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# Injury Prevention Briefing

## Preventing Fire-Related Thermal Injuries in Pre-School Children

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Disclaimer

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# Section A:

## Introduction

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### Aim and target audience of the Injury Prevention Briefing

This Injury Prevention Briefing (IPB) is the first of four briefings which provide guidance about the importance of home injuries in pre-school children and how these injuries can be prevented. The target audience of the IPB is Sure Start Children's Centres. Children's Centres are in the position to engage with families where children are at risk from poor outcomes and they can act as hubs for family support and as a base for voluntary and community groups.

This IPB is about fire-related thermal injuries in pre-school children, where partnership with the Fire and Rescue Service is encouraged. The other three IPBs will be on the prevention of falls, scalds and poisoning injuries.

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### How we prepared this briefing

This Briefing has been prepared as part of the 'Keeping Children Safe at Home' programme. This is a major project funded by the National Institute for Health Research, part of the NHS. It is a collaboration between four universities (Nottingham, UWE Bristol, Newcastle and Leicester), Norfolk and Norwich University Hospitals NHS Foundation Trust and the Child Accident Prevention Trust. The project aims to improve our understanding of children's accidents and thus make their prevention more effective.

The IPB brings together the scientific evidence on what works, or can be regarded as best practice, with the practical experience of people who already run injury prevention programmes in the field, both through Children's Centres or elsewhere. Different sources of evidence have been used to prepare this IPB. These include:

- Systematic reviews of what interventions work in preventing injuries from house fires and what health promotion approaches work with families of pre-school children.

- Cost effectiveness analyses.
- Surveys and interviews with Children's Centre managers about injury prevention initiatives in their Centres.
- Interviews with parents of pre-school children about their fire-related practices in the home, e.g. their ownership and maintenance of smoke alarms, whether they have prepared a fire escape plan, etc.
- Interviews with 'key informants' about national policy in this field.
- Workshops of local practitioners and policy makers, which have taken place in Nottingham, Bristol, Norwich and Newcastle, about how to implement programmes in Children's Centres and how to reach families in the community.

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### Structure of the IPB

After this introductory **Section A**, this IPB is composed of three main sections:

- **Section B** directed at commissioners
- **Section C** directed at Children's Centre managers
- **Section D** directed at practitioners working directly with families.

The materials developed in the IPB are sufficiently flexible that they can be used in different types of Children's Centres located in different parts of the country. Children's Centres are seen as providing the hub for the injury prevention initiatives (in this case on the prevention of fire-related thermal injuries), working in partnership with other agencies.

Each of the sections B, C and D has been developed to stand alone – as a result, there is some overlap in different sections. However all sections are provided so that, for example, commissioners can read section B in detail but have sections C and D provided for information.

## Section B:

# Advice for Commissioners

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This IPB is about the prevention of fire-related thermal injuries in pre-school children, where partnership working with the Fire and Rescue Service is encouraged.

### Key Messages for Commissioners

- House fires are a significant cause of death in pre-school children.
- There is a strong link between deaths and injuries in house fires and social deprivation.
- Preventive programmes are available and merit more widespread implementation.
- Children's Centres working with partners (particularly the Fire and Rescue Service) can make a difference.
- Preventive interventions can be built into Children's Centres' health promotion programmes.

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### Making the case - why is the prevention of injuries and the prevention of injuries from house fires important?

#### Scale of the problem

Unintentional injury is a major challenge for the health and well being of preschool children today. It is one of the leading cause of death in children aged 1-4 years in the UK. Falls, poisonings and thermal injuries are the most common injuries resulting in hospital admissions and emergency department (ED) attendance in pre-school children.

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

#### House fires

House fires are an important cause of death in pre-school children. In the UK in the three-year period 2006-2008, 42 children under the age of 5 years died as a result of a house fire in the UK (17 in 2006; 15 in 2007 and 10 in 2008) (DCLG, 2010a). House fires can kill and seriously injure both children and adults. While it is often the smoke that kills people, burns can also be very serious injuries which may require long periods of treatment.

House fires can also result in considerable cost and disruption for families, the house can be uninhabitable for a long time and possessions ruined, with a need for furniture and equipment to be replaced and houses redecorated. If the house and contents are not insured, the costs can be very high.

#### Links with deprivation

There are strong links between childhood injury deaths and families living in deprived circumstances. For all unintentional childhood injury deaths, the children of parents who have never worked or are in long term unemployment are 13 times more likely to die from an injury than those whose parents have higher managerial occupations. When childhood deaths from house fires are examined the gradient is even steeper at 37 times the rate for more advantaged families (Edwards et al. 2006).

#### Children are particularly vulnerable

Young children's injuries relate closely to their age and stage of development. In a house fire a young child will need the help of an adult to escape from a house fire. In the event of a fire, a young child's natural reaction may be to hide – under a bed or in a cupboard or wardrobe to escape the effects of the fire.

## Costs of injuries

The costs of ED attendances for unintentional injuries in pre-school children exceeds £17 million per year. The average cost of a domestic fire was estimated at £24,900 in 2004, of which approximately £14,600 was accounted for by the economic cost of injuries and fatalities and £7,300 was due to property damage (ODPM 2006).

## Prevention of injuries and of house fires

A range of prevention programmes are available to prevent childhood injuries and also injuries from house fires. Children's Centres working with partners (particularly the Fire and Rescue Service) can make a difference if the messages are promoted as part of the Centre's health promotion programme.

A number of interventions are effective in reducing the impact of fires, should they occur (secondary prevention). The programmes where there is good evidence of effectiveness include:

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

This IPB concentrates particularly on these two effective messages:

- In 2008, 91% of households in England had a smoke alarm but some groups had lower ownership rates, for example private tenants (87%) compared with those renting from housing associations (94%) and ethnic minority households (87%) (DCLG 2010b). Ownership of smoke alarms is not the complete picture: alarms need to be positioned and fitted correctly and regularly maintained.
- In a survey of parents of pre-school children conducted as part of the Keeping Children Safe at Home project, 43% of parents said that they had a fire escape plan for their homes and 13% had practised the plan. There is thus much scope for increasing parents' knowledge about fire escape plans.

Secondary fire prevention needs to be complemented by efforts to prevent the fire in the first place (primary prevention) such as through smoking cessation programmes, safe storage of matches and lighters, safe use of candles, reduction in fire play by children and bedtime safety routines. The main cause of deaths in house fires is what is officially described as "careless handling of fire and hot substances (e.g. careless disposal of cigarettes)" (DCLG 2010a).

When Children's Centres work on other areas of health promotion such as programmes aimed at smoking cessation, healthy eating (e.g. reduction in deep fat frying of foods) and alcohol reduction, the messages of house fire prevention can also be supported.

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

Two reports published in November 2010 provide some background to the policy context – these are the Public Health White Paper and NICE guidance on preventing unintentional injuries in children under the age of 15 years.

### Public Health White Paper

The Public Health White Paper, 'Healthy Lives, Healthy People: our strategy for public health in England' was published in November 2010 (HM Government, 2010). This emphasised the government's commitment to reducing health inequalities and reinforced the role of Children's Centres for those in most need. Local communities have been placed at the heart of public health and the importance of partnership working has been emphasised. The draft Public Health Outcomes Framework, published in December 2010, includes outcomes related to preventing unintentional injuries among the under 5s (Department of Health, 2010).

## NICE Guidance

The National Institute for Health and Clinical Excellence (NICE) published public health guidance on 'Strategies to prevent unintentional injuries among children and young people aged under 15' in November 2010 (NICE 2010). This guidance recommends that local and national plans and strategies for children and young people's health and wellbeing include a commitment to preventing unintentional injuries.

Emphasis is also given to preventing unintentional injuries among the most vulnerable groups in order to reduce inequalities in health.

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

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## Other areas to highlight

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

*Section C* for Children's Centre Managers provides more detailed suggestions about training and how to organise initiatives related to the prevention of fire related thermal injuries.

*Section D* for Practitioners working directly with families provides a summary of the key messages and range of suggested activities for working. These two sections are provided for information.

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## Section C:

# Advice for Children's Centre Managers

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This Injury Prevention Briefing is about the prevention of fire-related thermal injuries in preschool children, where partnership working with the Fire and Rescue Service is encouraged. Section C is directed at Children's Centre managers and provides suggestions about training and how to organise initiatives related to the prevention of fire related thermal injuries.

### Key Messages for Children's Centre Managers

- House fires are a significant cause of death in preschool children, particularly in families living in more deprived conditions.
- Children's Centres working with partners (particularly the Fire and Rescue Service) can make a difference using proven preventive programmes.
- Preventive interventions can be built into Children's Centres' health promotion programmes.
- Training for practitioners working directly with families needs to concentrate on six key messages and involve input from the Fire and Rescue Service.
- Opportunistic and planned approaches can be used to reach families, including one-to-one contacts in the home or Children's Centre and small group work in the Children's Centre or other setting.

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### Making the case - Why is the prevention of injuries and the prevention of injuries from house fires important?

#### Importance of child injuries

Unintentional injury is a major challenge for the health and wellbeing of preschool children. It is one of the leading cause of death in children aged 1-4 years in the UK. Children and young people who survive a serious unintentional injury can experience severe pain and may need lengthy treatment and numerous stays in hospital. They could be permanently disabled or disfigured and their injuries may have an impact on their social and psychological wellbeing. A child burned in early infancy may carry the scars for the rest of his/ her life.

House fires are an important cause of death in preschool children. In the UK in the three-year period 2006-2008, 42 children under the age of 5 years died as a result of a house fire in the UK. While it is often the smoke that kills people, burns can also be very serious injuries which may require long periods of treatment. House fires can also cause considerable cost and disruption for families, with a house uninhabitable for a long time and possessions ruined.

#### Links with deprivation

There are strong links between childhood injury deaths and families living in deprived circumstances. For all unintentional childhood injury deaths, the children of parents who have never worked or in long term unemployment are 13 times more likely to die from an injury compared with children whose parents have higher managerial occupations and this figure is 37 times higher for deaths from house fires.

#### Children are particularly vulnerable

Young children's injuries relate closely to their age and stage of development. In a house fire a young child will need the help of an adult to escape from the house. Many fatal house fires occur at night. If a fire occurs in the house, a young child's natural reaction may be to hide – under a bed or in a cupboard or wardrobe to escape the effects of the fire.

#### Prevention of injuries and of house fires

A range of prevention programmes are available to prevent childhood injuries and also injuries from house fires. Children's Centres working with partners (particularly the Fire and Rescue Service) can make a difference if the messages are promoted as part of the Centre's health promotion programme.

A number of interventions are effective in reducing the impact of fires, should they occur (secondary prevention). The programmes where there is good evidence of effectiveness include:

- The correct fitting and maintenance of smoke alarms.



- The development and practising by families of fire escape plans.

Secondary fire prevention needs to be complemented by efforts to prevent the fire in the first place (primary prevention) such as through smoking cessation programmes, safe storage of matches and lighters, safe use of candles, reduction in fire play by children and bedtime safety routines.

When Children's Centres work on other areas of health promotion such as programmes aimed at smoking cessation, healthy eating (e.g. reduction in deep fat frying of foods) and alcohol reduction, the messages of house fire prevention can also be supported.

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### Who is the target group?

The target group for the programme includes children under five and their families. All families are at risk of fires in their homes but some groups are at particular risk, including families living in more socially deprived conditions, those living in privately rented homes, children from some ethnic groups, and households where there is a smoker or a family member with hearing impairment.

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### The interventions

Children's Centres can act as the 'hub' for programmes on the prevention of fire-related thermal injuries in pre-school children. A member of the Children's Centre staff can act as the champion for injury prevention to lead and coordinate activities. In partnership with the Fire and Rescue Service, these may include the training of different practitioners who work directly with families: family support workers, health visitors, nursery nurses and social services staff. This allows practitioners to give consistent advice to parents and carers about fire-related thermal injuries.

In section 0, a package of primary and secondary prevention measures is suggested, emphasising in particular the ownership and maintenance of smoke alarms and the importance of families developing and practising a fire escape plan for their homes.

The key messages of the package are:

- The importance of smoke alarm use and maintenance.
- Having a family fire escape plan.
- Identifying potential causes of house fires.
- Understanding children's behaviour and its relationship to prevention - safe storage of matches and lighters.
- Having a bedtime fire safety routine.

In section 0, a series of practical exercises based around these messages is provided. These can be adapted for use by Children's Centre staff working directly with parents.

In addition, fire safety can be incorporated into existing smoking cessation and healthy eating programmes run at Children's Centres as cigarettes and matches, and chip pans are major cause of house fires.

Practical advice tailored to the individual home may be helpful. Members of the local Fire and Rescue Service may be able to make a 'home fire risk assessment' visit to people's homes (<http://www.fireservice.co.uk/safety/hfsc>). The home visit focuses on three areas:

1. Identification and awareness of the potential fire risks within the home (e.g. electrical safety, smoking safety and the use of electric blankets, etc).
2. Knowledge of what to do to reduce or prevent these risks (e.g. overloaded electrical sockets, wires trapped under carpets, ensuring that doors shut correctly, etc).
3. Putting together an escape plan in case a fire does break out and ensuring that smoke alarms work.

## Creative ways of reaching target groups

The best ways of reaching parents may vary for the different populations served by Children's Centres and individual centres may be able to work creatively with other partners to involve some traditionally 'hard to reach' groups. Both opportunistic and planned approaches may be possible for:

- Small group work with parents in Children's Centres.
- Small group work with parents in other settings, e.g. nurseries.
- One-to-one work with parents in Children's Centres and other settings.
- One-to-one work with parents in the home environment.

Messages need to be reinforced in different settings, with an emphasis on the consistency of messages being delivered. Use needs to be made of 'opportunity windows' when interest in the subject is high, such as a fire that hits the headlines in the media, a local fire in the area, Child Safety Week or national fire safety week.

Innovative ways of working with parents may include:

- A parent who has experienced a house fire may be willing to act as a peer supporter to the programme in the Children's Centre. Their experience could be developed as a constructive case study.
- The Children's Centre parents advisory group can be consulted for different ways of reaching parents in their neighbourhood.
- Parents may be willing to act as champions or advocates for home fire safety, for example working with a tenants' association on safety measures.
- Popular activities within the Centre, e.g. first aid can be used as an entrée to discussion about injury prevention. Healthy eating classes could include messages related to deep frying and healthier alternatives.

## Evaluation of the programme

Evaluation of the programme needs to be built in from the start. It is important to document all activities and to consider which elements work and for whom. A local evaluation of the programme may be useful for inclusion in an Ofsted report for the Children's Centre.

### Outcome measures

It will not be possible for an individual Children's Centre to demonstrate that a programme on fire-related injuries in pre-school children has an impact on reducing outcomes such as specific injuries to children or the number of house fires experienced by families in its catchment area. The numbers in any one area will be too small to allow this. However, more realistic intermediate outcome measures include: the number of families with functioning smoke alarms at every level in their homes, the number of families who have developed and practised a family fire escape plan, and the number of families who have taken up smoking cessation classes.

### Process measures

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

### Training sessions for practitioners

- Was training for practitioners conducted?
- Who initiated the training?
- Who conducted the training?
- What messages were included in the training?
- How long did the session last?
- How many people attended the training session/s?
- Was the training acceptable to the target group? What elements were considered good, what were considered less good? Were there any omissions?

#### Small group work with parents in the Children's Centre

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

#### One-to-one contacts with parents in the Children's Centre settings and other formal settings

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

#### One-to-one contacts with parents in their homes

- Did any home fire risk assessment visits to families' homes take place by Fire and Rescue Service staff?
- Did family support staff or health visitors have the opportunity to include messages about fire safety in their home visits?

#### Other

- Was a Children's Centre parents advisory group involved in planning the programme?
- Did any parents act as Parent Peer Supporters or Parent Advocates for the programme?
- Was any use made of 'opportunity windows' when interest in the subject was high?
- Were there any ways in which it was possible to involve 'hard to reach' groups?
- Were there any barriers that hindered the adoption of the programme in your Children's Centre?
- Were there any facilitators that encouraged the adoption of the programme in your Children's Centre?
- What advice would you give to another Children's Centre in running the programme?

## Section D:

# Advice for Practitioners

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This Injury Prevention Briefing is about the prevention of fire-related thermal injuries in pre-school children, where partnership working with the Fire and Rescue Service is encouraged. This section is directed at Children's Centre staff. It provides suggestions about programmes that can be run with parents and carers to highlight the causes of house fires and ways to minimise risk of deaths and injuries.

### Key Messages for Children's Centre Staff

- House fires are a significant cause of death in pre-school children, particularly in families living in more deprived conditions.
- Children's Centres working with partners (particularly the Fire and Rescue Service) can make a difference using proven preventive programmes.
- Using the programmes set out in this section, particularly those relating to the ownership and correct use of smoke alarms, and having and practising a family fire escape plan, the risks of deaths and injuries can be reduced.

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### Why is the prevention of house fires important?

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

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

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

#### Extract from a story on *Mail Online*

Mother rescued three sons from blazing home but died alongside daughter as she tried to coax her out from under her bed.

A mother who battled flames to rescue her three sons from their blazing home died in a desperate bid to save her little girl as she hid under a bed, an inquest heard yesterday. Michelle Thomas managed to pull the three boys from the inferno before she dashed back inside for four-year-old Courtney. But her efforts were in vain and firefighters later found their two bodies lying side by side on the floor in the child's bedroom.

Fire investigator David Phillips said: 'Michelle was cooking their tea in the kitchen when the alarm was raised. 'But Courtney appears to have run upstairs to escape the fire. Michelle had left the property but then re-entered in an attempt to rescue Courtney. From a small fire from the cigarette lighter to the whole bedroom being engulfed would have taken about a minute.'

Post mortem examinations showed Courtney died after breathing in smoke. Her mother died of smoke inhalation and burns.

The inquest heard the semi-detached home had no working smoke alarms.

Coroner Philip Rogers said: 'The fire spread very rapidly. There are several lessons which can be learned, including the danger of allowing children access or to play with any combustible material.' He recorded verdicts of accidental death on both mother and daughter.

## Who is at greatest risk?

Research shows that children in the most disadvantaged families are 37 times more likely to die in a house fire than the most affluent.

Why? There are many reasons. For example:

- They may live in older houses.
- They may live in overcrowded conditions.
- They may have old furniture that does not meet current flammability requirements and that may give off very toxic smoke when it burns.

Young children are particularly high risk because:

- Toddlers tend to hide from danger, rather than try and escape.
- Even if they are old enough to help themselves, they may not know what to do when the smoke alarm goes off.
- If they are babies, they are completely dependent on adults for help.

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

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## What are the main causes of house fires?

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

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

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## What you can do to help

Prevent the fire from happening – this is called primary prevention in that it aims to prevent the hazardous situation arising at all.

Make sure that if the fire does occur the family can escape – this approach is called secondary prevention; the hazardous event (the fire) occurs so prevention activities are focussed on making sure that injuries do not happen or their severity is minimised.

Primary and secondary prevention are both important approaches and are not alternatives.

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## What works to prevent house fires and their consequences?

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

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

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

## Where to get specialist advice and help

All Fire and Rescue Services have staff whose role is to promote fire prevention. You should find out what your local Fire and Rescue Service will do for you, but it may include some or all of the following:

- Fitting free smoke alarms in homes, especially those with vulnerable families (children and older people, people with disabilities including hearing and sight problems).
- Giving advice to families whose smoke alarms keep going off inadvertently.
- Testing and, if necessary, replacing smoke alarms that are reaching the end of their normal life.
- Undertaking fire safety risk assessments in family homes. Linked with this, they will give advice to families.
- Speaking to groups of children and/or parents on fire safety in whatever settings are available, including Children's Centres.
- Training others who have the opportunity to pass on fire safety messages.
- Providing leaflets and other resources for families.

## Examples of things you can do with parents

How you get the safety messages across to parents depends on your opportunities, working practices, staff skills and/or existing relationships with other agencies, such as your local Fire and Rescue Service. You may be able to work with parents one-to-one at the Children's Centre or in their homes, have the opportunity to run mini workshops or just highlight the messages through posters and handouts.

If you have the opportunity to run mini workshops, you could use some or all of the exercises presented in Annex 1. These highlight the key messages about preventing house fires and ensuring that if a fire does occur everyone manages to escape safely.

Below are the key messages that need to be presented to parents by whatever method you choose. These messages contain advice based on up to date evidence and should be presented as they appear below.

If you only have the opportunity to highlight a couple of topics, choose the key messages associated with exercises 1 and 5. These have the strongest evidence base; in other words, the approaches – the use of smoke alarms and having a family fire escape plan – are known to make a difference.

To support whatever method of emphasising the importance of fire safety for families that you use, you may also seek to highlight what fires are really like by, for example, inviting the fire prevention staff from your local Fire and Rescue Service along to speak to families, or they may have resources such as a DVD that you can use. Another powerful way of presenting the horrors, inconvenience and cost of having a house fire is to get a person who has experienced one first hand to speak to families.

## Key messages

### **The importance of smoke alarms**

- If you haven't got a smoke alarm, speak to the local Fire and Rescue Service – they may provide and fit one for you. If they can't do this, they will give you the best available advice.
- There should be a smoke alarm on every level of the home.
- Check that the alarm is working every week by pressing the test button until the alarm sounds.
- Replace the battery every year (unless it's a ten-year alarm or is wired into the electric mains).
- If the alarm keeps going off when there is no fire, ask the local Fire and Rescue Service for advice.

See also Information Sheet 1.

### **A family fire escape plan**

A family escape plan should cover the following issues:

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

## Identifying potential causes of house

**fires** The major causes of house fires are:

- Cigarettes, especially when not put out properly, e.g. when the smoker falls asleep in bed or a chair.
- Unattended chip pan, especially when it's too full of fat or oil. Cooking appliances used in some cultural groups may also produce similar hazards.
- Clothes drying on the fireguard. -

Clothes horse too close to a fire. -

Frayed electric wiring.

- Overloaded electric sockets (hot plugs or sockets, scorch marks, fuses that often blow, or flickering lights – they are all signs of loose wiring or other electrical problems).
- Candles and tea lights left unattended or with something too close above them. -

Young children having access to and playing with matches and lighters. - Old electric blankets.

- Electric cables running under rugs or carpets – you can't see if they are worn.
- Electric plugs that have not been wired properly - coloured wires sticking out of plugs is an indication of this.

Information sheet 2 presents many more common causes.

## Children's behaviour and fire prevention – safe storage of matches and

**lighters** Children's behaviours that can be associated with house fires include:

- Their understanding that a hidden object still exists (matches or a lighter hidden in drawer or cupboard).
- Being able to move something and then climb on it to reach and then open cupboard. -
- Ability to hold a small object (a match box), open the box, handle a single match. - Wish to copy adult behaviour by striking a match or operating a lighter.

Children find a range of things appealing. A match or lighter will be appealing because it makes a sound when you strike it, there is a flash as it ignites and then the flame is a flickering light.

Matches and lighters need to be stored out of reach and out of sight.

## Bedtime fire safety routine

To help prevent fires occurring through the night, it's important to check your home for fire hazards before you go to bed. Make sure you:

- Close inside doors at night to stop a fire from spreading.
- Check the cooker is turned off.
- Turn off and unplug electrical appliances (unless they are meant to be left on, like the freezer).
- Put candles and cigarettes out properly.
- Turn heaters off and put up sparkguards (if you have a coal or wood-burning fire) and fireguards.
- Keep all exits clear.



## Annex 1.

# Exercises that can be run with parents

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The exercises below are intended to help you encourage people to reduce the risk of fire in their homes and provide guidance on what to do if there is a fire so as to minimise the risk of death and injury.

Five exercises are presented. The first introduces the key importance of smoke alarms, the most effective tool in preventing deaths and injuries. The next three present the key messages to prevent fires. The final one aims to ensure that people know what to do if the worst happens.

If you only have the opportunity to run a couple of these exercises, choose numbers 1 and 5. These have the strongest evidence base; in other words, the approaches – the use of smoke alarms and having a family escape plan – are known to make a difference:

- Exercise 1 explores people’s understanding of house fires and their knowledge about smoke alarms.
- Exercise 2 is about minimising the risk of there being a fire by helping participants to identify what can cause a fire.
- Exercise 3 explores how child behaviour can lead to house fires.
- Exercise 4 stresses the importance of having a routine that families should follow at bedtime to make sure that things that can cause fires are made as safe as possible before you go to bed.
- Exercise 5 considers the problems of escaping when the smoke alarm sounds, stressing the importance of having a family escape plan.

### IMPORTANT - BEFORE YOU RUN THESE EXERCISES

There are three things you need to do before you run the exercises presented below:

1. You should contact the fire prevention staff at your local Fire and Rescue Service (FRS) to check what help and advice they can provide to families who may contact them. Find out if there is a telephone number that people should use to obtain help and advice from the FRS. If the FRS prefers to be contacted by another means, for example, people sending in a postcard requesting a visit, you should ask for a supply of these. They may also be able to provide you with resources that you can use or give to families, or even offer to come along to support your initiatives.
2. You should ensure that families have working smoke alarms. If any do not have alarms or are having problems, such as alarms going off when cooking, you should strongly advise them to contact your local FRS who will be able to help. You can help them to make contact.
3. Check whether any of the participants has suffered a house fire or has had relatives or friends injured in one. If this is the case, you may need to cope with a distressed and upset person.

## Exercise 1. The importance of smoke alarms

If you cannot run the whole of this exercise, then use as much of it as you can.

### Key messages

- If you haven't got a smoke alarm, speak to the local Fire and Rescue Service – they may provide and fit one for you. If they can't do this, they will give you the best available advice.
- There should be a smoke alarm on every level of the home.
- Check that the alarm is working every week by pressing the test button until the alarm sounds.
- Replace the battery every year (unless it's a ten-year alarm or is wired into the electric mains).
- If the alarm keeps going off when there is no fire, ask the local Fire and Rescue Service for advice.

### Background

This exercise is about ensuring that families benefit from one of the most effective tools to prevent death and injury in house fires – the smoke alarm. It tests people's knowledge of house fires and leads them to realise the importance of having correctly functioning, appropriately located, regularly tested smoke alarms. It also touches on the needs of people with hearing difficulties.

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

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

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

### Information snippet

House fires in which smoke alarms raise the alarm:

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

Casualty rates are significantly higher through the night. The higher casualty rates during the night probably reflect the lack of awareness of the casualties at the time of ignition.

### Learning objective

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

### Time

About 30 mins, including time to discuss some of the issues that may arise. The quiz about fire safety and smoke alarms only takes about 15 mins.

### Equipment needed

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

Enough copies of Information sheet 1. All about smoke alarms so that everyone can take a copy home. Your local FRS may have a leaflet that presents the same information more attractively.

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

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

### Method

Hand out the quiz sheets and invite participants to spend 15 minutes answering the questions. (If the group has reading problems, the questions could be read out and answered with a show of hands.) [10 mins]

When everyone has completed the quiz sheet, tell participants what the correct answers are. On a question by question basis, if anyone has an incorrect answer, use this as a discussion leader so that people understand why the correct answer is what it is. [5 mins]

### Discussion points

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

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

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

If someone has a smoke alarm that keeps going off, the FRS will be able to advise on the best solution. It may mean changing the type of alarm or, moving it. [10 mins]

### Conclusions

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

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

If any members of your group do not have smoke alarms, strongly recommend that they contact the local FRS. They may well be able to provide and fit them free of charge.

Give everyone a copy of Information sheet 1. All about smoke alarms to take home. You may find that your local FRS has a leaflet that covers the topics more attractively than this information sheet. [2 mins]

## Exercise 2. Identifying potential causes of house fires

If you cannot run the whole of this exercise, then use as much of it as you can.

### Key messages

The major causes of house fires are:

- Cigarettes, especially when not put out properly, e.g. when the smoker falls asleep in bed or a chair.
- Unattended chip pan, especially when it's too full of fat or oil. Cooking appliances used in some cultural groups may also produce similar hazards.
- Clothes drying on the fireguard. - Clothes horse too close to a fire. - Frayed electric wiring.
- Overloaded electric sockets (hot plugs or sockets, scorch marks, fuses that often blow, or flickering lights – they are all signs of loose wiring or other electrical problems).
- Candles and tea lights left unattended or with something too close above them.
- Young children having access to and playing with matches and lighters.
- Old electric blankets.
- Electric cables running under rugs or carpets – you can't see if they are worn.
- Electric plugs that have not been wired properly - coloured wires sticking out of plugs is an indication of this.

### Background

This exercise is about preventing fires from happening, not what to do if there is a fire.

While the exercise initially addresses dangers, the discussion that follows should concentrate on how to avoid or minimise those dangers.

The exercise addresses the causes of **accidental house fires**, not those started deliberately or through vandalism.

### Learning objective

To highlight the hazards in the home that can lead to a house fire and hence to take steps to reduce the risks

### Time

50 – 60 mins including time for discussion. The part of the exercise that deals with identifying the main causes of fires takes about 25 mins.

### Equipment needed

Ideally, each group of participants needs a sheet of flipchart paper and a marker pen. If these are not available in sufficient quantities, each group can be given one or two sheets of A4 paper and a pen, with the facilitator having the flipchart and marker pen.

Blu Tack or some drawing pins

### Method

Introduce the topic by explaining that house fires can cause death and serious injury. If there has been an incident reported in the press recently, use this as an excuse for bringing up the subject. Remind them that even if no-one is injured, a fire can mean they have to move out of their home, at least temporarily, with all the inconvenience this would mean. They may lose their possessions, especially treasured ones such as the baby photos, their clothes, documents, etc. They will also be left with a smell that pervades everything in the home. [5 mins]

Ask participants to work in groups of three or four. Ask each group to write down as many things that they can think of that might result in a house fire. (It's not a description of their own home that you are seeking, it is an especially dangerous hypothetical home.) [15 mins]

Invite each group to tell everyone what they have written down. After the first group has reported, other groups will simply identify new issues that they have recorded. Explain that you can discuss what people have reported when everyone has finished. [Time depends on the number of groups, but assume 3 or 4 mins per group. The first one may take longer but the others will be briefer.]

As you go along, make a list of all the points that people have raised so you have one consolidated list. Stick this on the wall with Blu Tack and ask people which they think are the most serious points.

Outline any points that they have not identified (see Information sheet 2). [2 mins]

Open the floor for discussion and questions.

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

### Discussion points

You can use this exercise as an opportunity to get participants to think about what their children are capable of doing at present and what they may do in the future. For example, a participant may say that her toddler can move a chair and climb on it, and open a cupboard. This matters in the context of the safe storage of matches and lighters – they need to be out of sight and out of reach, and if possible somewhere secure, so that the climbing and naturally inquisitive toddler can't get at them and play with them. Remind participants that children are fascinated by fire and that fire play is a common and potentially very dangerous phenomenon.

Ask participants whether there are any issues that they think would be difficult to address (e.g. grandfather often falls asleep in the evening with a cigarette in his hand) – other participants may have additional suggestions. [As much time as you wish, say 10 mins]

Will your landlord allow you to install equipment, e.g. smoke alarm? How do you handle this if the answer is "No"?

What about common areas in blocks of flats? Do people leave rubbish or other flammable materials there? Who is responsible for ensuring that these spaces are clear? Could the rubbish left in these areas cause problems if you had to get out in a hurry?

In conclusion, highlight the devastating effects that fires can have, and remind participants of the major issues that they have listed: cigarettes, matches, lighters, candles, chip pans, fires and heaters too close to furniture and curtains, curtains blowing if the window is open, [2 mins]

### Prompts

If participants are stuck, get them to think on a room-by-room basis to identify dangers.

Remember that it's not all about equipment. Behavioural issues, e.g. smoker in the home, someone comes home drunk, are also relevant.

### Information snippet

Cigarettes burn at 700°C and contain chemicals that keep them alight.

### Follow up work

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

### Sources of information

Quick guide to fire safety in the home:

[http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG\\_10030963](http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG_10030963)

Advice about safe cooking:

[http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG\\_071645](http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG_071645)

Electric appliance fire safety:

[http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG\\_071712](http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG_071712)

Safe use of electric blankets and heaters:

[http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG\\_174329](http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG_174329)

Fire safety tips for smokers:

[http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG\\_071693](http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG_071693)

Using candles, decorative lights and decorations safely:

[http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG\\_180798](http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG_180798)

Fire safety advice for parents and child carers:

[http://www.direct.gov.uk/en/Parents/Yourchildshealthandsafety/Yourchildssafetyinthehome/DG\\_10038395](http://www.direct.gov.uk/en/Parents/Yourchildshealthandsafety/Yourchildssafetyinthehome/DG_10038395)

### Exercise 3. Children's behaviour and fire prevention – safe storage of matches and lighters

If you cannot run the whole of this exercise, then use as much of it as you can.

#### Key messages

Children's behaviours that can be associated with house fires include:

- Their understanding that a hidden object still exists (matches or a lighter hidden in drawer or cupboard).
- Being able to move something and then climb on it to reach and then open cupboard.
- Ability to hold a small object (a match box), open the box, handle a single match.
- Wish to copy adult behaviour by striking a match or operating a lighter.

Children find a range of things appealing. A match or lighter will be appealing because it makes a sound when you strike it, there is a flash as it ignites and then the flame is a flickering light.

Matches and lighters need to be stored out of reach and out of sight.

#### Background

Many accidents to children arise because parents do not always realise the consequences of their child's rapidly changing physical and behavioural development. For example, one day a child may not be able to or may not be interested in climbing the stairs and then the next day you find him or her half way up – and ready to fall down! Anticipating this sort of change can allow parents to take precautions before the accident happens.

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

etc. These attractions can lead to fires and injuries if children have access to matches and lighters as flickering flames and their appearance when an action such as striking a match or operating a lighter can be very appealing.

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

#### Learning objective

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

#### Time

About 30 mins, including time for discussion.

#### Equipment needed

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

1 year old

3 years old

**2 years old**

**4 years old**

**Method**

Explain that while many house fires are started by the actions or inactions of adults or because of faulty equipment, some arise because of children's behaviours. [1 min]

### **Part 1 – exploring with participants what children of different ages can do.**

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

Ask each person in turn to describe something that they can remember that their child started doing at a particular age. This could be walking, climbing on to furniture, up stairs or over the safety gate, opening containers, using a spoon, running, sitting and playing quietly, playing with noisy toys, watching cartoons on TV, putting everything in their mouths, etc. Keep going until people have no further suggestions. (Remind participants that children are not all the same and that some do things at a particular age while others may do the same action earlier or later, or not at all.) [5 – 10 mins]

The behaviours are likely to fall into a handful of major groups – gross motor skills (walking, running, climbing, playing with push-along toys, etc), fine motor skills (holding a crayon and drawing, opening a container, stacking bricks, putting a key in a lock, trying to copy adult actions, etc), and cognitive skills (solving problems such as finding a hidden object).

### **Part 2 – exploring what children find attractive**

Ask participants to tell you what their children find attractive. This does not just mean things that the child plays with, it could also be things they like watching. Write down the responses. [5 mins]

Then, for each response, ask why they think that the item is attractive. As noted above, it is likely to be characteristics such as bright colours, sounds, movement, figures (such as cartoon characters that they may recognise), imitates adult behaviour, texture, taste, etc. It may be more than one characteristic. Write these next to each item. [5 mins]

### **Part 3 – combining the results of parts 1 and 2**

We now know what children can do at specific ages and what they find attractive.

Ask participants which of the behaviours and attractions you have recorded could be relevant to children starting fires. The relevant ones are likely to be understanding that a hidden object still exists (matches or a lighter hidden in drawer or cupboard), gross motor skills to be able to move something and then climb on it to reach and then open cupboard, fine motor skill to take hold of a small object (the match box), open the box, handle a single match and then copy adult behaviour by striking a match or operate a lighter. [5 mins]

The match may be appealing because it makes a sound when you strike it, there is a flash as it ignites and then the flame is a flickering light. So, in other words, it's completely understandable why children like to play with matches and lighters!

### **Discussion points**

Get participants to discuss where they could keep matches and lighters that would be as inaccessible as possible. [5 mins]

Consider as a group how to deal with the fact that someone in the house smokes so matches and lighters may be left lying around. [5 mins]

### **Conclusion**

The prevention message is the need to keep matches and lighters well out of reach and out of sight, to try and make sure that there is nothing convenient for children to use to climb, and to try not to let children see you striking a match or operating a lighter.



## Exercise 4. Bedtime fire safety routine

If you cannot run the whole of this exercise, then use as much of it as you can.

### Key messages

To help prevent fires occurring through the night, it's important to check your home for fire hazards before you go to bed. Make sure you:

- Close inside doors at night to stop a fire from spreading.
- Check the cooker is turned off.
- Turn off and unplug electrical appliances (unless they are meant to be left on, like the freezer).
- Put candles and cigarettes out properly.
- Turn heaters off and put up sparkguards (if you have a coal or wood-burning fire) and fireguards.
- Keep all exits clear.

### Background

This exercise builds on exercise 2 in which participants identified possible causes of house fires. Fires at night present a particular hazard so having a bedtime safety routine is an important tool.

Most house fires that result in death start at night, in other words when the family is fast asleep.

The exercise considers what to do at bedtime to prevent fires and the steps needed to minimise the spread of a fire if one does start, hence improving the chances of escape.

### Learning objective

To help families understand the importance of having a bedtime fire safety routine and to develop one for their own home, thereby minimising the risk of a fire occurring.

### Time

Less than 20 mins.

### Equipment needed

Use the list of the causes of fire that was developed when you ran Exercise 2. Alternatively, you can use the list in Information Sheet 2.

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

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

### Method

Explain where a bedtime routine fits into the sequence of preventing a fire and ensuring that everyone can escape safely. [2 mins]

Invite people to say what they think would be the main causes of fires that they should address before they go to bed. The key actions to prevent fires that they should identify are likely to include:

- The cooker is turned off. Apart from reducing the risk from anything left in the oven or on the cooker, such as the chip pan, this can also reduce the risk of a fire if, for example, a tea towel falls on to the cooker.
- Electrical appliances are off and unplugged (unless they are meant to be left on, like the freezer).
- Candles and cigarettes are out properly, and there is nothing smouldering in the ashtray.
- Electric, gas or oil heaters are off. This prevents them from setting fire to furnishings, etc.
- Sparkguards and fireguards are in place, if appropriate. (Sparkguards are needed for solid fuel fires – wood or coal fires – as these can spit sparks into the room. Sparkguards have a very fine mesh that should stop sparks passing through. Fireguards are larger and stronger. They need to be attached to the fire surround or the wall. They are intended to stop people and objects falling into the fire or on to the heater and are needed for all types of fires and heaters.)

When someone makes a suggestion, you could ask the group why they think this is important. [10 mins]

### Information snippets

In 2008, the most common rooms for a fatal fire to start were the living or dining rooms, not the kitchen.

Fatality rates in house fires in which smoke alarms raise the alarm are lower than those in which smoke alarms are either absent or do not raise the alarm (3 per 1,000 detected fires compared to 8 per 1,000 for undetected fires).

Then, ask them to identify what other steps they should take so that if a fire did start they would improve their chances of escaping safely. They should mention:

- Closing all internal doors – a normal room door can stop the spread of a fire for up to 30 minutes.
- Making sure that escape routes are free from clutter.
- Ensuring that door and window keys are accessible in case they are needed in a hurry.

(These are key elements of the family escape plan that is considered in Exercise 5 below.) [5 mins]

### Model bedtime check

Do a bedtime check – develop the habit

When you are asleep, it takes longer to notice the signs of a fire. If you don't have a working smoke alarm there will be nothing to wake you.

To help prevent fires occurring through the night, it's important to check your home for fire hazards before you go to bed. Make sure you:

- Close inside doors at night to stop a fire from spreading.
- Check the cooker is turned off.
- Turn off and unplug electrical appliances (unless they are meant to be left on, like the freezer).
- Put candles and cigarettes out properly.
- Turn heaters off and put up sparkguards and fireguards.
- Make sure exits are kept clear.

Source: [http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG\\_071793](http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG_071793)

## Exercise 5. A family fire escape plan

If you cannot run the whole of this exercise, then use as much of it as you can.

### Key messages

A family escape plan should cover the following issues:

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

### Background

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

There is scientific evidence that giving families advice about fire escape plans is effective in increasing the proportion of families that have such a plan, so this is an important exercise.

### Learning objective

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

### Time

About 60 mins.

### Equipment needed

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

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

### Method

Introduce the topic by explaining that house fires can cause death and serious injury to them and their families. If there has been an incident reported in the press recently, use this as an excuse for bringing up the subject. Remind them that even if no-one is injured, a fire can mean they have to move out of their home at least temporarily, with all the inconvenience this would mean. They may lose their possessions, especially treasured one such as the baby photos, their clothes, documents, etc. [5 mins]

Ask participants:

- How many have a smoke alarm?
- How many have one on each floor of their home?
- How many have checked it in the past seven days? [2 mins]

If anyone does not have a smoke alarm, does not have one on each floor of their home or does not know how to check their alarm(s), strongly recommend that they contact the local Fire and Rescue Service (FRS) for advice. Provide participants with the information they need. (When you next meet the participants, ask them whether they have been in touch with the FRS.) [2 mins]

## Scenario

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

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

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

Present the group with the scenario above.

Ask the participants what they would do if the smoke alarm in their home sounded in the middle of the night. If they do not have a fire escape plan, they are likely to say that they would grab the children, run out of the house and call 999 from a neighbour's house or on their mobile. This is not the wrong answer but the exercise is intended to explore the reality more deeply.

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

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

Ask them to describe potential problems that they could face that may stop them from escaping rapidly? Write on a flipchart the points that people mention. [5 mins]

They should mention at least the following:

- You would be fast asleep so completely disorientated and there is a piercing noise from the smoke alarm that is adding to the confusion.
- It's pitch dark.
- The children may be screaming.
- The staircase may have a safety gate to prevent the 18 month old falling.
- The front door needs a key to open it but this is in your handbag in the kitchen.
- Your partner, who is away for the night, left his bike in the hall.
- The stairs have the children's shoes on the bottom step.
- The hall and stairs cannot be used because of the fire.
- The bedroom windows are locked to prevent burglars getting in, so you need a key to open them.

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

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

- Know what the smoke alarm sounds like so it does not come as a complete surprise to them. They should know what sound it makes from testing it regularly.
- Have a torch next to the bed.
- Realise that the children may be hiding in their bedroom because they are frightened. Don't assume that if you cannot see them they have already escaped. Be prepared to look under the bed, in the wardrobe and anywhere else they could hide.
- Leave the front door key on a hook near the door, out of the reach of young children and not accessible to someone reaching through the letter box.
- Make sure that the stairs and the hall are clear of clutter that could slow you down.
- Think about a second escape route if the primary one – usually down the stairs and out of the front or back door – is not usable.
- Make sure that the key for the window locks is accessible to you, probably on a hook near the window, but not accessible to the children. [10 mins]

Variations you can consider during discussion could include:

- You live in an apartment in a tower block.
- Your elderly mother is staying with you. She is not too stable on her legs when she first gets out of bed and is not familiar with your home.
- It's the middle of the evening and you are out. A 14 year old babysitter is looking after the children. [10 mins]

### Escaping from a high-rise building

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

Most of your planning should be the same as homes at ground level, but there are some key differences:

- You won't be able to use the lift if there's a fire, so choose an escape route that takes this into account.
- Count how many doors there are on the route to get to the stairs when you can't use the lift, in case you can't find your way.
- Make sure stairways and fire escapes are kept clear of all obstructions and that fire doors are never locked.
- Regularly check that you can open the doors to stairways or escapes from both sides.

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

Source: [http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG\\_071793](http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG_071793)

Open the floor for discussion and questions.

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

Ask participants whether there are any issues that they think would be difficult to address (e.g. landlord refuses to supply a spare front door key; nowhere else to store the bike other than in the hall) – other participants may have suggestions. [As much time as you wish, say 10 mins]

## Model family fire escape plan

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

### Choosing an escape route

- The best escape route is the normal way in and out of your home.
- Think of any difficulties you may have getting out, e.g. at night you may need to have a torch to light your way.
- Choose a second escape route, in case the first one is blocked.
- Keep all exits clear of obstructions, like bicycles.
- If there are children, older or disabled people or pets, plan how you will get them out.

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

- The first priority is to keep people safe by getting them out of the building. If you can't escape, you'll need to find a room to take refuge in. This is especially important if you have difficulty moving around or going downstairs on your own.

### Make sure everyone knows where door and window keys are kept

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

### Explain the plan

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

### You could also:

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

### Practise the plan

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

Source: [http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG\\_071793](http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG_071793)

## Discussion points

What about common areas in blocks of flats? Do people leave rubbish or other flammable materials there? Who is responsible for ensuring that these spaces are clear? Could the rubbish left in these areas cause problems if you had to get out in a hurry? [10 mins]

## Follow up work

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

[2 mins]

## Sources of information

Quick guide to fire safety in the home: [http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG\\_10030963](http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG_10030963)

# Fire safety quiz sheet

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1. Fire is one of the biggest killers of children in the home

True      False

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2. You're more likely to be killed by a daytime fire than one that starts at night.

True      False

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3. Adults will be woken by the noise that a house fire makes so they don't need a smoke alarm

True      False

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4. The battery in a smoke alarm needs to be checked once a year

True      False

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5. In a house fire, you're more likely to die from the flames than from breathing in smoke.

True      False

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6. You should have a smoke alarm on every floor of your house, upstairs as well as downstairs, to wake you up if there is a fire.

True      False

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7. Cigarettes, matches and lighters are the biggest cause of house fires where people die.

True      False

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8. Smokers are more likely to own smoke alarms than non-smokers

True      False

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9. Some smoke alarms are 'toast-proof'. They recognise burning toast and don't go off when they 'smell' it burning.

True      False

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10. Children often sleep more deeply than grown-ups and find it harder to wake up quickly if a smoke alarm goes off.

True      False

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# Fire safety quiz answers

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



# All about smoke alarms

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- You are more than twice as likely to die in a fire at home if you haven't got a smoke alarm.
- A smoke alarm is the easiest way to alert you to the danger of fire, giving you precious time to escape.
- They are cheap, easy to get hold of and easy to fit.

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### How many smoke alarms do you need?

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

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

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### Installing your smoke alarm

Many Fire and Rescue Services (FRS) in England offer free home fire risk checks. This involves firefighters visiting your home and offering fire safety advice for you and your household. They may be able to install your smoke alarm for free.

It usually takes a few minutes to install your smoke alarm yourself - just follow the manufacturer's instructions that come with it. The best place for your smoke alarm is on the ceiling, near or at the middle of the room or hall. The alarm should be at least 30cm (one foot) away from a wall or light.

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

### Choosing a smoke alarm

There are two types of smoke alarm:

#### Ionisation alarms

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

#### Optical alarms

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

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

Whichever model you choose, you should make sure that it meets British Standard 5446, Part 1 (BS 5446-1) and ideally also carries the British Standard Kitemark. Your local FRS will help you decide which is best for your circumstances if you would like some advice.

## The different models available

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

### Standard-battery alarms

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

### Battery alarms with an emergency light

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

### Alarms with 10-year batteries

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

### Models with a 'hush' or 'silence' button

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

### Mains-powered alarms

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

### Interconnecting or linked alarms

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

### Mains-powered alarm with strobe light and vibrating pad

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

### Mains-powered alarm which plugs into a light socket

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

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## Maintaining your smoke alarm

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

Source: [http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG\\_071751](http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG_071751)

## Information sheet 2

# What should participants identify as causes of house fires ?

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All of the information here comes from the website "Fire safety in the home – a quick guide" [http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG\\_10030963](http://www.direct.gov.uk/en/HomeAndCommunity/InYourHome/FireSafety/DG_10030963)

Some or all of the following and possibly many more issues:

- Cigarettes, especially when not put out properly, e.g. when the smoker falls asleep in bed or a chair.
- Unattended chip pan, especially when it's too full of fat or oil. Cooking appliances used in some cultural groups may also produce similar hazards.
- Clothes drying on the fireguard. - Clothes horse too close to a fire. - Frayed electric wiring.
- Overloaded electric sockets (hot plugs or sockets, scorch marks, fuses that often blow, or flickering lights – they are all signs of loose wiring or other electrical problems).
- Candles and tea lights left unattended or with something too close above them.
- Young children having access to and playing with matches and lighters.
- Old electric blankets.
- Electric cables running under rugs or carpets – you can't see if they are worn.
- Coloured wires sticking out of plugs – this means they have not been wired properly.

### Cooking

- Filling the chip pan or other deep-fat fryer more than one-third full of fat or oil. Use a thermostat-controlled deep-fat fryer, which will make sure the fat or oil doesn't get too hot, or use oven chips.
- Leaving the pans on the heat if you're called away from the cooker, eg by a phone call.
- Wearing loose clothing that can catch fire easily.
- Cooking when you have been drinking alcohol or taken prescription drugs - you may get drowsy or lose concentration.
- Leaving the cooker on when you have finished cooking.
- Hanging tea-towels over the cooker and putting the oven gloves on top of a hot cooker.
- Not cleaning the oven, hob and grill – a built-up fat and bits of food can start a fire.
- Not emptying the crumb tray on the toaster and putting it too close to curtains.

### Electrical safety

- Hot plugs or sockets, scorch marks, fuses that often blow, or flickering lights.
- Badly wired plugs – any coloured wires sticking out could come loose and debris could also get into the plug.
- Overloaded sockets – plugging too many electrical appliances into one socket can lead to overheating.

## Smoking

- Not keeping lighters, matches and smoking materials out of the reach of children – you can also buy child-resistant lighters and containers for matches.
- Smoking in bed - it's very easy to fall asleep and allow your cigarette to set light to your bedclothes or furnishings.
- Smoking if you're drowsy - especially if you're sitting in a comfortable chair or if you've been drinking or taking prescription drugs; again, it's easy to fall asleep.
- Leaving a lit cigarette (or cigar or pipe) – they can easily overbalance and land on the carpet or other flammable material; and make sure your ashtray is heavy and can't tip easily.
- Not making totally sure that your butts (and any remains in your pipe bowl) aren't still smouldering when you've finished with them; wet them and empty your ashtray into a metal bin outside the house.

## Candles

Candles not:

- On a heat-resistant surface – be especially careful with night lights and tea lights, which get hot enough to melt plastic.
- In a proper candle holder, so they can fall over. - Out of the reach of children and pets.
- Out of draughts and away from curtains, other fabrics or furniture, which could catch fire.
- With at least 1 metre (3 feet) between the candle and any surface above it.
- With at least 10 centimetres (4 inches) between any two candles.
- Away from clothes and hair - if there's any chance you could forget a candle is there and lean across it, put it somewhere else.

Candles left unattended, especially when you go to bed.

A burning candle or oil burner in a child's bedroom.

Candles in, or by, a Christmas tree, plants, flowers or other foliage.

Candles near ribbons, greetings cards and other decorations.



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

For further information visit [www.nottingham.ac.uk/injuryresearch/](http://www.nottingham.ac.uk/injuryresearch/)

