Royal Society for the Prevention of Accidents (RoSPA)

Home Safety Position Statements

September 2014

These statements represent a summary of RoSPA's position at the time of publication, based on the current evidence available. As other issues emerge or the picture changes, with regard to an area covered by these position statements, they will be reviewed and updated.

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INTRODUCTION

This document contains position statements on a range of home safety issues. These are RoSPA's views, which are supported by the National Home Safety Committee (NHSC). The NHSC is an advisory committee to RoSPA and includes regional representatives from across the UK, government departments and national bodies.

This document does not intend to describe the complete statutory and voluntary framework that can have a positive influence on safety within the home as there are a wide range of laws, standards and voluntary agreements that exist which, when properly implemented and enforced, can make us safer in our homes.

This document only addresses key areas that RoSPA considers a priority for action to change the existing situation or further investigate the complexities of an issue. Where such actions are identifiable and achievable, and could make a significant difference to the incidence of accidental injuries in the home in the UK, they are included in this document.

Further information about these and other home safety issues and activities can be found at www.rospa.com.

In addition, we now make use of social media to promote key consumer messages. Social media generates significant feedback and discussion from consumers and is seen as an important tool in advising the public about RoSPA home safety policies .

There has been a dramatic shift in the way that much of the legislation referenced in this document is enforced. Nonetheless, the principles around safety in the home will always remain the same, and RoSPA is at the forefront of delivering guidance on these issues.

SUMMARY

The position statements included in this document cover a wide range of home safety issues and concerns. *Section 1* highlights the need for home safety to be recognised as a key public health issue. Highlighting the scale of the problem, in terms of the huge number of deaths and injuries that result from accidents in the home and the associated costs to society, RoSPA sets out a range of actions that needs to be taken at national and local level by agencies, partners and communities.

Section 2 highlights the need for consistent, accurate, high quality data to be systematically collected and disseminated in order to measure the scale of the problem and the effectiveness of interventions.

The remaining sections explore specific issues. *Section 3* highlights the importance of action to improve safety of housing; cost-effective measures that could be taken to achieve this; and the impact this could have on reducing accidents. Later sections look at gas, electrical, and garden safety, while water safety is covered in terms of drowning issues in both baths and ponds, along with temperature controls to reduce the risk of scalding.

Sections 4 and 5 focus on the two age groups most at risk from home accidents: children, especially those under the age of five, and older people.

The Child *Safety Section* raises concerns about a number of products including blind cords, baby bath seats, baby walkers, amber teething necklaces and baby “bling”. Advice is given on various types of safety equipment, sleeping arrangements, and finger trapping hazards.

Section 5 focuses on older people. It recommends a number of practical steps to improve safety of this age group and demonstrates the need for effective falls prevention policies.

Section 6 focuses on the prevention of house fires is extensively covered with recommendations on smoke alarms, residential sprinklers and the use of other fire-fighting equipment. There are also position statements on seasonal issues including firework safety and the use of barbecues in sections 7 and 10 respectively. Carbon monoxide and electricity are covered in section 8 and 9

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1 Raising the Profile of Home Safety

1.1 RoSPA believes that home safety should be a priority for action in a manner that better reflects the high cost to the individual and to society.

Accidental injuries in the home are a major cause of death and serious injury in the UK. More accidents happen in our homes than anywhere else.

In the UK, around 5,000[1] people die each year following an accident in their home.

People aged over 75 are most likely to die following a home accident. In England and Wales alone, in 2010, nearly 3,000 people died as a result of an accidental fall.

According to the Audit Commission report *Better Safe than Sorry 2007*[2]*,* accidental injury among under-15s results in two million visits to Accident and Emergency (A&E) by children each year, costing £146million.

For people of working age (20-64 years), the vast majority (72%) of fatal accidents take place while in the home and enjoying leisure time, 24% occur on the roads and just 4% happen in the workplace. For this age group, the leading causes of fatal accidents are poisonings by drugs (48%), transport accidents (26%) and falls (15%).[3]

It is estimated that about 2.7million home accidents requiring hospital treatment happen each year[4]. Many more will be treated by GPs or at home.

Children under the age of five and people over 65 years of age are most likely to be injured following a home accident. These age groups also have a greater likelihood of sustaining severe injuries with major or long term consequences.

About 1million children aged under 15 attend hospital each year for treatment following a home accident. This represents 10% of all annual hospital visits across all age ranges.

Until recently, the number of deaths from home accidents had fallen slowly over the previous 20 years. However, the most recent figures have shown a reverse in this trend with deaths increasing. Improvements in emergency treatment may also have led to an increase in the proportion of non-fatal injuries judged to be severe and in those leading to disability and long term rehabilitation needs.

Visits to hospital emergency departments are rising by 10% per annum and the Transport Research Laboratory[5] (TRL) estimates that the cost to society of home accidents is £45 billion per annum. Financial costs, such as lost working time, social care costs and benefit provision, can be incurred as well as a range of personal costs as the injuries can have major effects on education, employment opportunities, emotional wellbeing and relationships – with some families breaking up under the strain.

These costs continue to rise. The increase is likely to be over and above inflation rises due to the higher costs of new emergency treatments, longer rehabilitation periods, increased disability and an increase in the proportion of severe injuries. In addition,

current demographic changes mean an increasing proportion of the population will be over the age of 65 and, as stated previously, older people are more vulnerable to accidents in the home and are more likely to sustain severe injuries.

As a direct result of this, insufficient resources (financial and temporal) are being allocated to home accident prevention despite the increasing cost and burden to society.

1.2 RoSPA believes that including injury prevention within the public health agenda should be a priority.

RoSPA's mission is ***to save lives and reduce injuries***. Our vision is to ***lead the way on accident prevention***. We need to ensure injury prevention remains on the public health agenda where it is already established. However, there needs to be a much stronger focus on accident prevention as part of overall public health policy and practice.

RoSPA has argued consistently that accidents are a major public health issue requiring a strategic approach to prevention. We remain steadfastly committed to promoting safety and the prevention of accidents in all areas of life: at work, at leisure, on the road, in the home and in schools.

As the UK's leading accident prevention charity, we believe that improved co-ordination between Government departments is critical to the delivery of effective home safety. Accident prevention is easy and relatively inexpensive to deliver, to a largely receptive audience[6].

RoSPA recognises that home safety falls within the remit of more than one Government department, including the Department of Health, the Department of Business Innovation and Skills, the Department for Education and the Department for Communities and Local Government, as well as the Chief Medical Officer, Public Health and Sport Directorate in Scotland and the Public Health Agency in Northern Ireland.

Other organisations linked to Government, such as Public Health England and the National Institute of Clinical Excellence (NICE), also have critical roles to play.

Effective co-ordination and co-operation between departments which carry home safety responsibilities will ensure better delivery of home safety programmes both nationally and at a local level.

RoSPA positively encourages inter-agency working and shared funding of posts and programme interventions between agencies serving local populations.

RoSPA recommends that agencies and practitioners involved in home safety continue, whenever possible, to work together in partnerships, sharing the costs of combined activities.

This style of approach is generally acknowledged as being the most likely to lead to effective action and to maximise the benefits gained from the resources available.

1.3 RoSPA believes that effective home safety work requires the involvement of the community.

Every individual has responsibility for their own safety and many people are also carers with responsibility for the safety of others within their homes. In addition, individuals are members of communities, both formal and informal. Many actions aimed at preventing accidental injuries in the home require the active involvement of individuals and/or communities.

If people are to implement change to their environments or behaviour they must acknowledge the scale of the problem, accept the need for change, understand the changes required and be in a position to implement those changes. In addition, people are more likely to accept and utilise changes imposed upon them if they have been involved in the decision-making process.

Practitioners need to support individuals and communities to realise and implement changes that can effectively reduce the number, severity and consequences of accidental injuries in the home.

Whilst this can be approached through a range of traditional promotion and education approaches, RoSPA believes that far greater attention should be paid to community involvement, community development and community partnership work than is evident at present.

The burden of deaths and injury is disproportionately heavy on the most disadvantaged communities in society. This is seen as a result of a range of factors relating to poverty and environmental conditions that can place disadvantaged communities in circumstances that require alternative approaches.

1.4 RoSPA believes that home safety practitioners should pay special attention to the real and expressed needs of disadvantaged communities and, in particular, learn from and become involved in local regeneration, renewal and community development initiatives.

Community involvement should include all residents, regardless of age. RoSPA believes that increased attention should be paid to the potential role of children in maintaining their own safety as well as developing activities and supporting others to help increase their safety.

RoSPA would also like to see further investigation into how the role of older people in supporting and enabling home safety for other members of their community can be supported.

RoSPA is committed to the promotion of home safety in a manner that respects, acknowledges and fulfils the needs of the community being served, regardless of age, gender, disability and ethnic, religious or cultural background.

2 The Need for Improved Data

2.1 RoSPA believes that improved causation data is critical to the delivery of effective home injury prevention programmes.

Increasingly, home safety work has been severely hampered by the lack of data. The cessation of the collection of the Home Accident Surveillance System/Leisure Accident Surveillance System (HASS/LASS) statistics in 2002 and firework injury figures in 2005 has limited the data available particularly in relation to causation of accidents and products that maybe involved.

Emerging issues, such as deaths due to blind cords, nappy sacks and carbon monoxide poisoning on campsites, have been picked up from anecdotal and media reports rather than from a systematic collection and analysis of data that could have led to early identification of a problem and action being taken.

Data sources such as Hospital Episodes Statistics and Injury Profiles data are of value in supporting the work on home safety but they do not provide sufficient specific data on injury causation. This makes it difficult to target and evaluate prevention work.

3 The Provision of Homes

3.1 RoSPA recommends that the health and safety of occupants of a home should be an integral part of the design and building of all new dwellings, refurbishments and renovations.

Homes can and should be designed and built in a manner that can reduce exposure to hazards and contribute to a reduction in accidental injury rates.

RoSPA is concerned that the health and safety of those who live within a home is, at present, not a high enough priority for architects, designers and builders in this country. RoSPA is also aware that home purchasers and tenants tend not to give sufficient consideration to safety when purchasing or renting a home.

RoSPA has drawn up a policy relating to the design and build of new homes and is actively promoting a *Design and Build for Safety* approach with all relevant businesses, agencies and professions.

RoSPA would also like to see a *Design and Build for Safety* approach adopted by all those involved in the refurbishment and renovation of homes.

RoSPA is aware of the opportunity offered by regeneration and renewal initiatives within the most disadvantaged areas in this country and recommends that home safety should be a priority within all such projects.

3.2 RoSPA supports the safety requirements identified within the Building Regulations.

RoSPA supports the use of Building Regulations to identify the safety requirements for dwellings and believes that they have made a considerable contribution to home safety over the years.

RoSPA is encouraged by the incorporation of fire safety, safety glazing, thermostatic mixing valves and access requirements in the Building Regulations in recent years, and believes these changes demonstrate substantial progress towards safer homes.

RoSPA will continue to work to identify any changes or extension to the Building Regulations that could improve the level of safety within new and existing homes.

3.3 RoSPA actively promotes the provision of additional safety features within new homes including the provision and installation of:

- Secure cupboards for the storage of chemicals and medicines
- Fixing points for safety gates
- Fixing points for a fireguard
- Window restrictors on windows above ground level
- Easily accessible window controls
- Second handrail to staircases
- Grab rails for baths and toilets
- Increased stair treads
- Thermostatic mixing valves
- Carbon monoxide detectors.

RoSPA believes that there are many simple, low cost design improvements that can increase safety within a home.

RoSPA has identified specific measures (identified above) that it considers essential safety components of a new build home. These improvements would particularly help to address the needs of disadvantaged people and those restricted in their ability to make the necessary changes themselves.

RoSPA estimates that the total cost of including these measures within the building of any new home would not exceed £1,200 per dwelling – an amount which is considerably less than the cost of most serious injuries that could result from a home accident.

Full details of the features recommended, costs and benefits can be found in the document *Can the Home Ever be Safe? RoSPA 2005* (revised for Scotland 2008) at www.rospa.com/homesafety/Info/can-the-home-ever-be-safe.pdf

3.4 RoSPA would like to see all new tenants and homeowners provided with a comprehensive checklist of safety information relating to that dwelling.

In every home, there is a variety of actions required to ensure the property is safe to live in and continue to maintain or improve that level of safety.

Although the NHBC provides some safety information to new homeowners the provision of advice for most homeowners and tenants is currently inconsistent, may not be accessible to those most in need and, can only offer general advice rather than home specific details.

It is mandatory under health and safety legislation that in places of work certain safety information is displayed in a prominent position and that all workers undertaking risky operations are trained and provided with safety equipment and safety information.

RoSPA believes it is important that everyone - tenants and homeowners - should be aware of the presence, history and status of those aspects of the home that can affect their safety. They should also have available information and advice on how to maintain and improve the level of safety within their home.

RoSPA would like to see comprehensive checklists of safety information - one for the building and one for the garden - available for every home. These checklists could become an integral part of all purchasing and renting transactions for new and existing dwellings.

3.5 RoSPA advocates that all new homes should be provided with a safety "logbook" and believes that this should include dwelling-specific safety information.

RoSPA supports the proposal that all new homes should be provided with a safety "logbook", which details work carried out that might have an impact on the safety of the home in the same way that the Energy Performance Certificate gives details of the energy performance within a house.

Until such time as these safety "logbooks" become mandatory, RoSPA advocates that all new homes should be provided with safety checklists.

4 Child Safety

4.1 Children and their parents/carers should be a primary target for activities aimed at preventing accidental injury in the home.

According to the Audit Commission report *Better Safe than Sorry 2007,*[2] accidental injury among under-15s results in two million visits to A&E by children each year, costing £146million.

Public Health England's review of hospital admission statistics (2008/09 - 2012/13) for England shows that approximately 40,000 children under the age of five are admitted to hospital each year as a result of accidents.

Mortality statistics (2008-12) show that, on average, 62 under-fives die each year from injuries caused by accidents and 40 children die in the five to 14 age group.

Children aged less than five are most at risk of having a home accident.[2] Falls account for most non-fatal injuries[3] (42%), whilst the greatest number of home accident child deaths result from fires, drowning and suffocation.

Boys are more likely to have accidents than girls, and are twice as likely to die from accidental injuries than girls[3]

We know that there is a significant social class gradient in the death rate of children from injury or poisoning. For children of parents in 'routine occupations' (National Statistics Socio-Economic Classification class 7) the death rate is 2.6 times higher than that of children of parents in 'higher managerial and professional occupations' (NS-SEC class 1). However, the greatest difference in mortality is between children of parents who are employed and children of parents who are not. The death rate of children of parents who have never worked or are long-term unemployed (NS-SEC class 8) is 13.1 times higher than that of children of parents in NS-SEC class 1[2]

Factors such as stress, bereavement, illness, homelessness, or frequently moving house can increase the likelihood of a child having an accident.

Minor accidental injuries are a normal part of growing up and there is a close link between the type of accident a child will have and their stage of development. As a child explores and interacts with their environment, as they must do in order to develop properly, they will have accidents and the majority result in no or only minor injuries. These events are an important part of development.

However, serious accidents leading to death or severe injuries and repeated accidents are a major cause for concern.

Accidental death and severe injuries can be prevented if children have a safe, secure and sustainable environment in which to grow and learn.

Home accident prevention requires a combination of approaches to prevention including: measures to improve the environment; education; empowerment, and; enforcement measures.

4.2 Baby walkers

RoSPA actively discourages the use of baby walkers.

Safety experts, health visitors, physiotherapists and paediatricians from around the world have expressed great concern about baby walker injuries. Baby walkers are associated with more injuries than any other type of equipment designed for young children. In 2002, more than 3,300 children were taken to hospital after an accident while in a baby walker. Research has shown that at least a third of babies using baby walkers will be injured at some time by an accident involving the baby walker[7].

Baby walkers allow babies to move at high speed. They also raise babies to a height where they can reach sharp and hot hazardous items. Most accidents involve falls such as down stairs or steps or when the baby walker tips over.

Burns and scalds can also be sustained due to falling or crashing into fires, heaters and other hot surfaces, such as ovens, and as a result of the child's greater access to hot liquids about the home. For example, in a study of burns units in Wales, a quarter of babies aged six to 12 months in hospital with burns and scald injuries had been in a baby walker when the injury occurred[8].

Poisoning injuries are also more common for baby walker users, probably because they can reach higher whilst in the walker. In one research project, baby walkers were the second most common factor associated with poisonings in children under 12 months old[9].

For these reasons, RoSPA believes that baby walkers are dangerous pieces of equipment and actively discourages their use.

There continues to be demand from parents and carers for baby walkers. This demand can be seen as the result of two main misapprehensions:

- that a baby is safe in a baby walker
- that baby walkers teach their children to walk[10]

Parents often use a baby walker as a safe place to leave a child while they get on with some other activity. However, a child in a baby walker actually needs to be watched much more carefully and, even then, because these accidents occur very quickly, they still may not be able to prevent an accident happening.

One American study has shown that in nearly 70% of baby walker injuries the child was being supervised at the time.[11]

Some parents believe that baby walkers help to teach children to walk. This is NOT true. In fact, there is increasing evidence that the use of a baby walker may delay normal child development by limiting the amount of time spent rolling, sitting, crawling and playing on the floor – all essential components of learning to walk[12].

Safety practitioners, health visitors and others should be proactive in discouraging the use of baby walkers and supporting parents and carers in making informed choices[13].

4.3 Bath seats for babies

RoSPA recommends that young children are never left unattended when in the bath, even if they are in a seat or similar device.

Over the past 14 years, 78 children under the age of five have died in baths in the UK[12]. At least six of these involved a bath seat.

A child can drown in a bath very quickly and quietly. Young children can drown very quickly in as little as 5cm of water. In a slippery bath, a baby or young child with limited mobility and body control can become immersed in the bathwater very easily. This situation can be made worse by a young child's inability to self rescue - their heads still weigh proportionately more than their bodies compared to adults and their muscular control is not yet fully developed.

There are several baths seats and other devices on the market that appear to enable a young child to remain seated whilst in the bathwater. This can help with bathing two young children.

However, RoSPA is aware that these devices can give parents/carers the impression that their child is safe and secure in the water. There is increasing evidence that these seats can tip over or become detached and that children can slip or climb out of them. Many children find them uncomfortable and some offer inadequate support for young children.

The main reason behind these accidents is a false sense of security by adults using them who assume that these products are safety devices. RoSPA, the European Child Safety Alliance and the World Health Organisation all suggest otherwise and recommend supervision at all times.

The US currently has a standard for bath seats following research undertaken by the US Consumer Product Safety Commission (CPSC); there is no equivalent standard within the UK.

Figures released in February 2009 indicate 90 deaths occurred between 2003 and 2005 involving young children and baby baths or rings. It is believed these were caused by the false sense of security promoted by the equipment and the increased likelihood of leaving a child unattended.

When using these products, children must NOT be left unattended.

Under the General Product Safety Regulations, a prospective purchaser must be given sufficient information in order to assess the risk presented by a product. RoSPA believes that this principle should be applied more stringently within these regulations in regards to bath seats.

RoSPA is actively seeking the inclusion in any new European Standard of a requirement for a conspicuous, legible and durable safety label on every bath seat and a further notice on the product packaging. For example, "Five babies drown in baths each year in the UK - NEVER leave your child unattended in the bath".

4.4 Looped blind cords

Despite new standards being introduced that aim to make new blinds much safer, many homes are still fitted with blinds that will not incorporate these safety requirements.

RoSPA recommends that it is still important to raise awareness among parents, grandparents and carers to ensure looped blind cords are kept out of the reach of children.

Looped cords are a common mechanism on blinds currently fitted in UK homes. They also feature on new products (made-to-measure/professionally-installed and those bought “off the shelf”).

RoSPA typically hears about one or two children dying each year in the UK after becoming tangled in looped blind cords. The RoSPA press cuttings archive reveals at least 28 under-fives have died in blind cord accidents since 1999[14]. There are likely to be many more near-misses.

UK injuries are not reported systematically, but cases in the US show children can be severely disabled or left in a coma after blind cord entanglement.

RoSPA has welcomed a major development in its campaign to stop window blinds posing a risk to the lives of young children and is pleased to announce that the new Internal Blinds – Performance Requirements including Safety – EN13120:2009+A1:2014, released in February 2014, strengthens the child safety elements of the standard.

The new standard amends a previous European standard published in 2009. The amendment considerably extends the standard scope so that it covers not only venetian blinds, roller blinds, vertical blinds and pleated blinds, but also honeycomb blinds, Roman shades, Austrian/festoon blinds, panel blinds, plantation shutters and roll-up blinds.

It requires that new blinds must be "safe by design" or be supplied with the appropriate child safety devices installed. This means that where there is a loop that is present, or could be created, a safety device must be installed at the point of the manufacture.

These safety devices either break under pressure, tension the cord or chain, or provide the facility to store cord(s) out of reach. Professional installers must fit these devices. If you are fitting blinds yourself follow the instructions supplied with the product and make sure you fit any safety device.

The standard also imposes a maximum cord and chain length. All blinds must also continue to carry safety warnings. The main standard is supported by two additional standards: EN 16433:2014 and EN 16434:2014, which relate to testing requirements.

Although the new standard aims to make new blinds much safer, many homes are still fitted with blinds that will not incorporate these safety requirements, which is why

RoSPA recommends families ensure looped blind cords are kept out of the reach of children.

4.5 Sleeping arrangements for small babies

RoSPA recommends that babies under six-months-old never sleep in the same bed as an older child or adult.

In addition, RoSPA does not recommend the use of cot bumpers.

If an older child or adult sleeps in the same bed as a baby there is a significant risk they will roll on top or against the baby - this will suffocate the baby.

Whilst it is tempting for a tired or worried parent/carer to take a baby into their bed when breast feeding or tending to a sick or restless child, this should be actively discouraged.

RoSPA believes safety, health and childcare professionals should have a leading role in promoting this message

To avoid the risk of suffocation do not use duvets or pillows for babies, always put babies down to sleep on their backs with their feet at the bottom of the cot, reducing the risk of them being able to wriggle under the blankets.

RoSPA does not recommend the use of cot bumpers because:

- Babies are most at risk from suffocation when they are sleeping. Cot bumpers can pose a risk of suffocation, overheating and asphyxiation
- Once your baby can move around the cot and potentially pull themselves up on the bumper, there is an increased risk of a fall from the cot.

More Information can be found on the Lullaby Trust website at: www.lullabytrust.org.uk

4.6 Bunk beds

RoSPA recommends children under the age of six do not use the upper bunk.

The safety of bunk beds is addressed within The General Product Safety Regulations 2005. These Regulations are used to ensure the spaces between bars and around the mattress that should be used when designing and making a bunk bed, in order to prevent the occupant falling through and becoming trapped.

Such accidents can be severe, involving fractures and in some cases death by strangulation.

The dimensions of these spaces have been based on the average measurements of a child aged six-years-old: thus a younger or smaller than average child will not be adequately protected and will be at risk if they use the upper bunk.

Parents should also consider very carefully whether allowing a child younger than six to sleep on the bottom bunk is safe as toddlers can get trapped.

Babies should always have their own cots. *Safekids New Zealand* recommends that bunk beds are not suitable for children under the age of nine.

It should be noted most accidents involving bunk beds occur when children are playing on them and this should be discouraged. Parent and children should be discouraged from hanging toys or objects that could be a hazard, on the bed.

4.7 Bed guards

RoSPA does not recommend the use of bed guards.

Bed guards are fixed or drop side, metal, wood or plastic devices that can be added to the side of a child's bed.

It is suggested that this device can prevent a child falling out of bed and injuring themselves. They may well do so, but only as long as they are correctly positioned and fitted and regularly adjusted to the size and sleeping behaviours of the child. This can be impractical.

However, bed guards also introduce additional and potentially more hazardous injury risks, for example, a child can become trapped between the mattress and the guard possibly leading to suffocation.

Given that falls from low level beds often result in no or only minor injuries but that entrapment injuries can be severe or even fatal, RoSPA does not, at present, recommend the use of bed guards.

RoSPA will be monitoring the effect of the standard for bed guards (BS 7972 2001), although the lack of injury data in this area means that the majority of data is anecdotal and from press reports.

4.8 Cooker guards

RoSPA does not recommend the use of cooker guards.

Cooker guards are devices that can be attached to the hob which are supposedly designed to stop young children pulling pans down and scalding themselves with the contents.

RoSPA is concerned about the severe injuries that can occur from these accidents and the number of such incidents, but does not believe that cooker guards offer a safe and sufficient response to this risk.

The design and construction of many cooker guards means that children can still access the pans and the heated elements of the hob and thus sustain burns when they

touch them. Cooker guards also tend to get sufficiently hot themselves that they can cause burns to children.

RoSPA is also aware that a significant number of young people and adults have sustained burns and scalds as a result of knocking a pan as they attempt to lift it over the cooker guard.

RoSPA maintains a position that any piece of child safety equipment will only be recommended if it acts to prevent sufficient numbers of severe injuries to children without significantly affecting the safety of others within the home. RoSPA does not believe this is currently the situation with regard to cooker guards.

RoSPA recommends that, wherever possible, young children are kept out of the kitchen whilst cooking activities are being carried out, possibly by using a child barrier or gate at the doorway. It is also recommended that pans are used on the back burners or elements with the handles turned to the side away from the hob.

RoSPA supports the use of guards placed over oven doors to protect against the risks from high door surface temperatures.

4.9 Safety gates

RoSPA recommends the use of safety/stair gates in the homes of children under 24 months.

Around 36,000 under-fives attend A&E departments every year after an accidental fall on the stairs and around 42,000 following an accident in a kitchen.

Safety/stair gates (EN 1930:2011) are a well-established item of child safety equipment known to contribute to the safety of children with their homes. When in place and properly fitted they restrict a child's ability to access dangerous places by forming a barrier. The most common locations for using these gates are on stairs, steps and across the kitchen doorway.

These gates are designed to be used with children up to 24monthsold only.

BS EN 1930: Child Use and Care Articles – Safety Barrier – Safety Requirements and test method. - 10.3 Purchase Information must include the following: Safety Barrier is suitable for use with children up to 24 months of age - 10.4.3 The instructions shall include 'This safety barrier has been designed for use with children up to 24 months of age.

The American Safety Standard also states that gates are suitable only for 'young children aged six months through to 24 months'. Consideration was given to anthropometric data for 24-month-old children. Children above this age may be too tall, too heavy and too strong to be effectively retained by these products. The task group who discussed the age group also felt that the wording 'up to 24 months' was more suitable.

Some gates are screw-fixed and hinged at the wall whilst others are secured using adjustable pressure knobs that brace the gate between the walls or against the central post (newel post) of a staircase. The former types tend to be fixed more securely and are less likely to be pushed out of the way by a child. The latter types are dependent either on the pre-placement of wall cups prior to fitting the pressure style gate or the parent correctly fitting the gate using two solid surfaces and assessing the fit to ensure the correct pressure is applied.

The latter also has the advantage that they can be moved more easily between locations as required. However, the latter style also incorporates a bottom bar which makes them unsuitable for the top of the stairs, as this bar can cause a trip hazard.

Many current gate designs incorporate a central section that can be opened, in order to allow older children and adults to pass through safely. RoSPA encourages the use of these designs in order to minimise the number of accidents that can occur when an older child or adult tries to climb over a non opening barrier.

RoSPA particularly encourages people to fit screw-fixed gates with no bottom bar to the top of the stairs and a suitable gate to the bottom of stairs or steps in order to prevent young children from climbing on or falling down stairs and steps.

RoSPA proposes that reinforcements are provided in the walls at the top and bottom of the staircase in all new homes so that a European Standard stair gate can be fitted.

To help eliminate consumer confusion RoSPA believes gates described as 'pressure mounted' should be capable of satisfying the BSEN 1930:2000 safety standard tests without use of additional fixings.

4.10 Window restrictors

RoSPA recommends all windows above the ground floor should be fitted with restrictors, barriers, locks, or stays, to prevent children falling out.

RoSPA recommends window restrictors should be used where possible, but that if keys are used to lock windows, the keys are stored near the windows in a place easily accessible to adults for use in emergencies.

Each year, 6,000 children are injured falling from a structure of the home.

RoSPA is aware there has to be a balance achieved between the prevention of crime, the means of escape in an emergency, access to ventilation, the need to clean and maintain windows and the prevention of falls from a window.

For windows located at the first floor or above, RoSPA recommends some mechanism be fitted that acts to prevent children accidentally falling out. There are a variety of ways of limiting the opening of a window ranging from the provision of a chain between the

casement and the frame and fitting a restrictor to the scissor hinges to providing a lockable window stay, a window lock or a hinged bar between the window and frame.

RoSPA recommends a child resistant safety catch that limits the opening to less than 100mm should be fitted to windows. Any restrictor fitted should be capable of being opened in case of fire, via a child resistant catch.

RoSPA recommends the means to limit the opening of all windows at or above the first floor level should be included within the design and build of all new homes.

RoSPA is actively promoting the inclusion of the provision of window restrictors in building regulations.

4.11 Doors and finger trapping

RoSPA recommends parents and carers fit devices to all doors in their homes other than automatically closing fire doors, to prevent finger trapping.

RoSPA would like to see building regulations take into account the hazards presented by doors in homes.

It is estimated that 15,000 children trap their fingers in doors in the home each year in the UK. Attention was drawn to this problem by Dr Diana Macgregor[15]. Small "C" shaped foam/rubber products which are designed to be placed over the door to prevent slamming of doors on children's fingers. These are not suitable for fire doors as they prevent the door from closing.

Protectors can be retro-fitted to the hinged side of the door. These do not interfere with the closing mechanism or the integrity of the fire door as they can be fitted with an adhesive, therefore would be suitable for fire doors.

Other mechanisms can be retro-fitted which slow down the closing door process, giving a child the opportunity to remove fingers from areas of possible entrapment before an accident occurs. These do not interfere with the closing process, but simply slow it down. They may, however, not be suitable for fire doors as they would need to be screwed into place.

4.12 Storage of medicines

RoSPA recommends medicines are stored out of the reach of children in the kitchen.

RoSPA recommends a secure cupboard, located at 1.5 meters above floor level in the kitchen should be made available in all new homes.

In 2002, it was estimated that 28,600 children aged 14 years and under in the UK went to hospital after a suspected accidental poisoning.Nearly 25,000 of these cases involved children under the age of five. Children aged two to three years are known to be the most at risk.

The medicines most frequently involved in suspected child accidental poisonings are painkillers, tranquillisers, anti-depressants, vitamins and sleeping pills.

For most of these cases, the injury was minor and little or no treatment required. However, 14 children were recorded as having died of accidental poisoning in 2010 and eight of these children were under the age of five.[16]

Child resistant closures have significantly reduced child poisoning cases since they were introduced but they are not child proof and many four to five-year-olds can open them. They can, however, slow down access to medicines - as do single dispenser systems like single pill pocket pouches.

Young children learn about the world around them by touching and tasting and part of this developmental process involves putting things in their mouths. It is thus essential that they do not have access to items such as medicines, cleaning and DIY products that can be poisonous and can also cause severe caustic burns to the lips mouth and throat.

RoSPA recommends that all medicines are kept in their original containers and stored in a locked cupboard located in the kitchen so that young children cannot reach them from the floor or climb up to them. RoSPA recommends that locked cupboards are fitted at least 1.5 metres above floor level.

The provision of locked medicine cabinets in the bathroom has historically been a common approach to preventing these accidents. RoSPA recommends that medicine cabinets are fitted in the kitchen rather than the bathroom as the kitchen is a busier room and any child managing to access medicines is more likely to be interrupted before severe poisoning is sustained.

RoSPA also recommends the provision of a secure cupboard to store garden and DIY chemicals in a garage, shed or other suitable location.

RoSPA recommends that a secure cupboard, located at 1.5 meters above floor level in the kitchen should be provided in the specification for all new homes.

Low-cost, easy-to-fit cupboard locks are also available, which can turn a basic cupboard into a lockable cupboard, for the storage of medicines in the kitchen (as opposed to using child-resistant catches).

4.13 Hair straighteners

RoSPA recommends practitioners and users are made fully aware of the dangers associated with the use of hair straighteners.

Counterfeit hair straighteners have been found to have surface temperatures which exceed permissible standards. The maximum temperature limit for hair straightener handles, held in normal use, is 75°C. In terms of the actual plate temperature, these temperatures are currently not limited at all.

Hair straighteners can reach temperatures of up to 210°C and take as long as 40 minutes to cool down.

Horrific injuries can occur very quickly because children's skin can be up to fifteen times thinner than adults'.

RoSPA recommends that turning straighteners off, storing them out of reach or in a thermal pouch and doing it all straight away is a simple strategy to stop inquisitive children suffering. This will also prevent reported accidents where they have been sat on while cooling.

4.14 Cars and driveways

RoSPA recommends car drivers are made aware of the dangers particularly faced by young children when cars are being reversed in driveways.

People should be made aware of the dangers particularly faced by children in and around cars on driveways. Young children should never be left alone inside a vehicle, even when the engine is turned off. Car keys should never be left in the ignition when getting out of the car. A child could start the car or a car thief could jump in the car and drive off – there have been several cases where this has happened with a child still in the rear seat.

It is advisable to lock turn the steering wheel after removing the ignition keys. This makes it more difficult to start the car because when putting the ignition key back in to start the car, the steering wheel also has to be turned to release the steering lock. This would make the car more complicated to start for a young person.

It is easy for drivers to let their guard down or go into autopilot when doing tasks they perform daily – such as reversing onto or off a driveway – and this makes an accident more likely. One of the most common circumstances for these types of accidents is when a car is being reversed off a driveway. The driver has a limited view when reversing and, of course, small children may not be visible in the rear-view and wing mirrors.

In some cases, the parent was unaware that a child had managed to get out of the house. Where possible, it is better to reverse safely onto a driveway, and drive off forwards.

Car keys should be kept in a safe place, out of reach of children, in the house.

Drivers should be advised to adopt the following practices before and during reversing:

- Make sure you are aware of where all nearby children are
- Check around the vehicle by using the mirrors and looking over your shoulder
- Be aware that you may have blind spots around your vehicle, especially directly behind the vehicle, where small children can be hidden from view
- When reversing, make sure you perform the manoeuvre slowly, which gives you time to keep checking all around you. The rear window gives you the best view out of the rear of the car.

4.15 Amber teething necklaces

RoSPA recommends Amber teething necklaces should not be used.

These products represent a choking and strangulation hazard to babies. Beads and clasps can become detached and the danger is that a child could choke on them. There are also inherent strangulation hazards associated with having any type of cord placed around a child's neck, especially babies.

RoSPA advocates the use of medically approved creams applied directly to the gums. RoSPA also recommends teethers and teething toys which are often filled with a liquid and are sometimes kept refrigerated before being given to a baby to chew on.

In all cases, RoSPA advises parents to seek advice from health workers (even before the baby is born) on the best and safest ways of soothing teething pain.

4.16 "Bling" dummies, bottles and clips

RoSPA warns of the dangers of use of decorated "bling" dummies, bottles and clips.

"Baby Bling" is a new term to describe eye-catching dummies, clips and bottles of the usual design but with one important difference – they have stuck on beads, gems and other decorations in order to add a touch of "bling" to a baby's look.

Adding "bling" to dummies serves no medicinal purpose, it is purely a cosmetic addition.

Many of these products are manufactured by legitimate companies in accordance with the highest safety standards but are then being bought by other companies who glue on the gems, beads and other decorations.

There are strict controls on adding beads, gems or stickers to soothers, bottles and other baby products and, as such, these customised products are potentially unsafe.

The decorations that are attached to the dummies, clips and bottles are often easily detachable and once detached these pose a choking hazard to a baby. They can become stuck in the throat of a child or can be ingested and cause internal problems.

There have been cases of these products being taken off the UK market due to choking hazards.

4.17 Baby slings

RoSPA advocates using a carrier that keeps the newborn baby solidly against the parent's body, in an upright position. Parents should ensure that they keep the baby's chin off their chest, thereby keeping the airway free for breathing.

Baby slings are made of soft fabrics that wrap around the chest so that parents can carry their babies or just stay close as they bond with their babies. They have become increasingly popular in recent years with parents who want to "wear" their babies, known as "baby wearing."

There have been at least 16 reported deaths across the world associated with these products, particularly among babies younger than four months old. It has been reported that many of the babies who died in slings were a low birth weight twin, born prematurely, or had a cold.

Slings can pose a suffocation hazard in two different ways. A sling's fabric can press against a baby's nose and mouth, blocking the baby's breathing and suffocating a baby within a minute or two.

The other scenario involves slings where the baby is cradled in a curved or "C-like" position, nestling the baby below the parent's chest or near their stomach. That curved position can cause a baby, who generally doesn't have strong neck control, to flop its head forward, chin-to-chest, restricting the infant's ability to breathe. In scenarios like this, babies may not be able to cry for help and could slowly suffocate, according to the US authorities.

4.18 “Liquitab” style detergents

RoSPA recommends “liquitabs” and chemical items, like laundry detergents, are kept in a lockable cupboard or out of the reach of young children.

“Liquitab” detergents are an alternative to traditional powder, liquid or tablet style detergents used in washing machines and dishwashers. They are placed in either the drum of washing machines or in the tablet slot in dishwashers.

There have been reports of small children being poisoned after placing these products in their mouths. They are child-appealing in colour and shape and, as such, some children have ingested them, necessitating emergency medical treatment. In addition, medical professionals have reported cases of children being injured by getting liquid detergent in their eyes.

An evaluation of the pilot project running in Glasgow to prevent injuries from liquitabs has shown, so far, that 60 per cent of parents were storing their cleaning products in unsecured cupboards and within a child’s reach. Worryingly, eight per cent of parents had caught their children playing with these items. The completed evaluation of this project is due for publication in August 2014 and will be available on the RoSPA website www.rospa.com.

RoSPA does not oppose the use of “liquitab” detergents and other cleaning products at all. It is, however, very important to keep all chemical items, like laundry detergents and other products, in a lockable cupboard or firmly out of the reach of children. If children are affected by chemical products, then medical treatment should be sought immediately.

4.19 Nappy sacks

RoSPA recommends that awareness should be raised at both industry and consumer level of the potential for accidents involving nappy sacks.

Nappy sacks have recently been identified as causing suffocation and choking of babies under the age of one. Authorities in the UK have become aware of up to 10 deaths associated with nappy sacks during the past 10 years but collecting details of such incidents has proved difficult and it is possible that there have been more than these cases**.**

RoSPA considers that it is not feasible to suggest banning this product. Parents choose to use disposable nappies and welcome the opportunity to use nappy sacks to make their disposal easier.

- RoSPA is currently campaigning to raise awareness of the potential for accidents involving nappy sacks and how to prevent them. RoSPA is raising awareness

and distributing promotional materials to local delivery providers, training organisations and consumers.

- At the same time, RoSPA is campaigning to promote the continued development of safer products on the market. RoSPA is setting up stakeholder review meetings with manufacturers, frontline suppliers, users and industry representatives. This issue is also being raised at a European level by ANEC - the European consumer voice in standardisation.

4.20 Button batteries

RoSPA has been made aware of the dangers of children swallowing button cell batteries, which can be found in toys, remote controls, calculators and small electronic devices.

The National Capitol Poison Centre in the USA reports that there are around 3,500 incidents reported every year where swallowed batteries require urgent treatment. The Queensland Injury Surveillance Unit in Australia also estimates that four children a week are admitted to hospital after swallowing batteries.

Lithium batteries react with saliva so that they leak acid within as little as an hour. If a child swallows a battery it can cause severe trauma, such as burning a hole in their throat or stomach or further damage to other internal organs, or even death.

RoSPA has advised families to make sure toys and other products using button cell batteries, such as small electronic devices, have lockable battery compartments. This should mean they are safe for children to use as the batteries are locked away.

Famiies should also be extra vigilant with items including musical greeting cards, frameless candles and remote controls as they do not have lockable compartments. RoSPA advises that children should not be allowed to have access to these products if the battery compartment is not secure.

It is a good idea to ensure spare batteries are locked away, and used batteries are disposed of correctly. If a child swallows a button cell battery, seek medical advice immediately. Remember, the saliva in their body will react with the battery and so time is very much of the essence in these cases.

4.21 Laser pens

RoSPA has been concerned for many years about the dangers posed by laser pens, laser pointers and now laser “rings”.

Laser pointers are legitimately used for presentations and other activities, but in recent years, there has been an influx of strong laser pens, pointers and even ring-mounted lasers. The stronger lasers can cause eye damage and lasers beams have been pointed into the eyes of drivers and aeroplane and helicopter pilots in attempts to make them crash.

Lasers are categorised 1, 2, 3A, 3B and 4. Sometimes these categories are listed in roman numeral format (ie. class ii, iiiA etc). It is illegal to sell classes 3 and class 4

lasers so consumers should make sure that if they do possess a laser pointer it is either class 1 or 2. If in doubt, or if a laser is unmarked, then it should be disposed of as they can cause serious eye damage.

Parents should educate their children on the dangers associated with shining lasers at other people, especially drivers and pilots. Strong lasers are particularly popular abroad at tourist destinations and often sold without markings, so these should be avoided.

4.22 **Electronic cigarettes**

RoSPA is becoming increasingly concerned about the hazards posed by electronic cigarettes (e-cigarettes).

Electronic cigarettes are battery-powered devices which simulate smoking. They use a heating element known as an atomiser that vaporises a liquid solution. Some e-cigarettes contain a mixture of nicotine and flavourings, while others release a flavoured nicotine-free vapour. They are sold in flavours such as strawberry.

The three main safety concerns with them are:

- Many children are copying their parent's behaviour and are putting e-cigarettes in their mouths when their parents are not looking. This has led to a large number of children being poisoned by ingesting the liquids contained in the e-cigarette. Parents are failing to realise that e-cigarettes should not be left unattended, even if they are not "alight" like traditional cigarettes

- The "e-liquids," the key ingredients in e-cigarettes, which are not supplied in child resistant containers, are powerful neurotoxins. Tiny amounts, whether ingested or absorbed through the skin, can cause vomiting and seizures and even be lethal. A teaspoon of even highly diluted e-liquid can kill a small child

- Often e-cigarettes will be plugged into the mains or a USB port to charge. There have been reports of them overheating when charging and at least one death has been attributed to fire caused by overheating. Often these products will be left to charge overnight and this should be avoided.

Many of these products are very new onto the marketplace and there are no specific regulations governing their safety. As such, consumers should exercise extreme caution when considering whether to buy or use these products, as often it is simply unknown whether the contents of the product are safe or not.

4.23 Dog Bites

RoSPA seeks to remind the general public of the potential dangers around dogs.

During 2012/13, 6,317 people in England alone were treated in hospital as a result of being bitten or stuck by dogs[17]. This does not mean that RoSPA advocates that people should not experience the joy of having a dog as a family pet.

Dogs can be extremely beneficial to both mental and physical health and wellbeing. However, with practical safety measures this relationship with man's best friend can also be a safe one.

RoSPA advises people to do their research before bringing home a dog. Careful consideration needs to be given to the breed of dog that is compatible with a family's lifestyle.

Ensure the dog is trained – preferably by attendance at dog obedience classes - and that positive behaviour is reinforced

Supervise babies and young children around the dog at all times and teach children never to tease a dog or disturb it when it is eating or sleeping or in its special place. Having a dog neutered reduces aggression.

Remind children of the potential dangers of petting another person's dog and they shouldn't do it without asking its owner first. If a dog does attack, stay very still (like a tree) and don't look it in the eye and the dog will lose interest.

4.24 Home Safety Equipment Schemes

RoSPA advocates home safety equipment fitting schemes as good practice in preventing childhood accidents.

Home is the place where young children spend most of their time. Children can't be responsible for making their own environment safer. Young children are unaware of the possible hazards around them or may be physically unable to do things safely.

It is highlighted earlier in the document that there is a significant social class gradient in the death rate of children from injury or poisoning. For children of parents in 'routine occupations' (National Statistics Socio-Economic Classification class 7) the death rate is 2.6 times higher than that of children of parents in 'higher managerial and professional occupations' (NS-SEC class 1). However, the greatest difference in mortality is between children of parents who are employed and children of parents who are not. The death rate of children of parents who have never worked or are long term unemployed (NS-SEC class 8) is 13.1 times higher than that of children of parents in NS-SEC class 1. This suggests that a scheme targeting the children of parents who are not in paid employment may offer the greatest possibility for reducing child accident rates.

Home safety equipment schemes provide a means of overcoming economic barriers and may have greater benefit for those families living in communities with a higher risk of child injury in the home. They can be of value as part of a wider safety programme in reducing health inequalities and are recommended as a key component of interventions for children under 5 years of age, in the UK, European and global context.

There is evidence that targeted home safety education and home visitation programmes are *"effective in influencing the uptake of a range of safe practices, including for example, safe hot tap water temperatures, functional smoke alarms or storing medicines and cleaning products out of reach"*[18]

Injury statistics and background knowledge relating to the most common types of home injury to children under five should be used to inform the selection of safety equipment items. The safety equipment should be required to conform to safety standards where applicable.

Suggested equipment

- Safety gates
- Window restrictors– unlike window locks these allow the window to open partially whilst the device remains in place
- Non-slip bath/shower mat
- Fireguard
- Locks for kitchen cupboards containing cleaning chemicals/medications
- Corner cushions

In addition to equipment supply and fitting, the provision of safety advice and information to families is an essential component of any scheme.

Safe At Home, the first national home safety equipment scheme, hosted by the Royal Society for the Prevention of Accidents from 2009-2011, aimed to help families tackle one of the country's most severe accident problems - home accidents to under-fives, which account for an estimated 500,000 A&E visits across the UK each year.

The scheme installed free home safety equipment in the homes of 66,127 disadvantaged families in areas with the highest child accident rates in England. It also saw 4,300 local delivery providers trained and supplied with educational resources to help them talk to families about home safety, and more than 300,000 families with children under five receive home safety advice and information during the two-year project.

5 Older People's Safety

5.1 Older people should be a primary target for activities aimed at preventing accidental injury in the home.

During 2010, 11,438 people died as a result of an accident of which 59% were deaths to people aged sixty five and over[19].

Every year, around one in six of those attending hospital following a home accident are aged 65 and over. In 2002, an estimated 345,200 people aged over 74 attended A&E after a home accident[20].

Death and hospital admission rates grow exponentially with increasing age for women over-55 and men over-65. Increasing frailty and failing health can contribute to these accidents and the severity of the injury sustained. Falls, in particular, can reflect instability associated with impaired general health, longstanding illness or disability.

Around 30% of adults who are over 65 and living at home will experience at least one fall a year. This rises to 50% of adults who are over 80 and either at home or in residential care.

The injuries sustained by older people tend to be more extensive and/or severe than those experienced by other adults as reflected in their higher hospital admission rates and longer hospital stays.

Most of these accidents involve females but this gender difference is partly the result of the higher proportion of women in the older population in this country.

Accidental injuries in the home involving older people lead to significant levels of disability and frequently contribute to a loss of confidence and a fear of further accidents that can move a person from independence into dependence, and possibly some form of institutional care.

5.2 RoSPA recommends that all areas of the country should have a multi-faceted falls prevention strategy in place.

The commonest cause of accidental death in older people is a fall (45% in England) and it is estimated that 85% of deaths from a fall occur in the home[21].

The vast majority of non-fatal accidents involving older people are also falls and their incidence increases with age. During 2010-11, over 280,000 people in England alone aged over 65 were admitted to hospital following a fall in the home[22].

About a third of people aged over 64 will fall at least once a year and this proportion rises to half for those aged 85 and over[23]. In 2010-11, over 54,000 people over 65 were admitted as a result of a hip fracture[24].

A substantial proportion of falls happen on the stairs (over 60% of deaths). Falls also occur between two levels (15%), such as off a chair or out of bed, and on the same level due to a slip or trip[18] (around 15%).

The key risk factors for falls in the home involving older people include:

- Their level of physical ability, mobility, balance and gait
- Vitamin D and calcium deficiency
- Medication e.g. analgesics, sleeping pills and antidepressants
- Underlying diseases and disorders, including stroke and heart disease
- A history of previous falls[25].

RoSPA is aware of the large number of studies and reviews of the evidence that has taken place and whilst there are still some gaps in our knowledge, a consistent picture of the most effective approach to the prevention of injuries from falls in older people has now emerged.

This approach takes the form of a combination of measures including:

- Environmental changes, to reduce the risk of falls
- Exercise to maintain and improve strength and balance
- The prevention and treatment of osteoporosis
- The use of aids by those most at risk to reduce the impact of a fall[26].

5.3 Stairs and Steps: RoSPA recommends all steps and staircases within the home should have a rise not exceeding 170mm and a minimum going of 250mm.

Stairs and steps pose a significant risk to older people. Over 60% of deaths and non-fatal injuries from falls in older people result from accidents on stairs[27].

Nearly 30,000 over-75s attend A&E departments every year following a fall on or from stairs or steps[28].

At present, the Building Regulations recommend the height of any rise should not be more than 220mm and the going of any step should not generally be less than 220mm. However, in part M of the Building Regulations, the requirements for accessibility for the ambulant disabled, there is now a requirement that for any steps within areas of common access to flats, the riser should not be more than 170mm high and not less than 250mm going.

RoSPA believes this guidance could and should also apply within all new, renovated and refurbished homes.

In practice this would probably mean an increase in the use of a “dogleg” design of staircase. RoSPA would welcome this as it would have the additional benefits of helping to reduce the distance of many falls that do happen and could make higher floors more accessible to some ambulant disabled.

5.4 Handrails: RoSPA strongly recommends handrails are provided on both sides of all steps, ramps and staircases within and around the home.

It is common for many older people and the ambulant disabled to have a second handrail fitted to the staircases in their homes.

The Building Regulations (AD M 7.6 and 7.7) for common access steps, communal access stairs and steps within the entrance area of a dwelling require that a handrail is fitted on both sides of the steps. However, this is not a requirement for stairs within the home.

RoSPA recommends the provision of handrails on both sides of all steps, ramps and staircases within the home and believes that this should be made a requirement for all new, renovated and refurbished properties.

5.5 Grab rails: RoSPA recommends grab rails should be provided in all sanitary accommodation within dwellings intended for the use of wheelchair disabled, the ambulant disabled, older people and children.

More than 13,000 people over the age of 75 attend A&E departments each year following an injury sustained in the toilet or bathroom. Many older people find using these facilities in their homes problematic and it is common to provide handrails in the bathroom and toilet to assist them.

For dwellings that contain more than one storey, the Building Regulations require that sanitary accommodation for the disabled should be provided at the entrance level. Although sanitary accommodation for the disabled in other building types requires the provision of handrails within the toilet and shower, it is not a requirement for all dwellings in Sections AD M 10.1 to 10.3 in the Regulations.

RoSPA believes the regulations should require handrails to be installed in bathrooms and toilets within the home.

5.6 Operation of windows: RoSPA recommends all windows and vents in kitchens and bathrooms should be operable at worktop level or provided with some mechanical means of opening from a distance.

Access to window catches above worktops, sinks, baths and washbasins is difficult for older people, those of short stature and some disabled people. In order to open the window individuals are often tempted to climb on the worktop or stand on a chair. This can expose them to greater risk of an accidental fall.

The Building Regulations (Part AD F1) require some natural ventilation to be provided 1.75m above floor level. This can be provided in kitchens and bathrooms by a controllable, high level airbrick or trickle ventilation over the head of a window, operated by a cord or handle.

In addition, there is a requirement to provide extract ventilation in kitchens and bathrooms. Rapid ventilation has to be provided by a window that ideally should be located free from obstruction by fixtures within the home. However, this is rarely possible in kitchens and bathrooms.

Part N3 of the Regulations, which requires that windows, skylights and ventilators can be opened, closed and adjusted safely, does not apply to dwellings. RoSPA proposes the provision of low-level controls for at least one window in the kitchen and one in the bathroom should be provided in all homes.

RoSPA also believes this provision should be made a requirement for all new, refurbished and renovated properties under the Building Regulations.

5.7 RoSPA has reservations about the use of slip resistant bath mats on dimpled and uneven bath surfaces where secure fitting is not possible.

A bath mat can help to prevent slips in some circumstances but it must be effectively secured by downwards pressure applied to its suction pads prior to use.

Where this is not possible, as with a dimpled finish on the bath surface, the mat is likely to slip and will not provide the expected safe slip resistant support.

5.8 Hip protectors: RoSPA supports the use of hip protectors for those most at risk of falls but would welcome further research and development in order to identify more effective and comfortable designs of hip protectors.

Hip fractures are one of the most debilitating results of an accidental fall - approximately 90% of hip fractures occur among those aged 50 and over[29].

The risk of hip fractures in institutional settings can be up to three times that of the general population.

Hip protectors can be useful in preventing hip fractures and reducing the severity of falls-related injuries. In one study of frail older people living within an institutional setting, hip protectors reduced hip fractures by 56%.[30].

Most hip protectors are worn under clothing and consist of plastic shields or foam pads held in place over the greater trochanter by specially designed underwear. Many people find hip protectors uncomfortable to wear and for some the positioning of the pads may be incorrect when they fall.

In general, they are unpopular with many people and usage rates are low. Even within the study mentioned above, the compliance rate was only 24%.

RoSPA supports the use of hip protectors but only for those most at risk due to their frailty or repeated experience of falls who are most likely to be found with institutional settings.

Whilst supporting the use of hip protectors for those most at risk, RoSPA would also encourage and support further research to examine the role of hip protectors in preventing hip fractures in practice.

6 House Fires

6.1 Accidents involving fires in the home are a major problem within this country and should be a priority for preventive action.

Every fire in a home can result in death, injury and the destruction of property

Three quarters (76%) of fire-related fatalities occur in dwelling fires. Fire fatality rates are notably higher for people aged over 80, for males and people in Scotland.[31]

Being overcome by gas, smoke or toxic fumes was partly or wholly the cause of death in over half (53%) of all fire fatalities[30].

The highest fatality rate is for fires which started in the living or dining room[30]

The main cause of accidental dwelling fires remains the misuse of equipment/ appliances (14,700 fires), while the main source of ignition is cooking appliances, which account for more than half of all accidental dwelling fires[30]

Of the 287 fatalities in dwellings in 2011-12, 244 (85%) are due to accidental causes. The main cause is careless handling of fire or hot substances, e.g. careless disposal of cigarettes - amounting to 35% of all fatalities due to accidental causes. The highest fatality rate is for fires which started in the living or dining room[30].

RoSPA is aware that there are significant geographical variations in the rates of fires in dwellings across the UK and that those living in disadvantaged communities, poor home environments or in multi-occupied dwellings are more at risk of being involved in a fire in their homes.

RoSPA is actively promoting measures to prevent fires in the home with all members of the community and seeks to identify and implement effective measures which specifically address the circumstances of those most in need.

RoSPA supports the fire safety work of other agencies, particularly the Fire and Rescue Service, and promotes preventive approaches which co-ordinate efforts through effective national and local partnerships.

6.2 Smoke detectors/alarms

RoSPA supports the installation of smoke alarms in every home and recommends the use of optical (photoelectric) alarms; hard-wired where possible. Currently only new dwellings have to be fitted with hard-wired detectors under the Building Regulations.

RoSPA would like there to be a requirement for hard-wired alarms to be fitted at the time of refurbishment or rewiring in older properties.

Many deaths and injuries can be prevented if people have an early warning and are able to get out in time. In fact, you are twice as likely to die in a house fire that has no smoke alarm than a house that does.

The major cause of death in home fires is the inhalation of toxic fumes and smoke.

The majority of fires in the home start when no one is present in the room and many start during the night when people are asleep.

Those least mobile are most likely to be trapped by a fire in their home. The very young and the very old are most at risk. Nearly half (46%) of all fatal accidents to children are in home fires.

Smoke alarms (British Standard BS 5446 Pt. 1) are a simple and effective way to warn people that a fire has started within their homes in sufficient time to allow them to escape. They have made a major contribution to the reduction of death and injury in home fires in this country over the past 15 years.

No smoke alarm was present in 34% of (14,900) dwelling fires in 2011-12.These fires accounted for 105 fatalities and 2,400 non-fatal casualties[30]

The proportion of households with a working smoke alarm increased rapidly from 8 per cent in 1988 to 70 per cent in 1994, and has continued to rise in recent years to 86 per cent in 2008[30.]

RoSPA recommends that every home in the country has at least one smoke alarm fitted on each floor.

Optical alarms detect slow burning fires and should be fitted in all but specific circumstances, such as in rooms with open fires and threats of arson, where a rapid flame may occur. Optical detectors are better than ionisation at detecting a broader range of fires and should be fitted in hallways and other circulation areas as a minimum.

RoSPA points out that smoke alarms must be securely fitted in line with manufacturer's guidance and positioned correctly if they are to be responsive. Care must also be taken to ensure that they are not positioned in such a way that will cause them to cause nuisance alarms during cooking, for example, encouraging people to disable them.

Battery operated smoke alarms are easy to fit and cheap to buy, run and maintain. However, experience indicates that people often disable them by removing the battery, fail to test them regularly and often forget to change the battery every year. Thus there is a significant chance that although a smoke alarm is present within a home, it may not be working.

For this reason, RoSPA prefers the use of hard-wired smoke detectors wherever possible.

Hard-wired detectors are also more likely to be combined detectors and thus able to detect a variety of types of fire in the home. RoSPA is, however, aware that the cost of installing hard-wired smoke detectors is prohibitive for many people.

Currently, only new dwellings have to be fitted with hard wired detectors under the Building Regulations[32].

RoSPA would like to see this requirement extended to older properties when they are being refurbished, renovated or rewired.

The cost of installing hard-wired detectors would be a small proportion of the overall cost of the work being carried out. The rate at which the fire detection needs of the older properties in this country are achieved would increase and RoSPA's aim of having every home sufficiently protected would be met earlier.

RoSPA recommends that specialist advice should be sought if people are unsure where to fit their alarm, e.g. from their local Fire and Rescue Service.

RoSPA recommends that people carry out a weekly test of their smoke alarms and clean them regularly in accordance with the manufacturer's instructions.

It should be noted that the 1985 Housing Act requires a landlord to ensure that there is an adequate means of escape and, depending on the size of the property, there may have to be smoke alarms.

6.3 If battery operated alarms are to be used, RoSPA recommends that sealed units containing long-life batteries are used.

Battery operated smoke alarms are cheaper and easier to fit.

RoSPA recommends the use of sealed unit smoke alarms with long-life batteries. These may cost a bit more but they offer greater security. They are sealed and use non-standard batteries, which are less likely to be removed, plus the battery lasts 10 years - although the alarm should still be tested weekly and in line with manufacturer's guidance.

6.4 Evacuation in the event of a fire.

RoSPA recommends that the public should be advised that in the event of a fire in their home they should "Get out, Stay out and Call the Fire Service out".

A significant number of people killed or injured in a home fire are known to have stayed in a burning building or gone back in the building in an attempt to put out the fire or to either save someone trapped or valuable property.

Whilst acknowledging that this is a temptation when an emergency happens, RoSPA advises against members of the public trying to fight the fire themselves, especially when the location, extent and scale of the fire is unknown.

Fire and rescue services have specialist equipment and training which enable them to fight the fire and save lives and property more effectively than members of the public.

It should be noted that the 1985 Housing Act requires a landlord to ensure there is an adequate means of escape from the premises.

6.5 RoSPA does not recommend the use of domestic fire extinguishers.

There are three main types of fire extinguisher – powder, water and foam. No single type of extinguisher is totally effective on every kind of fire and therefore homes are likely to need a range of extinguishers available.

The presence of domestic fire extinguishers can encourage people to remain in a building and fight a fire which is known to be dangerous. Small domestic extinguishers can be insufficient to be effective against a fire. Larger extinguishers can be very heavy and most people will not have experience of their use.

Also, extinguishers need to be serviced every year if they are to remain effective.

For these reasons, RoSPA does not recommend the use of domestic fire extinguishers.

RoSPA is aware that the 1985 Housing Act requires some landlords, depending on the size of the property, to have fire extinguishing equipment installed and recommends the installation of sprinkler systems.

6.6 Residential sprinkler systems.

RoSPA recognises that residential sprinkler systems could make a contribution towards the reduction of deaths and injuries in domestic fires.

Sprinkler systems consist of ceiling fitted water sprays that automatically respond on an individual basis to raised temperatures in a room by emitting a spray of water and sounding an alarm.

Sprinkler systems are often fitted in commercial properties and public facilities and have been shown to be effective in raising the alarm and controlling the extent of fire spread.

Since the 1970s, it has been recognised that sprinkler systems could make an important contribution towards the reduction of deaths in domestic fires. They have the advantage that they can deal with a fire even before people are aware it has started and can contain the fire whilst raising the alarm.

Over the past 25 years, many areas in the USA have introduced laws requiring the installation of sprinkler systems, especially in high-rise dwellings and hotels. For example, Scottsdale, Arizona, has for the past 10 years required all properties to have sprinklers and has virtually eliminated deaths in home fires and reduced incidents of injury and property damage by 80%.

Several residential sprinkler systems are now available for purchase. However, although they respond to heat, they do not respond to smoke and with slow smouldering fires may take longer to sound the alarm than a smoke detector. Thus

sprinkler systems should always be considered in conjunction with smoke detection equipment.

RoSPA supports continued research into the effectiveness of residential sprinkler systems.

Previously, there has been very little research into the effectiveness of residential sprinklers. However, research by the British Research Establishment[33] published in 2012 has concluded that residential sprinklers as an additional safety measure are cost-effective for:

- All residential care homes for elderly people, children and disabled people (including those with single bedrooms)
- Most blocks of purpose built flats where costs are shared
- Traditional bedsit types houses of multiple occupation where there are at least six bedsit units per building and the costs are shared

RoSPA would like to see this research continue and extended to include all types of residential accommodation including domestic dwellings to see how Residential sprinkler systems could contribute to the reduction of deaths and injuries from fires in the home.

RoSPA supports the development of recognised standards for residential sprinkler systems.

Residential sprinkler systems are becoming more available to the public in this country, in particular via the internet from America where they are more common.

It is essential that residential sprinkler systems are constructed and installed to a standard that ensures they are fit for the job and are effective in use. RoSPA supports the development of a British Standard for residential sprinkler systems

RoSPA encourages builders to offer house purchasers the option of having a sprinkler system installed.

For an existing home, the installation of a residential sprinkler system would cost a few thousand pounds. However, this cost would be reduced if a sprinkler system were installed whilst a new home was being built. It is estimated that for a new property the cost of installation could be 1-2% of the total build cost.

RoSPA believes that purchasers of new homes should have the opportunity to install a sprinkler system and that it should be the responsibility of the builder to routinely offer this as an option.

RoSPA would like to see residential sprinkler systems installed in the homes of those most vulnerable to death in a house fire.

As residential sprinkler systems become more available and more frequently fitted, RoSPA recommends that priority is given to installing them in the homes of people who are most vulnerable to death in a fire in the home.

One of the main advantages residential sprinkler systems offer is that they can contain the fire giving more time for people to evacuate the building. RoSPA, in support of the British Research Establishment report[30], suggests that priority should be given to installing sprinkler systems in the residential premises identified within its findings and all domestic homes dwellings within multi-occupied premises; and those occupied by young children and people with mobility difficulties as a result of age, infirmity or disability.

6.7 Fireguards

RoSPA recommends the use of fireguards.

Annually, more than 10,000 accidents involve a fireplace, grate or fender. Many of these accidents involve falls and a significant number lead to severe burns injuries.

Children and older people are most at risk of sustaining these injuries.

Fireguards (BS 6778: 1986) are a well-established piece of safety equipment that are known to reduce the severity of these injuries by forming an adequate and secure barrier between the falling person and the fire. They can also prevent clothes catching alight when standing too near a fire. RoSPA recommends their use.

It is essential if these fireguards are to operate effectively that they are secured adequately to the wall. This is done through the provision and fixing of “eyes” on either side of the fireplace.

RoSPA supports initiatives which offer a fitting service for fireguards to individuals and communities, who due to disadvantage, age or disability, are unable to do the work themselves.

RoSPA is actively promoting the provision of fixing points for a British Standard fireguard within all new homes.

6.8 Chip pans

RoSPA recommends that the safest way to deep-fry food, such as chips, is in a thermostatically controlled freestanding electric deep fat fryer.

Cooking food by deep-frying is acknowledged as dangerous. Around 16,000 domestic fires every year start when food, often chips, is being deep fried and about 3,000 people a year are injured.

RoSPA suggests that, wherever possible, alternative methods of cooking are used, e.g. oven cooked chips.

Most of these accidents occur when the pan is left unattended and/or the fat or oil overheats and ignites. The subsequent fire on the hob is then difficult to extinguish, as the power source cannot be reached in order to switch it off.

Thermostatically controlled, freestanding electric deep fat fryers can eliminate many of these problems. They are also readily available to the public at a relatively low cost

Chip pans should never be filled more than one third full of fat.

6.9 Candles

RoSPA warns against candle-related fires. The use of candles has become more popular - leading to a significant increase in house fires.

Users are recommended to follow the safety labels produced by the British Candle Makers Federation, who are members of the European CMF. Candles should comply with the General Product Safety Regulations 2005, both for their performance and their labelling.

RoSPA recommends:

- Candles and tea lights should be in a suitable fire-resistant candleholder on a flat heat resistant surface
- Candles should never be placed under shelves or other enclosed spaces
- Candles and tea lights, matches and lighters should be kept out of the reach of children and pets
- Candles and tea lights should be kept away from curtains, furniture and anything else that can catch fire
- Loose clothing and hair should be kept away from candles/tea lights when they are lit
- Candles and tea lights should be put out and left to cool down before they are moved and always be extinguished when leaving the room, particularly when going to sleep.
- Use a candle ‘snuffer’ or a metal spoon to put the candle/tea light out – it is safer than blowing them out which can send sparks and hot wax flying

6.10 Flammability of nightwear

RoSPA welcomes the European standard BS EN 14878 Textiles - Burning behaviour of children's nightwear. The specification means that all children’s nightwear is now covered by an appropriate standard either through the specific regulations or through General Product Safety.

RoSPA recommends that the regulations are extended to also include all forms of adult nightwear.

RoSPA suggests that the Nightwear Safety Regulations should be updated. The impact they had on accident levels in the 1980s has now stabilised and the circumstances in which clothing flammability accidents occur have changed since their introduction. It would also be appropriate to review the flammability performance requirements used within the regulations.

All clothes burn and every year around 750 clothing flammability accidents take place, resulting in around 80 deaths, 225 severe injuries and 445 minor injuries. This level of accidental injury has remained stable for several years.

The people most at risk are those over 60 years of age, especially women over 70. Young girls, especially aged 12-17 years, have the highest risk of severe injuries while the highest rates for minor injuries are amongst boys aged 14-17 years.

Naked flames are involved in about 75% of all cases. The main sources of ignition of clothes are cookers (especially gas hobs), fires (especially electric fires), matches and lighters. Lit cigarettes also contribute significantly to these accidents especially those leading to fatal injuries.

Nearly 30% of the clothes ignited are nightwear, especially nightdresses (38%), dressing gowns (35%) and pyjamas (29%). Children are particularly at risk in nightwear flammability accidents.

In 1985, the Nightwear Regulations were introduced, which placed a flame spread restriction on the nightwear of children aged 3-13 years and an associated labelling requirement. This regulation covers night dresses, dressing gowns, bathrobes and other similar garments and refers to the flammability performance requirements specified in BS5722. BS EN 14878 2008 covers nightwear garments, and fabrics intended for nightwear for babies and children from birth up to age 14 years.

This level of flammability performance is only voluntary on all other nightwear but an appropriate label is required to make clear whether or not this flame requirement is met. Mail order advertisements for adult nightwear must also include information about their flammability.

In particular, given the current picture of accidents, RoSPA recommends that the regulations are extended to also include all forms of adult nightwear.

6.11 Ethanol gel

In RoSPA's view, the high risk of accidental burns from ethanol gel makes it unsuitable for use in the home.

In the USA, the National Fire Protection Association recommends that "consumers immediately stop using pourable gel fuel and contact the manufacturers for refund and product return information".

RoSPA is aware of at least one allegation of a UK resident receiving fatal injuries as a result of using a product fuelled by ethanol gel.

Ethanol is mostly produced from sugar plants and is typically used for cooking, water heating and heating of buildings. Ethanol is sometimes used because it does not give off smoke or soot and can produce hot water quicker than gas, coal and electricity.

Ethanol gel fuel is sometimes sold for use in fire pots, fondue sets, small fireplaces and patio torches. It burns with a virtually invisible flame. If consumers do use these products then they are urged to follow the manufacturer's instructions and warnings.

7 Fireworks and Chinese Lanterns

7.1 RoSPA actively supports the development of a National Firework Display Registration Scheme.

In 2010-11, more than 6,000 people attended accident and emergency departments as a result of being injured by fireworks[34]. Many of these injuries involved children. Eye injuries were common but there were no fatalities.

The Department for Business, Innovations and Skills no longer collects and publishes accident statistics relating to fireworks. RoSPA calls for reinstating these statistics to enable the current situation to be adequately monitored and appropriate actions undertaken.

Most of the injuries (35%) occurred during a family or private party and 29% on the street or in another public place. Considerably fewer injuries occurred during semi-public displays (e.g. scouts, clubs) and large public displays (15%).

It is generally acknowledged that firework displays are safer than using fireworks at home and such displays have become more popular and acceptable to the general public.

However, in order to be safe, public and semi-public displays must be organised by individuals who know what they are doing and fully understand their responsibilities. Event organisers and display operators have duties under the Health and Safety at Work Act 1974 to ensure, so far as reasonably practicable, the safety of members of the public as well as their and others' employees.

RoSPA believes that a National Firework Display Registration Scheme could make a major contribution to safety at public displays and actively supports its development.

7.2 RoSPA does not support the call for a complete ban on the sale of fireworks to the public.

RoSPA does not support the call for a complete ban on the sale of fireworks to the public. RoSPA considers such a ban would be unacceptable to the majority of people in this country and would not get public support.

Such a ban would also be difficult to enforce given the high level of travel abroad and the growth in web-based purchasing.

RoSPA is concerned that a ban on sales to the public could lead to the development of a black market in fireworks and possibly encourage people to develop home-made devices.

RoSPA will continue to monitor the situation especially considering the increased usage of fireworks throughout the year. However, whilst the firework injury levels remain constant or reduce, the legislative framework remains tight, and the attendance at displays increases, this position is unlikely to change.

7.3 RoSPA supports the legislative framework for fireworks.

The Pyrotechnic Articles (Safety) Regulations 2010 are the latest in a long line of legislation and regulations covering the production, type, quality, sale and use of fireworks.

This legislation brings together previous legislation and aims to reduce the noise, nuisance and injuries caused by the use of fireworks. It also brings into play CE marking requirements for fireworks, in line with other safety legislation. They create offences in relation to the supply of fireworks and the use, or misuse, resulting from anti-social or criminal behaviour.

RoSPA supports this legislation and the Manufacture and Storage of Explosives Regulations 2005, which create separate controls for the storage of fireworks, as well as giving guidance to fire authorities on how to tackle blazes at firework stores.

7.4 Chinese lanterns

RoSPA recommends retailers and importers in the UK will take the lead and demand the lanterns they purchase from manufacturers are 100% biodegradable (i.e. they contain no metal wires); they come with a high quality fuel source; and that they come with comprehensive operating and safety instructions.

Sky lanterns, also known as Chinese lanterns, are thought to bring good luck and prosperity to those releasing them. However, concerns have been raised by maritime authorities and farmers. West Midlands Fire Service recently attributed a huge fire involving 100,000 tonnes of plastic recycling material in Smethwick to a Chinese lantern.

As lanterns are a relatively recent phenomenon in the UK, there is still limited evidence of incidents that may have been caused by them. However, they are fast becoming a popular addition to weddings and parties.

Research has found that high quality lanterns, when used according to instructions, were generally safe in relation to fire risks; but, there are many poor quality lanterns which lack sufficient safety and operating instructions.

A recent survey carried out by the Department for Business, Innovation and Skills and trading standards services throughout the UK found incidents where property (e.g. fences, garden furniture, roofs,hedges) had been either damaged or destroyed, or where the lanterns had caused death or injury to livestock.

Non-biodegradable lanterns often include metal parts, which upon descent are discarded into the surrounding countryside. If not noticed by farmers, those parts of the lantern may end up in livestock silage or feed which, when ingested, can cause considerable and sometimes fatal harm to livestock.

Chinese lanterns are regulated by the General Product Safety Regulations 2005 which are enforced by trading standards officers across the UK. For more information about these products, the regulations or procedures for a safe firework party, go to www.bis.gov.uk or www.saferfireworks.com.

Industry code of practice – Sky lanterns

This new industry code of practice aims to provide guidance for manufacturers, importers, distributors and retailers of sky lanterns. The code will help market surveillance authorities recognise the necessary safety checks, the type of warnings and instructions that need to accompany the product, and help ensure the responsible sale and safe use of sky lanterns.

The code was the outcome of discussions between Government and industry hosted by the Department for Environment, Food and Rural Affairs.

8 Gas, Solid Fuel and Carbon Monoxide Poisoning

8.1 Carbon monoxide poisoning in the home is a significant problem that needs to be actively addressed.

Carbon monoxide (CO) is a highly poisonous gas produced when fossil fuels are burned. Fossil fuels include natural gas, propane, methane, butane, wood, oil, petrol, coal and charcoal. In the home, carbon monoxide is produced by any cooking or heating device that uses fossil fuels, e.g. a boiler, a space heater or an oven and hob.

Carbon monoxide is particularly dangerous because it has no colour, smell or taste. It is thus easy to inhale without being aware of its presence. This can often lead to lasting neurological damage and may result in death.

Many more people are likely to suffer unknowingly from CO poisoning, and the impact on health may well be underestimated. Such cases are caused by faulty or badly-serviced gas and other fossil fuel-burning appliances and systems.

Estimates vary but according to the Department of Health, there are known to be at least 50 deaths a year as a result of CO poisoning and more than 200 hospital admissions. Given the difficulties in diagnosing cases of carbon monoxide poisoning, this is likely to be a serious underestimate.

Those most at risk are the under-14s and the over 65s, with these age groups accounting for 31% and 25% of hospital admissions respectively.

8.2 RoSPA recommends that all fossil fuel appliances are installed and maintained by people with a recognised qualification of competence to carry out these tasks; serviced at least once a year; and any maintenance work required is carried out immediately.

When fossil fuels are burnt in appliances or locations without adequate ventilation, dangerous levels of carbon monoxide can build up. Ventilation is required both within the appliance, for example via a flue or chimney, and within the room which the appliance is located.

Higher levels of carbon monoxide can also be produced if the appliance is not working properly leading to incomplete combustion. Warming up a car in a closed or attached garage can also lead to a dangerous build up of carbon monoxide fumes.

In order to ensure that adequate ventilation is available, fossil fuel appliances need to be properly installed and maintained.

RoSPA recommends that all work is carried out by competent individuals, who have successfully completed appropriate and recognised training, and the installation and use of gas appliances are more tightly controlled and the responsibilities of landlords and tenants identified[35].

RoSPA recommends that for gas appliances:

- Use a Gas Safe registered engineer for installation and annual services
- Always check that an engineer's capabilities, which are listed on the back of his or her identity card, include the job you want done
- Consult fuel suppliers or professional heating engineers for regular servicing of other fuel-burning appliances

8.3 RoSPA supports ongoing awareness campaigns to alert members of the public to the following issues regarding carbon monoxide.

RoSPA supports ongoing awareness campaigns to remind people of:

- The dangers of carbon monoxide
- The symptoms of carbon monoxide poisoning
- The need for ventilation of all appliances burning fossil fuels
- The need to properly maintain all appliances burning fossil fuels
- The responsibilities of landlords and the rights of tenants in relation to the installation, operation and maintenance of heating appliances
- The advice given being relevant to all dwellings including owned, rented and residential homes, buildings with multiple occupation and holiday accommodation.

If you breathe in carbon monoxide it will interfere with the blood's ability to take up oxygen. Exposure to even a very low level of carbon monoxide can lead to brain damage or death.

The symptoms of carbon monoxide poisoning and the speed with which they appear depend on the concentration of carbon monoxide in the air and the rate and efficiency with which a person breathes.

The main symptoms are:

- Headache
- Shortness of breath
- Dizziness
- Fatigue
- Mental confusion and difficulty thinking
- Nausea and vomiting.

General awareness of the danger of carbon monoxide is reasonably high amongst the general public BUT the knowledge held is largely associated with gas appliances only and the level of practical and specific knowledge is low[36]. For this reason RoSPA supports a continued programme of public awareness which offers practical information.

The key safety messages should be:

- All fossil fuels produce carbon monoxide when burned
- Only buy appliances that meet the current and appropriate British or European standards and safety requirements
- Use competent engineers to install, maintain and service appliances
- All fossil fuel appliances should be serviced annually by a competent engineer and any repairs carried out
- All rooms should be ventilated and flues and chimneys should not be blocked
- Never use an appliance if you think it is not working properly.

Carbon monoxide detectors and alarms (BS7860) are also available, which when properly installed can tell you when the gas is present, but they do not prevent carbon monoxide building up.

RoSPA suggests that, given the experience with smoke alarms, the effectiveness of carbon monoxide alarms and detectors is likely to be greatest if those with long life batteries or which are mains powered are installed at appropriate locations.

8.4 RoSPA would like to see a significant research programme implemented into carbon monoxide issues as a priority.

RoSPA would like to see extensive research carried out which includes examination of:

- The existing levels of carbon monoxide in dwellings
- The levels of carbon monoxide in blood and breath and their effects on health
- The long-term effectiveness and reliability of carbon monoxide detectors
- The effectiveness of the various carbon monoxide detectors and alarms available in practice - covering the full range of portable and fixed detectors utilising both battery and mains power and capable of operating for different life spans
- The value and effectiveness of combined carbon monoxide and smoke detectors and alarms.

RoSPA is concerned about the lack of good quality information and evidence about the presence and effects of carbon monoxide in the home. There is also a lack of conclusive evidence about the long-term effectiveness of carbon monoxide alarms and detectors or combined detectors.

Whilst insufficient information is available, it is difficult to recommend detectors with confidence. RoSPA will continue to promote the safe installation, servicing, maintenance and ventilation of products powered by fossilised fuels and will only recommend the use of CO detectors as a back-up.

RoSPA suggests that a significant programme of research into carbon monoxide and the prevention of ill health, injuries and death from carbon monoxide poisoning, as outlined above, is a priority.

9 Electricity

9.1 Residual current devices (RCDs)

RoSPA actively supports the continued promotion of the use of RCDs and welcomes the requirement in the Building Regulations that all new dwellings should incorporate whole house RCD protection.

There were 21,424 electrical-related fires in UK homes in 2007, resulting in 49 deaths and 3,477 injuries. Electrocutions and electrical burns resulted in a further 19 deaths and thousands of injuries.

A Residual Current Device (RCD) is a mechanism designed to switch off electricity automatically if there is a fault, helping to save lives and to avoid a proportion of the fires resulting from electrical causes.

Relevant standards for safety are BS 7071 (portable), EN 61008 (installed RCCB), EN 61009 (installed RCBO), BS 7288 (RCD socket).

Since BS 7671: 2008 came into effect, virtually every circuit in new and rewired domestic properties can be expected to be RCD-protected.

BS 7671: 2008 includes lighting circuits in the requirements for RCD protection on the grounds that several electrocutions over recent years involved the penetration of lighting circuit cables concealed in walls. Due consideration was given to the consequences of lighting being disconnected in the event of an RCD operating.

RoSPA welcome these recent changes but still raises concerns about the inclusion of the lighting circuit in the RCD on the grounds that it might create a visibility hazard and increase the chances of accidents e.g. falls.

RoSPA would like there to be a requirement for whole house RCD protection to be fitted at the time of rewiring in older properties. RoSPA would like to see all hired electrical equipment supplied with an RCD.

9.2 Protective Plastic Covers for 13-amp Socket Outlets

Modern 13-amp power sockets made to BS 1363:1995 incorporate a shutter mechanism, which prevents inappropriate access to the live connectors. RoSPA therefore does not consider it necessary to recommend the use of socket covers.

RoSPA recommends that small children are warned to keep away from electrical equipment until they are capable of understanding the risks and are able to use it safely.

9.3 RoSPA actively discourages the use of decorated socket covers, which are attractive to young children.

9.4 Electric blankets

RoSPA recommends that all electric blankets should be serviced every year and that blankets over 10 years old disposed of in an appropriate manner and a new one purchased.

Electric blankets cause between 800 and 1,000 fires in the UK each year, with nearly 20 deaths and 200 injuries. Most of the casualties are aged over 60.

Those most at risk are older people, some of whom use electric blankets as a cheap source of heating. It is believed that some blankets are never taken off the bed and people are unaware when they have become worn or damaged.

Injuries and fires often happen because people do not use their blankets properly or never have the blankets serviced.

In 2008, the Electrical Safety Council carried out an Electric Blanket Campaign in the UK, recording a 57% failure rate. The results of their analysis of the reasons why many of the blankets failed the inspection and testing process revealed that there were more than 2,243 blankets tested, of which 1,284 were replaced. Faults in the overheat protection system was the top description of failure (510 of blankets in the sample).

In 2009, electric blanket testing across Northern Ireland revealed that the average age of blankets presented at testing centres was more than 20 years old, with the oldest blanket just over 27 years old. It is recommended that blankets of 10 years and over should be disposed of in an appropriate manner and a new one purchased.

9.5 RoSPA recommends that when choosing your electric blanket you should buy it from a reliable source. Look for a UK safety standard mark that means the blanket has been independently tested and meets the latest UK and European safety standards.

RoSPA reminds people that electric blanket danger signs[37] to look out for are:

- Scorch marks or discoloration areas visible on the fabric of the blanket
- Wires visible or poking through the fabric
- Fabric frayed or worn
- Damage to the electrical cord between the plug and the blanket's control mechanism, or between the control and the blanket
- The control makes a buzzing sound when switched on or gives off a smell
- The blanket's connector, where the electrical cord plugs into the blanket, is damaged or over-heating.

RoSPA recommends contacting the manufacturer if there is any doubt about the condition of a blanket before it is used to make sure that it is safe. It may need to be replaced.

Storing an Electric Blanket

Even when not in use a blanket can be left on the bed all year round. If put away it should be stored as the manufacturer recommends or as follows:

- Let the blanket cool down before folding
- Loosely fold or roll it in a towel or plastic bag and store the blanket in a cool dry place
- Don't use any moth-proofing chemicals
- Don't place heavy items on top of the blanket while it is being stored

Safe use of an Electric Blanket

- Always buy new when choosing an electric blanket - never buy second-hand blankets, as they may not be safe and you can't be sure that they meet current safety requirements
- Always read and follow the manufacturer's instructions before use
- Examine your blanket regularly for signs of wear or damage
- Never use an electric under-blanket as an over-blanket (or vice versa)

- Don’t use the blanket while it’s still folded or creased
- Don’t use a hot water bottle at the same time as using your electric blanket
- Don’t touch the blanket if you have wet hands or feet, and never use the blanket if it’s wet or damp.

9.6 Leaving electrical equipment charging overnight.

RoSPA is aware of incidences relating to electrical equipment being left to charge overnight and advises against this practice where possible.

Many items, such as mobile telephones, are often left to charge overnight and this is understandable. The problem with leaving electrical equipment charging when you are asleep is that you have less time to react if a fire were to break out.

One incident involving an electronic cigarette (e-cigarette) charging overnight in a nursing home caused a fire which led to the death of a resident.

RoSPA advises avoiding charging products overnight if possible. If consumers absolutely have to charge products overnight then they should check the manufacturer’s instructions and warnings for charging the product.

10 Barbecue Safety

RoSPA seeks to remind consumers that the warning “do not use indoors” on barbecues also includes references to tents and caravans, including awnings.

There have been a number of deaths due to carbon monoxide poisoning on campsites. These have been due to barbecues being used either inside tents or at the entrance to tents and the dangerous fumes coming into the tent and affecting victims in their sleep.

Many people are unaware of the dangers posed by disposable barbecues, which are also likely to give off carbon monoxide even when they appear to have been extinguished.

The temptation to continue with a barbecue indoors in inclement weather should be resisted.

11 Water

11.1 RoSPA recommends that water safety in and around the home should be a primary target for activities aimed at preventing death and severe injury in the home.

Water in the home can pose two significant threats – drowning and scalding.

RoSPA estimates that 111 children aged under-five have drowned in a domestic environment in the last decade. Children aged one to two years are most at risk and the risk decreases with age.

Drowning incidents have occurred in less than 300mm of water. Boys were the victims in 78% of all drowning incidents in UK.

Accidental scald injuries can lead to severe injuries and death (see 8.2 Bath Water Temperatures).

11.2 Garden ponds

RoSPA recommends garden ponds and other water features are not constructed or installed whilst children under five years of age are resident or regular visitors to a home.

RoSPA recommends existing ponds are filled in, fenced or covered with mesh if they are accessible to young children.

Children can drown in as little as 300mm of water. Of the 90 fatal drowning accidents recorded for children aged five and under from 1992-1999, 62 involved garden ponds. Children aged one and two years are most likely to be involved (85%)[38].

A study of drowning incidents involving children found that 18% of the incidents occurred in the child's own garden, 29% at a relative's home, 10% at a friend's home and 39% at a neighbour's home (especially boys wandering off into a neighbour's property).

Given the situation outlined above, RoSPA recommends that, if a garden pond already exists, every measure should be taken to avoid children accessing them.

The best method is to remove the danger altogether by filling in the pond or converting it to a sand pit.

If the pond or water feature is to remain then it should be covered using a material strong enough to support a child, such as a heavy metal grid. Heavy-duty mesh is often used so that the pond can still be seen and plants can grow through it.

The mesh must consist of be at least 6-8mm diameter wire and have a grid size of no more than 80x80mm to prevent entrapment. It also needs to be firmly secured above the water line and regularly checked.

Ponds can also be fenced in to help prevent unsupervised children accessing the water. Fencing should be no less than 1.1m in height and should have no horizontal footholds.

All gates must be self-locking gates. RoSPA warns that fencing around ponds is only a partial solution and is concerned that fences can give parents/carers a false sense of security - by two years of age many children will be able to climb over the fence or open the gate.

11.3 Bath water temperatures.

RoSPA never quotes a recommended water temperature for bathing

Compared with some other accidents, the number of injuries from bath water scalds is low. However, they are some of the severest injuries that can occur and often lead to death or permanent disability.

It can take a matter of seconds for the injury to be sustained, but the suffering can endure for many, many years.

Action on hot water safety was needed in light of accident figures which showed that nearly 600 people were suffering the devastating and enduring effects of a severe scald injury in the UK each year. Three-quarters of the victims were under the age of five.

Older people were shown to be at particular risk of dying as a result of hot tap-water scalds because their skin is far thinner and more vulnerable to heat. They thus sustain scalds at lower temperatures, injure themselves more quickly and sustain scalds to a greater skin depth. On average 15 older people die a year. In fact, the latest mortality figures show that, in 2007, 21 people died in the UK after contact with a hot tap-water, of whom 14 were over the age of 65.

Hot bath water is responsible for the highest number of fatal and severe scalding injuries among young children. Around 400 children (mainly under-fives) are admitted to hospital[39] and a further 2,000 attend A&E departments every year as a result of bath water scalds.

More than two thirds stay in hospital over four days or transfer to a specialist burns unit for treatment. Children may require 15-20 years of skin graft operations and permanent scarring and disfigurement is common.

Older people make up three quarters of all deaths from bath water scalds - around 20 fatalities a year.

People with a reduced ability to perceive risk or react to hazardous situations are also at greater risk.

Deprivation increases the likelihood of these injuries occurring - individuals from the poorest families being more likely to be admitted to hospital and most likely to sustain severe injuries than those from wealthier homes.

Despite this situation, RoSPA does not quote a safe water temperature for bathing, preferring to advise that the bath water temperature is always tested before getting into the bath.

The amount of mixing of the hot and cold water entering a bath can be limited, thus the water temperature measured at any one point within the bath may not be an indicator of a constant temperature throughout the bath water

Severe scald injuries can occur when accessing the water as it enters the bath from a hot water tap, e.g. children playing, when running and topping up the water temperature whilst in a bath.

11.4 Thermostatic mixing valves.

RoSPA believes it is safer to ensure the temperature of the hot water at the point of delivery into baths is controlled by the installation of a thermostatic mixing valve.

RoSPA contributed to a long-fought campaign to prevent horrific bath water scalds in homes across the UK.

In May 2006, it became mandatory in Scotland for thermostatic mixing valves (TMVs) to be fitted to baths and bidets in domestic properties. An amendment to the Building Regulations, which came into effect April 2010, meant that all new-build homes across England and Wales will also now have TMVs fitted to baths to limit the temperature of the water to 48°C.

That temperature is still more than hot enough for domestic use, but it removes the potential for the most serious scald injuries to happen. Northern Ireland will also adopt the amendment, but at a slightly later date.

TMVs blend hot water, which is heated before use, to a temperature of 60°C or above in order to kill legionella bacteria with cold water to ensure water comes out of the tap at a safe temperature.

Already commonly used in showers, as well as in baths, in hospitals and care homes, it has proved harder to raise awareness of the need for TMVs in baths in people's own homes, even though that is where the most severe scald injuries happen.

11.5 Preventing scalds: TMVs reduce, but do not completely remove the risk of a hot bath water scald. Therefore, RoSPA recommends that people are made aware of other critical safety advice.

RoSPA reminds people of important safety advice to prevent scalds including:

- When running a bath, always run cold water before hot

- Carefully test the water temperature before you get into the bath or before you place your child in the bath
- Supervise young children around baths at all times
- Talk to children about hot water safety from an early age – help them to learn about the risks
- In the kitchen, always use the cooker's back ring first and position pan handles so they cannot be pulled over
- Hot drinks are the most common cause of a scald to children under five year old Keep hot drinks out of the reach of children
- Do not drink a cup of hot liquid while holding a baby.

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