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action on smoking and health

Secondhand Smoke: the impact on children

This Research Report examines the impact on children to exposure to secondhand smoke.

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Introduction

“We affirm that environmental tobacco smoke is a significant public health risk to young children and that parents need to know about the risks of smoking in the home around their young children. We agree to co-operate on education and public awareness efforts aimed at reducing children’s exposure to environmental tobacco smoke.”

Extract from the 1997 Declaration of the Environment Leaders of the Eight (G8)* on Children’s Environmental Health.

“In all actions concerning children, whether undertaken by public or private social welfare institutions, courts of law, administrative authorities or legislative bodies, the best interests of the child shall be a primary consideration.”

Article 3, UN Convention on the Rights of the Child.

Key Findings

- ☉ Children’s exposure to secondhand smoke in England has approximately halved since the late 1980s.
- ☉ Around one-third of smokers - 4 million people in the UK - continue to smoke near children.
- ☉ Smoking by parents is the principal determinant of children’s exposure to secondhand smoke.
- ☉ 17,000 children under the age of five are admitted to hospital every year with illnesses resulting from passive smoking.
- ☉ A poll for SmokeFree London found that only 3% of parents knew that cot death could result from passive smoking and only 1% identified glue ear as an outcome.
- ☉ Children have the right to be protected from passive smoking.
- ☉ Parents must recognise that passive smoking causes ill-health in children and that they have a responsibility not to inflict harm on their children.
- ☉ As knowledge of the impact of passive smoking increases, so demand for smoke-free environments rises. When smoke-free public places are the norm, there is a greater public acceptance of the need to restrict smoking in the home.
- ☉ Governments have a duty to inform the public of the hazards of breathing in other people’s tobacco smoke and adults should act on that advice to protect the health of children.
- ☉ Smoking bans in workplaces do not cause displacement smoking in the home

* Canada, France, Germany, Italy, Japan, Russian Federation, United Kingdom, United States of America.

What is passive smoking?

Passive smoking is the involuntary breathing of other people's tobacco smoke. Secondhand smoke (SHS) – also known as environmental tobacco smoke – is a combination of exhaled smoke and smoke from the burning tip of a tobacco product. It is a complex mixture of more than 4,000 chemical compounds, including at least 40 known carcinogens (cancer-causing agents). Tobacco smoke also contains carbon monoxide, a gas that inhibits the blood's ability to carry oxygen to body tissues including vital organs such as the brain and heart.

Extent of exposure to tobacco smoke

The World Health Organization estimates that nearly 700 million, or almost half of the world's children, are exposed to tobacco smoke by the 1.2 billion adults who smoke.

In the UK, surveys in the 1980s and 1990s found that about half of all children in lived in a house where at least one person smokes. Overall, exposure to secondhand smoke among children in England has approximately halved since the late 1980s.¹ This is partly due to the fall in the percentage of parents who smoke and may also reflect reductions in smoking in public places. However, children living in smoking households appear to have experienced little reduction in smoke exposure.

For young children, the major source of tobacco smoke is smoking by parents and other household members. Maternal smoking is usually the largest source of ETS because of the cumulative effect of exposure during pregnancy and close proximity to the mother during early life.

Secondhand smoke in the home is a major source of exposure because children spend most of their time at home and indoors. Unlike adults who can choose whether or not to be in a smoky environment, children have little choice. They are far less likely to be able to leave a smoke-filled room if they want to: babies cannot ask; some children may not feel confident about raising the subject; and others may not be allowed to leave even if they do ask.

Summary of health impacts

A review by the World Health Organization concluded that passive smoking is a cause of bronchitis, pneumonia, coughing and wheezing, asthma attacks, middle ear infection, cot death, and possibly cardiovascular and neurobiological impairment in children.² These findings were confirmed by the UK's Scientific Committee on Tobacco and Health (SCOTH) which reviewed the evidence in 2004 following its initial report on secondhand smoke in 1998.³

In its report, '*Smoking and the Young*, the Royal College of Physicians, estimates that 17,000 children under the age of five are admitted to hospital every year in the UK with illnesses resulting from passive smoking.⁴ A recent study in Hong Kong found that babies living with two or more smokers were 30 per cent more likely to need hospital treatment than those who lived in smoke-free homes.⁵

Asthma is the most common chronic disease of childhood. There is now compelling evidence that passive smoking is a risk factor for the induction of new cases of asthma as well as for increasing the severity of disease among children with established asthma. In the UK, it is estimated that between 1,600 and 5,400 new cases of asthma occur every year as a result of parental smoking.⁶ Another major study has shown that passive smoking has a negative effect on the respiratory systems of children of all ages.⁷

Infants of mothers who smoke are up to three times more likely to die from Sudden Infant Death Syndrome (cot death) compared to those whose mothers do not smoke.⁸ Parental smoking is also responsible for a 20%-40% increased risk of middle ear disease in children.

Other disorders have been found to be associated with passive smoking but require further research to confirm the findings. These include a study showing that children living with smokers are at an increased risk of childhood meningitis;⁹ the possibility of mental impairment among children exposed to even low levels of tobacco smoke;¹⁰ and a recent study linking foetal exposure to tobacco smoke to the development of autism.¹¹ Other research has shown that children exposed to environmental tobacco smoke have lower levels of serum vitamin C than those in non-smoking households¹² whilst another study found that passive smoking can reduce children's ability to detect a number of different odours.¹³

In addition to the immediate health impact, there is growing evidence of longer term adverse health consequences of exposure to tobacco smoke in childhood. A large European study found that passive smoking during pregnancy and early childhood was associated with more respiratory symptoms and poorer lung function in adulthood.¹⁴ A Norwegian study of nurses' aides found an association between those who were exposed to secondhand smoke as children and long-term sickness absence in adulthood.¹⁵

Awareness of the health risks of passive smoking

Amongst the general public there is a recognition that passive smoking is harmful and the majority of smokers report that they try not to smoke in the presence of children. The 2004 ONS Omnibus survey found that 67% of smokers said they do not smoke at all when they are in a room with children and 25% said they would smoke fewer cigarettes in the presence of a child.¹⁶ However, this means that approximately one third of smokers – about 4 million people in the UK – continue to smoke in the presence of children.

The same survey found a high level of knowledge about the effects of passive smoking. Ninety per cent of respondents thought that a child's risk of getting chest infections was increased by passive smoking and 85% thought that passive smoking would increase a child's risk of asthma. However, these figures may not give a true indication of the real level of knowledge about passive smoking. This is demonstrated by the fact that the survey also included a question about the risk of becoming diabetic from being exposed to passive smoking (which has not been medically proven). One respondent in five thought that the risk of becoming diabetic would be increased by passive smoking. The statisticians conclude, therefore, that the figures for the other conditions should be taken as reflecting perceptions rather than knowledge.

By contrast, a poll conducted for SmokeFree London revealed very low awareness of the impact of passive smoking on children. (See Appendix 1) When asked unprompted (i.e. without the interviewer offering a list of possible responses) to give examples of the health impact of passive smoking on children, 26% of parents interviewed identified asthma as a likely impact and 22% mentioned respiratory illness or lung infections as an outcome. However, two of the most common ailments linked to passive smoking – cot death and glue ear – were identified by only 3% and 1% of parents respectively.

Tobacco and the Convention on the Rights of the Child

The UN Convention on the Rights of the Child was adopted by the UN General Assembly on 20 November 1989 and came into force in September 1990. The Convention consists of legally binding international obligations. Article 3 of the Convention states that in every decision affecting a child, the best interests of the child shall be a primary consideration. Although the Convention does not include any explicit right to protection from the harm caused by tobacco, official interpretation of the articles of the Convention demonstrates that tobacco is a human rights issue. According to the World Health Organization:

“Because of the enormous potential harm to children from tobacco use and exposure, States have a duty to take all necessary legislative and regulatory measures to protect children from tobacco and ensure that the interest of children take precedence over those of the tobacco industry.”¹⁷

Strategies to reduce children's exposure to ETS

In view of the considerable health risks posed to children by passive smoking, public health policies are needed to protect this vulnerable population. The WHO's consultation document on ETS and Child Health identifies two principal approaches: legislation and education. Legislation includes all regulatory approaches to controlling where and when people can smoke. Education includes public information, debate and advocacy to encourage behaviour change. These two approaches are complementary.

Evidence from the USA¹⁸ and Australia¹⁹, where bans or restrictions on smoking in public places are already commonplace, suggests that having smoking bans, with widespread public support, is a prerequisite for the adoption of smoking restrictions in the home. In other words, once people have accepted that non-smoking should be the norm in public places, there is likely to be a greater willingness to voluntarily restrict smoking in the home. Legislation is inappropriate to reduce smoke exposure in the home but educational strategies to raise awareness about the risks to children from passive smoking are more likely to be effective in changing behaviour.

Some people have expressed concern that bans on smoking in the workplace and public places will lead to a rise in people smoking in the home, thus putting children at greater risk of ill-health through passive smoking. However, there is no good evidence that this is the case. In fact, smoking bans help people to stop smoking and are more likely to lead to a reduction of smoking in the home.^{20 21}

Interventions to restrict smoking in the home

Little is known about how widespread practices are to protect children from secondhand smoke in the home or what factors influence such practices. Until recently, most studies found that the majority of smokers had taken no action. However, there have been encouraging results from studies conducted in Australia, Scandinavia and North America.

In Australia, there has been a rapid rise in the number of adults taking steps to minimise children's exposure to tobacco smoke in the home. This has coincided with the widespread adoption of laws to ban smoking in public places and workplaces. For example, rates of discouraging visitors from smoking among all households with children rose from 25% in 1989 to 59% in 1997. In "all smoker" households, restrictions rose from 2% to 32% and in mixed smoker, non-smoker households they rose from 17% to 53%.

In Scandinavia, a study involving 5500 households in Denmark, Finland, Norway, Sweden and Iceland found that although more than half of children living in households containing at least one smoker were exposed to tobacco smoke in the home, there was a widespread willingness among parents to reduce or eliminate indoor smoking. Of the parents who responded to the survey, 75% reported having introduced some rules to limit SHS in the home.²²

In the USA and Canada, initiatives to encourage parents to ban or restrict smoking in the home have shown positive outcomes. One study found that among a group of mothers who received counselling about the dangers of passive smoking, their children's exposure to smoke in the home declined in the counselled group from 27.3 cigarettes per week at the start of the study to 4.47 at three months, and to 3.66 at 12 months.²³ Another study in Canada examined families' efforts to make their homes tobacco smoke-free and to minimise their infants' exposure. Six months after the birth of a child, 76% (176) of the women in the study reported that they did not allow people to smoke in their houses.²⁴

A US study targeting low-income families with young children also showed that parents responded by reducing children's exposure to tobacco smoke, following a period of training and follow-up counselling.²⁵

Educating parents about passive smoking

Parents who smoke should be aware that their children may become ill as a result of breathing in airborne tobacco smoke. Furthermore, children of smokers are more likely to take up the habit themselves because they copy the behaviour of adults and will perceive smoking as the norm if they grow up in a household where adults smoke.

Some healthcare agencies in North America have begun to address the issue of smoking in the home and are working with parents to minimise their children's exposure to environmental tobacco smoke. For example, the US National Safety Council has developed a model smoking policy for childcare agencies together with advice on reducing tobacco smoke in the home.²⁶

In addition, the NSC has produced guidance for parents on what practical steps they can take to minimise children's exposure to tobacco smoke (if they are unable or unwilling to stop smoking). These include:

- ☉ *Try to smoke only outside. If you must smoke inside limit smoking to a room where you can open windows to allow adequate ventilation.*
- ☉ *Never smoke in a child's bedroom and do not allow anyone else to smoke there.*
- ☉ *Do not smoke while you are washing, dressing or playing with your child.*
- ☉ *Never smoke in the car with the windows closed, and never smoke in the car when children are present.*

In the UK, the Department of Health launched a mass media campaign in 2003 to raise awareness about the hazards of passive smoking and to reduce the number of people smoking around children.

Many programmes have been developed to reduce smoking in the home by encouraging parents and carers to stop smoking. However, a review of such interventions found that only four out of 18 studies found a statistically significant effect, suggesting that such interventions are largely ineffective.²⁷

Conclusions

The health impacts of passive smoking on children are now well documented and pose a considerable health burden on this vulnerable group. As public knowledge about the health consequences increases, so support for smoking restrictions in public places also rises. In countries where smoking bans are now

commonplace, there is a greater willingness to accept the need for smoking restrictions to be extended to the home environment. Based on evidence from other countries, it is likely that the forthcoming ban on smoking in workplaces throughout the UK will lead to a reduction in smoking in the home. Since legislation is inappropriate to regulate smoking in the home, educational campaigns offer the best means of encouraging adult smokers to modify behaviour in order to protect children from ETS.

Appendix 1- Extract from SmokeFree London survey

A telephone survey was conducted among a representative sample of 2040 adults in England and Scotland on 5-7 and 12-4 January 2001 by the polling company ACCESS, the Omnibus division at BMRB International.

Twenty-two percent of the sample (442) answered ‘yes’ to the question: “Are you the parent of a child aged 10 years or under?” Parents were then asked the following question:

You may have heard of the phrase ‘passive smoking’. In what ways, if any, do you think passive smoking impacts on children?

Base: All parents with children aged 10 years or under

	Total	Male	Female
Asthma	26%	19%	32%
Respiratory illness/lung infections	22%	21%	22%
Bad chest/tight chest	12%	7%	16%
Sick/ill health	16%	16%	16%
Cancer	11%	13%	10%
General health	6%	8%	4%
Coughs/sore throat	5%	3%	6%
Bronchitis	5%	4%	6%
Cot death	3%	2%	4%
Inhaling smoke	3%	2%	4%
Addiction to nicotine	2%	3%	5%
Ear infections/glue ear	1%	-	1%
Nose problems/sinusitis	1%	1%	-
Poor physical fitness	1%	-	1%
Poor circulation	1%	1%	-
Bad example	1%	1%	1%
Death	1%	%	-

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For more information on issues raised contact: (020) 7739 5902
email: enquiries@ash.org.uk
visit: www.ash.org.uk

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