no safe play areas (indoors or outdoors), etc – the challenge is even greater and accidents are likely to be more frequent than the average.

Interviews with parents revealed that after an accident took place some parents described increased awareness of injury risks, increasing safety rules and increased direct, visual supervision.

However, research also tells us that preventing accidents and injuries is not achieved just by using safety equipment. Supervision makes a difference, even though it is difficult, especially when there is more than one young child in the family.

Parents find it difficult to watch their children continuously; it becomes more difficult to supervise the more children you have; as children get older they need to be given more freedom to explore.

Conclusion from KCS interview with parents

Prevention activities

The activities outlined in this IPB are intended for use by anyone who can provide advice and other services to families. They include activities that you may be able to run alone or as part of a wider local initiative.

Which activities are appropriate will depend on your opportunities and resources and also on the wishes of your target audience. A local incident or national headline may provoke families to seek help and advice.

Wherever possible, the activities are based on programmes that are known to be effective, although the evidence base for child accident prevention is limited.

Where there is good evidence of effectiveness, this is noted as it may support making the case for the activity. The absence of a programme from the list may be because there is no evidence to support its use, rather than an indication that it is ineffective or harmful.

It is important to remember that your specific contribution to a prevention programme may be limited because, for example, your resources, including time, staffing and money, may be limited. However, you may still have an important role to play in a wider initiative so your small contribution may still be of value. For example, your access to families at your setting or your home visits can be valuable resources to other local practitioners.

The activities may be used in different settings (for example, a children's centre or the child's home), in group sessions, on a one-to-one basis, or on an active or passive basis (i.e. as an activity or by creating a display on a notice-board).

The principle that underpins all the activities is that they help families to explore child safety and develop solutions that are right for them.

Having regard for and particularly anticipating child development and its consequences for safety cuts across virtually all safety programmes, regardless of the injury topic being addressed. The first activity, Activity 1 – Exploring child development, provides a foundation for the others.

The biggest barriers emerging ... were the fact that 13 out of the 16 interviews mentioned being surprised that the accident happened and over half of the parents interviewed (9 interviews) thought there was no risk of an accident at the time it happened.

Another significant element, given that parents mentioned the lack of safety advice at different stages of development as a barrier to injury prevention strategies, is the fact that many of the interviews describe a child doing something they had never done before or being able to do more than the parent(s) thought they could.

Conclusion from KCS interview with parents

The way that you use the activities presented in Section B will depend on your opportunities, resources, skills, etc. They do not have to be used in their entirety or in just one session. They can be adapted, although it is important not to lose sight of the key safety messages that you are trying to get across – the key safety messages are listed at the beginning of each activity.

When planning activities, an ordered approach helps to ensure that nothing has been overlooked. Section C contains a short checklist that helps you do this, covering planning, partnerships, piloting, implementation, evaluation, etc.

Using the IPB for other purposes, e.g. staff training

This document can be used for more than just providing guidance on how and what to present to parents and carers. It can be used as a training tool for colleagues on topics other than just accident prevention, for example, as the theme that runs through a number of the activities is child development, the IPB may help staff to learn about this topic.

Section B:

ACTIVITIES TO HELP PARENTS

These activities are intended to help you encourage parents to reduce injuries to pre-school children in their homes. There are 11 activities, some of which can be used to cover any type of injury while others address just one injury.

The aim of the prevention activities is to help parents think about safety rather than simply give them the answers.

While providing a list of dos and don'ts may be quick and easy, encouraging parents to think about the way their children behave and the safety consequences is likely to have a more sustained effect.

Some activities focus strongly on the provision and use of safety equipment. While safety equipment can be an effective way of preventing accidents and injuries, not all accidents can be prevented by safety equipment. Some are related to how we look after children and what we allow them to do, for example, changing a nappy on a raised surface or allowing them to climb on furniture. These behaviour change interventions link with the need to understand what children do and want to do, and our knowledge of child development and its consequences.

Some of the cross-cutting activities form the foundation for the behaviour change activities as they allow parents to explore and enhance their knowledge of different aspects of child development.

The activities are adaptable – they can be run in bite-sized pieces or as a single session, or can be interactive sessions, displays or things that parents can take home to do in their homes.

If you cannot run the whole of an activity, then use as much of it as you can.

General lessons from *Keeping Children Safe at Home* programme

A comprehensive review of the scientific literature identified a number of facilitators that can enhance home safety interventions aimed at children under five and barriers that can obstruct such interventions. Whether using the activities set out below or developing your own, the lessons from the research can be helpful. A brief summary of the barriers and facilitators identified in this research is shown in the following table.

Facilitators	Barriers
<p>Approach Home visits; combined educational and environmental; community involvement; partnership working; tailored methods</p>	<p>Cultural barriers Distrust of home visits; language barriers; lifestyle; generalisability</p>
<p>Focused message One injury type; tailored to the individual; simple message</p>	<p>Socio-economic Low literacy; low income; ethnicity</p>
<p>Minimal changes Educational; physical</p>	<p>Complex interventions Multiple injuries; multiple methods</p>
<p>Role of the deliverer Benefits to participants—using health professionals, other professionals or volunteers; benefits to the deliverer; time and place</p>	<p>Deliverer constraints Training; time involved; sustainability; communication</p>
<p>Accessibility to equipment Free provision and fitting of safety equipment; coupons; information</p>	<p>Physical barriers Rented accommodation; multiple occupancy; frequent moves; access to devices; faulty devices</p>
<p>Behaviour change Reinforcing messages; motivational techniques; theoretical models used; organisational change; community involvement and awareness</p>	<p>Behavioural barriers Existing behaviour; behaviour change</p>
<p>Incentives Facilitators and barriers for home injury prevention</p>	

Reproduced from Ingram JC, Deave T, Towner E et al (2012). *Identifying facilitators and barriers for home injury prevention interventions for pre-school children: a systematic review of the quantitative literature*. Health Education Research, 27, 2, 258–268 by permission of Oxford University Press.

General activities

These activities do not relate to specific types of accidents and injuries. Some allow information about child development to be explored, while others help parents to look at the physical safety of their homes.

1. Exploring child development

Covers children's ability to undertake tasks, including climbing and manipulating objects and the safe storage of potentially harmful products such as matches, lighters, medicines, knives, etc.

2. What is appealing to children but may harm them?

Helps parents think about what makes some everyday items attractive to young children and may harm them.

3. Checking home safety

Help parents to develop a checklist for them to use in their own homes. The list covers the most important things to look out for and the key safety products to use, depending on the age and ability of the child. It is an extension of Activities 1 and 2.

4. Where are your harmful products?

Builds on Activity 3 - Checking home safety by helping parents think about the safety consequences of some of their actions, such as what may be in their coat pockets, shopping bags or handbags and where they are.

5. Designing an unsafe kitchen

A fun way of thinking about dangers. It can be adapted for other parts of the home.

6. Home safety equipment – what do families need?

Helps parents think about essential safety equipment that they may need.

Activities for specific injuries

These activities cover specific types of accidents and injuries. They draw on the findings of the *Keeping Children Safe at Home* programme and other sources.

Just as with the cross-cutting activities, some are equipment-related while others are designed to encourage behaviour change.

Falls prevention activity

7. Preventing falls – more than just safety gates!

Even falls from what seem like relatively low heights can result in serious injuries. Simple changes in parenting practices can make a difference. This activity allows parents to understand the need for implementing safety practices.

Scald prevention activities

8. How far does a hot drink spread on a baby?

Even what may seem like a small quantity of liquid can extensively cover a baby.

9. How long does a drink stay hot?

Drinks stay hot enough to cause injury for a surprisingly long time.

Fire safety activities

10. The importance of smoke alarms

Smoke alarms are an essential item of safety equipment. Families need to understand this and

what they should do to ensure that they will save lives if there is a fire.

11. A family fire escape plan

When the smoke alarm sounds, the whole family needs to be able to escape quickly and safely. This activity is designed to ensure that they are equipped to get out or stay safe if this is not possible.

IMPORTANT - BEFORE YOU RUN THESE ACTIVITIES

Check whether any of the participants have children who have suffered a serious injury or a near miss. If this is the case, you may need to cope with a distressed person. Even an injury to the child of a relative or friend may upset a parent.

For activities in which you suggest families go to other agencies for further help, such as the local fire and rescue service for a home fire safety check or to have a smoke alarm fitted, check that the agency is able to provide the appropriate help. Check how the agency likes to be contacted. (They may also be able to provide you with resources that you can use or give to families, or even offer to come along to support your initiatives.)

When someone asks for safety advice, guessing the answer is not an option. The wrong answer may lead to more harm than good or an illegal situation. If you don't know the answer say so and either find the right answer or point the family towards an appropriate source explaining why you are not able to give them advice.

CROSS-CUTTING ACTIVITIES

Activity 1 – Exploring child development

KEY MESSAGES

- As children grow, their ability to move themselves and manipulate objects, wish to explore, unreliable reaction to rules, and copying adult behaviour, etc are normal, but can lead to accidents and injuries.
- The types of accidents can change as they develop.
- Parents should be encouraged to anticipate what their child is going to do next and take appropriate steps to prevent accidents. Children develop rapidly and may take their parents by surprise – they cannot do something one day but then do it next!

Relevant injuries

This activity is relevant to all injuries covered by this IPB and others that are outside of the scope of this document. It is the foundation for other activities.

Background

This commentary of the links between child development and accidents is a brief illustration rather than a comprehensive review of the subject.

A more extensive description can be found in *Accidents and child development*, published by Child Accident Prevention Trust.

Increasing awareness with regard to child home injury risks and the ages and stages of development was described by some parents as something that would help them to prevent unintentional injuries.

Conclusion from KCS interview with parents

(This activity links closely with Activity 2, which focuses on objects that may be appealing but harmful to young children.)

Although the focus of this activity is preventing injuries to children, it can be used to illustrate other aspects of child development and behaviour.

Many accidents to children arise because parents do not always realise the consequences of their child's rapidly changing physical and behavioural development. Anticipating these changes can help parents to take precautions before accidents happens.

Another significant element, given that the lack of safety advice at different stages of development is mentioned as a barrier to injury prevention strategies, is the fact that 13 of the interviews describe a child doing something they had never done before or being able to do more than the parent(s) thought they could.

Conclusion from KCS interview with parents

Gross motor skills

Babies start by being largely immobile but are soon able to wriggle and roll. If they are on raised surfaces they are at risk of falling. Then they become able to crawl, shuffle along on their bottoms, walk and climb, not necessarily in this order as some babies will climb before they can walk. This enables them to gain access to all sorts of hazards.

One day, a child may not be able to or may not be interested in climbing the stairs and then the next day you find him or her half way up – and ready to fall down!

They also gain the strength to move objects such as chairs, boxes, large toys, all of which can be used to climb on and hence reach products that you may think are safely out of reach. Fall injuries are not the only risks. Young children have been strangled when they have climbed but then become entangled in the cords on a window blind as they fall.

While their strength develops rapidly, babies may not be able to get out of dangerous situations. If left unattended in the bath, they may be able to turn on to their front but not be able to turn back. As they have limited ability to raise their head, they can easily drown, even in very shallow water. Even young children will be at risk if they fall into something like an ornamental garden pond.

When children start walking and running, they are initially unsteady so falls are inevitable. But when they can move on their own, they may escape from you quickly and get to risky locations before you can grab them.

Fine motor skills

As children develop, they become able to undertake increasingly precise actions with their hands and fingers, such as opening containers – bottles, locks, drawers, etc – turning taps on, operating switches, striking matches and operating cigarette lighters, etc.

Cognitive development

Babies do not understand that a hidden object still exists, but this understanding changes as the child develops. Just putting things out of sight (but not out of reach) for safety is not an option for young children.

Babies and young children have little understanding of the consequences of their behaviour. They simply do not understand the risks associated with their actions. Conversely, they do not understand the consequences of their inactions – if something that is potentially dangerous occurs, they will not try to move away from it and may try and hide, putting themselves into greater danger. They will also not remember that something that has hurt them will do so again in the future.

Just because young children may be able to repeat back to an adult an instruction or a warning, they may not understand what it means nor follow it consistently so may be injured again.

"Parents assumed safety rules would prevent injuries and mostly implemented rules in reaction to evidence of injury risk. Parents equated noncompliance with not understanding, assuming that if children understood they would comply."

Source: Morrongiello et al. *Parents teaching young children home safety rules: Implications for childhood injury risk.* J Applied Developmental Psychology. Available online 29 March 2014.

Children like to copy adult behaviour, so if they see someone strike a match, ignite a lighter, take a tablet or use a knife, they may well want to try to do this for themselves.

Exploratory behaviour

One way that babies and young children learn about taste and texture is to put things in their mouths. This can lead to poisoning, suffocation and ingestion of potentially harmful objects.

Young children may want to discover what an object sticking out over the edge of cooker is, not knowing that it is a pan full of boiling water.

Learning objective

To help families understand how a child's physical and behavioural development and what children are attracted by can result in accidents.

Equipment needed

A sheet of flipchart paper and a marker pen. Divide the sheet of paper into quarters, labelling them as shown below. (Alternatively, you could use more than one sheet of A4 paper or a white board.)

1 year old	2 years old
3 years old	4 years old

Method

Explain that many accidents to babies and young children are linked with what children can do and that as a result the types of accidents change as children grow up.

(This activity works best if the participants have children of different ages.)

Ask each person in turn to describe something that they can remember that their child started doing at a particular age. The behaviours are likely to fall into a handful of the major groups mentioned in the background section above:

- gross motor skills – rolling and wriggling, waving their arms around (when they are babies, often in an uncontrolled way), walking, running (and hence tripping or just being unsteady), climbing (on to furniture, up stairs, and over a safety gate, into the bath, etc), playing with push-along toys, etc.

- fine motor skills (holding a crayon and drawing, using a spoon, opening a container, stacking bricks, putting a key in a lock, trying to copy adult actions, etc).
- exploring behaviour – putting things in their mouth.
- cognitive skills – solving problems such as finding a hidden object.

Keep going until people have no further suggestions.

Write the responses on the appropriate part of the sheet of paper.

Remind participants that children are not all the same and that some do things at a particular age while others may do the same action earlier or later, or not at all.

Variation 1

The facilitator draws up the list of potential behaviours beforehand and just asks the participants to indicate when such behaviours started for their children.

Variation 2

You could run a two stage process – first, get parents to identify development tasks/behaviours, and then secondly get them to put them into the specific (approximate) ages based on their own experiences.

We now know what children do at specific ages.

Ask participants which of the behaviours you have recorded could lead to accidents and injuries and what they can do to prevent the injuries. Remember that we don't want to stop children being active, even though this can make injury prevention challenging.

The relevant behaviours are likely to include:

- gross motor skills:
 - rolling off beds or changing tables.
 - waving arms and knocking mugs of hot drinks.
 - being able to move something, climb on it to reach and then open a cupboard.
 - climbing out of a highchair, up stairs or over a safety gate.
- fine motor skills:
 - open a box or a cupboard.
 - handle a match or bottle.
 - copy adult behaviour by striking the match.
 - putting pills in their mouth.
 - turn on a tap.
 - drinking from the bottle.
- exploratory behaviour:
 - reaching up to grab a pan handle.
 - tasting something.
 - putting a small object in their mouth.
- cognitive development:
 - not understanding the consequences of their actions, e.g. grabbing hot hair straighteners or the iron, touching the oven door.
 - realising that a hidden object still exists (e.g. tablets, matches or lighters hidden in drawer or cupboard).

Discussion points

Get participants to discuss where they could keep matches, lighters, pills, knives, cleaning products, etc that would be as inaccessible as possible.

Variation

A variation that may link with your smoking cessation activities would be to consider as a group how to deal with the fact that someone in the house smokes so matches and lighters may be left lying around.

Conclusion

The prevention message is the need to keep potentially harmful items ideally locked away, well out of reach and out of sight (i.e. above adult eye height and ideally in a locked drawer or cupboard), to try and make sure that there is nothing convenient for children to access. Further, it's important to try not to let children see you carrying out activities that may be harmful to them. There are lots of low or no cost things that can be done to keep children safe from harmful items in the home.

Activity 2 – What is appealing to children but may harm them?

KEY MESSAGES

- Babies and young children find a range of characteristics of objects appealing, including movement, light, colour, sound, texture, etc. In consequence, they will be attracted to many objects that may be harmful.
- Parents need to be aware of this and to ensure that, as far as possible, appealing objects are out of sight and out of reach, namely above adult eye height and ideally in a locked drawer or cupboard.
- Objects that are appealing to babies and young children can result in burns and scalds, house fires and poisonings.

Relevant injuries

This activity is relevant to most injuries covered by this IPB, especially poisoning and burns, as well as others that are outside of the scope of this document. Further information on poisonings, scalds and fire-related injuries can be found in Section C.

Background

Many everyday items are very attractive to young children, even though they may harm them. This short activity helps parents think about the characteristics that make them attractive so that they can take appropriate safety actions. It is an aspect of child development.

It is not always well understood what attracts children so that one object is appealing to a child while another may not be. It is known that young children are attracted by characteristics such as bright colours, sounds, movement, figures (such as cartoon characters that they may recognise), etc. These attractions can lead to:

- house fires and burns if children have access to matches and lighters as flickering flames and their appearance when an action such as striking a match or operating a lighter can be very appealing.
- burns if an object changes colour when it gets hot, e.g. thermochromic mugs.
- poisoning if pills look like sweets or a household chemical, even something like a laundry or dishwasher tablet, looks like a small cake!

Learning objective

To help parents understand what characteristics make products attractive to young children as a normal part of their development.

Equipment

A sheet of flipchart paper or a white board and a marker pen.

Method

Ask participants to tell you what everyday objects their children find attractive. This doesn't just mean things that they play with, it could also be things they like watching on TV, such as cartoons. Write down the responses.

Then, for each response, ask why they think that the item is attractive. As noted above, it is likely to be characteristics such as:

- bright colours.
- sounds.
- movement, including flames and flickering lights.
- figures (such as cartoon characters that they may recognise).
- things that imitate adult behaviour.
- texture.
- taste.

It may be more than one characteristic. Write the characteristic next to each object that was mentioned.

Finally, ask participants to think of everyday objects that may not be on list that exhibit these attractive characteristics but that may harm children.

Typical objects are:

- matches.
- lighters.
- candles.
- fires, including gas, electric and solid fuel fires and barbecues.
- tablets.
- laundry and dishwasher tablets and “liquitabs”.
- cleaning products in brightly coloured bottles.
- brightly coloured cups, mugs and hair straighteners.

Discussion points

Ask parents to think about what they have already done to reduce the risks from products that are child-appealing.

Were the changes as a result of an accident or a near miss?

What risks do they feel are the most significant?
In other words, get them to identify priorities.

How practical would any changes be?

If there is a scheme in your area that provides and fits safety equipment at low or no cost, refer the families who need drawer and cupboard locks (or other equipment) to the scheme.

Generally, share ideas.

Conclusions

The prevention message is the need to keep potentially harmful items ideally locked away, well out of reach and out of sight (i.e. above adult eye height and ideally in a locked drawer or cupboard), to try and make sure that there is nothing that would be easy for children to access. Further, it’s important to try not to let children see you carrying out activities that may be harmful to them. There are lots of low or no cost things that can be done to keep children safe from harmful items in the home.

Activity 3 – Checking home safety

KEY MESSAGES

Research findings

- Home safety education and the provision and fitting of safety equipment **improves** safety behaviours and may reduce injuries.
- Not using a safety gate on stairs **increases** the risk of a fall on stairs and leaving the gate open **increases** the risk even more.
- An overview of the evidence on preventing falls and the analysis of different combinations of falls prevention strategies reveal that the combination of education, low cost or free safety gates, home safety checks and fitting of safety gates is the **most effective way of increasing the possession of a fitted safety gate**.
- The home safety checks and fitting of safety gates as part of the package are particularly important as families receiving both of these components in the package are **much more likely** to have a fitted safety gate than those provided with education or safety gates without the home safety checks and the fitting of safety gates.
- Fitting a thermostatic mixing valve (TMV) and providing education is **more effective** in reducing bath water temperature to a safe level (one that will not cause serious and rapid injury, usually about 46°C) than education alone or than giving parents thermometers to test their water temperature and lower it if it is too high.
- Families without smoke alarms are **more likely to die in a house fire** than those with smoke alarms.
- **The most effective method** for increasing the number of families with a functional smoke alarm is to educate families, provide and fit free or low cost alarms and do a home safety check. Where fitting smoke alarms and doing home safety checks is not possible, providing education and free or low cost alarms is a cost effective option.
- Providing families with only education about how to prevent poisoning is **less effective** than providing education along with provision of safety equipment (e.g. cupboard locks) and home safety checks.

This activity help parents to develop a checklist for them to use in their own homes. The list covers the most important things to look out for and the key safety products to use, depending on the age and ability of the child. It is an extension of Activities 1 and 2.

Relevant injuries

This activity covers all injuries that occur in the home that are related to products, the design of the home and issues such as where things are stored. Further information about poisonings, falls, scalds and fire-related injuries is presented in Section C.

Background

Pre-school children spend much of their time at home, so that is where they have most of their accidents. When they go to school, they have more accidents at school and outside the home than at home.

We can never make the home completely safe but we can try to ensure that the most serious hazards are identified and the risks associated with them reduced.

This activity develops a checklist to help parents make and keep their homes reasonably safe. It is important to remember that a checklist alone makes little difference. One has to act on what is identified when completing the checklist.

Not all parents will be able to do this for a variety of reasons, notably financial and cultural reasons, the fact that they may not own the property, may have competing priorities for their time and money, and may be influenced by other family members.

So carrying out an action that the checklist suggests is needed may not always be possible.

Babies and children develop and change rapidly. They are not all at risk of the same accidents and injuries. For example, a newborn baby is not at risk of falling down stairs (unless you or a “helpful” sibling drops them) and a toddler is unlikely to be sleeping in a cot and so be at risk from cot bumpers. As a result, a single checklist may not be the best approach so part of the activity is to identify what matters to which developmental (or age) group. However, creating a developmentally-related checklist may add to the time it takes to run the activity.

This activity builds on Activities 1 and 2.

Learning objectives

To help parents develop the knowledge needed to identify injury risks in their home by developing a checklist and take appropriate action.

Ideally, the activity should help parents become proactive rather than reactive with regard to safety by encouraging them to think about what to do next.

Equipment

A few sheets of flip chart or whatever you can find and marker or ordinary pens.

Method

The activity can be run in three ways:

- As an activity completely in your setting where participants think about their own homes, or

- Participants are asked to go home, list issues that they find, possibly just in one or two rooms, note them down and bring them back to the setting to be consolidated with the contributions from others, or
- On a one-to-one basis when working with a family in their home, walking around it to help them develop their own personalised checklist.

Variation

A variation that can act as an example of what you want parents to do is to develop a checklist for your own setting – children’s centre, nursery or wherever.

Method 1

Outline the aim of the activity. Split the participants up into groups of two or three and assign a different room to each small group -kitchen, living room, circulation space (halls, stairs and landing), bathroom, bedroom (children’s and parents’). If you do not have many participants, the subgroups can have more than one room.

Ask each group to imagine their own home and list the things that they think of as being risky for their children. (It makes it easier if everyone in a subgroup has children of more or less the same age as the risks will then be similar. If this is not practical, ask the participants to note whether they think the risk applies to a specific age group.) If you need to prompt the groups, suggest that they think about the design of the rooms (low glass, steps, doors that slam, etc), the things kept in the rooms, etc.

Invite each group to tell everyone what they listed for their room. Jot the results down for everyone to see. Ask others to suggest other points to be added.

Method 2

Outline the aim of the activity. Ask each participant to check their own home (or part of it), having regard for the age / development stage of their own children, note the risky aspects they found and bring their notes back to a further session.

At the next session, invite everyone to tell others what they listed for their home / room. Jot the results down for everyone to see. Ask others to suggest other points to be added.

For Methods 1 and 2

When the whole house has been covered, ask participants to identify the issues that they think are the most significant in terms of the possible injuries.

If your setting runs computer classes, ask someone to design the final list into something that can be printed and distributed.

Method 3

This method allows the development of a checklist focussed on the specific needs and circumstances of a particular family. It can be used just to check the safety of the home without developing a checklist as such.

It is a more time-consuming option but may be appropriate when there is clearly something that needs to be addressed in one family’s home. It also allows advice to be given without making people reveal their issues in front of their peers.

When you are visiting the home, walk around the home with the parent and ask them to identify issues that might injure their child, having regard for the way that the child behaves. Make notes for you both to review.

If not all issues are identified, help them to identify the ones that have been missed.

Talk through the points raised, in particular those that could cause the most serious injuries.

An example of a comprehensive home safety checklist is given below. This can be adapted to suit local needs. A list of “Best Buys”, the most important safety products that parents should have, when they are needed and guidance on their cost is part of Activity 6.

Discussion points

Consider why some issues are more important than others. For example, they can cause life-threatening, disabling or disfiguring injuries.

Invite people to think about the issues that vary by the developmental stages of children.

Discuss why some of the solutions may not be practical and invite people to suggest workarounds.

Talk about where safety equipment may be available from. Is there a local safety equipment scheme? If so, what do your families need to do to benefit from it? (See Activity 6)

To reinforce the links between home safety and child development, discuss how frequently parents should check the safety of their homes to accommodate changing behaviours and skills, where children spend their time (e.g. alone in the garden), and the emergence of new risks, perhaps because you have bought a new product, another family member has moved in or you have moved home.

Invite parents to think about what the safety issues will be when their child develops new skills and behaviours. This is important as anticipating potential issues and acting upon them before they cause harm can make a real difference – encourage them to be proactive rather than reactive.

If possible, give the parents leaflets or flyers to take home as a reminder of what you have discussed.

A few weeks later, ask parents whether they have made any changes to their homes. If they haven't, you may need to consider why not and what else you can do to help.

Conclusions

Making the physical aspects of the home safer can make a big difference as it means that families do not have to remember to take action every time a possibly harmful situation arises. However, child safety is not just about equipment, changing everyone's behaviour, based on an understanding of what can go wrong, is also important. There are lots of low or no cost things that can be done to make homes safer.

Model home safety checklist

This checklist has been prepared by Bradford Safeguarding Children Board and the Child Accident Prevention Trust. A cross in a cell of the table shows that the question is relevant to the age group. It is very long. You may decide to edit it down to a more manageable size to suit the needs of the families you are supporting. Be careful when you do this as you may remove some key items.

Checklists have limitations. The most important point is that checklists alone do not prevent accidents and injuries. It is the actions that follow the completion of the checklist that make the difference.

To ensure that the appropriate actions are taken, the person who oversees the use of the checklist needs to know why the questions are asked, their relative importance, what to do when a “wrong” answer appears, e.g. where to point the family for help, and be able to answer any questions that will inevitably arise.

Not all questions are relevant to all families because some will depend on the nature of the home, and some families will not be capable of acting to correct any problems identified.

	Baby	Crawler	Toddler
FIRE SAFETY			
Is there a smoke alarm on each level of the home?	X	X	X
Do all smoke alarms work when tested?	X	X	X
Does the family have an escape plan in case of fire?	X	X	X
Are keys to window locks readily accessible for an adult? (This is also a falls issue)	X	X	X
Before going to bed, is a check made for cigarettes that are still alight, electrical appliances are turned off and doors are closed?	X	X	X
Are matches and lighters stored out of reach and out of sight?			X
Are there multiple plugs in sockets?	X	X	X
FALLS PREVENTION			
Is the baby's nappy changed on the floor?	X		
Are there safety gates (at top AND bottom of stairs)?		X	X
Are stairs and landing free of clutter? (This is also a fire safety issue)	X	X	X
Does the highchair have a harness that is used every time the baby is in it?	X	X	
Does the buggy have a harness?	X	X	
Are there locks / restrictors on all upstairs windows?			X
Does the child sleep on the top bunk of a bunk-bed?			X
Does the garden have any climbing play equipment mounted over a hard surface?			X
Does the garden have a trampoline without appropriate safety equipment?			X
POISONING PREVENTION			
Are there cupboard door locks?		X	X
Are there kitchen drawer locks?		X	X
Are all cleaning products and other household chemicals kept in locked cupboards or high out of reach?		X	X
Are all medicines (tablets and liquids) kept in locked cupboards/drawers or high out of the reach?		X	X
Are all household chemicals only stored in their original containers?			X
CUTS PREVENTION			
Are all sharp items placed out of reach, e.g. knives, scissors, needles?		X	X

The "safe" answer to most of the questions is *Yes*. However, for the shaded questions, it is *No*.

	Baby	Crawler	Toddler
BURNS PREVENTION			
Is the bath water temperature always checked (with an elbow) before putting the child in?	X	X	X
Are there fire guards on all fires?		X	X
Is cold water always put in the bath before the hot?		X	X
Is there a thermostatic mixing valve (TMV) fitted to the bath hot water tap?		X	X
Is the electric kettle at the back of the work surface?		X	X
Are pan handles turned away from the front of the cooker?			X
Is the child kept out of the kitchen or secured in the highchair or playpen when cooking is taking place?		X	X
Is the baby held on the lap while the parent drinks a hot drink?	X	X	
Are hot drinks left on the floor or low tables?		X	X
Are hair straighteners left around immediately after use?		X	X
Is the iron left to cool where it could be touched?		X	X
DROWNING PREVENTION			
Are babies and young children always supervised in the bath to prevent drowning?	X	X	X
Is the paddling pool emptied immediately after use?		X	X
Is there a garden pond?			X
STRANGULATION, SUFFOCATION AND CHOKING PREVENTION			
Are nappy sacks stored well out of reach of the baby?	X	X	
Is the baby "prop-fed"?	X	X	
Are cot bumpers used?	X	X	
Is a duvet and/or pillow used in the cot?	X	X	
Are large toys removed from the baby's cot? (This is also a falls issue)	X		
Are plastic bags knotted and thrown away or put away safely to avoid suffocation?		X	X
Are there window blinds in the children's bedrooms with cords that could present a strangulation hazard?	X	X	X
Is the child made to sit still while eating?		X	X

The "safe" answer to most of the questions is *Yes*. However, for the shaded questions, it is *No*.

Activity 4 – Where are your harmful products?

KEY MESSAGES

General points

- Young children and, to a lesser extent, babies naturally explore and play with whatever they can get their hands on.
- Babies and young children explore taste and texture by putting things in their mouths.
- They have no understanding of the consequences of their actions. Young children cannot identify hazards.
- Babies and young children are attracted by products that have certain child-appealing characteristics.
- The tops on bottles of tablets, liquid medicines and products such as cleaning products can be opened by some children. Some children can also operate cigarette lighters. They are not childproof so should never be completely relied upon.
- So-called strip and blister packs slow young children's access to tablets but may not completely stop them from getting at the tablets.

- Household chemicals such as cleaning products may taste horrible to adults but the sense of taste in young children is still developing so they may not find them so unpleasant.
- While long-term harm is rare, poisoning from some products – medicines and household products – can require prolonged stays in hospital.

Research findings

- Safe storage of medicines – at or above adult eye height or locked away – **reduces the risk of poisoning**. This may seem obvious but the key point is that the research confirms this.
- *Keeping Children Safe at Home* research tells us that not putting medicines and household products away immediately after use **increases the risk of poisoning**.
- Children who are taught rules about what to do or not do if medicines are left in places they can reach, such as on worktops, **are poisoned less frequently**. Remember that we are dealing with young children who do not always act reliably.

- Children who have access to things to climb on and so gain access to harmful substances are likely to be **more seriously injured**.
- Children who have been poisoned are **likely to be aged over 12 months and less than about 4 years**. However, even children aged under one year may suffer accidental poisoning.
- Children who have a poisoning are **more likely to be from the most disadvantaged families**, similar to most types of accidents, although children from all social groups are at risk.
- Providing families with education about how to prevent poisoning is **less effective** than **providing education along with provision of safety equipment** (e.g. cupboard locks) and home safety checks.

This activity builds on Activity 3 - Checking home safety by helping parents think about the safety consequences of some of their actions, such as what may be in their coat pockets, shopping bags or handbags and where they are. It is also relevant when visiting friends and relatives who might not be as switched on to safety as the parents.

Relevant injuries

It mainly addresses poisonings and fire-related injuries, but also suffocation and ingestions from small articles such as coins, and lacerations and puncture wounds from scissors and pins. Background information on these injuries can be found in Section C.

Burns can require long-term treatment, may be disfiguring and can impact on future life chances.

While most poisonings are not life-threatening nor require a stay in hospital, they can be very distressing for the child and the family, disrupt normal family routines when a child has to be taken to A&E and consume significant NHS resources.

Learning objectives

To help parents to minimise the risk of poisoning and other hazards.

Background

This activity can:

- focus on children of specific developmental stages, notably babies and young children who are exploring and who have fine motor skills that are developing.

- be used with groups of parents in children's centres or other settings, or can also be used with parents to help them identify hazards in their own home.
- be used to illustrate child development with respect to fine motor skills, i.e. the ability to manipulate objects with their fingers, and introduce the concept of anticipatory guidance.

One of the most common items that mothers, grandmothers and friends have is their handbag. It may contain various items that are hazardous to children such as tablets, lighters, matches, cigarettes, cosmetics and sharp objects (scissors, nail files, etc).

It's important to note that for many people handbags are necessary and the things they contain are there for a reason. The activity is not an anti-handbag exercise but aims to highlight the need for bags to be kept away from babies and young children.

Not everyone uses a handbag. Sometimes, when mum or dad and the children go out, everything needed gets pushed into whatever is available – the handbag may be one such item, but it may be the shopping bag, baby bag, coat pockets, etc. While this activity refers to handbags, it is equally relevant to these other containers.

It is not easy to control and/or supervise young children, and if there is more than one child in the family it can be even more difficult to keep them all safe.

Playing with lighters and matches can lead to clothing and house fires.

Method

Explain that the aim of the activity is to remind parents that children, especially young children, love to explore everyday objects but that this can result in injuries.

There are two parts to this activity that can be run together or on separate occasions.

Where are handbags kept?

Ask participants, their female friends and/or grandparents to tell you where they normally put their handbag when they arrive home. List these locations. (If there are men in the group, ask them where they leave their coats, briefcases, etc and where their partners put their handbags.)

Ask them to judge whether these locations are such that a toddler could or could not reach them.

Examples of accessible locations may be:

- the hall table.
- the kitchen work surface.
- your bed.
- on the floor.

Examples of inaccessible locations may include:

- hanging on a coat hook.
- in a high cupboard, such as the top shelf in your wardrobe.
- on top of the wardrobe.

Explain that young children can often move chairs around and then climb and reach things that you think are out of reach.

Exploring what hazardous items are in handbags

This activity may embarrass people – you know them best so can judge how to handle this activity. It can be run anonymously or openly.

The anonymous method

Give everyone the checklist and ask them to tick if they have the various items in the list in their handbag. Note that their names are not required on the checklist.

Collect up the checklists and transfer the information to a flipchart or white-board (or something similar) so that everyone can see that, for example, four people have painkillers, one has prescribed tablets, etc.

The open method

Draw the checklist on a flipchart or white-board.

Ask participants to come and tick the checklist if they have any of the items. (An even more open method is to go around the room and ask people to reveal whether they have any of the items.)

Ask participants whether they have items not listed on the checklist that they think may be hazardous and add these to your flipchart.

Extensions to the activity

Ask participants who else may bring a handbag into the home, or where else children may encounter handbags. Examples will be grandparents, friends and other relatives, including older siblings, who may be visiting. Discuss how you will pass the safety messages on to these people.

Consider what makes objects particularly appealing to young children and whether any of the items listed are child-appealing. Common child-appealing characteristics include objects:

- with bright and shiny colours.
- that have cartoon characters on them.
- shaped like toys.
- that play sounds and music.
- with lights and flames.
- that look like food.

Put the list of hazardous items on your notice board and ask people who did not participate in the activity to check their own handbags and to add items to the list.

Discussion points

Highlight that

- young children explore anything and everything.
- some objects are very attractive to children.
- some young children can open containers that you may think are “childproof”. (See the note about child resistance on page 58).

- young children can sometimes operate lighters and strike matches.
- young children try to copy adult behaviour and also notice where things are being put away.
- young children will be able to climb so potentially harmful products need to be stored out of reach and out of sight.

Further information

Painkillers: Are they in bottles or strip packs? Both are child-resistant but it’s important to remember that up to one child in five can gain access to the pills even when they are in child-resistant packaging.

Contraceptive pills. While not particularly harmful, they are not intended for young children and should be kept secure.

Prescribed tablets. These can be very dangerous, even in small doses, so it’s essential that they are kept away from children. When you are given tablets, ask your pharmacist how dangerous they may be to children and act accordingly.

Lighters and matches can be really dangerous. They can lead to burns if a child manages to strike a match and drops it on to themselves or sets fire to their own clothes, or can lead to house fires. While most disposable lighters are now child-resistant, we know that some children will be able to operate them, and also it is still possible to buy cheap, illegal lighters that are not child-resistant.

Cigarettes. Some children may chew them, even though for adults they may taste horrible. Older young children may try to copy their parents and smoke them!

F-cigarettes. The nicotine that is contained in them is very dangerous - it is highly toxic.

Scissors, tweezers and penknives have sharp points and/or blades that can result in puncture wounds or cuts.

Cosmetics may be harmful and are not intended to be swallowed.

Aerosols may have propellant gases that are flammable or may cause problems if sprayed into children's eyes.

Conclusions

This activity demonstrates that not all safety measures need to involve buying equipment. In this example, changing parental behaviour by putting things away can make a difference.

If equipment is needed, remember that there may be a scheme in your area that provides and fits some items.

Checklist

	Yes	No
Painkillers (aspirin, paracetamol, etc)		
Contraceptive pills		
Tablets prescribed by your doctor		
Lighter		
Matches		
Cigarettes, including e-cigarettes		
Scissors with points		
Scissors without points		
Tweezers		
Penknife		
Cosmetics		
Aerosols (e.g. hair spray)		

Activity 5 – Designing an unsafe kitchen

KEY MESSAGES

- The kitchen is an especially dangerous room because of hot water and appliances, sharp objects, cleaning materials and activities such as carrying hot food around.
- Young children want to be with their parents but they need to be kept away from dangerous situations.
- There are lots of things in the kitchen that may be appealing to young children.

This can be a fun way of thinking about dangers in the kitchen. It can be adapted for other parts of the home.

Relevant injuries

Almost anything can happen in the kitchen, except stair falls and bath drownings. See Section C for background information on poisonings, falls, scalds and fire-related injuries.

Background

This short activity illustrates that the kitchen is the most dangerous room in the home. It has:

- hot water in abundance (in mugs, kettles and saucepans).
- hot oven doors.
- hobs or burners on cookers that can be reached by young children.
- very hot food being carried from the cooker to the table or worktop.
- knives and other sharp utensils in accessible drawers or on worktops when they are being used.
- electric gadgets such as the kettle and food mixer that can be very harmful in the wrong (small) hands.
- cleaning products usually stored under the sink.
- the highchair if this where the baby is fed.
- a tiled, and hence hard, floor that is unforgiving if it is fallen on.
- pills and other medicines may be kept in a cupboard, in the fridge or just left on the worktop.
- cigarettes (including e-cigarettes), matches and lighters may have been left lying around.
- a busy and possibly distracted parent!

Learning objective

To allow parents to identify what in the kitchen may harm a baby or young child.

Equipment

Some sheets of flip chart paper and marker pens, or just pens and paper.

Method

Explain to participants that the kitchen can be a very dangerous room for babies and young children, but don't tell them why it is so dangerous.

Ask participants, working individually, in small groups or as a single group, to write down (or call out) all the features that they can think of that would make a kitchen really dangerous. Either they or you should write down the responses. The list will include everything in the Background section above, possibly plus other items.

Get the participants to identify what ages of children would be associated with each dangerous feature and capture this on the paper.

If time permits, invite participants to suggest solutions to the hazards that have been listed. You can help to complete the list of solutions. The activity still works without this stage as it still makes people think about hazards.

Discussion points

It is not always practical to achieve perfection. Invite participants to consider what should be the key preventive actions.

Some parents, because of financial circumstances, space limitations, the fact that it is a rented property, etc, may not be able to address all of the hazards. Investigate whether there is a safety equipment scheme locally.

Explore how some people may have overcome some of the issues that have been identified. Learning from each other can be an attractive way of presenting advice as it is not seen as officialdom telling people what to do.

Allow parents to visit the kitchen in your setting to see whether they can find any hazards and see how you have addressed them.

Distribute the list of Best Buys, part of Activity 6, and other safety leaflets if you have any.

Conclusion

The kitchen is a popular, yet dangerous, room in the home. Making it safe and keeping it that way can be challenging as it is working space used by everyone. However, some of the hazards are very dangerous so it cannot be neglected. There are lots of low or no cost things that can be done to make a kitchen safer.

Activity 6 – Home safety equipment – what do families need?

KEY MESSAGES

General points

- Many parents may not be able to afford the safety equipment that they need.
- There is a strong association between deprivation and children's accidents.

Research findings

- Home safety education and the provision and fitting of safety equipment **improves** safety behaviours and may reduce injuries.
- Not using a safety gate on stairs **increases** the risk of a fall on stairs and leaving the gate open **increases** the risk even more.
- An overview of the evidence on preventing falls and the analysis of different combinations of falls prevention strategies reveal that the combination of education, low cost or free safety gates, home safety checks and fitting of safety gates is the **most effective way of increasing the possession of a fitted safety gate**.
- The home safety checks and fitting of safety gates as part of the package are particularly important as families receiving both of these components in the package are **much more likely** to have a fitted safety gate than those provided with education or safety gates without the home safety checks and the fitting of safety gates.
- Fitting a thermostatic mixing valve (TMV) and providing education is **much more effective** in reducing bath water temperature to a safe level (one that will not cause serious and rapid injury, usually about 46°C) than education alone or than giving parents thermometers to test their water temperature and lower it if it is too high.
- Families without smoke alarms are **more likely to die in a house fire** than those with smoke alarms.
- **The most effective method** for increasing the number of families with a functional smoke alarm is to educate families, provide and fit free or low cost alarms and do a home safety check. Where fitting smoke alarms and doing home safety checks is not possible, providing education and free or low cost alarms is a cost effective option.
- Providing families with only education about how to prevent poisoning is **less effective** than providing education along with provision of safety equipment (e.g. cupboard locks) and home safety checks.

This activity provides guidance on evidence-based safety equipment for families. Many children's centres and health visiting teams run schemes that provide, and in some cases fit, free or low cost safety equipment, or refer families to schemes run by other agencies. We have produced a resource sheet showing which items of safety equipment have the best evidence and which safety equipment schemes may wish to provide.

It would be wrong to interpret the findings in the box above as meaning that no other safety equipment is effective. These findings come from the *Keeping Children Safe at Home* programme which had limited scope. Other safety equipment may well be effective but without additional research this cannot be stated categorically.

See Section C for further background information on poisonings, falls, scalds and fire-related injuries.

Relevant injuries

This activity is intended to reduce the likelihood of a range of injuries, especially falls, fire-related injuries, poisonings and bath scalds.

Background

Home safety equipment, as outlined in the box above, can help with keeping the home safe. In some areas, there are schemes that provide and often fit home safety equipment for families who cannot afford to buy it themselves. Such schemes:

- benefit from the involvement of a number of organisations and practitioners to handle referrals, auditing families' needs, education, fitting, etc. These can include health visiting teams, fire and rescue services, children's centres, charities such as Home-Start and Care & Repair, social services departments, housing providers, tenants associations, public health departments, etc.
- because of the need for multi-agency involvement, require good leadership, a clear strategy, and recognition by all concerned of what their roles are.
- need to have several components to be effective – they are not just about supplying equipment. They need to be a combination of selection of equipment, training for staff, an education package for both staff and parents, auditing home safety to identify the equipment needed and any fitting issues, a fitting service, resources to reinforce the importance of using the equipment correctly, etc.
- can be expensive to operate as they rely on the purchase of new equipment, but will be good value for money because of their effectiveness.
- should be directed to help those in greatest financial need who may not be able to afford safety equipment themselves. It is well established that children from the most disadvantaged families are at greatest risk of death and injuries from accidents.

Learning objectives

Families learn which items of safety equipment are most effective and the cost and local availability of them.

Families will have considered the barriers to having safety equipment and how they might overcome them, e.g. cost, fitting, landlords, nuisance, etc.

They will have learnt important home safety issues.

Equipment

Flipchart or whiteboard and marker pens. Write three headings: babies, crawlers, young children.

Sticky dots for voting.

Method

Outline the potential benefits of having safety equipment and explain that you want to hear parents' views about such equipment and their experiences of using it.

Stage 1

Ask parents to identify the safety equipment that they think would help them make their homes safer. Get them to write their ideas on the flipcharts under one or more of the headings.

When all the ideas have been exhausted, ask them why they have included some of the items, especially the ones that are unusual.

The following items may be listed, although those marked with crosses may be omitted as they are not common:

- Bath seats
- Bed guards
- X Blind cord safety devices
- Fireguards
- Hair straightener insulating bags
- Highchair harnesses
- X Lockable medicine cupboards
- Safety gates
- X Carbon monoxide (CO) alarms
- Corner protectors
- Drawer and cupboard locks
- Smoke alarms
- Socket covers
- X Thermostatic mixing valves (TMVs)
- X Walking reins
- Window locks

If you feel that there are important items missing, prompt the parents to think about them. Have a look at the list of “Best Buys” at the end of this activity. Most of the items in the “Best Buys” list are based on evidence of effectiveness and need in that they address accidents that are frequent and/or serious.

Give each person five sticky dots and ask them to place one next to each item that they think are most important. (If you don’t have any sticky dots, just ask them to put a cross with a pen next to the five most important items.)

Give each person three more sticky dots and ask people to choose which ones they would buy if they could only afford three items.

Discuss what has emerged from the voting.

Stage 2

During our research, parents have identified barriers to having safety equipment or using it properly, including the size and layout of the property, other children in the household, and landlords who do not allow safety equipment to be installed.

Ask people to say what they think makes it difficult for families to get and to use safety equipment (ask about families in general, not the people in the group in particular). Write the barriers on the flip chart or white board.

Brainstorm ideas for how families might overcome these barriers and what people in the group have done themselves. This might include:

- getting referred to schemes that provide and fit safety equipment (and discuss eligibility if there is one in your area).
- asking advice about how to get safety equipment from health visiting teams, children’s centre staff, voluntary organisations etc.

- asking the landlord, housing association or council to repair the property or fit safety equipment; or asking the health visitor, children’s centre staff or voluntary organisations to do this on behalf of parents.
- getting advice from Citizens Advice if families think their house is unsafe and the landlord will not make the necessary changes and people in the group may have come up with some other innovative solutions.

If you feel it appropriate – you know your client group – discuss whether people would be able to buy some items of safety equipment. Discuss where people can buy safety equipment locally and the approximate cost of safety equipment using the “Best Buys” table below.

Discussion points

Some of the items on the equipment list are of dubious value or may even add to risks.

- Electrocutation at sockets is extremely rare because of the way that sockets are designed. It is a popular tale that young children push things like knitting needles into sockets – they don’t or if they do the risk of electrocution is minimal. The only possible value to socket covers is that they may prevent children plugging in some appliances such as the iron, electric fire or hair straighteners. The better way of preventing this from happening is to put things away!

The other problem with socket covers is that some are so poorly designed and made that they can actually make matters worse because they can be inserted upside down, thus opening the safety shutters that are inside the socket and revealing the live terminals.

- Bath seats are not safety products. They can create a false sense of security and may mean that a parent is tempted to leave a baby unattended in the bath, even if only briefly to answer the phone or door or fetch something like a towel that has been forgotten. This can be fatal. Babies may be able to tip bath seats or squirm out. Drowning happens very quickly and is silent.
- There is no evidence that corner protectors make a difference.
- Fireguards are not just needed on open fires. They are also needed around gas and electric fires to stop unsteady young children falling against the hot parts and stop things being dropped into the fire. Open coal or wood fires need spark guards to stop sparks spitting on to the carpet.
- As other activities have explained, smoke alarms are needed on each floor of the home.
- Lockable medicine cupboards are not easy to find. There are alternatives to using such a cupboard, such as ensuring that medicines are kept out of sight and out of reach (above adult eye height, ideally in a locked cupboard or drawer).

Keep medicines in the fridge?

Some medicines say “Keep this in a cool place” but does that mean in the fridge?

Always check with the pharmacist if a medicine MUST be kept in the fridge as most do not.

It is better not to keep medicines in the fridge if they don't need to be there as things in the fridge are intended to be eaten.

If they do need to be kept in the fridge make sure the bottle is correctly closed and they are stored as far out of reach as possible for a child.

Conclusions

Not all items of safety equipment have good evidence to support their use. The items with the best evidence are smoke alarms, thermostatic mixing valves, safety gates and cupboard locks. Other items may be effective but research does not currently confirm this.

Safety equipment schemes are effective in increasing the use of safety equipment, especially when combined with home safety education.

Families who meet the eligibility criteria for safety equipment schemes should be offered referral to the scheme. Families who don't meet the criteria should be offered advice about evidence-based items of safety equipment, how much these cost and where they can be bought locally.

“Best buys” – Key safety products

The table below shows products that can make a big difference to the safety of babies and young children and at what ages and stages of development they matters. (The equipment is important for the ages and stages of development shown by shaded cells.)

Some of the recommendations arise from the *Keeping Children Safe at Home* programme, others do not because they fell outside the scope of the programme. Further, some recommendations are based on solid evidence while others are not, although this does not mean that they are ineffective.

It is important to remember that safety equipment is not the be all and end all when it comes to keeping children safe. Changes in family practices, such as not placing hot drinks on low coffee tables or the arm of the chair, are also very important.

The ages and developmental stages shown in the table on page 38 are for guidance. Some of these characteristics are when a child may start to do something, not just the period during which it matters.

Not all children do the same things at the same age so some may need equipment sooner than others. The best approach is to anticipate when it may be needed and put it in place too soon rather than after the accident has occurred.

The approximate cost of each product, including the cost of installation if this is relevant, is provided for guidance.

In some areas, safety equipment schemes provide and fit some items of equipment for families who may not be able to afford them. Health visitors and children's centres often know if there is a scheme in your area and who to contact for help and advice.

The products in the table on page 38 are all important but the earlier items can prevent fatal and very serious injuries. Some products, especially the smoke and CO alarms and TMVs, can benefit all members of the family, not just young children.

	Approx cost •	Birth – 6 months	6 months – 12 months	12 months – 18 months	18 months – 2 years	2 years – 3 years	3 years onwards
Gross motor skills		Rolling and wriggling	Shuffling, crawling and may start to walk	Walking and starting to climb	Walking, running unsteadily and climbing Can move large objects	Walking, running and climbing	
Fine motor skills		May wave arms around	Plays with toys and small objects	Starts to open containers Can operate knobs and switches			May open child-resistant containers, operate lighters, strike matches
Exploratory behaviours				Puts objects in mouth to explore			Wants to help and copy adults
Smoke alarms	££ - £££*						
CO alarms	£££						
Thermostatic mixing valve (TMV)	££££						
Blind cord safety devices	£						
Fireguards	£££						
Safety gates	£££					*	*
Child-resistant window locks	££						
Insulated bags for hair straighteners	££						
Child-resistant cupboard and drawer locks	£						

• £ = less than £5 ££ = £5 - £10 £££ = £10 - £25 ££££ = The only item with this symbol is the TMV. The cost of purchasing and installing a TMV is approximately £100 and needs to be done by a plumber

* Smoke alarms can be purchased for less than £10 but these need their batteries replacing annually. Alarms with a 10-year battery life and a battery that cannot be removed so it will always work cost about £20.

* Safety gates are only suitable on stairs until a child is aged 24 months, even though we know that children are not able to use stairs safely after this age. The reason for this age limit relates to the way that gates are tested and the relevant standard. If you advise parents to use gates on stairs after this age and a child climbs over or dislodges the gate and falls down the stairs, there may be liability issues. If a gate is used across the kitchen or another door, the consequences of the gate not providing complete protection may be less.

FALLS PREVENTION ACTIVITY

Activity 7 – Preventing falls – more than just using safety gates!

KEY MESSAGES

General points

- Falling over is inevitable as babies and young children learn to walk and run. The challenge is to minimise the serious injuries from falls.
 - Falls from relatively low heights can result in serious injuries, including head injuries and limb fractures.
 - Some babies will be able to climb when they become able to crawl. They do not have to be able to walk before they can climb.
 - The focus has to be on preventing falls from heights, such as down stairs, out of windows, from furniture, off kitchen work surfaces and from highchairs.
 - Babies' and young children's movements – wriggling, rolling, fidgeting, climbing, etc – can result in falls from beds, changing tables, work tops, tables and highchairs.
- ##### Research findings
- Not using a safety gate on stairs **increases** the risk of a fall on stairs and, unsurprisingly, leaving the gate open **increases** the risk even more.
 - Carpeted stairs **reduce** fall injuries.
 - Changing nappies on raised surfaces (e.g. changing tables, beds etc) means that the children are **more likely to need to go to hospital following a fall** compared with those whose nappies are not changed on raised surfaces.
 - Leaving babies unattended on raised surfaces (e.g. bed, sofa), even for a moment, **greatly increases** the risk of falls
 - Babies under 1 year from families who place car or bouncing seats on raised surfaces (e.g. worktops, tables etc) were **more likely to need to go to hospital** because of a fall from furniture than those who don't place car or bouncing seats on raised surfaces.
 - Children under 5 years from families without safety gates across doorways are **slightly more likely to need to go to hospital** because of a fall from furniture (e.g. beds, sofas, chairs etc) that they can access than those in families who do use safety gates.
 - Children aged 3-5 years who climbed or played on furniture more often were **very much more likely to need to go to hospital** because of a fall from furniture than those who climbed or played on furniture less often.
 - Children under 5 years who were taught not to climb on objects in the kitchen were **less likely to need to go to hospital** because of a fall from furniture than children who were not taught about this.
 - Interventions including education, low cost or free safety gates, home safety checks and fitting of safety gates were the most effective in increasing the possession of a fitted safety gate. Families receiving interventions containing all of these components were **very much more likely to have a fitted safety gate** compared to families who received no special treatment, just what is termed "usual care". Actually fitting safety gates was particularly important as families receiving this part of the intervention were **much more likely to have a fitted safety gate** than those just provided with education or safety gates or home safety checks, or any combination of these.

Some parts of this activity, especially those concerning safety gates, overlap with those covered in Activity 6 – Home safety equipment – what do parents need? That activity focused on home safety equipment to address a variety of accidents. This one concentrates on educating parents about falls prevention generally – the use of safety gates in various locations, changing parenting practices and understanding relevant aspects of child development. See Section C for further background information on falls.

Relevant injuries

Falls can be very serious. In simple terms, the higher the fall, the more serious the consequences are likely to be. Falls are the most common cause of injury-related admission to hospital and A&E attendances.

Each year, a handful of children die as a result of falls from heights, often from windows or balconies. But even a fall from what may seem like a relatively low height such as from a highchair or off a table can lead to prolonged hospital treatment.

Head and brain injuries can have long-lasting and occasionally disabling consequences. Limb fractures are another result of falls.

Background

As can be seen from the evidence, some practices are more likely to lead to injuries from falls from furniture than others. The challenge is how to get families to change their safety behaviours.

Some of the behaviours reveal a lack of understanding of the ways that children develop, notably how babies and young children move around, such as rolling and wriggling off raised surfaces. These general issues are covered in Activity 1 – Exploring child development.

This activity concentrates on getting parents to think about the consequences of some of their everyday actions as they relate to falls – changing nappies, putting the baby where he or she can see them, etc – and the usefulness of safety gates in preventing more than just falls on stairs.

It is important not to make people feel guilty about their own behaviour by simply asking them where they place their children and what they allow them to do. The method below aims to prevent this and allows parents to think constructively.

Learning objective

Parents should understand the potential consequences of placing children on raised surfaces and the beneficial effects of safety gates.

Equipment

Drawings or photographs of different parts of the home: a kitchen (with a table and worktops), living room (with a sofa), bedroom (with a normal height bed and a changing table) and circulation spaces (hall, stairs, landing, balcony, etc).

A flipchart or whiteboard and marker pens.

Method

How this activity is run depends slightly on the ages of the children in your group of parents (or of the individual parent).

Split the group up into four subgroups.

Give each subgroup one of the illustrations and ask them to discuss where they think a child of an age that you choose may fall from. Ask them to jot down each location that they identify.

Move the illustrations around so that eventually each subgroup has discussed each situation.

Ask one subgroup to report where they thought a child may fall from in one of the areas. Record the responses on a flipchart or whiteboard. Ask other subgroups to add to the list. Do this for all areas of the home rooms.

Discussion points

With regard to actual fall injury events, 11 out of 16 interviewed parents were not visually supervising their child at the time of the injury. Five were visually supervising but four of them did not anticipate the injury.

Conclusion from KCS interview with parents

The participants should identify at least the following possible fall locations (including some that are not furniture-related):

- Kitchen:
 - Table
 - Worktop
 - Washing machine
 - Highchair
- Living room:
 - Sofa
 - Chairs
 - Table
- Bedroom:
 - Bed
 - Bunk bed
 - Changing table
 - Chest of drawers
 - Window (could apply to any room but the bedroom may present a special risk because children may be unsupervised there. If it's upstairs, the injuries are likely to be more serious than those resulting from a fall from a ground floor window)
- Circulation spaces:
 - Stairs
 - Through or over landing banisters
 - Communal stairs
 - Balcony (within the home and in communal areas)

Highlight the fact that the participants have identified many places that cannot apparently be protected by safety gates. Ask participants to suggest different preventive approaches: changing where they place or leave children, supervision, teaching "rules", and restricting access (including using gates).

If necessary, provoke discussion by asking why a baby may fall off a worktop or table (because their baby car seat or bouncing cradle has been placed there), or how a baby may fall off a bed or changing table (because they can wriggle and roll and have been left unattended). The discussion could be extended to consider what parents think of as "unattended". Does it mean within arm's reach, the same room, within hearing range or what?

If the group has children who are active (old enough to climb), ask them what their children enjoy climbing on when playing. They are likely to say chairs and other items of furniture. If they say bunk beds, remind them that the higher a child falls, the worse the injuries will be. Discuss how you can deter this behaviour – restricting access to the furniture through the use of a safety gate across the doorway is one solution if the children are under 24 months (see page 61 for a consideration of the use of safety gates with by older children).

Consider where safety gates may be useful. The obvious answer is to restrict access to stairs – they are often (wrongly) called "stair gates". They can also be placed across doors to prevent access to rooms where children may be able to climb on furniture, reach hot substances in the kitchen, etc.

In the context of restricting access to stairs, discuss where the gate at the top of the stairs should be placed – see the box on page 61 for advice on this. Also, ask whether among participants who have gates all members of the family always close them – gates left open are useless!

Discuss the need for teaching young children "rules" about not climbing on furniture and not placing babies on raised surfaces, but emphasise the fact that young children cannot be relied upon you follow rules, even though they may appear to understand them.

Recap on the fact that babies will move if left unattended – this may not be happening one day but as they develop rapidly they may catch you out by wriggling off something next day. And remind your audience that young children will climb on anything that they can access when playing. (We want to encourage activity but make it safe.) You could present the facts outlined in the evidence section above to illustrate the significance of the issue.

Conclusions

Falls are common accidents and can result in very serious injuries, even when falling from what may appear to be a low level.

SCALD PREVENTION ACTIVITIES

Activity 8 – How far does a hot drink spread?

KEY MESSAGES

General points

- Scalds, as with all burns, can be very serious injuries, requiring prolonged hospital treatment and long-term disfigurement.
- The more liquid involved and the hotter that it is, the more serious the burn can be so kettles and saucepans must be kept out of reach.
- Babies and young children should always be supervised when you run a bath and when in the bath to ensure that they don't play with the hot tap.
- It is natural child behaviour to try to grab items, such as mugs, and for babies to wave their arms around running the risk of knocking mugs that you may be holding.
- Even a mug of liquid can cover a large area of a baby's body. The hot liquid can soak into the baby's clothes.
- A hot drink can be hot enough to burn 15 minutes after it is made.
- Appropriate first aid can make a major difference to the long-term consequences of scalds.

Research findings

- Educating parents as part of wider home safety programmes **makes a difference**.
- Leaving a hot drink within reach of a child **greatly increases** the likelihood of a scald.
- Teaching children what not to do when cooking or using the kettle **reduces** the risk of scalding.
- Teaching children not to climb on things in the kitchen **reduces** the risk of scalding.

This activity is based on one contained in the Child Accident Prevention Trust training resource *Preventing accidents. Session plans for parents and carers groups*.

See Section C for further background information on scalds.

Relevant injuries

This activity addresses scalds from hot drinks.

Background

Scalds from hot drinks are very common injuries to babies and young children. They can be very serious, requiring prolonged treatment.

They occur as a result of normal childhood behaviour. Activity 1 - Exploring child development and Activity 2 – What is appealing to children but may harm them? are closely linked with this activity as they allow the general aspects of child development and child-appealing items to be explored.

There are three classic scenarios for hot drink scalds:

- A baby is held on the lap while the carer is having a hot drink. The baby waves his or her arms around and knocks the drink over themselves.
- A hot drink is passed over a baby or toddler and is spilt over them.

- A mobile baby or toddler, one who can at least crawl, is able to grab a drink that has been left on a low surface such as a coffee table or the arm of a chair.

This vivid demonstration shows that even a relatively small quantity of liquid – a mug may contain 200-300 ml, about half a pint – can spread over a large area of a baby or toddler. It can be the equivalent of pouring a bucket of water over an adult.

An aspect of child development that is probably not understood is that a baby's skin is just one-fifteenth the thickness of an adult's so a burn can be very serious.

If you have the opportunity, run first aid training relevant to children's needs – typically burns, poisoning, head injuries and choking. Appropriate and timely first aid can make a major difference to the long-term consequences of a scald.

Learning objective

To illustrate the extent of a scald from a mug of liquid.

Equipment

A baby-sized doll, dressed in a babygro.

A mug of liquid, ideally containing a coloured liquid such as blackcurrant juice.

A bouncing cradle.

A large plastic sheet (or undertake the demonstration outside so that spill does not matter).

Method

Explain the way that babies naturally behave, waving their arms around, fidgeting, etc when they are sitting on a lap. This behaviour could be identified through a brief discussion session.

Put the doll into the bouncing cradle.

Throw the mug of liquid over the doll.

Note how extensive the stain is (and the fact that the baby is sitting in a pool of liquid).

Discussion points

Discuss the other scenarios that could lead to a mug of liquid being spilled over a baby. One possible situation is when you are carrying a hot drink from a coffee shop – the lid may be insecure and the drink may be very hot. (Some pushchairs have drink holders on their handles so the drink is naturally very close to the baby.)

Consider why babies may try and grab a mug. It may be related to the child-appealing nature of the mug – be colourful, have cartoon characters on it, etc.

Use the opportunity to talk about child development, adult behaviour, and the need to anticipate children's behaviour.

Initiate a conversation about first aid as this can make a major difference to the treatment and recovery from burns. Consider whether families would like you to organise first aid sessions.

Conclusions

This dramatic demonstration creates a good opportunity to talk about what can be a very serious injury with potentially long-term consequences, closely linked to child development.

Activity 9 – How long does a hot drink stay hot?

KEY MESSAGES

General points

- Scalds, as with all burns, can be very serious injuries, requiring prolonged hospital treatment and long-term disfigurement.
- The more liquid involved and the hotter that it is, the more serious the burn can be so kettles and saucepans must be kept out of reach.
- Babies and young children should always be supervised when you run a bath and when in the bath to ensure that they don't play with the hot tap.
- It is natural child behaviour to try to grab items, such as mugs, and for babies to wave their arms around running the risk of knocking mugs that you may be holding.

- Even a mug of liquid can cover a large area of a baby's body. The hot liquid can soak into the baby's clothes.
- A hot drink can be hot enough to burn 15 minutes after it is made.
- Appropriate first aid can make a major difference to the long-term consequences of scalds.

Research findings

- Educating parents as part of wider home safety programmes **makes a difference**.
- Leaving a hot drink within reach of a child **greatly increases** the likelihood of a scald.
- Teaching children not to climb on things in the kitchen **reduces** the risk of scalding.

Relevant injuries

This activity addresses scalds from hot drinks.

Background

Scalds from hot drinks are very common injuries to babies and young children. They can be very serious, requiring prolonged treatment.

They occur as a result of normal childhood behaviour.

Activity 1 - Exploring child development and Activity 2 – What is appealing to children but may harm them? are closely linked with this activity as they allow the general aspects of child development and child-appealing items to be explored.

There are three classic scenarios for hot drink scalds:

- A baby is held on the lap while the carer is having a hot drink. The baby waves his or her arms around and knocks the drink over themselves.
- A hot drink is passed over a baby or toddler and is spilt over them
- A mobile baby or toddler, one who can at least crawl, is able to grab a drink that has been left on a low surface such as a coffee table or the arm of a chair.

This demonstration shows that hot drinks can stay hot enough to burn a baby long after it is made.

Hot liquids can cause burns down to about 50°C. This temperature will feel hot, but not intolerably so, to an adult. For a child it would be very uncomfortable. The table below shows the approximate relationship between water temperature and the time it takes to cause a third degree, i.e. full thickness, burn.

An aspect of child development that is probably not understood is that a baby's skin is just one-fifteenth the thickness of an adult's so a burn can be very serious.

If you have the opportunity, run first aid training relevant to children's needs – typically burns, poisoning, head injuries and choking. Appropriate and timely first aid can make a major difference to the long-term consequences of a scald.

Learning objective

To illustrate that hot drinks stay hot long after they have been made.

Equipment

A couple of freshly-made hot drinks, one with cold milk added and another without milk.

A thermometer capable of reading between 50°C and 100°C. A cooking thermometer may be suitable.

A flipchart or white board and a marker pen. A stopwatch (or just a wristwatch).

If you can produce it, a large print copy of the table below. Alternatively, just copy the values on to a piece of flipchart paper.

A trivial prize!

Method

Ask everyone to guess how long it will take a freshly made hot drink to cool to 50°C.

As soon as the drink is made, get someone to measure its temperature. Note this down on the flipchart or whiteboard. Repeat the measurement every minute until the temperature is down to below 50°C, noting the time and the temperature as you go along.

You could also get someone to take a sip of another drink made at the same time – note down the time when it becomes comfortable to drink.

(For information, a cup of coffee from a coffee shop may be served at up to 85°C.)

Compare the time-temperature table with the one opposite.

Give the prize to whoever made the best guess.

Discussion points

You will find that it will take about 15 minutes for a drink to cool to a temperature that will not cause rapid and serious burns to a child. Remember that this time will depend on the insulating properties of the mug – a well-insulated mug may take much longer.

Discuss the consequences of the time to cool to a safe temperature – it will be far longer than people expect – such as where freshly-made hot drinks should be placed.

Initiate a conversation about first aid as this can make a major difference to the treatment and recovery from burns. Consider whether families would like you to organise first aid sessions.

Conclusions

Hot drinks can scald long after they are made. People do not appreciate this.

You can use this activity to justify rules you may have set for keeping children away from hot drinks in your

Time for a third degree (full thickness) burn to occur in a child

°C	Time
40	(Safe for bathing)
49	5 min
52	2 min
54	10 sec
60	3 sec
64	2 sec
68	1 sec

FIRE SAFETY ACTIVITIES

Activity 10 – The importance of smoke alarms

KEY MESSAGES

General points

- Over half of house fires that the fire and rescue services attend DO NOT have a working smoke alarm, despite the fact that well over 80% of homes have smoke alarms.
- When smoke alarms raise the alarm, dwelling fires are discovered more rapidly (less than 5 minutes) after ignition and are associated with lower fatal casualty rates.
- There should be a smoke alarm on every level of the home.
- Check that the alarm is working every week by pressing the test button until the alarm sounds.
- Replace the battery every year (unless it's a ten-year alarm or is wired into the electric mains).
- If the alarm keeps going off when there is no fire, ask the local fire and rescue service for advice.
- House fires are a significant cause of death in pre-school children, particularly in families living in more deprived conditions.

Research findings

- Families with working smoke alarms are **less likely to die** in a house fire than families without smoke alarms.
- There is **strong evidence** to suggest that home fire safety fire checks reduce domestic fires and related injuries. Children's centres and others can refer families to their local fire and rescue service for such checks.
- The **most effective** method for increasing the number of families with a functional smoke alarm is to educate families, provide and fit free or low cost alarms and do a home safety check. Where fitting smoke alarms and doing home safety checks is not possible, providing education and free or low cost alarms is a cost effective option.

Relevant injuries

This activity is intended to reduce the likelihood of deaths and injuries from house fires.

Background

This activity is about ensuring that families benefit from one of the most effective tools to prevent death and injury in house fires – the smoke alarm.

It tests people's knowledge of house fires and leads them to realise the importance of having correctly functioning, appropriately located, regularly tested smoke alarms. It also touches on the needs of people with hearing difficulties.

Ownership of smoke alarms in the UK is very high – approaching 90 percent – thanks largely to initiatives that fire and rescue services (FRS) have run for several years, providing and fitting smoke alarms in homes. However, ownership rates vary, depending on such factors of whether there is a smoker in the home and the degree of poverty – in both of these situations ownership rates are lower than the average.

There is strong evidence that functioning smoke alarms are a real life-saver in the event of a house fire. They provide extra crucial seconds of warning that there is a fire. It is not an exaggeration to say that they can make the difference between living and dying.

But simply having a smoke alarm is not enough. They have to be working correctly – the only way to ensure that this is the case is for the family to test them regularly. A smoke alarm that doesn't work for whatever reason, the most common being that the batteries have been removed, is not a smoke alarm – it's a piece of plastic attached to the ceiling that gives a completely false sense of security.

This activity links closely with Activity 6, which is about safety equipment, including smoke alarms.

Information snippet

House fires in which smoke alarms raise the alarm:

- are discovered more rapidly after ignition.
- are associated with lower fatal casualty rates.
- cause less damage as they are more often confined to the item first ignited.

Casualty rates are significantly higher during the night. These higher rates probably reflect the fact that the casualties are not aware of the fire as quickly.

Learning objective

To highlight the importance of having smoke alarms and ensuring that they are working correctly.

Equipment needed

Enough copies of the *Fire Safety Quiz Sheet* on page 49 for people to work in groups of two or three and a supply of pens or pencils. Alternatively, if you run the quiz as a single group activity, the questions could be on a series of pre-prepared flipcharts.

Enough copies of *Information sheet - All about smoke alarms* on page 50 so that everyone can take a copy home. Your FRS may have a leaflet that presents the same information more attractively.

Having a smoke alarm as a visual aid is useful and fun. Make sure it works by pressing the test button!

A small, fun prize for anyone who gets all the quiz answers correct.

Method

Hand out the quiz sheets and invite participants to spend a few minutes answering the questions. (If the group has reading problems, the questions could be read out and answered with a show of hands.)

When everyone has completed the quiz sheet, tell participants what the correct answers are.

Use any incorrect answers as discussion leaders so that people understand why the correct answers are what they are.

If you are concerned that using the quiz in a group session may embarrass some of your audience by revealing their ignorance, you could use the quiz sheet as part of a feature on smoke alarms, using it as a display item with the correct answers highlighted.

Discussion points

"Fire safety quiz - we just got parents talking about it and thinking about it. It just got parents talking about it and they were interested in questions and activities around it."

"There was a lot of discussion around the group because some parents have said 'oh no, that I wouldn't do that' and others would say 'but if you didn't do that then what would happen?' And so they were already problem-solving themselves"

Comment from a children's centre worker on the first edition of the Injury Prevention Briefing

It's possible that some people may say that because they live in privately-rented accommodation, they are not allowed to fix anything to the walls or ceiling, or they are afraid that they will lose their deposit if they do so. (This is not usually an issue for people living in social housing.) Unless the building is a so-called house in multiple occupation, a landlord doesn't have to comply with any specific laws but has a general duty to keep a home fit to live in.

If a tenant doesn't think their accommodation is fire safe, the first step should always be to try negotiating with the landlord. They may be prepared to provide fire safety precautions, such as a smoke alarm, if requested.

If the problem is caused by disrepair (for example, loose wiring or a faulty electrical heater) the landlord is probably responsible for getting the necessary repairs done. The fire prevention officer at your local FRS may be able to give further advice on this topic.

If someone has a smoke alarm that keeps going off, the FRS will be able to advise on the best solution. It may mean changing the type of alarm or moving it.

Conclusions

When all the questions have been dealt with, emphasise the importance of:

- having a working smoke alarm – they save lives.
- having the right number of smoke alarms – one on each floor.
- making sure that they are checked frequently – at least once a week.
- replacing batteries each year (unless it is an alarm with a ten year battery life or is connected to the mains electricity).
- replacing the whole alarm every ten years because the sensor may deteriorate over time.

If any members of your group do not have smoke alarms, speak to the fire prevention staff at the local FRS and let your families know what the FRS can do for them. They may well be able to provide and fit them free of charge.

If there is a scheme to provide free or low cost home safety equipment in your area, it may provide smoke alarms free or at reduced prices. (See Activity 6)

Give everyone a copy of *Information sheet - All about smoke alarms* to take home. You may find that your local FRS has a leaflet that covers the topics more attractively than this information sheet.

FIRE SAFETY QUIZ SHEET

1. Fire is one of the biggest killers of children in the home.
True U False U
2. You're more likely to be killed by a daytime fire than one that starts at night.
True U False U
3. Adults will be woken by the noise that a house fire makes so they don't need a smoke alarm.
True U False U
4. The battery in a smoke alarm needs to be checked once a year.
True U False U
5. In a house fire, you're more likely to die from the flames than from breathing in smoke.
True U False U
6. You should have a smoke alarm on every floor of your house, upstairs as well as downstairs, to wake you up if there is a fire.
True U False U
7. Cigarettes, matches and lighters are the biggest cause of house fires where people die.
True U False U
8. Smokers are more likely to own smoke alarms than non-smokers.
True U False U
9. Some smoke alarms are 'toast-proof'. They recognise burning toast and don't go off when they 'smell' it burning.
True U False U
10. Children often sleep more deeply than grown-ups and find it harder to wake up quickly if a smoke alarm goes off.
True U False U

FIRE SAFETY QUIZ ANSWERS

1. **True.** Although deaths from house fires have fallen dramatically in recent years, largely thanks to the widespread ownership of smoke alarms, significant numbers of children (and adults) die in fires each year.
2. **False.** Most fires in which people die are at night when you become aware of the fire later because you are asleep.
3. **False.** If a fire is just smouldering, as it may be if a cigarette has fallen down the side of the sofa, it will make no noise. It may, however, be giving off poisonous smoke that will kill.
4. **False.** The battery needs to be checked every week, not every year. It's usually easy to test the battery – there will usually be a button on the alarm that you press and the alarm sounds. If it makes no noise, the battery should be replaced immediately.
5. **False.** It's the poisonous smoke that kills people in house fires, not the flames. A few deep breaths of smoke is enough to kill or incapacitate you.
6. **True.** The more alarms you have, the safer you'll be. As a minimum, you should have one on each floor. However, if you have only one alarm and two floors, put it somewhere you'll be able to hear it when you're asleep, such as on the landing outside the bedroom. If you have a TV or other large electrical appliance (such as a computer) in any of the bedrooms, you should fit a smoke alarm there too.
7. **True.** Make sure that cigarettes are completely extinguished before going to bed and that matches and lighters are stored so that children cannot get at them.
8. **False.** In fact, it's the other way round. The latest designs of smoke alarms are not activated by cigarette smoke.
9. **True.** Optical alarms are good at detecting slow burning fires, as opposed to those that produce a lot of flames, and are less likely to go off accidentally and so are best for ground-floor hallways and for homes on one level. (They don't actually "smell" the smoke!)
10. **True.** This reinforces the need for alarms to be close to bedrooms to improve the chances of their waking the children as well as the adults.

INFORMATION SHEET – ALL ABOUT SMOKE ALARMS

- You are more likely to die in a fire at home if you haven't got a smoke alarm.
- A smoke alarm is the easiest way to alert you to the danger of fire, giving you precious time to escape.
- They are cheap, easy to get hold of and easy to fit.
- Look at the booklet *Fire safety in the home*, downloadable from <https://www.gov.uk/government/publications/fire-safety-in-the-home> for further information.

How many smoke alarms do you need?

The more alarms you have, the safer you'll be. At minimum you should have one on each floor. However, if you have only one alarm and two floors, put it somewhere you'll be able to hear it when you're asleep.

If you have a TV or other large electrical appliance (such as a computer) in any of the bedrooms, you should fit a smoke alarm there too.

Installing your smoke alarm

Many fire and rescue services in England offer free home fire safety checks. This involves firefighters visiting your home and offering fire safety advice for you and your household. They may be able to install your smoke alarm for free.

It usually takes a few minutes to install your smoke alarm yourself - just follow the manufacturer's instructions that come with it.

The best place for your smoke alarm is on the ceiling, near or at the middle of the room or hall. The alarm should be at least 30cm (one foot) away from a wall or light.

If it is difficult for you to fit your smoke alarm yourself, ask a family member or friend to help you, or contact your local fire service.

Choosing a smoke alarm

There are two types of smoke alarm:

Ionisation alarms

These are the cheapest and most readily available and are very sensitive to flaming fires (ones that burn fiercely such as chip-pan fires). Ionisation alarms will detect flaming fires before the smoke gets too thick.

Optical alarms

These are more expensive and more effective at detecting slow-burning fires (such as smouldering foam-filled furniture or overheated wiring). Optical alarms are less likely to go off accidentally and so are best for ground-floor hallways and for homes on one level.

For the best protection, you should install one of each. However, if you can't have both, it's still safer to have either one, rather than none at all.

Whichever model you choose, you should make sure that it meets the standard BS EN 14604:2005 and ideally also carries the British Standard Kitemark or the LPCB symbol. Your local Fire and Rescue Service will help you decide which is best for your circumstances if you would like some advice.

The different models available

A lot of people forget to check their smoke alarms, so the best choice of power supply is usually the one that lasts longest.

Standard-battery alarms

An 'ionisation battery alarm' is the cheapest and most basic smoke alarm available. An 'optical battery alarm' is a little more expensive. Both run off 9-volt batteries.

Battery alarms with an emergency light

These come fitted with an emergency light which comes on when the alarm is triggered. They are particularly suitable if someone in your house has hearing difficulties.

Alarms with 10-year batteries

These are slightly more expensive, but you save on the cost of replacing batteries. They are available as ionisation or optical alarms and are fitted with a long-life lithium battery or a sealed power pack that lasts for 10 years.

Models with a 'hush' or 'silence' button

Some models are available with a 'hush' button which will silence the alarm for a short time. This can be used when cooking, for example. If there is a real fire, giving off lots of smoke, the hush system is overridden and the alarm sounds. These models will continue to remind you they have been silenced by 'chirping' or by displaying a red light.

Mains-powered alarms

These are powered by your home's electricity supply and need to be installed by qualified electricians. There's no battery to check, although they are available with battery back-up in case of a power cut.

Interconnecting or linked alarms

Some alarms can be connected to each other so that when one senses smoke, all the alarms in the property sound. They are useful for people with hearing difficulties and also in larger homes.

Mains-powered alarm with strobe light and vibrating pad

These are designed for people who are deaf or have hearing difficulties. If there's a fire, the alarm alerts you with a flashing light and vibrating pad (which is placed beneath your pillow).

Mains-powered alarm which plugs into a light socket

This type of alarm uses a rechargeable battery that charges up when the light is switched on. It lasts for 10 years and can be silenced or tested by the light switch.

Maintaining your smoke alarm

To keep your smoke alarm in good working order, you should:

- test it once a week, by pressing the test button until the alarm sounds.
- if it has a battery, change the battery once a year (unless it's an alarm with a ten-year battery).
- replace the smoke alarm every ten years because the detector mechanism in the alarm becomes less effective over time.

Activity 11 – A family fire escape plan

KEY MESSAGES

General points

- Family fire escape plans should cover the following issues:
 - Know what the smoke alarm sounds like so it does not come as a complete surprise to them. They should know what sound it makes from testing it regularly.
 - Have a torch next to the bed.
 - Be aware that the children may be hiding in their bedroom because they are frightened. Don't assume that if you cannot see them they have already escaped. Be prepared to look under the bed, in the wardrobe and anywhere else they could hide.
 - Leave the front door key on a hook near the door, out of the reach of young children and not accessible to someone reaching through the letter box.
 - Make sure that the stairs and the hall are clear of clutter that could slow you down.
- Think about a second escape route if the primary one – usually down the stairs and out of the front or back door – is not usable.
- Make sure that the key for the window locks is accessible to you, probably on a hook near the window, but not accessible to the children.

Research findings

- A major review of the home safety literature tells us that education is **effective** in increasing the proportion of families with a fire escape plan.
- While **less than half** of families in our study had a family fire escape plan, most had discussed this with other adults in the house. However, most of those with a plan had not practised it and did not have a backup plan in case they were unable to use their first plan for some reason.

Relevant injuries

This activity is intended to reduce the likelihood of deaths and injuries from house fires.

Background

Families are invited to identify the issues they may have to address in developing their own fire escape plan and hence develop a plan that is relevant to their own home and family circumstances.

Having a fire escape plan may make a difference to the chances of being killed or injured when a house fire occurs, so this is a very important activity to run.

'I think they focused your thinking. For instance, the escape plans were on some of the sessions where we actually got people to stop and think, what would be the routes through your home. You would even write down thoughts that you would then take home and work out what actually is under the balcony, is it actually feasible to get to your front door from your bedroom if there is a fire in the kitchen so if there wouldn't be and actually almost feel like... we were almost like doing little drawings what if went this way, what if we went that way and I think that's actually just about getting you thinking. It's focusing your thinking rather than sitting having a chat'.

Comment from a children's centre worker on the first edition of the Injury Prevention Briefing

Learning objective

To give families the ability to develop a fire escape plan for their own home so that they could cope if their smoke alarm went off in the middle of the night.

Equipment needed

There are different ways to run this activity. It can be run with a single group in which case all you will need is a flipchart and a marker pen for the facilitator.

Alternatively, you could split the group into small subgroups and ask them to think about what they would do if the smoke alarm sounded, then take a report back. In this situation, each subgroup needs some paper and a pen and the facilitator will need is a flipchart and a marker pen.

Method

Introduce the topic by explaining that house fires can cause death and serious injury to them and their families. If there has been an incident reported in the press recently, use this as an excuse for bringing up the subject. Remind them that even if no-one is injured, a fire can mean they have to move out of their home at least temporarily, with all the inconvenience this would mean. They may lose their possessions, especially treasured one such as the baby photos, their clothes, documents, etc.

Ask participants:

- how many have a smoke alarm?
- how many have one on each floor of their home?
- how many have checked it in the past seven days?

If anyone does not have a smoke alarm, does not have one on each floor of their home or does not know how to check their alarm(s), strongly recommend that they contact the local fire and rescue service (FRS) for advice. Provide participants with the information they need. (When you next meet the participants, ask them whether they have been in touch with the FRS.)

SCENARIO

At 12.30am, a neighbour, who was about to go to bed, spotted flames in a downstairs room in the house across the street. He called the fire service and fire fighters arrived about ten minutes later.

Although the fire crews were able to bring the blaze under control quickly, a mother and her two children, aged 18 months and 3 years, died, their deaths being attributed to inhaling toxic smoke. When fire fighters wearing breathing apparatus went upstairs, they found the mother on the bedroom floor and the children apparently asleep in their beds. Efforts to resuscitate the mother and one child were not successful and the second child died later in hospital.

In their report on the incident, the fire brigade noted that the house had no smoke alarm. The cause of the fire was never identified.

Present the group with the scenario above, just to bring home the reality of a house fire.

Ask the participants what they would do if the smoke alarm in their home sounded in the middle of the night.

If they do not have a fire escape plan, they are likely to say that they would grab the children, run out of the house and call 999 from a neighbour's house or on their mobile. This is not the wrong answer although they could be placing themselves even more deeply at risk if they did just this. This activity is intended to explore the reality more deeply.

The key message in a house fire is "Get out, stay out, call 999"

- Get everyone out of the house quickly. Don't try to pick up valuables or pets.
- Stay out – don't go back in until a fire officer tells you it is safe to do so.
- Call 999 – dial 999 and ask for the fire brigade. Know how to do this and what to expect when you are connected to an operator.

Ask them to describe potential problems that they could face that may stop them from escaping rapidly? Write on a flipchart the points that people mention.

They should mention at least the following:

- You would be fast asleep so completely disorientated and there is a piercing noise from the smoke alarm that is adding to the confusion.
- It's pitch dark.

- The children may be screaming.
- The staircase may have a safety gate to prevent the 18 month old falling.
- The front door needs a key to open it but this is in your handbag in the kitchen.
- Your partner, who is away for the night, left his bike in the hall.
- The stairs have the children's shoes on the bottom step.
- The hall and stairs cannot be used because of the fire.
- The bedroom windows are locked to prevent burglars getting in, so you need a key to open them.

If not all of these situations are mentioned, prompt them with questions such as "Do you ever leave anything on the stairs when you go to bed?"

When participants run out of ideas, ask them to suggest what they could do to address each of the problems they have mentioned. These could include:

- Know what the smoke alarm sounds like so it does not come as a complete surprise to them. They should know what sound it makes from testing it regularly.
- Have a torch next to the bed.
- Realise that the children may be hiding in their bedroom because they are frightened. Don't assume that if you cannot see them they have already escaped. Be prepared to look under the bed, in the wardrobe and anywhere else they could hide.

- Leave the front door key on a hook near the door, out of the reach of young children and not accessible to someone reaching through the letter box.
- Make sure that the stairs and the hall are clear of clutter that could slow you down.
- Think about a second escape route if the primary one – usually down the stairs and out of the front or back door – is not usable.
- Make sure that the key for the window locks is accessible to you, probably on a hook near the window, but not accessible to the children.

A model family fire escape plan that can be printed and distributed is provided at the end of this activity.

Discussion points

Open the floor for discussion and questions. Remember that if you don't know the answer to a question, don't guess as this could lead to wrong advice. Make a note of the question and ask the specialists for their advice.

Ask participants whether there are any issues that they think would be difficult to address (e.g. landlord refuses to supply a spare front door key; nowhere else to store the bike other than in the hall) – other participants may have suggestions.

Variations and issues you can consider during discussion could include:

- You live in an apartment in a tower block.
- Your elderly mother is staying with you. She is not too stable on her legs when she first gets out of bed and

is not familiar with your home.

- It's the middle of the evening and you are out. A 14 year old babysitter is looking after the children.
- What about common areas in blocks of flats? Do people leave rubbish or other flammable materials there? Who is responsible for ensuring that these spaces are clear? Could the rubbish left in these areas cause problems if you had to get out in a hurry?

Escaping from a high-rise building

Living above the first floor doesn't necessarily make you any more at risk from fire. High-rise flats are built to be fire-proof – walls, ceilings and doors will hold back flames and smoke.

If there's a fire elsewhere in the building, you are usually safest in your own flat, unless heat or smoke is affecting you. If you are affected, you should get out, stay out and call 999.

- As with all buildings, you should plan and practise an escape route.
- Avoid using lifts and balconies if there is a fire.
- It is easy to get confused in smoke, so count how many doors you need to go through to reach the stairs.
- Check there is nothing in the corridors or stairways that could catch fire – like boxes or rubbish.
- Make sure doors to stairways are not locked.
- Make sure everyone in the building knows where the fire alarms are.

- You should still get a smoke alarm for your own home, even if there is a warning system in the block.

Source: This advice is based on the booklet *Fire safety in the home*, available from <https://www.gov.uk/government/publications/fire-safety-in-the-home>

Follow up work

Ask participants to come to the next session and tell you about any of the issues they found in their own homes. If there are things they could not resolve, ask the FRS or help and advice.

Sources of information

An extensive series of fire safety booklets can be downloaded from <https://www.gov.uk/government/collections/fire-safety-guidance>

INFORMATION SHEET – MODEL FAMILY FIRE ESCAPE PLAN

When you make an escape plan, involve everyone who lives in your home, including children, older or disabled people and any lodgers.

Choosing an escape route

- The best escape route is the normal way in and out of your home.
- Keep all exits clear of obstructions, like bicycles.
- Think of a second escape route, in case the first one is blocked.
- Think of any difficulties you may have getting out, e.g. at night you may need to have a torch to light your way.

- If there are children, older or disabled people or pets, plan how you will get them out.
- Review your plan if the layout of your home changes.

Make sure everyone knows where door and window keys are kept

- Decide where the keys to doors and windows should be kept and always keep them there. Make sure that all the adults and older children in your household knows where they are.

What to do if there is a fire

- Keep calm and act quickly, get everyone out as soon as possible.
- Don't waste time investigating what's happened or rescuing valuables.
- If there's smoke, keep low where the air is clearer.
- Before you open a door check if it's warm. If it is, don't open it – fire is on the other side.
- Call 999 as soon as you're clear of the building. 999 calls are free.

Think about a safe place to go if you can't escape

- If you can't get out, get everyone into one room, ideally with a window and a phone.
- Put bedding around the bottom of the door to block out the smoke, then open the window and call "HELP FIRE".
- If you're on the ground or first floor, you may be able to escape through a window.

- Use bedding to cushion your fall and lower yourself down carefully. Don't jump.

Explain the plan

Once you have made your plan, go through it with all the adults and older children in the household.

You could also:

- put a reminder of what to do in a fire somewhere where it will be seen regularly, like on the fridge door.
- put your address by the phone so that children can read it out to the emergency services.

Practise the plan

Make sure you have 'walked through' the plan with all the adults and the older children in your household. Regularly remind everyone of what to do, and what not to do, in the event of a fire.

This plan is based on advice in the general fire safety booklet *Fire safety in the home*. The booklet can be downloaded from <https://www.gov.uk/government/publications/fire-safety-in-the-home>

An easy read version, *Fire: make your home safe (easy read)*, is available from <https://www.gov.uk/government/publications/make-your-home-safe-from-fire>

Section C:

BACKGROUND INFORMATION

POISONINGS

Why focus on poisoning?

Poisoning is the third most common cause of injury-related hospital admissions among the under 5s in England with about 4,000 admissions a year, 95 percent of them for less than 2 days. About 21,000 under 5s go to A&E annually as a result of poisoning incidents.

While deaths are very rare – just one or two a year nationally – poisonings can be very serious with about 100 children staying in hospital for more than 3 days each year.

It is a cause of harm that is preventable. The counter-measures need not be expensive to put in place and can be applied by virtually everyone.

Poisoning prevention can provide a good illustration of the need to be aware of the association between child development and accidents and can be an example that can be applied to other injury topics.

Throughout this IPB, we talk about preventing poisoning. It would be more accurate to refer to poisoning and suspected poisoning as many cases either involve a child swallowing a dose that may not cause harm or not actually swallowing anything at all

but is suspected of having done so. As it's a matter of chance whether something has been swallowed and how much may have been taken, we have to try and avoid both these scenarios.

Small children are at higher risk of harm than adults because their small body size means that a similar dose of a harmful substance will have a proportionately greater adverse impact on a child.

Why are babies and young children at risk of poisonings?

As with most types of childhood accidents, they are strongly associated with child development:

- Babies and young children naturally explore by, among other things, putting objects in their mouths. They also drink anything they can lay their hands on, especially if they think it's a drink.
- As gross and fine motor skills develop, poisoning becomes more likely. The ability to climb (gross motor skill) and open cupboards, drawers, bottles and strip and blister packs (fine motor skills) are natural stages in children's development.
- Young children are attracted by bright colours, objects that resemble toys, etc. Some household

chemicals and their containers are brightly coloured. While the containers may be child-resistant they may be attractive to young children. Even some liquid medicines specifically for children are attractively coloured.

- Also associated with exploratory behaviour is the tendency to copy adult behaviour so if they see an adult taking a medicine they may try to do the same.
- In some babies and young children the lack of taste discrimination means that tastes that might be very unpleasant for adults are not rejected by children.
- Their cognitive development is changing but babies and young children are unlikely to understand the consequences of their actions.

What poisons babies and young children?

The simple answer is almost anything that they can get their hands on that is not food.

There can be a number of consequences when they put something solid in their mouth:

- The object can enter their windpipe, in the worst case leading to suffocation. In less serious cases, the object will probably need to be removed in hospital.

- It can be swallowed. If the object is made of an inert substance, for example, a small coin or a plastic button, it will not usually cause any harm as it will pass through the body and emerge into their potty or the toilet.
- It can be swallowed and potentially cause serious harm. Some seemingly solid products such as very small batteries (called button or coin batteries) can dissolve in the gut resulting in very serious harm. Objects such as small magnets can become stuck in the gut, especially if more than one is swallowed, and cause serious internal damage that may need to be repaired surgically.
- It can be swallowed and dissolve the way that tablets are supposed to. If the dose is large enough they can cause serious harm and in very rare cases death.

Liquids also produce problems. Some, especially those that are strongly caustic or acidic, are so harmful that they can damage the oesophagus – the tube from the mouth to the stomach – requiring surgical repair.

Other liquids, including medicines and substances such as cleaning products and garden chemicals, can result in poisoning, in simple terms upsetting the way that the body works.

Other substances are also poisonous. One is carbon monoxide, produced when organic fuel (coal, coke, wood, petrol, oil, natural gas, LPG, etc) is burnt without sufficient oxygen. It kills a handful of people annually.

Parts of some garden and indoor plants are also poisonous. It may be the berries, leaves or other parts. Some mushrooms and toadstools can also be harmful.

Some products that are poisonous can also cause harm in other ways. For example, the liquid in some laundry and dishwasher capsules (sometimes called liquid tabs) can cause eye damage; this can occur if a child bites these soft capsules, bursting it so that the contents squirt into the face. Some products and plants are skin irritants.

Nicotine products – electronic cigarettes, sublingual tablets, gum, patches, inhalator cartridges, lozenges and nasal sprays – may contain doses that could have very serious consequences for children. Nicotine can be highly toxic, particularly in children or infants. It is highly toxic by ingestion, inhalation and skin contact. Not all e-cigarettes are the same. Different brands and products have varying amounts of nicotine content. Some e-cigarette refills are formulated with sweet smelling chemicals and packaged in brightly coloured tubes that could appear attractive to babies or young children.

What research tells us about poisonings and their prevention

As part of the *Keeping Children Safe at Home* programme, a number of different studies were carried out to inform our knowledge of what works and, equally importantly, doesn't work. Existing literature was reviewed, children's centre staff were interviewed about their safety promotion opportunities, and parents

were interviewed about their safety practices and the barriers to keeping their children safe. In addition, data was collected at several hospitals and through interviews with parents whose children had been poisoned. This data was compared with information from parents whose children of similar ages and who lived nearby but had not had accidents. The various studies revealed the findings presented in the box that is part of Activity 4.

Other research has shown that there is a greater risk of poisoning in specific situations when there is maternal depression or disruption from normal routines, such as when visiting or being visited by grandparents who may leave their medicines accessible, or when there are celebrations in progress that may reduce supervision.

Local data on poisonings

Local data on poisonings may be available from the sources outlined in Section A.

The only relevant additional sources of epidemiological data are the national poisons information service (NPIS). Access to advice from these centres is only available to frontline NHS staff. When a child is taken to hospital having been poisoned, it is possible that A&E department staff may contact NPIS to find out about appropriate treatment. Calls are logged and national statistics are produced. The service's annual report is publicly available.

Emergency action

In an emergency, call 999 (or 112).

Knowing what to do in an emergency is important. Having knowledge of first aid related to the needs of young children can be very helpful.

Typical accident scenarios

The actions or inactions by adults, in combination with the developmental characteristics of babies and young children, can lead to actual or suspected poisonings. For example:

- Products may be stored where they are easily accessible – drawers and cupboards that are not locked and/or not well out of reach.

"At the moment we have all got colds and coughs. Again they are on top of the kitchen bench pushed to the back but again they all have the child locks on. They are not in a cupboard because we are actually using them regularly but normally all the medicines are at a height that even I have trouble to reach so they wouldn't be able to reach those at all."

Comment from parent of a four year old

- Tablets are often carried in a handbag or whatever is used for odds and ends when out and about. On returning home, the bag is left lying around.
- While parents may take all the appropriate steps to reduce the risk of accidental poisoning, this may not be the case at the grandparents who may leave their tablets on the bedside table for convenience.
- Liquid medicines often carry the instruction to store them in a cool place. This can be incorrectly

interpreted as being in the fridge, which is very accessible to children and that naturally contains things that are eaten or drunk.

- We sometimes think that child-resistant containers (CRCs – bottles that are reclosable – and strip and blister packs where you pop tablets out by pressing them) are childproof. This is definitely not the case – they are only a contributor to reducing the risk of poisoning.
- Medicines may not be put away after they have been used, perhaps because of tiredness or for convenience if they are going to be given to sick child during the night.

Child-resistant packaging

Such packaging is tested with a large panel of children aged between 42 and 51 months. If less than 85 percent of the panel cannot open the packaging or release more than eight tablets in a strip or blister pack, it is regarded as child-resistant.

The reverse of this is that up to 15 percent of children in this age range may be able access the harmful product. Because of the age composition of the panel, this percentage may be greater for children at the top end of the panel's age range.

Research shows that child-resistant packing greatly reduces children's ability to reach the product but it does not prevent it in 100 percent of cases. It is not childproof.

- It takes little time for a young child to gain access to a hazardous substance, even when it is in child-resistant packaging. A brief distraction such as answering the door or the phone can be long enough for tablets to be released from their packaging and swallowed.
- Child-resistant bottles have to be closed after use; otherwise they are useless from the child safety viewpoint.
- If you show adults a display of tablets and a similar display of sweets, it is difficult to tell which is which. For young children, it would be impossible so it should be no surprise that they may think that they are putting sweets in their mouth.
- When trying to persuade children to take tablets or other medicine, parents occasionally tell children that what they being given are sweets. It should be no surprise that children will be confused.
- For convenience, adults may decant a small quantity of a liquid from its large (safe) container into a cup or another, for example soft drink, bottle. Children are used to drinking from cups and soft drink bottles so it is natural for them to drink the fluid.
- The lack of taste discrimination can result in a child swallowing substances that adults may think of as having an unpleasant taste. Many household chemicals, for example, kitchen and bathroom cleaners, may contain a bittering agent, such as Bitrex. Adults and most children find this a truly foul tasting substance that usually results in the fluid

being spat out so a toxic quantity is not swallowed. However, there is research evidence that a small proportion of children do not react in this way and still swallow the fluid. The lesson is that bittering agents are a help but are not a complete deterrent, just as CRCs are not the complete solution. (See above for remarks about CRCs).

- Some laundry and dishwasher detergents are supplied in transparent, brightly coloured, flexible single dose packages (liquitabs). Some resemble sweets. Major manufacturers have adopted a code of practice to reduce poisoning from these products by making the packaging opaque and the boxes less easy for a young child to access.
- The lack of maintenance of heating systems, including the need to sweep the chimney, can lead to a build-up of carbon monoxide (CO). Further, using products in the wrong environments, such as using the barbecue in the garage or even putting it in there to allow it to cool, or running a petrol-driven generator indoors with inadequate ventilation, can result in harmful CO concentrations.
- Not having a working CO alarm in situations where CO could be present is a dangerous practice for adults and children.
- Very occasionally, left-over drinks, sometimes brightly coloured and sweet, and hence child-appealing, and cigarette ends left around after a party may be drunk or eaten when the toddler is the first person up in the morning.

The consequences of poisoning

In the great majority of cases, there are no long-term health effects of a poisoning incident. In fact, many incidents are not actual poisonings but are suspected events – but we cannot take the chance that a child will not be harmed.

However, even a suspected incident is distressing for the family and the child, causes disruption to normal routines, may need care to be found for siblings while the affected child is taken to and is in hospital, can require time off work with financial consequences, etc.

General prevention methods

The general methods of preventing poisoning include:

- Supervising children when products are being used and not being distracted, even for a moment.
- Storing potentially harmful products safely. ("Products" means anything that can cause harm – solid and liquid medicines, household cleaning products, chemicals such as white spirit and bleach, garden and garage chemicals, etc). Ideally, this means in a locked cupboard or drawer, but if this is not possible then well out of children's reach and out of sight. Child-resistant cupboard and drawer locks are available in DIY stores and nursery goods shops.
- Ensure that products that are provided in child-resistant containers have their tops replaced securely after every use.

- Referring families to local schemes that provide and fit safety equipment – in this context, cupboard and drawer locks, and CO alarms.
- Not having indoor plants that may be harmful and, if possible, clearing poisonous garden plants and fungi.

Out of sight and out of reach

We often say that harmful substances and objects should be kept out of sight and out of reach – but what does this really mean?

In the *Keeping Children Safe at Home* programme, we used the definition of out of reach as being at or above adult eye height.

Just remember that young children are very creative and may be able to move chairs around to climb on worktops. A locked cupboard or drawer is a safer solution.

Prevention activities

Some general prevention principles and advice are set out in Sections A and C.

The activities in Section B that are relevant to preventing accidents in general, including poisoning, include:

- Exploring child development (Activity 1).
- What is appealing to children but may harm them? (Activity 2).

- Checking home safety (Activity 3).
- Where are your harmful products? (Activity 4).
- Designing an unsafe kitchen (Activity 5).
- Home safety equipment – what do families need? (Activity 6).

These activities can be supported by providing awareness-raising resources. These may have limited value in isolation but can provide valuable reminders of the safety messages.

Possible outcome measures

Using A&E attendances or hospital admissions to measure the impact of a local prevention programme, for example centred on a small geographical area such as a housing estate or the families using a local facility such as a children's centre, is unlikely to produce meaningful results. Alternative outcome measures relating to poisoning prevention programmes could include using information on how many families have drawer and cupboard locks, owning (and using) a lockable medicine cupboard or changes in knowledge of and practices regarding the safe storage of medicines and household products.

FALLS

Why focus on falls?

Fall injuries are the most common cause of injury-related hospital admissions among the under 5s in England with almost 20,000 admissions a year, 90 percent of them for less than 2 days. An estimated 230,000 under 5s go to A&E annually in the UK after falls in the home and garden and a further 75,000 following falls elsewhere.

Deaths are rare – about 5 a year nationally – but fall injuries can be very serious with about 700 children staying in hospital for more than 3 days each year.

While it is difficult to prevent all falls without severely restricting children's activities, there are ways of preventing many of the most serious falls. The counter-measures need not be expensive to put in place and can be applied by virtually everyone.

Why do babies and young children fall?

The baby and toddler period is a time of rapid changes that can lead to falls:

- physically – they grow and their body proportions change: their heads start as a large proportion of the body mass but this reduces as they grow, changing their centre of gravity. They also become stronger so may, for example, move objects such as chairs that they may climb on (and fall off).
- gross motor skills – they learn to roll, wriggle, crawl, walk, run and climb.

- exploratory behaviour – they like to investigate everything around them.
- cognitive behaviour – although they are learning, they have little understanding of the consequences of their actions so they may get themselves into situations from which they cannot safely escape. It is also a time when they copy the behaviour of adults and older siblings.

What research tells us about falls and their prevention

As part of the *Keeping Children Safe at Home* programme, a number of different studies were carried out to inform our knowledge of what works and, equally importantly, doesn't work. Existing literature was reviewed, children's centre staff were interviewed about their safety promotion opportunities, and parents were interviewed about their safety practices and the barriers to keeping their children safe. In addition, data was collected at several hospitals and through interviews with parents whose children had had a fall. This data was compared with information from parents whose children of similar ages and who lived nearby but had not had accidents. The various studies revealed the findings presented in the box at the beginning of Activity 7.

Local data on falls

Local data on falls may be available from the sources outlined in Section A.

Typical accident scenarios

Many characteristics relating to child behaviour and comprehension can lead to falls:

- Babies are placed on beds, changing tables and other raised surfaces for nappy changing. If they can wriggle or roll, they may fall off when left unattended. Even a fall from a relatively low height can lead to an injury requiring admission to hospital.
- Babies in cots may pull themselves to standing, climb on a large toy or cot bumper and, if the cot side is not at the correct height, fall out. This scenario is exacerbated by their high centre of gravity.
- Babies in bouncing cradles or car seats are placed on worktops or tables. Their fidgeting results in the seat moving and falling to the floor.
- Young children are inevitably unsteady on their feet when learning to walk. Injuries are not just as a result of hitting the ground; they may fall on to sharp corners, etc.
- Falls from highchairs are common. Unless a child is properly strapped in, they may pull themselves to standing and fall. Landing on a tiled kitchen floor can lead to serious injury.
- Crawlers and walkers are at great risk of stair falls. While we always think of children falling from the top of a flight, they can also fall when they try and climb the first few steps. Safety gates correctly fitted to prevent access to the top and bottom of the stairs can make a big difference.

The use, positioning and fitting of safety gates

Safety gates are not recommended for children over the age of 24 months, as tests in the standard (BS EN 1930) reflect the size and some of the abilities and behaviours of children under 2 years.

However, this does not mean that all children over this age will be able to manage stairs safely. If parents choose to remove the safety gate before their child can reliably cope with the stairs, there can be a risk of a serious fall.

The position of a safety gate to prevent falls down stairs is important. The main function of the gate is to prevent a young child accessing the stairs. This does not require the gate to be directly across the top of the flight. By placing the gate in this location, there can be a risk of an adult, older child or even an adventurous toddler climbing over the gate without opening it and falling down the stairs. By placing the gate across the landing or the toddler's bedroom door, this risk is minimised while access to the stairs is also prevented.

Some gates have a rectangular bar at floor level. This can present a tripping hazard so a gate close to the stairs, even when it is used correctly by an adult or older child, can lead to a stair fall.

Some landlords may not allow tenants to fit safety gates, claiming that they will damage the walls and staircase. Gates are available that rely solely on pressure mounts so that there is no need to screw mountings to the wall. It is essential that for any gate it is fitted exactly in accordance with the manufacturer's instructions to ensure that it works properly.

(Gates are also needed at the bottom of the stairs to stop babies and young children climbing. Follow the manufacturers' instructions on where to place them. The scenario described above is not a problem when the gate is at the foot of the stairs.)

- The wish to explore and reach objects can result in young children moving chairs, etc and climbing on them. A serious example of this is when a toddler wants to look out of their bedroom window, perhaps to wave to someone or just to see what's going on. If the window is not securely latched, the fall can be extremely serious. Even a fall from a ground floor window – perhaps a metre or so – on to concrete can cause serious injury.
- Bunk beds are great space savers but are also associated with falls. They make exciting climbing frames for young children. The rule is that the top bunk is not suitable for children under 6 years and is not somewhere where children should play.
- Another consequence of a fall in a bedroom can be strangulation. A fall can result in the child becoming entangled in the window blind cord. Sadly, there have been over 25 such deaths in recent years.
- Babies using old baby walkers – those that do not comply with the current standard BS EN 1273:2005 – may topple over if one wheel goes over a step.

The consequences of falls

In the great majority of cases, there are no long-term health effects of a fall. However, there are a handful of deaths annually and many serious injuries. The most serious injuries are those involving the head and brain as these can have long-term consequences.

Fractured limbs are also common serious injuries possibly requiring a stay in hospital although most will repair without long-term consequences.

Even a relatively minor incident – one that does not present a threat to life – is distressing for the family and the child, causes disruption to normal routines, may need care to be found for siblings while the affected child is taken to and is in hospital, can require time off work with financial consequences, etc.

General prevention methods

The general methods of preventing falls include:

- Constantly supervising babies and children when they have been placed on a raised surface, for example to change a nappy or feed them.
- If the child is in a highchair, securing the child using the seat's harness.
- Using safety gates to prevent babies from when they start crawling, and hence climbing, from accessing the top and bottom of the stairs and making sure gates are not left open. Gates can also prevent access to furniture that they can climb on and then fall from.
- Teaching children safety "rules" for example teaching young children not to climb on objects from which they could fall.
- Supervising children when they may be in hazardous situations, such as climbing or playing on furniture.
- Not placing baby seats – bouncing cradles, child car seats, etc – on kitchen worktops and tables.
- Fitting child-resistant catches to windows, especially but not only those above the ground floor.
- Not using baby-walkers that were made before 2005.

Later baby-walkers comply with a different standard that is aimed at reducing the risk of falls. If families use baby-walkers, look for those complying with BS EN 1273:2005.

Prevention activities

Some general prevention principles and advice are set out in Sections A and C.

Activity 7 - Preventing falls – more than just using safety gates! considers safety practices and rules linked with falls prevention.

Other, more general activities in Section B that are relevant to many types of accidents, including falls prevention, include:

- Exploring child development (Activity 1).
- Checking home safety (Activity 3).
- Where are your harmful products? (Activity 4).
- Designing an unsafe kitchen (Activity 5).
- Home safety equipment – what do families need? (Activity 6).

These activities can be supported by providing awareness-raising resources. These may have limited value in isolation but can provide valuable reminders of the safety messages.

Possible outcome measures

Using A&E attendances or hospital admissions to measure the impact of a local prevention programme, for example centred on a small geographical area such as a housing estate or the families using a local facility such as a children's centre, is unlikely to produce meaningful results. Alternative outcome measures relating to falls prevention programmes could include ownership and fitment of safety gates on stairs or use of window locks or changes in knowledge of and practices regarding falls prevention.

SCALDS

Why focus on scalds?

Scalds are simply burns caused by a hot liquid or steam.

Scalds are a relatively common injury among babies and young children. They result in over 7,000 hospital admissions among the under 5s in England annually and have some of the longest periods of admission of any injury.

Deaths are rare – less than one a year.

The peak age for admissions to hospital as a result of scalds from drinks, tap water and pots and pans is one year. For every tap water scald admission, there are two scalds due to pots and pans and four due to hot drinks.

While tap water scalds can be prevented using engineering measures (thermostatic mixing valves – see below for further information), hot drink and cooking-related scalds need adults to change their behaviour or restrict where children go when the dangers are present.

Why do babies and young children get scalded?

Just as with other types of accidents, scalds are related to the exploratory behaviour and increasing mobility of babies and young children, in particular:

- gross motor skills – they crawl, walk, run and climb and can therefore move towards dangerous items.

- fine motor skills – these are developing but may be imprecise so if they grab at something they may not grasp it properly.
- exploratory behaviour – they like to investigate everything around them, especially if the item is appealing to children, for example is brightly coloured, has a design such as a cartoon character, resembles a toy, etc.
- cognitive behaviour – although they are learning, they have little understanding of the consequences of their actions. It is also a time when they copy adult behaviour and that of older siblings. Also, they may be able to say “hot” after you teach them but this does not mean that they understand what it means or act reliably by not touching hot objects.
- physiological characteristics – babies are at high risk of serious injury from hot liquids because their skin is very thin, just one fifteenth the thickness of an adult's.

What research tells us about scalds and their prevention

As part of the *Keeping Children Safe at Home* programme, a number of different studies were carried out to inform our knowledge of what works and, equally importantly, doesn't work. Existing literature was reviewed, children's centre staff were interviewed about their safety promotion opportunities, and parents were interviewed about their safety practices and the barriers to keeping their children safe.

In addition, data was collected at several hospitals and through interviews with parents whose children had been scalded. This data was compared with information from parents whose children of similar ages and who lived nearby but had not had accidents. The research findings are presented in the boxes at the beginning of Activities 8 and 9.

The research also showed that fitting a TMV and providing education is more effective in reducing bath water temperature to a safe level (one that will not cause serious and rapid injury, usually about 46°C) than education alone or than giving parents thermometers to test their water temperature and lower it if it is too high.

Just as with most children's accidents, by comparing children who did or did not suffer scalds, the KCS research confirmed that the children who were injured were more likely to come from more disadvantaged families.

Local data on scalds

Local data on scalds may be available from the sources outlined in Section A.

Typical accident scenarios

Many characteristics relating to child behaviour and comprehension can lead to scalds:

- Babies on a lap may wave their arms around and knock a mug of hot liquid that is being held. Spilling a mug of liquid over a baby is equivalent to pouring a bucket of liquid over an adult.

- A drink is placed on a low coffee table and is grabbed by a crawling baby or a toddler.
- A toddler in the kitchen reaches up to grab the handle of a saucepan that is hanging over the edge. The volume of very hot water can have a devastating effect.
- In the past, the leads of electric kettles used to create problems if they hung over the edge of the worktop and were pulled by a child. This is now less of a problem since the introduction of curled or short kettle flexes and cordless kettles although these do, of course, have cords attached to the base unit. Cordless kettles introduce their own hazards as it is now easier to carry a full kettle of boiling water around the kitchen.
- The most severe scalds are from bath water because a child can be almost completely immersed in the water. A toddler left unattended in the bathroom while the bath is filling, often just from the hot tap, may drop a toy into the bath and reach in to try and retrieve it, falling in because of their high centre of gravity.
- A variation on this bath scald occurs when a toddler and baby are left alone in the bath and the toddler plays with the hot tap. While the toddler may be able to escape, the baby would not be able to do so.

The consequences of scalds

Even relatively minor burns can have long-term effects as they can result in scarring. They can also be distressing for the family and the child, causes

disruption to normal routines, may need care to be found for siblings while the affected child is taken to and is in hospital, can require time off work with financial consequences, etc.

Extensive and/or deep burns can require long-term and repeated treatment and lead to extensive scarring. This can have psychological effects in adulthood and may impact on life chances.

General prevention methods

The general methods of preventing scalds include:

- Changing adult behaviour so, for example, - they do not hold a baby while holding a hot drink.
 - hot drinks are placed where babies and young children cannot reach them.
 - pans are placed on the back burners or hobs of the cooker. If the front burners or hobs have to be used, the handles are turned away from the edge.
- Keeping babies and young children out of the kitchen when you are cooking by placing a safety gate across the kitchen door. If the kitchen is large enough or the area is open plan so there is no door, a child can be placed in a playpen to keep them away from hot liquids.
- Plumbing a thermostatic mixing valve (TMV) into the bath hot water system to prevent bath water scalds.

What is a thermostatic mixing valve (TMV)?

A TMV is a device that mixes hot and cold water before it emerges from the bath hot tap so that it is not at a scalding hot temperature. It is not the same as a simple mixer tap.

A TMV is plumbed into the system and set so that the water emerges from the hot tap at about 47°C, plenty hot enough for a bath but not so hot that it will cause immediate and severe burns. (We normally bath at about 38°C. Water at 47°C will feel uncomfortably hot but will not cause injury.)

TMVs are now required under Building Regulations in new homes and when a major refurbishment of the bathroom is carried out.

Why is tap water so hot? Most domestic water heating systems produce water above 60°C to minimise the risk of legionella bacteria developing in the system.

TMVs are not required on all hot taps in a house for two reasons: the greatest risk of a scald is in the bath, and water above bathing temperature may be needed for washing dishes in the kitchen.

Research has shown that TMVs work as designed and are acceptable to families, although there is a short learning process to get the bath temperature correct, simply because you don't have to run as much cold water into the bath as you normally would.

Prevention activities

Some general prevention principles and advice are set out in Sections A and C.

In Section B, there are two activities that are specifically related to preventing scalds:

- How far does a hot drink spread? (Activity 8).
- How long does a hot drink stay hot? (Activity 9).

In addition, other, more general activities in Section B are relevant to many types of accidents, including preventing scalds:

- Exploring child development (Activity 1).
- Checking home safety (Activity 3).
- Designing an unsafe kitchen (Activity 5).
- Home safety equipment – what do families need? (Activity 6).

Possible outcome measures

Using A&E attendances or hospital admissions to measure the impact of a local prevention programme, for example centred on a small geographical area such as a housing estate or the families using a local facility such as a children's centre, is unlikely to produce meaningful results. Alternative outcome measures relating to scalds prevention programmes could include changes in knowledge of and practices, such as not carrying a hot drink and the baby at the same time, using the rear hobs on the cooker or moving the kettle to the back of the worktop.

Products that change colour when hot

Mugs, bath plugs and bath thermometers that change colour when hot are available. These are thermochromic products. However, you need to consider whether these promote safety or could cause injuries.

When hot, a pattern or words, such as "danger – hot" may appear on the outside of the mug, or the mug may change from one colour to another.

The problem is that children may be attracted by such changes and want to play with the product, putting themselves at risk.

While a baby or toddler may not be capable of filling such a mug with a hot liquid, an older child may do so. If a younger sibling is around, they could be injured.

Similarly, bath plugs that change colour when the water is too hot may fascinate young children. They may try to run hot water into the bath to make the plug change colour with potentially serious consequences.

Colour-changing bath thermometers, perhaps in the shape of a fish, may look to a child like a toy. Changing colour might make them attractive to children. Why such a tool looks like a toy is a mystery. All that is needed to check bath water temperature is the inside of an adult's wrist, knowing that the water should feel neither cool nor hot.

FIRE-RELATED INJURIES

Why focus on fire-related injuries?

House fires kill and seriously injure children and adults. While it is often the smoke that kills people, burns are very serious injuries, often requiring prolonged treatment while the child continues to grow.

House fires cause massive disruption to the family. The house is likely to become uninhabitable for a long time. It will require redecoration, furniture will need replacement and rooms such as the kitchen may need to be re-equipped. If the family home is not insured, the costs can be prohibitive.

Even though statistics may say that fire deaths in your area are very low, the next major fire may happen in your town.

While ownership of a working smoke alarm is high in families of pre-school children living in disadvantaged areas, many families lack fire prevention bedtime routines and fire escape plans.

Why are babies and young children at particular risk?

Just as with other types of accidents, fire-related injuries are related to the exploratory behaviour and increasing mobility of babies and young children.

The developmental aspects that relate to these accidents include:

- gross motor skills – while they may be able to crawl, walk, run and climb, they may not be able to escape if there is a fire.
- fine motor skills – these are developing but may be imprecise so if they have the opportunity to play with matches and lighters they may inadvertently set fire to their surroundings.
- exploratory behaviour – they like to investigate everything around them. Flames from matches and lighters may be appealing to children.
- cognitive behaviour – although they are learning, they have little understanding of the consequences of their actions. It is also a time when they copy adult behaviour and that of older siblings. They may also hide from danger rather than attempt to escape.

What research tells us about fire-related injuries and their prevention

As part of the *Keeping Children Safe at Home* programme, data was collected on smoke alarm ownership and whether or not families had escape plans, the scientific literature was reviewed to examine how best and most cost-effectively to increase smoke alarm ownership and to increase the proportion of families with fire escape plans. The research findings are presented in the boxes at the beginning of Activities 10 and 11.

Research that was not part of the *Keeping Children Safe at Home* programme shows that children in the most disadvantaged families are over 37 times more likely to die in a house fire than the most affluent. Why? There are many reasons; for example:

- They may live in older houses.
 - They may live in overcrowded conditions.
 - They may have old furniture that does not meet current flammability requirements and that may give off very toxic smoke when it burns.
 - They may have older electrical appliances that may be more likely to be faulty
 - Smoking is more common in disadvantaged families
- Young children are particularly high risk because:
- They tend to hide from danger, rather than try and escape.
 - Even if they are old enough to help themselves, they may not know what to do when the smoke alarm goes off.
 - If they are babies, they are completely dependent on adults for help.
 - They do not always wake when the alarm sounds.

However, although there some very high risk groups, fire safety is important for everyone.

Local data on fire-related injuries

Data on fire-related injuries may be available from local fire and rescue services and the sources outlined in Section A.

Typical accident scenarios

Many characteristics relating to child behaviour and comprehension and parental actions and inactions can lead to fire-related injuries:

- Cigarettes that have not been extinguished properly.
- Chip pans that have been left unsupervised and/or are too full.
- Faulty electrical wiring.
- Children playing with matches and lighters. The combination of the fact that children are attracted by flames and that they try and copy adult behaviour can be fatal.
- Candles and tea lights.
- Clothes and furnishings that are too close to fires and heaters.

Some of these causes can be exacerbated by the consumption of excess alcohol. A classic scenario is for an adult to return home from the pub, perhaps drunk and tired, light a cigarette and fall asleep in a chair. The cigarette falls and sets light to the chair. Instead of lighting a cigarette, the adult may put on the chip pan to make a snack but then fall asleep. The chip pan catches light causing a house fire.

Are cigarette lighters child-resistant?

It is a requirement that most lighters on the market are resistant to operation by young children.

The tests used to examine the safety performance of these lighters is very similar to those used for child-resistant closures for medicines and some household chemicals. A large panel of children aged between 42 and 51 months are asked to operate the lighter without and then following instruction. If more than 85 percent of the children cannot operate the lighter it is deemed to be child-resistant.

However, this means that up to 15 percent in this age range may be able to operate them. Older children may have an even higher success rate.

The consequences of fire-related injuries

Even relatively minor burns can have long-term effects as they can result in scarring. They can be distressing for the family and the child, causes disruption to normal routines, may need care to be found for siblings while the affected child is taken to and is in hospital, can require time off work with financial consequences, etc.

Extensive and/or deep burns can require long-term and repeated treatment and lead to extensive scarring. This can have psychological effects in adulthood and may impact on life chances.

Injuries are only part of the story. A fire can mean that the family may have to move out of their home, at least temporarily, with all the inconvenience this means. They may lose their possessions, especially treasured one such as the baby photos, their clothes, documents, etc. The house may well need redecoration but there can still be a smell of burning that pervades everything in the home.

General prevention methods

The general methods of injuries from preventing house fires include:

- Prevent the fire from happening in the first place.
- Make sure that if the fire does occur the family can escape – this can reduce the risk of injury or ensure that their severity is minimised.

There is good evidence that certain prevention programmes can make a real difference. Using these programmes means that you are working as effectively as possible. The programmes that are known to work include:

- The correct fitting and maintenance of smoke alarms.
- The development and practising by families of fire escape plans.

Other activities are equally important but have not been fully evaluated.

Prevention activities

Some general prevention principles and advice are set out in Sections A and C.

In Section B, two activities relate specifically to preventing fire-related injuries:

- The importance of smoke alarms (Activity 10).
- A family fire escape plan (Activity 11).

In addition, other, more general activities in this section are relevant to preventing accidents in general, including injuries from house fires:

- Exploring child development (Activity 1).
- What is appealing to children but may harm them? (Activity 2).
- Checking home safety (Activity 3).
- Where are your harmful products? (Activity 4).
- Designing an unsafe kitchen (Activity 5).
- Home safety equipment – what do families need? (Activity 6).

These activities can be supported by providing awareness-raising resources. These may have limited value in isolation but can provide valuable reminders of the safety messages.

Possible outcome measures

Using A&E attendances or hospital admissions to measure the impact of a local prevention programme, for example centred on a small geographical area such as a housing estate or the families using a local facility such as a children's centre, is unlikely to produce meaningful results. Alternative outcome measures relating to fire safety practices could include having working smoke alarms on each floor, having a family escape plan, or storing matches and lighters safely.

Where to get specialist advice and help

Many fire and rescue services (FRS) have staff whose role is to promote fire prevention. You should find out what your local FRS will do for you, but it probably includes all or most of the following:

- Fitting free smoke alarms in homes, especially those with vulnerable families (children and older people, people with disabilities including hearing and sight problems).
- Giving advice to families whose smoke alarms keep going off inadvertently.
- Testing and, if necessary, replacing smoke alarms that are reaching the end of their normal life.

- Undertaking fire safety check in family homes. Linked with this, they will give advice to families.
- Speaking to groups of children and/or parents on fire safety in whatever settings are available, including children's centres.
- Training others who have the opportunity to pass on fire safety messages.
- Providing leaflets and other resources for families.

PLANNING, IMPLEMENTING AND EVALUATING ACTIVITIES

This section covers the issues that you need to consider when identifying the needs for appropriate projects, deciding what to do, how to do it, and how to measure the impact of your work.

Decide what injury topic(s) you are going to cover.

What are the key injury issues? Find local injury data if possible. National injury data will also provide helpful guidance.

What are the concerns of parents? Even this can be regarded as a useful prevention activity as it reveals their fears, shares prevention experiences and allows any myths to be addressed. Could be a discussion, simple questionnaire or just ticking a list on a notice board.

Look for alternative measures, such as injuries associated with deprivation, ownership of safety equipment, attitudes towards and knowledge of safety issues, etc.

Identify evidence-based activities that can address the topics.

Use this Injury Prevention Briefing for evidence. Seek expert advice if necessary. If your area has an injury prevention coordinator, this is the best starting point. In the absence of a coordinator, fire prevention personnel at the local fire and rescue service (FRS), and the local authority public health and/or road safety departments

may be able to help, depending on what programme you have in mind.

Decide whether it is practical to run such activities.

Think about local policies and priorities, cost, resources (leaflets, handouts, posters, videos, safety equipment, etc), time, staffing issues, potential partners and their programmes, how the activities can be integrated into other programmes (e.g. scald prevention during a cooking class, fire safety during smoking cessation sessions), etc.

If practical, work with parents and other agencies to develop the programme in detail.

Work up a detailed plan – what you and others are going to do at each stage.

Remember that you may need to adapt it as it progresses as parents and others raise queries or suggestions.

Decide how you are going to evaluate the activity before you start it.

If you can arrange and afford it, ask an external agency to undertake the evaluation. Students undertaking courses at a local college may be looking for projects and may be able to undertake the evaluation without costs. Your local public health department is likely to be a good source of guidance.

Pilot the activity.

If necessary, amend the activity in the light of your pilot.

Carry out the “before” part of the evaluation

Collect baseline data, such as injuries, ownership of safety equipment, attitudes towards and knowledge of safety issues, etc.

Roll out the activity.

Monitor the activity as it progresses.

Note what you actually did and spent, and the timeline for the work. This may differ from what you planned to do, spend, etc.

Undertake any “after” evaluation elements if appropriate.

Collect the same measures as in the “before” part of the evaluation.

Draft a short report

Disseminate this to interested parties so that others can learn from your experience and use it when reporting to Ofsted, your funders, etc. Your families may like to see at least a summary of your report.

Celebrate your successes!

THE PRINCIPLES OF AND APPROACHES TO PREVENTION

Primary, secondary and tertiary prevention

When we think about preventing unintentional injuries it is important to remember that “accidents”, or potential injury-causing events, may or may not result in an injury. A child may fall down stairs but escape without suffering an injury. An event has happened, but no injury has resulted.

Equally there may be more effective ways of preventing an injury from occurring than by preventing the event itself. For example, a child car seat will not stop a crash from happening but will reduce the potential for severe injury.

In terms of prevention we can prevent injuries by preventing the event from which the injury results or by reducing the chance of an injury occurring as a result of such an event. It is helpful to think about trying to prevent the event and the injury separately. The types of preventive activity we can undertake can be grouped into three different levels:

Primary prevention

Primary prevention is aimed at trying to prevent the occurrence of the accident from which an injury can result. It includes activities such as using a stair gate to prevent a child falling down stairs; drink driving legislation to reduce the risk of road traffic injury or fitness training to reduce the risk of sport injury.

Secondary prevention

Secondary prevention aims not at preventing the event that may cause injury, but at reducing the risk of injury once the event has occurred. A smoke alarm will not prevent a house fire from occurring, but will give the occupants more time to escape from the house, so reducing their chance of being injured. Cycle helmets work not by preventing the fall from the cycle, but once the fall has occurred the helmet reduces the risk of head and brain injury.

Tertiary prevention

Tertiary prevention comes into play once the event has occurred and an injury has resulted. It is aimed at minimising the consequences of an injury. Providing appropriate treatment following an injury may reduce the adverse effects and long-term consequences of that injury. For example, if as a child has suffered a burn, this injury could be exacerbated by incorrect treatment and conversely the long-term outcome can be improved by appropriate, immediate first aid.

Rehabilitation is also part of tertiary prevention. This aims to maximise physical, psychological and occupational function and quality of life following an injury.

Opportunities for prevention – the Es

Injury prevention practitioners come from many disciplines, have a wide range of experiences and skills and have very different opportunities within their working environment to undertake injury prevention at

the three levels described above. When planning an injury prevention programme and deciding the level(s) of injury prevention the programme will encompass, practitioners need to consider their experience and skills in undertaking injury prevention at the various levels, the opportunities present for injury prevention within the scope and remit of their work and the possibilities they have for collaboration with other agencies that may be able to undertake prevention at other levels. It is important to remember that it may be more effective to undertake a range of activities aimed at preventing an injury covering more than one level.

Within each of these levels of prevention there are a range of approaches that can be used to prevent injuries. These include:

- Education and awareness-raising.
- Empowerment.
- Environmental modification and engineering.
- Enforcement.

The approaches are outlined below with examples and information about the local practitioners that may be involved in each approach. It is important for injury prevention practitioners to be aware of the roles of other individuals, agencies and organisations in injury prevention. For many injury prevention programmes full effectiveness is best achieved through collaboration with other agencies.

Education and awareness-raising

The educational approach to injury prevention aims to provide people with information about the risk of injuries and how to prevent them. This can make people aware of the problem, enable them to understand how and why injuries happen and how they may be prevented so that they can make an informed choice about what action they will take to reduce their risk of injury. It involves exploring an individual's attitudes and beliefs about injuries and injury prevention, and providing information to enable an individual to examine their own attitudes and beliefs.

Public awareness campaigns and training can be considered sub-sets of educational approaches. Awareness campaigns highlight an issue as a cause for concern and training involves the teaching of certain specific skills, e.g. bicycle skills training.

An underlying concept of this approach is that it is the individuals' right to choose their action, and their responsibility to do so. Giving parents information about the type of injuries that occur to children in the home and the types of safety equipment available that can help to reduce the risk of such injuries would be an example of such an approach. One of the potential drawbacks of this approach is that if we assume that when presented with the same information everybody has an equal opportunity to make a "safe" choice, we may well be wrong. For example, choosing whether or not to buy and install a stair gate may be a very different choice for different families.

The educational approach can be used for individuals in an attempt to change their safety behaviour. It can also be used with whole communities to increase knowledge about injuries and effective methods of injury prevention, increase confidence and skills in undertaking injury prevention and create a climate of opinion within a community within which preventive activities are acceptable. Remember, a community is a formal or informal network of people who are linked together due to, for example, where they live, the work they do, their ethnic or religious background and through their links have the capacity to respond collectively. Thus, educational approaches need to address needs both within and outside your organisation. There is a growing body of research suggesting that workers from all disciplines and professions have had insufficient training in injury prevention and that they have considerable need for further educational input.

Education should also be aimed at local and national policy- and decision-makers who legislate or create standards and regulations, or who commission environmental changes or preventive services.

Empowerment

Empowerment involves facilitating or enabling people to undertake injury prevention for themselves. This may be through gaining confidence, skills, or knowledge and putting these into practice; by helping parents to access safety equipment through low cost schemes; or by enabling parents to persuade landlords to make repairs to their homes. Health service staff, educational

services, road safety officers, children's centre staff and voluntary organisations are probably the agencies most commonly involved in this type of injury prevention.

Environmental modification and engineering

This involves the design of the environment itself, the design of products and the introduction of safety devices. For example, the design and implementation of traffic calming schemes can reduce the risk of road traffic injuries, the use of safety glazing in windows and doors near children's play areas can reduce the risk of lacerations, separating cyclists from motor vehicles by the installation of cycle ways can reduce cyclist injuries, and the use of energy-absorbing surfaces in playgrounds can reduce the risk of injury from falling. Local authority staff are commonly involved in this type of work e.g. road safety officers, planners, engineers, transport, leisure and housing department staff. Housing associations, architects, builders and designers may also be involved.

Changes to the design and manufacture of products can:

- reduce the risk of an injury occurring by, for example, the manufacture and fitting of air bags in cars.
- reduce access to a hazard through the design and introduction of child-resistant closures for medicines.
- reduce the severity of the injury such as by changing the design of pen caps to reduce the risk of fatal suffocation if a cap is inhaled.

The use of safety equipment is often a key aspect of our approach to unintentional injury prevention, even among the under 5s, for example, the use of a cycle helmet can protect the head if the child falls from its bike, the use of safety seats in cars, and safety gates and smoke detectors in the home.

Enforcement

The enforcement approach involves the use of standards, regulations or legislation to enforce safer behaviour, safer environments or safer products to reduce the risk of injury. Although not related to the under 5s, examples include seat belt legislation that has been associated with increased seat belt wearing rates and reductions in motor vehicle occupant injuries; and cycle helmet legislation in Australia has been associated with a reduction in head injuries amongst cyclists. The British Standards Institution produces standards for a range of nursery equipment and children's products including playpens, push chairs and buggies, child car seats, stair gates, fireguards, cots, high chairs, two-wheeled bikes, cycle helmets and smoke detectors.

These standards, laws and regulations do not necessarily mean that injuries will not occur. They aim to reduce the potential for injury and may need to be combined with adequate enforcement and other approaches that promote safe behaviour. Those who have an enforcement role in terms of injury prevention include:

- police.
- fire and rescue services.
- local authority departments including environmental health, trading standards and social services.

While enforcement may appear to rely on what we all regard as laws and regulations emanating from parliament or the council, there can be "legislation" at a more domestic level. The rule in a children's centre that hot drinks must not be taken into an area where there are children is such an example. Good legislation is that which is readily accepted by the public, makes good sense and requires little, if any, enforcement. Involving families in the development of rules can improve their chances of being followed.

Active and passive prevention

Protection that is provided without an individual needing to do anything or not having to take repeated action is called passive prevention. Permanent changes to the environment or to products usually provide such protection against injury. For example, the fitting of a thermostat to control hot tap water temperature stops an individual having to remember to always use cold water in the bath first and to test the temperature. Smoke alarms wired in to the electrical supply of the house do not require batteries to be changed.

Injury prevention measures that requires individuals to change their behaviour or to take action repeatedly are known as active measures. There are times when all of us would forget to undertake preventive actions, for example, when we are tired or stressed, or something unexpected happens. Passive protection is more likely to be effective, as it does not require us to take any action, and hence should work under such circumstances.

SOURCES OF SPECIALIST ADVICE AND INFORMATION

Detailed information about the *Keeping Children Safe at Home* programme can be found at <http://www.nottingham.ac.uk/research/groups/injuryresearch/projects/kcs/index.aspx>

Key voluntary organisations

Child Accident Prevention Trust (CAPT)

www.capt.org.uk
www.makingthelink.net
www.childsafetyweek.org.uk

CAPT's work stops children being killed, disabled or seriously injured in accidents - without wrapping them in cotton wool.

Royal Society for the Prevention of Accidents (RoSPA)

www.rospace.com

RoSPA promotes safety and the prevention of accidents at work, at leisure, on the road, in the home and through safety education.

Lullaby Trust (formerly the Foundation for the Study of Infant Deaths)

www.lullabytrust.org.uk

The Lullaby Trust provides specialist support for bereaved families and anyone affected by a sudden infant death. It also provides advice on safe sleeping for babies.

Government agencies

National Institute for Health and Care Excellence (NICE)

www.nice.org.uk

NICE produces public health guidance covering disease prevention, health improvement and health protection and has influenced policy and practice in the NHS and local government on many of the big issues in today's society including accident prevention. It also produces briefings for local government to help them in their public health roles.

Public Health England

<https://www.gov.uk/government/organisations/public-health-england>

Its mission is to protect and improve the nation's health and to address inequalities.

NHS Health Scotland

www.healthscotland.com
www.maternal-and-early-years.org.uk

Its commitment is to focus on the biggest health challenge facing Scotland – health inequalities.

Public Health Wales

www.publichealthwales.wales.nhs.uk

Its purpose is to protect and improve health and wellbeing and reduce health inequalities in Wales.

Sources of data

Office for National Statistics (ONS)

www.ons.gov.uk/ons/index.html

The website contains a variety of statistics including mortality statistics and population data.

Child and Maternal Health Information Network (ChiMat)

www.chimat.org.uk

It provides information and intelligence covering England to improve decision-making for high quality, cost effective services. Its work supports policy makers, commissioners, managers, regulators, and other health stakeholders working on children's, young people's and maternal health.

Local public health departments

These departments are part of your local council. They are likely to have local data on hospital admissions and deprivation. If they do not hold such data, they should know from where it is available. They may also be able to assist with the analysis of local data and programme evaluation.

Relevant local authority departments

Upper tier local councils (county councils, metropolitan boroughs and unitary authorities) have departments or teams that cover the following topics:

- Road safety (often part of transportation or highways).
- Environmental health – is responsible for housing fitness.
- Public health.
- Children’s services, including local safeguarding children boards and responsibility for children’s centres.
- Trading standards – responsible for the enforcement of product safety issues.

In 2015, responsibility for the commissioning of health visiting services in England moves from the NHS Commissioning Board to local authorities.

Other sources of information

Fire safety

Government publications

<https://www.gov.uk/government/publications/fire-safety-in-the-home>

<https://www.gov.uk/government/publications/make-your-home-safe-from-fire>

<https://www.gov.uk/government/collections/fire-safety-guidance>

Preventing carbon monoxide poisoning

CO awareness

<http://covictim.org>

Health and Safety Executive

www.hse.gov.uk/gas/domestic/co.htm

Key references

Arch BN, Thurston MN. An assessment of the impact of home safety assessments on fires and fire-related injuries: a case study of Cheshire Fire and Rescue Service. *J Public Health* (2013) 35 (2): 200-205.

Cooper NJ, Kendrick D, Achana F et al. Network meta-analysis to evaluate the effectiveness of interventions to increase the uptake of smoke alarms. *Epidemiol Rev* 2012;34:32-45.

Deave T, Goodenough T, Stewart J, et al. Contemporary hazards in the home: keeping children safe from thermal injuries. *Arch Dis Child* 2013;98:485-489

Edwards P, Green J, Roberts I, Lutchmun S. Deaths from injury in children and employment status in family: analysis of trends in class specific death rates. *Brit Med J*. 2006. 333;7559:119-121

Ingram JC, Deave T, Towner, E et al. Identifying facilitators and barriers for home injury prevention interventions for pre-school children: a systematic review of the quantitative literature. *Health Education Research*;2012;27(2):258-268.

Kendrick D, Stewart J, Smith S et al. Randomised controlled trial of thermostatic mixer valves in reducing bath hot tap water temperature in families with young children in social housing. *J Arch Dis Child* 2011;96:232-239.

Kendrick D, Young B, Mason-Jones AJ, et al. Home safety education and provision of safety equipment for injury prevention. *Cochrane Database of Systematic Reviews* 2012, Issue 9. Art. No.: CD005014. DOI: 10.1002/14651858.CD005014.pub3.

Tyrrell EG, Orton E, Tata LJ, Kendrick D. Children at risk of medicinal and non-medicinal poisoning: a population-based case-control study in general practice. *Br J Gen Pract*. 2012 Dec;62(605):e827-33. doi: 10.3399/bjgp12X659303.

Watson M, Benford P, Coupland C, et al. Validation of a home safety questionnaire used in a series of case-control studies. *Inj Prev* Published Online First: 3 Mar 2014. doi:10.1136/injuryprev2013-041006.

Watson MC, Mulvaney CA, Kendrick D et al. National survey of the injury prevention activities of children's centres. *Health Soc Care Community*. 2014 Jan;22(1):40-6.

Young B, Wynn PM, He Z, Kendrick D. Preventing childhood falls within the home: overview of systematic reviews and a systematic review of primary studies. *Accident Analysis and Prevention* 60 (2013), 158-171.

Keeping Children Safe at Home is a collaboration between the organisations shown below.
It aims to improve our understanding of children's accidents and make their prevention more effective.

For further information visit www.nottingham.ac.uk/injuryresearch

