

A study suggests that many young people with asthma are unclear about the effect of air quality on their condition, and do not make the best use of information services.

Lesley Kendall, the project leader, is a Senior Research Officer with NFER, where she has worked for over 15 years. During this period she has been involved in a wide variety of projects covering many aspects of education and training, from pre-school to higher education.

Lesley Kendall

Something in the air — but what does it mean?

1 in 7 children of school age in the UK is now diagnosed as having asthma.

Asthma is the commonest long-term medical condition among children, and has increased in both incidence and prevalence over recent decades. One in seven children of school age in the UK is now diagnosed as having asthma.

Public perception links the increase in asthma with rising levels of air pollution, although a recent report commissioned by the Department of Health (Holgate, 1995) has concluded that other factors are much more important.

The study reported here concerned young people with asthma aged from 11 to 16, and had three main aims:

- to investigate how these young people obtain information on air quality, and how they respond to such information;
- to assess the role of parents and schools in providing this information, supporting pupils with asthma and helping them to make more informed choices;
- to consider how information could be better targeted for this group of young people.

Questionnaires were completed by over 1,800 pupils with asthma, in Years 7 to 11 in a sample of schools in England. In addition, over 80 pupils took part in group discussions to explore some of the issues in more depth. The representatives of 157 secondary schools and 55 special schools also completed questionnaires.

This report provides a brief review of some of the key findings from this study, which was funded by the Department of Health (Kendall, 1997).

Experience of asthma

Asthma was important to the pupils returning questionnaires, with over half experiencing symptoms of asthma at least once a week. Most felt that their families understood how asthma affected them, but only half were confident that they knew enough about asthma, how it affected them individually, and about how air quality can affect asthma.

Not all the young people carried their reliever inhaler at all times, either because it was inconvenient or because it made them feel 'different'. Information provided at times when young people are leaving home for the day may be more effective in reminding them to take their inhaler with them than would similar information provided in mid-evening.

Pupils were asked whether a number of factors made their asthma worse. The ten most important factors were:

- running around or doing sports;
- colds and illnesses;
- being in places where people smoke;
- hay fever or pollen;
- house dust mites;
- hot summer days with no wind;
- smoke from factories;
- cold weather;
- being near traffic;
- anxiety.

Clearly, many of these factors are related to indoor and outdoor air quality.

Learning about air quality

Pupils were also asked about the sources of information about asthma and air quality that they found most useful. These were:

- family doctors and local asthma clinics;
- information leaflets;
- family, relations and friends;
- hospital doctors and asthma clinics;
- radio and television programmes.

However, it was not clear to all pupils how they should respond to this information. Only 38% said they had agreed an 'asthma management plan' with their GP or nurse, while a further 27% were unsure.

Many pupils taking part in the group discussions commented that leaflets and similar information needed to be presented in a more lively and appealing format. While the majority found that doctors and nurses were helpful and supportive, some found it more difficult to talk to health professionals. This group may have felt that they were under pressure not to take up too much time, or did not wish to show that they did not understand what they were being told.

Pupils and air quality

Weather forecasts and pollen counts were generally felt to be useful sources of information about air quality locally or for specific days.

When faced with poor air quality, pupils used their preventer medication, made sure they had their reliever inhalers with them, and avoided exercise. However, most pupils reported that asthma never or only occasionally affected what they and their families did. In the group discussions, many pupils said they did not want to let their asthma control their lives, and that they wanted to be able to make the same choices about where to go and what to do as their peers.

A minority of pupils worried about having an asthma attack while at school. Many pupils felt that teachers did not understand enough about asthma generally, or about the links between asthma and air quality. One 12-year-old girl said:

I don't think the teachers know about it [asthma] unless they've got it... they don't know what you're going through.

Air quality affected the majority of the pupils, although 'air quality' as such would be an unfamiliar concept for many of these pupils. Over half gave at least one aspect of outdoor air

quality, such as smoke from factories, being near traffic, or pollen, as being among the three most important triggers of their asthma, while a further 40% were affected to a lesser extent. Indoor air quality, for example being near pets or being exposed to cigarette smoke, was, however, rather more important. Over 60% gave at least one aspect of indoor air quality as a very important trigger, while fewer than 10% were unaffected by indoor air quality.

Air quality: information and forecasts

Pupils were asked to suggest ways of improving information about asthma and air quality. Among those pupils who responded, most made comments that were concerned more with environmental improvement than with information needs. Among those pupils who did make suggestions, the following were seen to be important:

- information on air quality provided routinely as part of radio and television weather forecasts;
- longer-term weather forecasts;
- printed information being attractive, interesting and easy to read.

Comments from the pupils included the following:

The television is the main source of information, especially for youth, so it would be useful if on all weather forecasts (and some radio) air quality and pollen counts could be included.

In leaflets, lots more illustrations would make them much more attractive and interesting, which would attract younger readers and would help them to understand more about air quality and what they can do to improve it.

... make it more fun for asthmatics to learn about it like using cartoon characters and making colourful leaflets to read.

One girl said:

At the moment I know almost nothing about how air quality does affect me, and what I do know is from myself learning about how I feel in different air qualities and where I am in relation to the countryside, factories, the sea, etc.

Only 7% of the pupils knew about the free DoE helpline on air quality.

The following comments refer to three generally-available daily sources of information.

Weather forecasts often include air quality information and pollen counts, but pupils noted a number of ways in which they felt they could be improved. They often contain a great deal of information in a relatively short time period; a common view was that young people wanted consistency, to know that air quality information would be available every day, not just on some days. Against this must be balanced the loss of impact of information that is provided too often. Perhaps it is not always clear to young people whether lack of information about air quality can be taken as meaning that no problems are expected.

Research has shown that about 80% of younger teenagers are in households with access to at least one television with *Teletext/Ceefax* capability. About 40% of these pupils use the service at least once a week, yet only about 30% of the young people surveyed knew of air quality information available through these services, and about 20% found the information useful. There is clearly scope for ensuring that the availability of this information is more widely known, and consideration could be given to changing the format, or having additional information targeted at this age group.

Pupils' views on the usefulness of *telephone helplines* varied. There is clearly a difference between a helpline giving pre-recorded air quality data and one giving access to a trained staff available to answer questions and provide advice and information. Among the pupils surveyed, only 15% knew of the Asthma Helpline run by the National Asthma Campaign, and 93% were ignorant of the DoE air quality helpline, which is free. Making more pupils aware of these and other facilities could be an effective means of improving their understanding of asthma and air quality, although only half of the small proportion that knew about the DoE helpline found the information 'helpful'.

Schools and asthma

The schools responding to the survey took their responsibilities towards pupils with asthma seriously, ensuring that staff were aware of them, that pupils had easy access to inhalers, and that there was an effective procedure for dealing with emergencies.

Fewer than 30% of schools reported that any staff had had any recent training specifically

related to asthma, though a further 40% reported staff training in general first aid. A third of schools said that there were unmet training needs with regard to asthma. Lack of suitable training opportunities, difficulty in releasing staff to attend training, the cost of training and other training needs taking priority were each cited as barriers to further asthma-related training by at least 20 schools.

About a third of schools had, or were in the process of preparing, an asthma policy. Avoiding exposure to cigarette smoke is important for many people with asthma, and most schools had, or were preparing, a policy to eliminate or restrict smoking on school premises.

Although both asthma and air quality were addressed in the curriculum and in most schools, few schools specifically related these two topics. Typical comments included the following:

Air pollution is a topic which occurs in geography and science at various stages in the curriculum. Not directly related to asthma.

Some schools gave high priority to asthma and air quality issues, and viewed asthma as a topic of concern to all pupils:

Each year, we have a disability awareness week, during which asthma features prominently. We are also sensitive to the issue of air quality and in certain weather, including hot summer days, some pupils are instructed to stay indoors.

A Health Day was organised last year by the school nurse and the head of year for all Year 7 pupils. It dealt with specific issues, including asthma, and was presented by members of the local health authority. It is intended to repeat it this year.

Here are some other measures that a few schools took to support its asthma sufferers and to raise awareness of the problem:

- ensuring that pupils knew that trained staff were available, and how to contact them;
- raising general understanding through Asthma Awareness sessions, assemblies, PSHE, and poster displays;
- setting up an Asthma Club;
- raising staff understanding and awareness by training, inviting the school nurse to attend a staff meeting, or making specific reference to asthma in a staff handbook;
- providing information to parents, using the

Over 60% gave at least one aspect of indoor air quality as a very important trigger.

ASTHMA-RELATED INFORMATION SERVICES

■ Weather forecasts (air quality, but not every day)

■ Telephone helplines (air quality [DoE free], counselling)

■ Teletext/Ceefax (air quality)

- school prospectus or newsletters;
- discussions with local asthma clinics or health centres.

Special schools

The 55 special schools responding to the survey catered for pupils with a wide variety of special needs.

Over half the schools reported some recent staff training directly related to asthma: this training often involved school nurses. One in three schools felt that there were unmet training needs with regard to asthma, and a similar proportion were unsure. Other training needs took priority in 13 of these schools. While training staff about the relationship between asthma and air quality was not seen as a priority, many schools ensured that information was available to staff.

Fourteen of the 55 schools said that they had, or were preparing, an asthma policy.

Conclusions and implications

The pupils participating in this survey provided a body of information on how asthma affected them, and on the ways in which they obtained and used information about asthma and air quality. Their responses indicated that their understanding of asthma, of air quality, and of the links between these, could all be improved. It is clear that pupils wanted more information. At the same time, many pupils were not making use of the information that was already available. The provision of better information is likely to lead to an improvement in pupils' control of their asthma: this will in turn benefit their personal, social and academic development.

Four key points emerged.

- Information must be *carefully targeted*, both in content and format, taking into consideration pupils' ages and interests. The ways in which information is provided must also acknowledge that, while asthma is a common condition, young people do

not want it to limit their activities or make them appear different from their peers.

- Pupils can make informed judgments about how to respond to variations in air quality only if they have *a sufficient understanding of the links between asthma and air quality*. Schools could play an important part here, in making these links more explicitly in the curriculum, and perhaps also when disseminating information about asthma. Some schools may feel that this is not part of their role, or that they do not have the required expertise; however, co-ordination between health professionals, health educators and schools could ensure that young people are helped to understand these links.
- Many pupils find that *doctors and asthma clinics* are important and helpful sources of information about asthma and air quality. How can health professionals improve the ways in which they communicate with those young people who do not respond so positively? How can they help pupils to synthesise factual information and personal experience, so that individual pupils can learn how to respond appropriately to variations in air quality?
- Pupils need to be aware of the *wide variety of sources of information* that already exist, and ways of increasing levels of awareness of these sources should be investigated.

The views and concerns of the adolescents involved in this study deserve the consideration of schools, doctors, nurses, health educators and all those involved with helping and supporting young people with asthma.

References

- Holgate (1995). *Asthma and Outdoor Air Pollution* (the Holgate Report). DOH: Committee on the medical effects of air pollutants. London: HMSO.
- Kendall, L. (1997). *Something in the Air: Young people's perceptions of asthma and air quality*. Slough: NFER.

Pupils wanted more information, but many were not making use of the information that was already available.

The 83-page report on which this article is based, *Something in the Air*, costs £5.00 plus postage and is available from NFER, The Mere, Upton Park, Slough, Berks. SL1 2DQ (01753 574123, fax 691632).