PRACTICE OBSERVED

Practice Research

General practitioners' views on asthma in childhood

B E MARKS, V F HILLIER

Effective control of asthma in childhood largely depends on the quality of diagnosis and treatment in general practice, where there are unique opportunities for early recognition, appropriate treatment, and education of parents and where an unknown but certainly high proportion of cases is managed. Evidence of deficits in general practitioners' knowledge about either diagnosis or treatment would cause anxiety in a disorder with a disturbing mortality, high morbidity, and effective treatment.

The results of a study of children who had been referred to outpatient departments in Newcastle upon Tyne and London showed both underdiagnosis and undertreatment by general practitioners,[1] and it was suggested that among the reasons were preoccupation with infection as a cause of respiratory illness and, possibly more important, reluctance to use the term asthma. More recently, the results of a semistructured patient management problem about an evening home visit to an 8 year old boy with a fairly severe attack of asthma which was completed by over 300 general practitioners showed that of the 209 who chose initial treatment at home only 46 would give steroids by any route.[2] Sixteen and 14 doctors regarded cromoglycate and antibiotics respectively as appropriate treatment for the acute attack.

Appreciable deficits in treatment were shown in a study of the use of drugs in the treatment of a representative sample of wheezy 9 year old children in the London Borough of Croydon.[3] One third of the children who had disturbed nights and restricted activity had not received treatment for asthma during the previous month. Only 14% had used cromoglycate or inhaled steroids to prevent their asthma. The authors commented that use of the word asthma by the general practitioner is a major factor in determining anti-asthmatic treatment.

The results of a recent survey in Tyneside of 179 children aged 7 with a history of wheezing showed that the parents of only 21 had been informed that the problem was due to asthma and that these parents were almost invariably relieved to be told the diagnosis and to be given guidance about future management.[4] The authors concluded that the reluctance of many practitioners to label children as asthmatic was without foundation. Willingness to make the diagnosis made it much more likely that treatment with bronchodilators would be prescribed.

Thus it is interesting to note the differences recently reported between the opinions of paediatricians and general physicians on the management of children with asthma and on the nature of the advice given to parents and children.[5] There was much difference of opinion between the two groups of specialists on over half the topics in a postal questionnaire, and the authors are concerned about the different advice that specialists may give to general practitioners and to patients.

In this study we investigated the difference between the information that general practitioners had about asthma in childhood and that of several experts by comparing their views on a series of statements about its prevalence, diagnosis, and treatment.

University of Manchester
B E MARKS, FRCGP, senior lecturer, department of general practice
V F HILLIER, PHD, senior lecturer, department of computation methods in medical science

Correspondence to: Dr B E Marks, Department of General Practice, Rusholme Health Centre, Walmer Street, Manchester M14 5NP.

Methods

A series of 10 statements about several aspects of asthma in childhood was sent by post to 107 general practitioners who had consecutively referred patients to a paediatric outpatient department that mainly treated asthmatic children. This group of doctors was chosen in the belief that they would give a high response rate to the inquiry and that as referers of children with respiratory problems their views would be of particular interest. They were asked to indicate their opinions about each statement on a seven point scale, ranging from strong agreement to strong disagreement. In addition,

doctors received a questionnaire inquiring about their age, place of qualification, how long they had been in general practice, characteristics of the practice, and whether they taught undergraduates in their practices or were trainers.

Seven consultants with a special interest in childhood asthma were asked to express their views about the 10 statements using the same rating scales, and their opinions as experts were used as a standard with which the views of the general practitioners could be compared.

TABLE I—*Age of general practitioner respondents*

	Age (years)				
	30	30-39	40-49	50-59	>60
England 1977 (%)	7	25	27	26	15
Respondents (%)	5·3	19·7	25	28·9	20·8

TABLE II—*Practice characteristics and place of qualification of general practitioner respondents*

Partnership		Premises			Place of qualification	
Single handed (%)	In partnership (%)	Health centre (%)	Purpose built (%)	Other (converted) (%)	Britain (%)	Overseas (%)
Respondents 1981						
16	84	33	13	54	83	17
Greater Manchester survey 1981						
19	81	18	21	61	72	28

TABLE III—*Opinions of respondents and consultants*

	Strongly agree 1	2	3	4	5	6	7 Strongly disagree	Mean	Median
Statement 1: Recurrent bronchitis is a highly prevalent condition in young children									
Respondents n = 76	5	8	7	15	16	13	12	4·526	5
Consultants n = 7	0	0	0	1	0	2	4	6·286	7
Statement 2: Antibiotics are not logical treatment for attacks of asthma in childhood									
Respondents n = 77	24	22	7	5	7	7	5	2·870	2
Consultants n = 7	6	0	0	0	1	0	0	1·571	1
Statement 3: Asthma is a common condition in children under the age of 4									
Respondents n = 77	8	16	12	15	13	8	5	3·688	4
Consultants n = 7	4	2	1	0	0	0	0	1·571	1
Statement 4: Inhaled steroids should be used with caution in children with asthma because of the possibility of side effects									
Respondents n = 77	15	13	11	7	9	13	9	3·740	3
Consultants n = 7	0	1	0	2	0	1	3	5·286	6
Statement 5: Children who frequently wake in the early morning with a chesty cough usually have a persistent upper respiratory tract infection									
Respondents n = 76	8	11	10	12	5	19	11	4·263	4
Consultants n = 7	0	0	0	0	1	1	5	6·571	7
Statement 6: It is possible for many 4 year olds to use an Intal spinhaler effectively									
Respondents n = 77	28	17	12	7	5	5	3	2·623	2
Consultants n = 7	5	2	0	0	0	0	0	1·286	1
Statement 7: Coughing and wheezing after physical exercise is not of great diagnostic importance									
Respondents n = 77	1	5	6	7	8	23	27	5·506	6
Consultants n = 7	0	0	0	0	0	0	7	7·0	7
Statement 8: Deformity of the chest wall is more often the consequence of inadequately treated asthma than poor posture									
Respondents n = 77	9	20	9	14	8	9	8	3·662	4
Consultants n = 7	4	1	1	1	0	0	0	1·857	1
Statement 9: Episodes of wheezing in children who are not systemically ill are best first treated with bronchodilators alone									
Respondents n = 77	25	25	11	4	1	9	2	2·558	2
Consultants n = 7	6	1	0	0	0	0	0	1·143	1
Statement 10: Asthmatic children get a lot of chest infections									
Respondents n = 77	8	16	12	17	8	13	3	3·675	4
Consultants n = 7	0	0	0	1	1	4	1	5·714	6

Results

RESPONDENTS

Seventy seven replies were received, a response rate of 71%. Non-responders were not followed up. The ages of the respondents were compared with those of a 1977 national sample of general practitioners in England[4] (table I). Respondents were slightly older than the doctors in the 1977 national sample. Thirteen per cent had been in practice for less than five years, 28% for five to 14 years, 26% for 15 to 24 years, and 33% for over 25 years. The practice characteristics and place of qualification of the respondents were compared with the findings of the 1981 survey of general practitioners in Greater Manchester to discover whether they were a representative group (table II).

Although the proportion of single handed general practitioners was similar, the group of respondents was slightly weighted in favour of graduates of British universities and heavily so in respect of health centre practice. The last reflects the amount of rebuilding taking place after much decaying urban property was demolished in the area from which the hospital attracts a high proportion of its referrals.

Eighteen (24%) of the respondents taught medical students in their practices and 27 (36%) were trainers, and there was some overlap. The proportion of respondents who stated that they were trainers was much higher than the 14% for general practitioner trainers in the north west region.

Table III gives the 10 statements on which the general practitioners and consultants were invited to comment and their opinions about each statement, followed by statistical comparison of their replies with the Mann-Whitney U test. For statements 1 and 5 there were 76 respondents and not 77 (one reply was omitted in each), and one doctor failed to answer the question about teaching and training.

Only in statement 4, which was concerned with the adverse effects of treatment with inhaled steroids, did the difference between the ratings of the two groups fail to achieve significance. For the remaining nine statements the differences were highly significant ($p < 0{\cdot}01$) in seven (statements 1, 2, 3, 5, 7, 9, 10) and significant ($p < 0{\cdot}05$) in two (statements 6 and 8).

Except for statement 4 it was possible to identify the doctors who disagreed with the consultants on each statement separately. Ratings 1,

2, and 3 showed some agreement and ratings 5, 6, and 7 some disagreement with each proposition. For example, the consultants in their responses to statement 3 agreed with the proposition (ratings 1, 2, and 3), whereas the 26 general practitioners who answered in the 5-7 range were categorised as expressing disagreement with it and were therefore in disagreement with the consultants. Similarly, in statement 1 the 20 doctors who answered in the range 1-3 were counted as disagreeing with the consultants.

The personal and practice characteristics of respondents were compared with their disagreements with the opinions of the consultants. Age, time spent in general practice, place of qualification, and whether they practised single handed, in partnership, or in a health centre or other premises did not influence the number of disagreements. Two groups of general practitioners, undergraduate teachers and trainers, had a significantly smaller number of disagreements with the consultants than non-teachers and non-trainers respectively (Mann-Whitney U test).

The median number of disagreements with the views of the consultants for respondents who taught medical students was one, whereas general practitioners who were not teachers had a significantly higher ($p < 0{\cdot}05$) median of two. The means were 1·833 and 2·707 respectively. Similarly, the median for trainers was one (mean 1·852), while for those who were not trainers it was three (mean 2·857). These differences are highly significant ($p < 0{\cdot}01$). Table IV gives the frequency of disagreement with the consultants for all respondents, and for undergraduate teachers and "non-teachers" and trainers and "non-trainers" respectively.

TABLE IV—*Comparison of disagreement between general practitioner respondents and consultants*

No of disagreements with consultants	Frequency of disagreement				
	All respondents	Teachers	Non-teachers	Trainers	Non-trainers
0	7	3	4	6	1
1	18	7	11	9	9
2	18	3	15	4	14
3	11	3	8	4	7
4	13	1	11	2	10
5	6	0	6	0	6
6	3	0	3	1	2
7	1	1	0	1	0
Total	77	18	58	27	49

Discussion

The results of this study support the findings of earlier surveys that a proportion of general practitioners has an inadequate understanding of the problems of children with asthma. Caution, however, should be exercised in interpreting the results because the general practitioners who were asked to take part in the study had all referred children to the outpatient clinic, while the views of doctors who had not made referrals remain unknown.

The variation in the respondents' opinions about early morning cough and exercise induced wheezing, symptoms about whose importance the consultants were unanimous, suggests that there is insufficient knowledge about the more undramatic and less stereotyped ways in which asthma frequently presents in childhood. Excessive emphasis on infection as the principal cause of recurrent respiratory illness in childhood is shown by the views of a sizable minority of respondents on the statements about the prevalence of recurrent bronchitis in young children, the frequency of chest infections in asthmatic children, the treatment of asthma with antibiotics, and the aetiology of early morning cough, and it seems likely that this attitude is an important factor in the failure to recognise asthma in childhood and treat it adequately.

The fact that its high prevalence was not acknowledged by the considerable minority of respondents who believed that recurrent bronchitis was common in young children though asthma was not underlines the difficulties already discussed about early diagnosis. Other authors have reported that the reluctance of general practitioners to use the term asthma reduces the likelihood of appropriate treatment being given, a view supported by the opinions of many respondents about treatment with antibiotics, cromoglycate, and bronchodilators. There may be many explanations for this, among which is the operation of a denial mechanism founded on a lack of understanding of the effectiveness of appropriate treatment and of the need of parents to be given a rational explanation for their children's recurrent respiratory symptoms.

The results of this study suggest that a proportion of general practitioners lack awareness of the less classic ways in which asthma may present in childhood, are unfamiliar with current ideas about both prophylactic and symptomatic treatment, and are preoccupied with infection as the principal cause of recurrent respiratory problems in childhood. That teachers and trainers differed least in their views from the consultants suggests that the difficulties concerning the management of childhood asthma in general practice may perhaps be resolved in a relatively short time as students are exposed to the influence of teaching practices and the effects of vocational training are felt.

Meanwhile, children with asthma experience unnecessary ill health with restricted activity, disturbed nights, time off school, inappropriate medication, and repeated hospital admissions, much of which is preventable. Every opportunity should be taken by educators concerned with training for general practice and with continuing education to communicate to their audiences the essential information about asthma in childhood, without which effective treatment is not possible.

We thank the doctors who took part in the study and Professor David Metcalfe for advice and support.

Conclusions

Seventy seven general practitioners and seven consultants with a special interest in respiratory paediatrics rated their attitudes to statements about asthma in childhood on a seven point scale. Comparison of the ratings of the two groups showed statistically significant differences in nearly all instances. There seemed to be no correlation between the ages and practice characteristics of the general practitioner respondents and their views, but general practitioners who were undergraduate teachers or trainers showed the least disagreement with the consultants. The findings suggest that a proportion of general practitioners is not aware of the less classic ways in which childhood asthma may present and is unfamiliar with current thought about treatment.

We thank the doctors who took part in the study and Professor David Metcalfe for advice and support.

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First Five Years in Practice: the 1920s

After the first world war

S WAND

There have been so many radical changes in medical training, organisation, economics, and practice since the first world war that for a proper appreciation of conditions then existing it is necessary to go into some detail. Most hospitals, including the teaching hospitals, were voluntary—that is, were dependent on voluntary public subscription; others were under the aegis of boards of guardians. In voluntary hospitals consultants were unpaid or received a small honorarium. For income they depended on private practice carried on outside the hospital. Resident medical staff received a salary; juniors in a teaching hospital received about £50 a year plus accommodation, food, and laundry. In non-teaching hospitals salaries were higher. Board of guardians hospitals, in which the staff were full time and paid, were developments of the workhouse infirmaries. While the infirmaries continued to be used for the chronic sick poor, the hospitals were advancing rapidly in the quality of clinical care.

General practice was usually carried on at the doctor's residence. Many doctors also had branch surgeries. Income in industrial areas was derived in part from capitation fees for National Health Insurance patients and in part from private practice. National Health Insurance covered general practitioner care including medicines (obtained from a chemist on prescription) for the lowest paid workers only. Their dependants as well as consultant services were excluded. There was no provision for pension for the doctors.

To help ease the burden of payment for medical care at the time of illness arrangements for the collection of weekly payments were made in some areas. These "clubs" were organised by the doctors or an outside agency, particularly in the colliery areas, which paid the doctor a capitation fee, the amount of which often led to dispute. For those too poor to pay there was a Poor Law medical service—understandably not very popular. For private patients doctors did their own dispensing—usually mixtures made from preprepared stock bottles. Successful practices employed dispensers. Others could not afford to do so. At the doctor's house receptionist duties were usually carried out by the doctor's wife or the maid and at the branch surgery by the caretaker.

In a practice in an industrial area a full time receptionist or practice nurse was exceptional. Where the doctor or his wife did not conduct the business side of the practice, a clerical assistant was employed. This was a part of general practice for which the newcomer was usually totally unprepared. Apart from a district nursing service, supporting services were virtually non-existent. The only social worker was the hospital almoner. There were no health visitors, no district nursing attachment to practices, no publicly organised ambulance service, no meals on wheels or laundry service, and no health centres. Child welfare clinics were soon to appear. At first there was little cooperation between them and the family doctor.

Apart from some local variations, such as small general or cottage hospitals with a general practitioner staff, this in general terms was the setting in which the incoming general practitioner found himself at that time.

Birmingham
S WAND, FRCGP, general practitioner

Correspondence to: 55 Kenilworth Court, Hagley Road, Birmingham B16 9NU.

Setting up in practice

Entry into general practice was by purchase into an existing practice, sometimes after a preliminary assistantship, or by "putting up a plate." The doctor who put up a plate in an established area already fully doctored was understandably not always well received by his colleagues and the survival rate was low. After the first world war, however, there were some new developments to compensate for the absence of building during the war and for slum clearance. These provided many recognised opportunities.

Purchase and sale of the goodwill of practices continued until 1948 when, under the National Health Service Act, provision was made for the ultimate payment of an agreed sum to compensate for the abolition of the right to sell a National Health Service practice. Depending on the type of practice and the likelihood of maintaining the income, the purchase price was around one and a half times the average *gross* earnings.

The incoming doctor had to buy or rent premises, and furnish and equip them, so that quite a lot of money had to be found. Money was not easy to save on the salaries paid and there could be problems in obtaining a loan. The doctor going into single handed practice (and most practices were then single handed) who could find no collateral or guarantees was not regarded as a good risk, and there was no General Practice Finance Corporation. I emphasise the financial side because remuneration of the average general practitioner was low and was the cause of much anxiety (as well as a spur) in the years during which the doctor was becoming established in practice.

I started medicine in 1915, having, like so many of my contemporaries, taken classics and virtually no science at school. The first MB (the full course lasted under five years) gave us nine months to reach the necessary standard in chemistry, biochemistry, physics, biology, and zoology. Having reached military age during my second MB course, I joined the army (in a non-medical capacity) and with other medical students was compulsorily repatriated from France in mid-1918 because of the casualties among doctors. The shortage was such that fourth year students were engaged in fully qualified work as hospital residents, and when visiting a friend in such a post I was pressed into giving an anaesthetic (chloroform and ether) to a case of acute intestinal obstruction. I had never seen an anaesthetic given and knew nothing of anaesthesia. The patient made a good recovery. In due course as a student I was able to take similar