

PRACTICE OBSERVED

Papers That Have Changed My Practice

Contributions to this series are welcome for consideration

Primary prevention of coronary heart disease

CHANDRA PATEL

Continuing education is an integral part of the practice of medicine. Thus the way we practice continuously changes. Usually these changes are so subtle that it is often difficult to remember what was responsible for the changes and at which point a particular change occurred. Some readings, however, make such an impact that they may be easily recalled. For example, I seriously started thinking that the role of the general practitioner was to prevent coronary heart disease when I read about some community studies¹ showing that about two thirds of coronary deaths occur outside hospital, often without the presence of a medical certificate, and in about half of these patients there is no previous history of angina or myocardial infarction. Even when the patient survives the first attack the subsequent mortality remains high.² It has also been shown that crisis orientated interventions such as coronary care units,³ coronary ambulances,⁴ and an aortic aneurysm bypass surgery⁵ are unlikely to save more than a few lives. It has been projected that if nothing is done to prevent coronary heart disease one man in six can be expected to have an infarction before retirement age, and half of these will be fatal.⁶ It is quite apparent that prevention alone can reduce the great burden of mortality from heart disease in our communities and the general practitioner is uniquely placed to carry out that task. Although the cause of coronary heart disease is not known, several risk factors have been identified and are widely known. While research continues so that we may understand why some people with risk factors do not get the disease and why some people without factors do, it is clear that we should try to prevent it. In our suburban group practice appropriate notices were put up in the hope of detecting high risk patients.

"Is your blood pressure normal? You can only be sure by having it checked about every two years."
"Smoking can cause lung cancer, chronic bronchitis, and heart disease. Our advice is to stop smoking. Ask your doctor or receptionist about help available."
"How often have you said: 'I will go on a diet tomorrow'?"
"Don't say it again; join your local slimming club."
Posters were displayed illustrating unhealthy diets containing excessive animal fats and healthy diets containing more fruits, vegetables, and bran.
I became more and more aware of patients with hidden hypertension and took every opportunity to measure blood pressure and control hypertension. I advised smokers to stop, to take to lose weight, and encouraged the physically inactive to take exercise. Before starting treatment for hypertension patients were fully investigated, although routine intravenous urograms was stopped after the publication of the paper showing that it did not change the management in most patients.⁷ Those with hypercholesterolaemia were given dietary advice, and those whose cholesterol remained high despite dietary advice were prescribed clofibrate. Diabetic patients were actively sought out and their hyperglycaemia energetically controlled. Over the years the need for prevention remains strong, but the means to do it have not become clearer, despite many publications. Even when the indications for certain treatment are clear, very little research has been done to overcome the practical difficulties in implementing such treatments.

Mild hypertension

The results of several therapeutic trials of mild hypertension have been published without producing irrefutable evidence of benefit. The earlier studies from Norway⁸ and the United States⁹ did not show appreciable differences. The Australian trial of mild hypertension¹⁰ showed appreciable reduction

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High cholesterol

The problem of identifying patients with a raised cholesterol level and treating those who are already known to be hyperlipidaemic, as the evidence has remained conflicting throughout.¹¹⁻¹⁴ I have not actively screened for hypercholesterolaemia, but hypertensive patients still have their blood tested for cholesterol as part of the basic investigation and those whose concentrations are raised are given dietary advice.
The publication of the World Health Organization's co-ordinated study of clofibrate¹⁵ not only stopped me prescribing clofibrate before the Department of Health and Social Security directed this, but also helped me to decide not to practise large scale drug interventions in apparently healthy people unless there is irrefutable evidence of benefit. I was helped in this decision by Rose's paper "Strategy for prevention,"¹⁶ which showed the hazards of mass medication of people with mild to moderate levels of risk factors. Although most deaths from coronary heart disease occur from this population, he pointed out, citing the clofibrate study, that small harm from drugs could easily outweigh the small benefit and in view of the numbers treated it could be of major importance. We would never have found this out but for this large scale study which is not possible for every single drug. This was the best paper I have read in the past 10 years. So far as preventing heart disease is concerned, looking at the advances made¹⁷⁻²¹ I am less optimistic, though not less enthusiastic, than I was 10 years ago.

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Smoking

I also found that telling patients to stop smoking is easy, but really to help them to stop smoking and remain stopped is more difficult. Helping people to change their life style or behaviour is also too time consuming for busy general practitioners. I, therefore, approached a local health education department for help. I was pleasantly surprised to find that the department was only too keen to give such a service if we could help them set up a programme. I and Miss Patricia Bailey (health educator) jointly ran two five week courses, in 1975, during which we gave various talks often illustrated by personal experience, x ray films, and specimens of lungs of people who were unfortunate enough to get cancer, chronic bronchitis, or coronary heart disease. We also showed them various health education films aimed at persuading smokers to stop. We gave them emotional support and taught them breathing exercises to replace inhalation of smoke and relaxation and behaviour modification to help them to cope with the stress of withdrawal symptoms. Miss Bailey, along with other health educators, has continued this service since, and about 500 smokers have gone through the programme. Smokers can either approach the department directly or be referred by their own general practitioners. A two year follow up showed that 48% had stopped and a substantial number of other smokers had reduced smoking, which is not altogether unimpressive.

Obesity, physical inactivity, and diabetes

Helping the obese to lose weight has been most disappointing. My partner, Dr Craddock, has helped a number of obese patients, and all of us in the group spend a lot of time encouraging obese people to change their eating habits, but in the long term most seem to regain the weight. My feeling is that until there is more direct evidence of its benefit in reducing coronary heart disease it is better to use the time and energy elsewhere. This also applies to any exercise programme. It has been shown that people who follow leisure time vigorous exercise seem to get less heart disease than those who are inactive,²² but it has not been shown in a controlled trial that advising people to take up exercise reduces heart disease. It may be that those who follow vigorous exercise in their leisure time are generally more health conscious, smoke less, have an appropriate diet, have fulfilling jobs, and belong to the correct social class.²³ On the whole, my philosophy is to advise treatment, provided it does not cost too much in terms of both money and side effects and is likely to do some good. But the observations that fail to convince me of the unequivocal benefits of exercise in North Karelia County,²⁴ East Finland has the highest incidence of coronary heart disease in the world, yet most men are lumberjacks performing the most strenuous exercise and, despite eating some 4000 calories (16.72 MJ) a day, are lean and tall. American Automobile Association statistics reported by Burch show that 8300 joggers were killed and over 100 000 injured by automobile accidents in 1977.²⁵ Reports of sudden death in "sportsmen,"²⁶ marathon runners,²⁷ and others after moderate to severe physical activity²⁸ appear often. The state of affairs is similarly disappointing so far as energetic control of hyperglycaemia in diabetic patients is concerned. At least one large scale trial has shown that strict control with phenformin and tolbutamide may actually increase the number of ischaemic cardiac events,²⁹ not to speak of increased incidence of retinopathy in patients treated with continuous infusion of insulin for better control.³⁰ Despite such evidence, it is amazing that one constantly reads about the need for stricter control of hyperglycaemia to reduce complications. My advice is to reduce calories, animal fats, and refined sugar, increase fibre, and include a good measure of complex carbohydrates. Only if the dietary measures fail to control hyperglycaemia to a reasonable level I prescribe hypoglycaemic agents.

strokes and sudden death, but no reduction in non-fatal myocardial infarction. The Hypertension Detection and Follow up Program¹¹ of "stepped care" versus "regular care" did show benefit, but the study has been interpreted in various ways. In the "stepped care" group the patients were intensively treated and carefully followed up in specially set up clinics, while the "regular care" group patients were treated by their own general practitioners. Since this was not a placebo controlled trial and mortality from all causes was reduced in the "stepped care" group the trial was criticised as not being a comparison of drug treatment with placebo but of a "good care" versus "poor care."¹² While awaiting the results of the Medical Research Council's current trial of mild hypertension I read when blood pressure is consistently above 105 mm Hg diastolic or 180 mm Hg diastolic.
In some patients, however, hypertension is difficult to control despite many changes in medication. The objective of treatment is good hypertension is to reduce to or near normal level, but to incapacitate symptoms patients with the side effects of treatment is not good medicine. Neither is ignoring the psychological and social well being of the patient. I remember a patient whose blood pressure would not go down below 120 mm Hg diastolic. I felt challenged and continuously increased the dose of neuronal blockers. Her attendance was regular, so the question of non-compliance never entered my mind. She became severely depressed and had to be admitted to a psychiatric ward for long term care. She sent a message: "I tell you that I did not always take my medication." Maybe she was trying to get rid of her guilt, but I could not stop thinking that my treatment might have been responsible for her condition. In other cases of impotence, muscle cramps, nightmares, fatigue, and other symptoms I was in no doubt. If we are to treat more and more patients with mild hypertension it would entail putting a substantial proportion of the population on antihypertensive drugs, which is also an expensive business. This led me to think: "Are there no other effective, safer, and cheaper ways to control blood pressure?"
Over several years I have developed a programme of health education, relaxation helped by biofeedback, and stress management that has been effective in reducing high blood pressure in several studies, either on its own or in conjunction with smaller and more tolerable doses of antihypertensive drugs. These studies have been published elsewhere.¹³ Antihypertensive drugs are still the mainstay of treatment, although the type of drugs used has changed over the years. Beta-blockers are more often used as a first line drug rather than diuretics in the hope that they are more cardioprotective.¹⁴ Potassium supplement is not routinely given with diuretics¹⁵ unless the patient has hypokalaemia or is on digoxin treatment.¹⁶ Patients who are hypertensive are not prescribed oral contraceptives, and those who develop hypertension while taking the pill have it immediately withdrawn.¹⁷ Women over 35 who smoke are advised to stop smoking and if they fail to do so other methods of contraception are advised. Oral contraceptives are preferred, and the patients are advised to interrupt pill use every three to four years.¹⁸
So far as salt and hypertension are concerned, for many years I followed the advice of Sir George Pickering. Why create a nuisance to the patient, his relatives, and friends by giving a nuisance salt free or very low salt diet?¹⁹ Further publications²⁰⁻²² on the subject changed my mind and I started advising hypertensive patients to avoid salt laden foods like bacon, ham, other processed meats, smoked fish, pickles, and sauces and then gradually cut down on the salt added to food, both on the table and in cooking. Experience suggested that gradual cutting down on the consumption of salt was more tolerable and, like sugar, once people got used to eating low salt food they found food laden with salt highly aversive. At least two studies, however, have failed to show benefit in reducing sodium in mild hypertension.²³ "What should the general practitioner do? Possible benefit of high potassium content in the diet was also considered when giving dietary advice"²⁴ to appropriate patients.

Practice Research

Can the clinical course of acute otitis media be modified by systemic decongestant or antihistamine treatment?

D J G BAIN

There is a high incidence of acute otitis media in childhood, and treatment presents problems for the general practitioner. The attack rate has been estimated at between 10% and 15% in children under age 10, and the condition is most prevalent in the preschool and early school years.¹ There is a strong tendency for otitis media to recur and for presumed middle ear effusion to develop during the two months after an acute episode.²

The treatment of acute otitis media is directed mainly at eradicating bacterial infection, which probably occurs secondarily to viral infection of the nasal passages, but is generally agreed that measures that promote patency of the eustachian tube are a valuable aspect of management.

Oral decongestants and antihistamines, alone or in combination, are second only to antibiotics in the drug treatments most frequently prescribed by general practitioners for acute otitis media. The results of a recent study of the prescribing habits of 25 general practitioners showed that of 274 children with acute otitis media 49% had been prescribed decongestant-antihistamine mixtures.³ No group of drugs has enjoyed such widespread use without demonstration of efficacy in the treatment of the various stages of otitis media and upper respiratory tract infection in children.

The aims of this study were principally to evaluate decongestant and antihistamine drugs used separately in the treatment of acute otitis media and the effect of these drugs on the clinical course of otitis media. The study was designed to determine whether decongestants and antihistamines (a) mitigate the severity of associated symptoms of acute otitis media and upper respiratory tract infection, (b) reduce the duration of symptoms, and (c) prevent the recurrence of acute episodes during a two month follow up period.

Methods

The study was conducted during the winter months of 1980-1 and 1981-2 in seven practices in the city of Aberdeen with 22 participating general practitioners. On entry to the study doctors completed a medical social history card, and a symptom diary was issued to patients to complete during the two month follow up. In general practice doctors are presented with the early signs of illness and disease and in physical terms diagnostic accuracy lacks precision. General practitioners were therefore asked to identify children with "presumed acute otitis media where symptoms and signs warrant (in your judgement) the use of an antibiotic." General practitioners were free to prescribe the antibiotic of their choice and were asked not to prescribe any additional medication.

The study was restricted to children aged from 3 to 10 years because younger children present special difficulties in communication and

assessment and require different doses of oral drugs and children over 10 present less often with acute ear infections. Children were excluded who had had an episode of presumed otitis media treated in the previous month, had taken decongestants or antihistamines the previous month, had received antibiotic therapy during the previous two weeks, or were receiving regular medication for other conditions such as epilepsy and diabetes. In view of the unpredictable workload in general practice doctors were asked to include consecutive cases when possible, and there was a target of 10 cases per doctor. Children were entered to the trial on one occasion only.

The outcome of treatment was measured by two methods: (a) symptom diaries completed by parents for two months, and (b) extraction of information about subsequent attendance to the general practitioner in the follow up period. Other techniques such as intratympanic, pneumatic otoscopy, audiometry, and impedance testing are used by few general practitioners in the United Kingdom and it was thought inappropriate to introduce these tests to the study. Within 24 hours of entry to the trial a research assistant visited the homes of children to confirm that the parents understood the nature of the trial and to give further explanation about the methods of completing symptom diaries. She then issued every child and parent with 200 ml of one of the three trial drugs, using a randomised schedule that had been prepared by a computer program. The children were allocated to receive pseudoephedrine 30 mg per 5 ml, 5 ml to be taken morning and evening (group 1); triprolidine 2.5 mg per 5 ml, 5 ml to be taken morning and evening (group 2); placebo, 5 ml to be taken morning and evening (group 3).

The research assistant revisited the parents at regular intervals during the next two months when queries were answered, problems noted, reasons for drop out assessed, symptom diaries collected at two week intervals, and further supplies of appropriate drug treatment issued. If the parents thought that their child's progress was unsatisfactory they were advised to consult their general practitioner in the normal manner. If the treatment code had to be broken the research assistant was informed immediately. Data were analysed using standard statistical tests.

Results

Two hundred and eighteen children were admitted to the trial with 74 children allocated to receive pseudoephedrine (group 1), 72 to receive triprolidine (group 2), and 72 to receive placebo (group 3). Twenty nine children (13 from group 1, nine from group 2, and seven from group 3) did not complete the trial (Table 1). Of the 189 children who completed follow up, there were 61 in group 1 (pseudoephedrine), 63 in group 2 (triprolidine), and 65 in group 3 (placebo). The mean ages of the children in the three treatment groups were 5.0 years in group 1, 4.8 in group 2, and 4.8 in group 3. There were no appreciable differences between the three treatment groups in family history of medical history, including history of ear, nose, and throat disorders.
A total of 956 symptoms was recorded—a mean of 4.8 symptoms per child, and a median of six. Table II shows the associated symptoms in addition to otitis media; there were no differences among the three drug groups. 147 children had unilateral ear drum signs and 42 bilateral signs; 378 drummers were examined and 426 otitic could not be visualised. Of the 362 drummers 112 had normal signs and observed with 213 in the right eardrum and 199 in the left eardrum; 250 of the abnormal signs (65%) related to variations in redness of

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the drum and the remaining 153 signs were concerned with changes in appearance... such as bulging of the drum and loss of light reflex...

TABLE 1—Children entered in the trial and reasons for withdrawal

Table with columns: Drug group, Pseudoephedrine (n=72), Triprolidine (n=72), Placebo (n=72), Total (n=216). Rows include Stopped treatment because of side effects, Withdrew on general practitioners' advice, etc.

TABLE II—Symptoms associated with acute otitis media

Table with columns: Symptom, No. of symptoms. Rows include Earache, Earache at night, Crying, Runny nose, etc.

were shown among the three drug groups in terms of the time it took for symptoms to resolve. Similar results were found for the remaining symptoms...

In 42 (22%) of the children symptoms had been previously recorded that suggested a possible allergic basis such as asthma, hay fever, allergic rhinitis, or a combination of these...

TABLE III—Symptom diary follow-up: resolution of acute symptoms seven days after entry. Figures are number recorded

Table with columns: Symptom, Pseudoephedrine (n=61), Triprolidine (n=61), Placebo (n=61). Rows include Earache, Wakened by earache, Cough, etc.

TABLE 10—Two month follow up of symptoms: mean number of occasions: 189 children were recorded and number of days until drier had no record of symptoms

Table with columns: Symptom, Drug group (Pseudo-ephedrine, Triprolidine, Placebo). Rows include Earache, Duration (days), Wakened by earache, etc.

Discussion

The findings for presenting symptoms confirmed the results of a previous study in general practice and highlighted the existence of a wide range of respiratory symptoms (in addition to earache) in children with presumed middle ear infection.

An important finding was that nine of the 12 children who withdrew from the study because of side effects were taking pseudoephedrine. The side effects included bad temper, irritability, poor sleeping, dizziness and general malaise.

Outcome had to be assessed from recorded symptoms and further assessment at the general practitioner with recurrence of respiratory and middle ear symptoms. Although this measurement might be criticised because of the absence of more objective tests, the trial described may be defended on the grounds that it was well followed up.

With regard to symptom relief the results are consistent with those of Rubenstein et al., who found that the addition of pseudoephedrine to antibiotic treatment did not seem to improve resolution of acute otitis media in children.

It is interesting to note that the results of the trial described may be defended on the grounds that it was well followed up. With regard to symptom relief the results are consistent with those of Rubenstein et al., who found that the addition of pseudoephedrine to antibiotic treatment did not seem to improve resolution of acute otitis media in children.

Innovations

Have bus, won't travel!

BRIAN R MCAVOY

"New bus service to Byfield Medical Centre"—thus read the colourful leaflet (produced by Northamptonshire County Council) for the launch of what was arguably the most innovative transport scheme in the area in the past 20 years.

Further meetings were held to work out the details of routes, timetables, fares, and plans for publicity. As the practice area is circular with Byfield at its centre, it divides readily into distinct halves. We decided to run the bus on two days a week, serving the villages to the north and east one day, those to the south and west the other.

Our three main practice covers 160 square miles in three counties (Northamptonshire, Oxfordshire, and Warwickshire), 23 parishes, and 31 villages, with populations ranging from 20 to just under 2000. We dispense for two thirds of our 5600 patients and provide our own out of hours cover.

Until 1980 we practised from an increasingly overcrowded main surgery in Byfield—the centre of our seven mile radius practice area. We also operated seven branch surgeries, six of which were held for one hour a week and one for one hour a weekday; most of these were only two or three miles from Byfield.

Since the branch surgeries provided inadequate facilities and were more "ports of call" we resolved to close them and centralise services in a new medical centre at the beginning of November, to be built in Byfield. Despite considerable local opposition, the family practitioner committee approved our application to close five of the six branch surgeries.

Transport scheme

Our practice area is poorly served by public transport, and we realised that one concern about centralising our facilities would be the difficulties (real or perceived) of travelling from outlying villages to Byfield. Various patient transport schemes have been described, some using privately owned cars or minibuses, other school buses and ambulances.

We contacted the Northamptonshire County Council Highways and Transportation Department asking if they could help in setting up such a scheme. They provided us with a map of the geography and population and an estimate of the number of people from each village who might require transport to our

central surgery; these figures were based on surveys carried out in the three largest outlying villages.

An encouraging response from the county council led to a series of meetings between myself, officials of the highways and transportation department, and a local private bus operator. An application was made to the county transport committee to provide a grant subsidising the running costs of a 56 seat coach for a trial period of six months. Before the transport committee meeting I wrote to all the parish councils and local clergy keeping them up to date with the developments and asking them to inform the county council of their support for the proposed transport scheme. The application was approved in May 1981.

We reorganised our consulting arrangements so that a special one and a quarter hour "bus surgery" was provided on the appropriate days. Patients were asked to book appointments in advance but provision was made to see anyone who arrived on the bus. Our treatment room nurse reserved time to attend to "bus patients." We also made special arrangements so that all new and repeat prescriptions for "bus patients" would be dispensed in time to be taken away that morning. The bus would wait until the last patient had been attended to before leaving.

Innovative features of this service were, firstly, that it linked previously unconnected villages, and, secondly, that it enabled the inhabitants of these villages to catch a connecting bus in Byfield and travel on to Banbury, a large market town. A positive step had been taken to reverse the steady decline in rural transport facilities in this part of the country.

On the preliminary planning stages we emphasised that this was not just a surgery bus but a service that could be used by all members of the local community who lacked transport, irrespective of medical need. We hoped that individuals would use the bus to visit their friends and relatives, to go shopping in the larger villages, and to take advantage of the connection to Banbury. Non-surgery use of the bus was critically important since the county council's backing would continue only if the service was supported.

If the fares collected did not cover at least one third of the running costs the subsidy would be withdrawn. Fares were set on a flat rate of 27p single for adults and 18p single for children and from any place on the route; old age pensioners would be able to use bus tokens.

The launch

The date for the launch of the new service was to be 17 November 1981—over 18 months since the first meeting between us

In this study consultations with general practitioners during the two month follow up showed that 39 children had a recorded recurrence of presumed otitis media, but the children were equally divided among the three treatment groups, indicating that neither decongestant nor antihistamine treatment prevented recurrence.

The continuing use of these preparations by general practitioners is probably an attempt to place the time in the absence of other approaches to treatment, but the results of this study suggest that the extent of the use of decongestants and antihistamines in treating symptoms of middle ear infection and effusion and associated respiratory symptoms must be seriously questioned. Although the numbers in this study were small, the finding that all children withdrawn from the trial because of side effects were receiving pseudoephedrine or triprolidine must cast further doubts on the use of these preparations.

Conclusions

A double blind randomised control trial of treatment with a decongestant and an antihistamine was conducted in general practice in 189 children with acute otitis media to determine whether such drugs reduced the duration and severity of associated symptoms and prevented the recurrence of acute episodes. After an acute attack in addition to antibiotic treatment children received an eight week course of pseudoephedrine, triprolidine, or placebo. There was no appreciable improvement among the three treatment groups in terms of symptom relief or time taken for symptoms to resolve nor was there any difference in the recurrence rate of acute otitis media.

Medical Services in Rural Areas

There can be few places in the world outside Britain where so few complaints about the local provision of health services would be revealed in a survey of rural communities. This study, done by the Exeter and District Community Health Council, attempts to identify the main areas of difficulty in obtaining access to health services in rural Devon. In so doing it provides evidence of the continuing vitality of the humanitarian ideals underlying our National Health Service.

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In general the results indicate a broad level of satisfaction with health services and no serious criticisms were made of antenatal care, dental services, the ambulance and hospital care services, and opticians. The most widely perceived problem was poor public transport to hospital, followed by difficulties of access to general practitioners' surgeries, lack of chiropody, and difficulties in getting prescriptions dispensed in the absence of a local pharmacy.

The report includes a detailed discussion of the merits and demerits of branch surgeries and of the economic factors influencing the distribution of pharmacies. It strongly recommends improving chiropody services, including introducing mobile clinics, and it publishes the little known fact that assistance with fares to hospital is available to war pensioners and to those dependent on supplementary benefit (now numbering some seven million people) both for hospital attendance and for visiting close relatives who are in hospital. Some practical advice on how to set up a collection and delivery service for prescribed medicines is lost in the middle of a long chapter. This section would be useful to parishes, Women's Institutes, and other organisations keen to tackle the problem and might usefully be extracted and duplicated to ensure wider distribution.

The major part of the report and its recommendations apply to rural areas throughout Britain and it deserves to be read widely. The report represents only a first step for the community health council in trying to improve rural health services in the Exeter district. But it should also be a reminder that rural areas have particular problems to be overcome in ensuring that the National Health Service lives up to its ideal of general availability—see STEVENSON, general practitioner, Dux, Norfolk.

Medical Services in Rural Areas. Available from Exeter and District Community Health Council, 94 Sidwell St, Exeter EX8 4PF for 27p to post.

and the county council. Publicity was all important. We were fortunate in having the services of the Northamptonshire Rural Community Council, whose chairman designed an eye catching leaflet-timetable that was kindly printed by the county council. The rural community council also organised a competition in the local primary schools with a prize for the best poster advertising the new bus service. The local newspapers and television were kept informed by the county council and provided publicity before the launch. We sent a letter explaining the new service and its need for support to the local parish and district committees, community health councils, family practitioner committees, and clergy. In all these forms of publicity we scrupulously avoided being mentioned by name or "advertising" the services we offered. Finally, copies of the timetable were distributed to the parish councils and all the village shops and post offices at the beginning of November.

Despite all the publicity only five passengers travelled on the first two journeys of the coach. The largest number of passengers—17—came the following week but during the whole of November only seven passengers were recorded on its 10 journeys. Further appeals for support were made in the local press coupled with pessimistic statements from county council spokesmen regarding the future of the subsidy. Despite this, the numbers using the bus service each week remained in single figures. On several journeys the bus travelled the whole route and back again. As the months went by the number of people using the bus service averaged out at about a week or two a journey. To meet the county council criterion for subsidising rural bus services a minimum of 15 passengers was required for each journey. Clearly, the experiment had not worked. In May 1982 the county council transport committee announced that it was withdrawing the subsidy for the bus service, which duly stopped. Symbolically, on its final journey, the Byfield Medical Centre bus was empty.

It had been an expensive experiment. The total subsidy over the six months amounted to nearly £1250. On many journeys the sole passenger was being transported at a cost to the local ratepayers of nearly £24.

It is now almost one year since the bus service was withdrawn. When the county council officially informed the parish councils that the bus service was being stopped it suggested that they might like to consider setting up social car schemes, and offered help with advice and administrative costs. Several parish councils have taken up this lead and now successfully operate such schemes. We continue to see our patients who live in the outlying villages at our central surgery. There is no evidence that patients have difficulty travelling to the surgery, and there has been no increase in the number of home visits we make to these villages.

Issues it raises

Though it would be wrong to extrapolate our experience to all rural practices in Britain, I nevertheless think that it raises issues that are of more than local interest. The assumptions that underlie such a scheme are, in fact, very simple. The assumptions that underlie such a scheme are, in fact, very simple. The assumptions that underlie such a scheme are, in fact, very simple.

Department of Health and Social Security withdrew its offer. Moreover, Dr Peter Kay and his colleagues in Witney, Oxfordshire, decided not to introduce a transport service after studying the need for it and the characteristics of expected users.

Why did our service fail? The obvious reason was lack of support from the local community, but why was this? Publicity both before and after launching was extensive, in fact almost too much and the characteristics of expected users. The obvious reason was lack of support from the local community, but why was this? Publicity both before and after launching was extensive, in fact almost too much and the characteristics of expected users.

Who should be responsible for organising transport to outlying villages? Certainly not doctors. The responsibility rests squarely with the patients or nominated individuals in the community. The success of both formal and informal social car schemes supports this view.

How necessary is public transport in rural areas? Our experience suggests that it is not as necessary as is assumed. The conventional view is that public transport in rural areas is inadequate and has been declining for many years. Over the same time, however, more people have acquired cars to transport their families, neighbours, and friends. Car sharing is not uncommon and has been made easier by the 1978 Transport Act. Improved liaison between local authorities, rural community councils, parish councils, voluntary organisations, and private individuals has produced imaginative and flexible alternatives to public transport, such as community buses and social car schemes.

What lessons have we learnt? Firstly, it takes an immense amount of time, effort, and perseverance to set up a patient transport system. Secondly, real needs and perceived needs for transport to a central surgery will be very different. Thirdly, contrary to their popular image as "access bureaucrats," the county council officials with whom we dealt were extremely helpful, enthusiastic, and responsive to our local needs. Finally, in the words of my national bard:

"The best laid schemes o' mice an' men Gang aft' agley."

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