personal care of the individual patient continues to be central, and undoubtedly day-to-day health care practice provides the opportunity of enhancing this care for both the patient and the doctor. The difference is rather that practice from a health centre such as Woodside provides a clearer view of relations with other services and thus, perhaps, a more critical awareness of the strengths and weaknesses of the general practitioner's role in the wider system of health care.

Although closer relationships and improved facilities help to provide better patient care, the quality of organisational arrangements is critical to the proper functioning of large health centres; matters of this kind cannot simply be left to muddle along. The impression that health centres are impersonal, bureaucratic institutions with the air of hospital outpatient departments should be false; where it is not we suggest that too much emphasis is being given to administrative convenience and too much influence to receptionists and clerical staff.

Giving better patient care as traditionally provided in general practice may be an argument for the benefits of the organisation of a health centre, but it is not the basis on which the health centre as a concept, rather than a building, was promoted. There are perhaps three central aspects of contemporary general practice where one might expect the health centre to allow an expansion of the traditional role of the general practitioner: in the prevention of disease or ill health; in managing disabled patients in the community; and—linked to both—in providing care for a population (the patients on the practice list) and not just for those who are identified as "patients" at any one time. Each needs collaborative relationships of different kinds. These obviously may be achieved in different settings but we think that an important feature of our experience in one health centre is the equality of the relationships that have developed. The activities of individuals and their responses to particular patterns have changed in the direction of joint problem solving and away from more formal definitions of role and responsibility.

Prevention can seem a rather abstract notion when one steps away from well-defined tasks so that the development of a preventive ethos in a multidisciplinary practice team can at times be a difficult idea to pin down. We have, however, ensured that recognised preventive procedures—such as the developmental assessment of babies and the selective care of families at risk by the health visitor—are part of a co-ordinated practice policy. Similarly, an obstetrician and the health visitor share in antenatal care. We have also begun to explore opportunities for prevention in other groups of people; almost 70% of the 40-50-year-olds in the practice accepted an invitation for screening for risk factors for heart disease, and the rate of compliance was high in those for whom measures such as weight reduction was advised. Again, the health visitors played an important part. Equally important is the ability to identify problems in advance

of a crisis and to take remedial action. It is here that the range of skills represented in the practice team can be deployed to best effect.

Managing patients with disabilities requires a clearly defined plan of, and again effective collaboration with social workers and specialist medical services are crucial to success. This process of planning care and of the need to relate changes in a patient's circumstances one to another is perhaps the most important lesson we have learned over the past 10 years. For example, we now appreciate that the functional outcome of surgery for hip replacement is likely to be more successful if changes in the patient's social circumstances (such as housing) precede the surgery. Psychological preparation for the planned improvement in the patient's life style is also a necessary preliminary, and this may include the active treatment of coexisting depressive illness.

Thus the general practitioner's contribution to the management of a patient with a disability rests on his ability to co-ordinate the different services that are needed if the plan to improve the patient's functional capacity is to succeed. This depends on good communication, which the organisation of the health centre has done much to foster. Close links with the specialists who regularly visit the health centre have meant a shared view of patients' circumstances and a better understanding of the general practitioner's objectives in referring them. More recently we have realised the importance of patient education in the functional management of disability.

We do not think that we have solved the problem of caring for the whole practice population and not simply those who are identified as patients. In many ways we are more conscious of the need to do so because practising team care emphasises this need. We have gone some of the way—by example, in regular assessments of the preschool child and elderly people—and the age-sex register is a working tool and not simply a practice ornament. One of the potential benefits of health centres is computerised information systems for monitoring prescriptions, for keeping lists of patients with chronic illnesses, and for other management problems. Though such systems should be regarded as a necessary tool of good practice, we regret that we have made little progress towards this goal.

This is the first part of a two-part article.

References

- Ministry of Health. Consultative Council on Medical and Allied Services. *Interim report on the future provision of medical and allied services*. (Lund 96). London: HMSO, 1920. (Tascon Report).
- Mackenzie WJM. *Power and responsibility in health care*. The National Health Service as a political system. Oxford: University Press for the Nuffield Foundation Hospitals Trust, 1979: 66-72.
- The Woodside story. *Health Bulletin* 1973;13:107-75.

Clinical Curio: early and late adder bites

The United Kingdom has only one naturally occurring venomous snake, the adder (*Vipera berus*), which hibernates throughout the coldest months of the year and is rarely seen between mid-October and the end of March. After this the incidence of adder bites increases about 62% of cases being reported during June, July and August. I saw two patients who were bitten by adders, and these are, I think, the earliest and latest cases reported.

Case 1. A 48-year-old 12-year-old boy saw an adder in a field and picked it up. It bit him on the right index finger, and he was brought to the accident and emergency department. He was apprehensive and had vomited several times. His blood pressure was 95/60 mm Hg with a regular pulse rate of 96 per minute. Two small puncture wounds were seen on his right index finger, which was swollen and bruised, the swelling extending to the right hand and forearm, and tenderness to the axilla. He was given 25 mg chlorpromazine intramuscularly to control the nausea; then 100 mg hydrocortisone and 5 mg chlorpromazine made intravenously; and 0.5 mg tetanus toxoid intramuscularly and an injection of penicillin. Over the next five days the

signs and symptoms slowly disappeared and he was allowed home. **Case 2.** 23 October 1980. A 34-year-old herdman was bitten by an adder on the right wrist. He had been a jackaroo in Australia and had once been bitten by a snake, so had some practical experience in first-aid treatment. He vigorously shook the adder off his wrist and tied a handkerchief around his upper arm, cleaned the bite with an antiseptic, and came to hospital, which took about four hours. He said that he had come for reassurance and did not think that much venom had entered his body. His right wrist was painful, and two faint marks were visible, surrounded by an area of swelling and redness of about 2 cm in diameter over the ulnar aspect. He also had two slightly enlarged and tender lymph nodes in the right axilla. His pulse and blood pressure were normal, and he was fully immunised against tetanus. The wound was cleaned and he was kept resting. He was sent home after three hours on a course of penicillin V. —HEATH, M. HON. ASSOCIATE SPECIALIST, ACCIDENT DEPARTMENT, ROYAL DEVON AND EXETER HOSPITAL.

would not have produced some physical signs after all that time. (4) Since a great deal of neurological disease is chronic, time is often the best diagnostician and little is to be gained in most cases by making a diagnosis at an early stage.

Finally, what use information can general practitioners give to a neurologist on referring the patient?

(1) Outpatient waiting lists in neurology are usually long, so it is helpful to give some idea of priority in referral letters. An accurate description of the patient's complaint and its duration is often sufficient. I do not consider it necessary for the general practitioner to undertake a neurological examination. A misconception is that neurologists make the plantar responses do what they want them to do. Rather, after taking a history a neurologist knows which way the plantar response will go. Since general practitioners see neurological patterns of disease only rarely they cannot be expected to do an expert neurological examination, and unless signs are gross an examination may only confuse the issue.

(2) The reason for referral. Is the general practitioner or the patient (or both) worried about the symptoms? It is permissible to refer a patient "to get him off my back," but management in the outpatient clinic will be different with this sort of case and more effective if the neurologist knows that this is the reason for referral.

(3) Whether the patient attends the surgery frequently or not, and if so, for what type of complaint.

(4) What medication the patient has been taking recently. This vital piece of information is frequently omitted, and often there is a discrepancy between what the patient is taking and what the general practitioner thinks he is taking.

(5) Goethe is reported to have said: "To be uncertain is to be uncomfortable: to be certain is to be merely ridiculous." Human beings are changing organisms, and pathology is a continuous biological process. A "label" put on the process at one time, therefore, may not apply in the light of subsequent events. It is impossible for a neurologist to provide an adequate service if he follows up everybody in whom he suspects that something might be wrong. It is helpful though to be told by the general practitioner of what has transpired, and even to be told that one has been wrong. One learns far more from one's mistakes than from one's diagnostic triumphs.

Reference

- Hampson JR, Harrison MJG, Mitchell IRA, Prichard JS, Seymour C. Relative contributions of history-taking, physical examination, and laboratory investigation to diagnosis and management of medical outpatients. *Br Med J* 1975;91:486-9.

Practising Prevention

Preparing a leaflet for patient education

J A MUIR GRAY

It is now generally accepted that patients can recall only a few facts after a consultation with the general practitioner.

Furthermore, the parts of doctors' advice that are remembered are not necessarily the most important, and the patient is often unable to repeat correctly aspects of the advice that he has managed to remember. In the past this frequently was blamed on the patient's stupidity or inattention, but it is now appreciated—albeit not universally—that the fault often lies with the doctor and that by observing certain simple guidelines the amount of information that the patient can retain may be increased. Even with the best technique, however, most patients will not remember all the points that the doctor believes to be most important. One way of increasing the effectiveness of communication is to complement the spoken advice with written material.

The most effective medium would be a summary of the advice given in the consultation written specifically for each patient, but this is impossible and a leaflet suitable for all people who have a particular condition or problem has to serve instead. "Leaflets" have, quite rightly, been widely and fiercely criticised, but a leaflet prepared in accordance with some simple guidelines may effectively contribute to both prevention and treatment if it is used to complement the advice given during a consultation. Indeed, it can be argued that many consultations are unnecessarily ineffective because the doctor relies exclusively on spoken communication. Leaflets have their place in medical practice—and that place is not always the wastepaper basket.

The message

The message in any leaflet written to encourage prevention should always emphasise four points:

- The seriousness of the problem. The aim should be to create concern but not overwhelming anxiety—for example, to say that smoking causes lung cancer but not to describe the suffering of a cancer patient in gory detail.
- The susceptibility of the reader. The statement that there are 185 000 deaths from coronary heart disease in Britain each year impresses the policy maker or epidemiologist. The individual, however, wants to know whether or not he is susceptible—for example, present him with a list of risk factors for heart disease that he can use to assess his personal level of risk.

(3) The benefits that will result from following the advice. It is insufficient to say that high blood pressure increases the risk of a stroke; it is also necessary to state that a reduction in blood pressure is associated with a reduction in risk. If there are any other benefits that will follow from taking the advice—that is, benefits other than reducing the risk of disease—they should be emphasised. For example, say: "If you lose weight you will feel

Community Health Officers, Radcliffe Infirmary, Oxford OX2 8HE
J A MUIR GRAY, MD, community physician

The GP and the Specialist

Neurology

GEORGE HARWOOD

It has been said that neurology, though a fascinating and rewarding subject intellectually, has little to offer the patient except a diagnosis. This is as true today as it was a hundred years ago—but neurology does not stand alone in this respect. Can a physician can do more about emphysema than a neurologist about multiple sclerosis? Thus there is little that a neurologist can offer a general practitioner than a sound knowledge of anatomy, and at times a diagnosis and reassurance. Occasionally a problem will turn up in which the pathology is reversible: in my practice, for example, perhaps 30 patients a year out of 1500 to 2000 new faces will have a diagnosis for which there is no effective treatment. This of course excludes Parkinson's disease, epilepsy, and migraine.

Fortunately, from a general practitioner's point of view, neurological disease is rarely seen if one excludes those three exceptions. A general practitioner with an average list size will see one new case of multiple sclerosis in every 15 years of practice. Probably because doctors see patients with neurological disease so rarely some patients with such problems go undiagnosed for a long time and often their symptoms are ascribed to commoner pathologies. I have seen symptoms of multiple sclerosis, spinal cord tumours, and muscular dystrophy all ascribed to "arthritis".

Doctors frequently think in terms of patterns. There are patterns to neurological disease as there are for other diseases, but I will not discuss them here, particularly as neurological disease is rare and the cardinal principle of pattern-making is that "common things occur commonly." Certain errors do occur, however, in referral letters and it is useful to enumerate them. The commonest error is to fail to listen to what the patient is saying. I get letters from neurologists telling me of the patient's complaints which the referring doctor cannot put into a pattern: he cannot of course be expected to. The information is there, however, and a diagnosis can sometimes be made on the referral letter alone. Other letters bear absolutely no resemblance to the problem, and are sometimes so bizarre that one wonders exactly what the doctor had in mind. Two examples will suffice: A 17-year-old referred to me with impotence, who did not know how to masturbate; and a 28-year-old referred with suspected acute multiple sclerosis causing difficulty in walking—this was due to an inflamed bunion on his left foot.

The article in the *BMJ* by Hampton et al¹ could be read with profit by all practising doctors and students. The authors showed that in a series of 80 consecutive patients attending a medical outpatient clinic a diagnosis could be made on the history in 66 cases; the physical examination contributed in 12 more cases, and in only seven cases did the results of investigation change the diagnosis after the history had been taken and examination done.

A constant source of irritation to me, and I suspect to other neurologists, is the patient who says: "My doctor says that I should have a scan (EEG) or whatever. What the hell does he need a scan for?" or whatever. What the hell does he need a scan for? With a view to answering the questions: (1) Is there anything wrong with the nervous system? (2) If there is (a) where is the site of the lesion? (b) what is the nature of the lesion? This information it is impossible to decide what investigation, if any, is appropriate.

GP: I have a lady with three weeks' history of severe headache who has now developed double vision. Would it be possible to arrange a scan for her?

Me: She may well need a scan, and I would be happy to see her to confirm this for you.

GP: Well, if we could arrange scans directly I wouldn't need to ask you to see her, would I?

Her erythrocyte sedimentation rate was 114; her scan normal. There is also the myth that EEGs are helpful in diagnosing epilepsy. The only known way of ascertaining whether an attack of loss of consciousness was epileptic or not is by taking a careful history and confirmation from a witness. An EEG may occasionally be helpful in providing further information once the diagnosis has been made, but if done before the diagnosis has been made it can confuse and complicate the issue because some people who have never had a fit in their lives have abnormal EEGs. While working as a neurophysiologist I felt provoked by requests for EEGs for "blackouts" or "faints" to exclude epilepsy. A consultant should know the indications and limitations for specialised investigations. Rather than focusing the patient's interests on to technological medicine a general practitioner should emphasise that the patient is going to see a neurologist for an opinion, and it is his decision whether or not to investigate and how it should be done.

My outpatient waiting list could be cut down considerably by the recognition of several other commonly occurring problems:

(1) Adolescent faints. I see about two of these a week, referred as possible epilepsy. A diagnosis of epilepsy still has stigma and profound implications concerning the patient's future. No doctor therefore who has a young patient's interests at heart should be keen to explore a diagnosis of epilepsy on flimsy indications. The teenager who, on getting up suddenly from a chair or after standing for a long time, feels transiently "dizzy" and whose vision darkens is not having fits but is suffering from a phenomenon that is common among teenagers. It is caused by carotid sinus hypersensitivity. The teenager ever consults a doctor about it in the first place.

(2) Ill-defined, transitory, and migratory sensations of numbness are seldom possible to diagnose, and even if they were they seldom respond to treatment.

(3) As a very general rule the importance of headache is inversely proportional to its duration. Patients have been referred to me with a constant headache extending back over 10 to 12 years. It is hard to think of any pathological process which

better and fitter and look more attractive," as well as emphasise the beneficial effects of weight reduction on the metabolic problems of mature-onset diabetes.

(4) The difficulties the patient may face. Try to think of the difficulties that the patient may have in following advice, and give specific advice on how these may be minimised.

Style of the message

Having chosen the facts that are to be included, it is essential to set them out clearly. Writing clearly and simply is difficult. It is more difficult than writing long and complicated sentences, with commas and semicolons separating a concatenation of clauses. It takes time and practice to learn how to write simply and clearly, but there are a few guidelines which should be observed:

(1) Don't use too many technical terms. When a term is first used it should always be defined. On the other hand, don't use too few technical terms. It is patronising to use terms like "tummy" when the technical term is in common use.

(2) Use large print—capital letters on an ordinary typewriter is a good size of writing for older patients (though not for most of us).

(3) Put the most important information at the beginning and then repeat it towards the end of the text, perhaps as a succinct summary of the advice.

(4) Avoid general vague instructions such as "take more exercise," or "eat less fat." Be specific and precise. If you do not feel that you can be precise when writing a leaflet or handout leave a blank space in the leaflet for specific instructions tailored to the individual's needs. Never be afraid that you will be too detailed. Nearly always the mistake is to give general exhortations that aggravate anxiety without changing behaviour. Specific, precise instructions reduce anxiety and are more likely to be effective.

The difficulty of writing clearly should not be underestimated. The doctor who wishes to acquire the skill can learn how to draft plain English by reading "the tabloids" with care and attention to style. Try reading the *Daily Mail* or *Express* or the *Sun*, or *Mirror* carefully at least once a week. Study the leader

ONE HUNDRED YEARS AGO The Khedive's palace, on our arrival, was found completely denuded of every particle of furniture. There were the walls, and the ceilings, and the floors, but there was absolutely nothing else in the house. The Khedive's palace was a sick and wounded man. In the whole of the building there were originally four water-closets, two on each storey, supplied with water from a tank on the roof, but as the water had been cut off and the tank was empty, these were of course useless. The first and most pressing need therefore was to institute the dry earth system of conservancy. Accordingly, latrines were dug in the usual manner at the bottom of the garden, but when dysenteric patients began to arrive in large numbers, it was soon found that, in spite of all verbal prohibitions, they would persist in using especially at night, whatever part of the garden they found most convenient—while the distant latrines they would not, oftentimes, even not go—an attempt was then made to form a few dry earth closets within the building for use, at night especially, by the bad cases; but these almost immediately became an intolerable nuisance; for the British soldier is not generally imbued with correct notions on sanitary matters, and it was found impossible to limit the use of these dry earth boxes to the case of serious illness only, a trial was next made of a latrine pot on two at a distance of only twenty yards from the building, but the same difficulty again presented itself, viz: the prevention of its use by ordinary patients, and after an experience of about a couple of days, this plan had likewise to be abandoned. In the meantime application had been made to the Engineers for assistance in making seats, receptacles, and the like, and the idea fortunately occurred to Captain Gordon, RE, that some iron wheelbarrows, which had been found

column for plain prose at its clearest, even if you do not agree with the opinions expressed. An even more effective way of learning, however, is to pilot the leaflet and seek criticism.

Preparing the medium

So much for the message, now for the medium. No amount of care in presentation can improve an incomprehensible message, but a clearly written message may be obscured by poor presentation. The rules of leaflet preparation may be summarised simply:

(1) Write in short paragraphs. Use headings to break the text into short sections. If listing a number of facts or points set them in a line and indent them one centimetre to highlight their importance.

(2) Try the question-and-answer style as one of your drafts. Market research has shown that it is an effective means of keeping the reader's attention.

(3) Leave space for writing in "personalised" advice. For example, you can give a leaflet on exercise and say: "There are two points that are particularly important for you to remember so I am going to write them down here."

(4) Try to find ways in which the reader can use the leaflet to assess his own progress. It is the written or self-monitoring improves compliance. For example, leave a space for him to write down what he finds most difficult about following the advice so that he can discuss this with the doctor or health visitor when he consults again.

(5) Pilot your leaflet and try to evaluate its comprehensibility. Remember that many patients are reluctant to criticise anything their general practitioner produces honestly because they are reluctant to hurt his feelings. Try to enlist the help of a medical student or student health visitor or one of the administrative staff in the health centre. Remember that the local health authority can dispense small sums from research funds for this type of action research.

The well-prepared leaflet is a useful medium for communication which has had a bad press. If prepared by the general practitioner for his own patients it can make an effective contribution.

among a lot of Egyptian lumber in Ismailia, might serve our purpose. These barrows were so constructed that the central portion, or box, might be raised as high as the patient's head, and the wheels could be better. All that was necessary was to supply them with a wooden seat between the handles, and a movable latrine barrow became available for use at any place where it was most wanted. About ten of these were all that could be got; but they are now utilised within and about the hospital, and their contents are wheeled to the desert and buried, as often as may be required. The difficulties connected with the improvising and working of the dry-earth system of conservancy under such circumstances as we were placed in at Ismailia can scarcely be overrated, owing to the deficiency of labour and the almost total absence of appliances. Suppose there are only thirty bad cases of dysentery, each having an average of ten motions a day. This would give three hundred stools to be defecated and removed daily; add to this the number of times bedpans are used for other serious cases, wounds of the lower extremity, and the like, and it will be apparent that to bring dry earth, and then to remove it, require the services of a large number of men. Unfortunately, very little native labour can be got at Ismailia. We have had about a dozen Egyptian prisoners to act as scavengers, to dig pits, etc. Everything else has had to be done by the men of the Army Hospital Corps, who numbers are quite inadequate for such work as this. The "latrine barrows" have, however, so effectively relieved the medical officers of one of their greatest difficulties that it is to be hoped such articles will hereafter be a portion of the equipment of every field hospital. (*British Medical Journal*, 1882.)