Protecting children from exposure to environmental tobacco smoke

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Children exposed to environmental tobacco smoke are at greater risk of a number of childhood ailments, especially in the pre-school years. Parents have little knowledge of the health risks of passive smoking, and strategies adopted by them to reduce ETS are often ineffective. Research has found that motivational counselling is effective in helping parents make changes (Emman et al, 2001; Greenberg et al, 1994). The aim of this project was to reduce the number of children exposed to environmental tobacco smoke in the home. The project was led by a member of the Hambleton and Richmondshire Smoke-Free Alliance.

Approximately 17,000 pre-school children are admitted to hospital each year as a result of passive smoking (ASH, 1999). The effects of inhaling this ‘environmental’ smoke include (ASH, 2002; Mannino et al, 2001):

- Bronchitis,
- Bronchiolitis,
- Pneumonia
- Coughing,
- Wheezing;
- Asthma.

The risk of children developing middle ear infections is estimated to be 20–40 per cent higher in smoking than in non-smoking households (World Health Organization, 1999). Infants are five times more likely to die from sudden infant death syndrome and are at increased risk of meningococcal disease (Kriz et al, 2000).

A poll by ASH (2001) has highlighted that parents had little knowledge of the health consequences for their children of their smoking. Only three per cent were aware of the increased risk of sudden infant death and only one per cent knew about the increased risk of glue ear (ASH, 2001). In addition, parents had misconceptions about the effectiveness of ventilating rooms. Research suggests a ventilation system with the airflow of a mini-tornado would be needed to remove environmental tobacco smoke, and opening a window is not effective (Repach and Lowrey, 1985).

A local community smoking and health campaign led by Patricia Hodgson (who is now Yorkshire and Humberside tobacco control coordinator) found that telling parents not to smoke in front of their children does not work, though motivational interviewing and counsel-

ling can be effective (Emman et al, 2001 and Greenberg et al, 1994). This suggests professionals will need to discuss passive smoking with parents at every opportunity, encouraging them to set achievable targets.

Asthma and chronic obstructive pulmonary disease are the most significant respiratory diseases in the Hambleton and Richmondshire PCT area, with nearly 6,000 patients recorded as having active asthma. Smoking is the greatest single cause of preventable death in the UK (Department of Health, 1998). Within Hambleton and Richmondshire the work of the Smoke Free Alliance is central in tackling the effects of passive smoking, attempting to reduce smoking in public places and promoting smoke-free environments (Swann and Marshall, 2003). The Passive Smoking Project is funded through the Smoke-Free Alliance.

**The project**

A project was launched with the aim of reducing the number of children exposed to environmental tobacco smoke in the home. It was led by a member of the Hambleton and Richmondshire Smoke-Free Alliance.

Target professionals for the project were practice nurses, midwives, health visitors, social workers, family workers, and the staff of a mini Sure Start project. An interest group made up of representatives of members of each of these professional groups provided information about current levels of activity relating to passive smoking and highlighted gaps in knowledge and skills for each group. An action plan for reducing the number of children exposed to environmental tobacco smoke in the home was agreed by the group.

The first task was for the project leader to research the topic fully. A training pack was then developed for use with health care professionals.

**Objectives**

The objectives of the project were to:

- Increase awareness among professionals and carers;
- Increase the capacity of professionals to address the issue of passive smoking with families;
- Provide information to professionals, parents, and carers on ways of minimising the risks of passive smoking for children and young people;
- Provide information to professionals and carers about smoking cessation services.

**Training for professionals**

Training in the effects of environmental tobacco smoke exposure was delivered to professionals at their regular meetings. The training session included a questionnaire
A short presentation followed, which covered the simple steps parents could take to minimise their children’s exposure to tobacco smoke. Everyone who attended the sessions was given an information pack and a selection of health promotion materials that could be used with their clients. Those who were unable to attend the training sessions were sent a resource pack and evaluation form. The availability of local smoking cessation services was also promoted.

A three-standard model of protection against environmental smoke that identifies gold, silver, and bronze levels of protection has been developed for use with parents (Box 2).

**Evaluation**

A total of eight sessions were delivered to nine groups. These were:
- Practice nurses (n=9);
- School nurses (n=11);
- Health visitors (n=21);
- Social workers (n=15);
- Community midwives (n=7);
- Senior community medical officers (n=2);
- Family centre workers (n=10);
- Sure Start family support (n=1);
- Wardens of homeless units (n=1).

This is a total of 77 health care professionals and support workers. The evaluation feedback forms from the sessions were analysed to assess the effectiveness of the training. There were 67 forms returned (a response rate of 87 per cent) with the following results:

- ‘The session improved my knowledge of passive smoking’ – 66 per cent strongly agreed and 34 per cent agreed;
- ‘The session improved my knowledge of the strategies parents could adopt to keep their children smoke-free’ – 58 per cent strongly agreed, 36 per cent agreed, and six per cent were unsure;
- ‘I feel more able to discuss this issue with parents’ – 42 per cent strongly agreed, 33 per cent agreed, seven per cent were unsure, and one disagreed;
- ‘The resource folder will be useful in practice’ – 42 per cent strongly agreed and 33 per cent agreed.

Many attendees gave examples of how they would use the information and some said they felt more motivated to do so after the session. Staff were also asked what other training they had attended, and whether they intended to seek further training.

Of the practice nurses, school nurses, health visitors, and midwives who attended the training, 18 were registered smoking cessation advisers and 12 had attended brief intervention training. Twelve reported that they intended to attend future training. This included a group-work skills course and motivational training, in addition to the smoking cessation advisers course and brief intervention training.

After the training, evaluation showed that professionals were more aware of the impact of passive smoking on children’s health, with 100 per cent indicating the session had improved their knowledge of passive smoking. In addition many professionals were now more willing to discuss this with families and they thought the information folder would be a useful resource.

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**REFERENCES**


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**BOX 1. PASSIVE SMOKING QUESTIONNAIRE**

1. Environmental tobacco smoke is made up of two types of smoke. One is mainstream smoke, which is breathed in and out by the smoker. What is the other type called?
2. Environmental tobacco smoke (ETS) contains approximately how many chemicals?
   a) 1,000   b) 2,000   c) 4,000
3. Tobacco smoke contains both particles and gases. Can you name two of each?
4. The effects of passive smoking can be long term and short term. Can you name two of the short-term effects?
5. The long-term effects of passive smoking on adults include lung cancer, respiratory disease, and heart disease. Children exposed to ETS have an increased risk of which of the following?
   - Asthma
   - Bronchitis
   - Bronchiolitis
   - Diabetes
   - Cot death
   - Middle ear infections
   - Anaemia
   - Meningitis
6. The number of children in the UK admitted to hospital with illness caused by passive smoking is estimated at:
   a) 5,000   b) 11,000   c) 17,000
7. What percentage of home fires caused by children’s play is the result of children playing with smoking materials?
   a) 20%   b) 50%   c) 80%
8. In a poll in London in 2001 the percentage of parents who were aware that passive smoking caused sudden infant death syndrome was:
   a) 3%   b) 10%   c) 40%
9. In the same poll the percentage identifying glue ear as a result of passive smoking was:
   a) 1%   b) 5%   c) 20%
10. Are ventilation systems effective at reducing the harmful effects of ETS?
11. Is smoking by an open window effective at protecting children from the effects of passive smoking?
12. Smoke in cars is more concentrated than smoke in homes. Is it:
   a) 5 times more concentrated?
   b) 17 times more concentrated?
   c) 23 times more concentrated?

(Box 1) presenting statistical data and relevant questions. The responses to this questionnaire provided an insight into the gaps in the health care professionals’ knowledge about environmental tobacco smoke exposure and its effects on children.

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Further developments

It was decided that it would be useful to incorporate some information on the effects of passive smoking in the child health record. This is a personally held record book containing useful information as well as a record of a child’s consultations with health care professionals. Information such as immunisations, weight, and surveillance checks are recorded in this book and there is a useful information section.

There is some information on the effects of environmental smoke on children in the, Prevention of Sudden Infant Death leaflet that is given to all new parents in this area. There is also information on the effects of smoking in the Birth to Five book (DoH, 2003) but this is not specific and information is found in different sections of the book.

The next stage of the project will involve extending the training to other professionals and exploring ways of further encouraging parents to protect their children from environmental smoke. The approach will be educational, ensuring a consistent message is given and supporting parents who wish to stop smoking. Those who say they intend to have a smoke-free home will be rewarded with certificats and stickers to display, telling visitors that the home is smoke free.

For this project to have more impact at client level, a coordinated approach across all the North Yorkshire PCTs would have been beneficial. Cooperation between two of the PCTs did occur but the two projects were working to slightly different remits.

The other project ran to a different time frame and started and finished before the Hambleton and Richmondshire project.

A further PCT started a project as the local one finished. Had the four North Yorkshire PCTs all been working on this issue at the same time the project leaders would have been able to share ideas and resources.

Discussion

The training reached 77 professionals but only nine of these were practice nurses. This is a group of nurses who play a key role in health promotion. The new general medical services contracts emphasise the importance of the role of the practice nurse in the management of chronic disease, and as a group they have frequent contact with young children and their parents and carers.

However, because many of them work part time and their group meetings are held only quarterly it is difficult to access them as a group. It has been decided that when further work is done it would be more effective to target primary health care teams at their place of work rather than as professional groups.

Midwives ask all pregnant women whether they are smokers, and health visitors gather information on smoking at the eight-week and nine-month review. Although this information is recorded in the personal child health record, the data gathered is not easy to retrieve at present. If this process could be simplified it would provide a useful means of measuring the effectiveness of the project in reducing the number of household smoking occurs.

Conclusion

The Passive Smoking Project attempted to update professionals about the effects of passive smoking and evaluate what those professionals gained from the training. As a result of this work professionals have improved their knowledge of the effects of environmental smoke and will be repeating the same consistent message.

Many health care professionals are now more confident about discussing the protection of children from the effects of exposure to environmental smoke and have a resource pack to assist in this task.

As a result of this project the smoking public within Hambleton and Richmondshire will become more aware of the effects of environmental tobacco smoke on the health of children and will be motivated to provide some level of protection.

Future work will include the distribution of new evidence and research via members of the interest group, and encouragement of parents to sign up for the smoke-free home standards.

Professionals now have the knowledge and skills to promote this campaign. Increased publicity is needed to motivate more parents and carers and to take the message to extended families and friends.