

what the main deficiencies were.

The 16 participants agreed to approach up to 10 consecutive consulting patients with known asthma who used a metered dose inhaler. The patients were given an inhaler and were asked to demonstrate how they usually used it. Their technique was scored according to a previously agreed protocol which had been examined by the chest physician at the local district general hospital. The protocol covered six areas: shaking the inhaler (points range 0 to 1), full expiration (0 to 3), lips closed around inhaler mouthpiece (-1 to 2), inhaler activated on inspiration (0 to 3), full inspiration (0 to 3) and breath held for 10 seconds (0 to 3). Patients could thus score a maximum of 15 points, with the technique being deemed 'adequate' if a minimum of nine points were scored provided at least a partial inhalation had taken place.

One hundred and fifty patients were recruited to the study. Seventeen patients (11.3%) were judged to have perfect technique while 109 (72.7%) were 'adequate'. Over a quarter of the patients failed to shake their inhalers before use (29.3%) and 24.7% failed to close their lips around the mouthpiece prior to activation. Two thirds of the patients (65.3%) did not breathe out fully before activating their inhaler and a similar proportion did not hold their breath after activation for a full 10 seconds (66.7%). Over half of the patients failed to activate the inhaler on the commencement of inspiration (53.3%) and only 59.3% breathed in fully.

This survey shows that while a majority of users of metered dose inhalers probably have an adequate technique only one in 10 achieve optimal performance. With the exception of shaking the inhaler, similar steps are common to the use of virtually all inhalation devices. It would, therefore, not be unreasonable to assume that similar technique deficiencies would occur with different types of device. This might explain why Hilton⁴ found little difference in performance between users of various devices.

These findings give some guidance on where particular attention needs to be concentrated when we educate patients in the proper use of inhalation therapy devices.

BRIAN GIBBONS

Afan-Nedd General Practitioner
Vocational Training Scheme
Gwynfi Health Centre
Western Terrace
Blaegwynfi, Port Talbot
West Glamorgan SA13 3YE

References

1. British Thoracic Society. Guidelines for management of asthma in adults. I. Chronic persistent asthma. *BMJ* 1990; **301**: 651-653.
2. British Thoracic Society. Guidelines for management of asthma in adults. II. Acute severe asthma. *BMJ* 1990; **301**: 797-800.
3. Surrey Family Health Services Authority. *General practice formulary 1990*. Surbiton: Surrey FHSA, 1990.
4. Hilton S. An audit of inhaler technique among asthma patients of 34 general practitioners. *Br J Gen Pract* 1990; **40**: 505-506.
5. Jones K, Middleton M. Benefits of an inhaler technique scoring system. *Update* 1989; **38**: 1399-1403.

Patients' preferences for appointment or non-appointment surgeries

Sir,

Since its inception, National Health Service general practice has gradually changed from almost universal non-appointment surgeries to appointment-only systems.

My practice, of 7200 patients, has always seen patients on a first come, first served basis, with the exception of antenatal and childhood immunization clinics and practice nurse appointments outside of surgery hours. Prompted by the complaints of a small, but vociferous, minority of patients and by some of the partners' hopes of bringing predictability and order into the daily routine, it was decided to ballot approximately 1000 consecutive attenders at all routine surgeries. When reporting to reception, each patient was given a printed slip which stated that the possibility of introducing an appointment system was being considered. Patients were asked to tick the box which most closely corresponded with their views: 'I would like an appointment system' or 'I would prefer the present system to continue'. Patients were also invited to make comments.

Of the 1007 patients 698 patients voted in favour of the present non-appointment system continuing, 295 wanted appointments and 14 were undecided. Typical comments from the first category were: 'I like to know I can see the doctor when I am ill, not two days later', 'I have moved from practice X to get away from appointments', 'Why spoil a good system?' and even 'I like a good read'. In the second category comments were far fewer in number, and tended to point to the rather long waiting times that exist under the present system. Even advocates of an appointment-only system expressed concern at not being seen quickly for urgent matters. Many of the 14 undecided

patients wanted a combination of the two systems.

Clearly, a sizeable majority of patients are happy for open surgeries to continue. Having decided to seek medical advice, most patients wish to do so as soon as possible. Many people's perception of appointment systems, be it based on personal experience or anecdotal evidence, is that they delay and restrict access to the doctor. In a previous study into patients' attitudes towards appointments (Townshend P, personal communication) a similar distribution of patients preference was found. Interestingly, in that study the sub-group in favour of appointments showed a predominance of elderly people and unemployed men, rather than the working population one might have expected. The same study also confirmed the finding of Cartwright, that appointments increased patients' expectations regarding waiting times:¹ although appointments shortened the time spent in the waiting room, dissatisfaction was increased because even a short delay after the appointed time was felt to be intolerable.

Following two patient surveys, made about three years apart, showing, if anything, an increasing dislike of appointment systems, my practice will continue to operate open surgeries.

THOMAS P S BLOCH

Barn Close Surgery
High Street
Broadway
Worcester WR12 7DJ

Reference

1. Cartwright A, Anderson R. *General practice revisited*. London: Tavistock, 1981.

GP-optometrist cooperation and referral in primary health care

Sir,

As a group practice, we have recently extended and improved our health centre. A self-contained ophthalmic suite comprises part of the new facilities and this is rented by a local optometrist. While planning the details of the ophthalmic suite, the optometrist and I also developed an ophthalmic referral card. This card is now used routinely in our practice for referrals to the optometrist of the patient's choice.

The referral card is a folded card with four sides which fits into the patient's notes. The first side gives the patient's name, address, date of birth, NHS number and telephone number; the general practitioner's name, address and

telephone number; the optician to whom the patient is referred and the reason for referral; the patient's relevant past medical history including hospital reference number (if known); and family/social history. The second side gives the patient's drug therapy and allergies; clinical history and findings, including blood pressure and urinalysis results; and the opinion required including boxes to tick when intra-ocular pressure or fundal photography are required. These details are signed and dated by the referring general practitioner. The third side is headed clinical notes and together with side four is left free for extra information, clinical notes and follow up as required.

Why should we not communicate with and utilize the skills of our ophthalmic colleagues more readily? Few general practitioners have immediate access to slit lamp examination for acute anterior eye conditions. Would it not be more appropriate to build up a better working relationship with our optometrist colleagues for urgent eye opinions than burden our local casualty department where examination may be carried out by a doctor with fairly limited skills in ophthalmology?

Harrison and colleagues have shown that properly equipped ophthalmic opticians are better able to diagnose accurately and refer patients with glaucoma than general practitioners.¹ Ocular hypertension is therefore best managed by the ophthalmic optician and, when appropriate, hospital referral arranged in conjunction with the general practitioner. Accurate and cost effective screening and follow up of the families of patients with glaucoma could also be organized by the optometrist.

Patients with more chronic visual problems, such as hypertensive or diabetic patients, could readily be referred, using the ophthalmic referral card to an optometrist. Harrison and colleagues have also shown that ophthalmic opticians have greater skills than general practitioners in the early detection of diabetic retinopathy.¹ It would, therefore, seem reasonable to refer diabetic patients to them for initial screening. Follow up, at mutually agreed intervals, could then be arranged in conjunction with the practice diabetic and hypertension clinics and any hospital ophthalmic referral be made by the optometrist and general practitioner in consultation.

Concern has been expressed that the restrictions on the availability of free sight tests deter people from using optometrists.² There are, however, important exemptions to those required to pay for sight tests. These include low income groups,

all diabetic patients, patients with glaucoma and anyone over 40 years of age with a family history of glaucoma in a parent, brother or sister — the main groups for which general practitioner-optometrist cooperation would be most beneficial.

The advantages of better communication and cooperation between general practitioners and optometrists would be: a better standard of ophthalmic care by both general practitioner and ophthalmic optician; a reduction in unnecessary hospital referrals; a shortening of waiting times for outpatient appointments; and savings to the National Health Service.

The optometrist working from our health centre has expressed support for the idea of inviting our local ophthalmologists to undertake occasional clinics in the ophthalmic suite. Such a development would allow a three way referral service for ophthalmological problems between general practitioner, optometrist and consultant ophthalmologists. This would be a helpful, cost effective service and the ophthalmic referral card could become a useful, efficient means of communication between all concerned.

ARTHUR D JACKSON

Holmes Chapel Health Centre
London Road
Holmes Chapel
Cheshire CW4 7BB

References

- Harrison RJ, Wild JM, Holey AJ. Referral patterns to an ophthalmic outpatient clinic by general practitioners and ophthalmic opticians and the role of these professionals in screening for ocular disease. *BMJ* 1988; **297**: 1162-1167.
- Lewis MR. Referrals by optometrists to general practitioners (letter). *Br J Gen Pract* 1990; **40**: 169.

Fatal cryptosporidiosis in association with Sheehan's syndrome

Sir,

Cryptosporidiosis is a common cause of acute gastroenteritis in immunocompetent individuals, particularly in children, and of chronic, persistent, severe diarrhoea in the immunocompromised.¹⁻³ Healthy young adults may acquire infection by family contact with children and the disease in this age group may be severe.^{2,3} We report a fatal case of cryptosporidiosis in a 33 year old woman who had received thyroxine and hydrocortisone replacement therapy for Sheehan's syndrome for the previous six years.

The five month old son of the woman was admitted to hospital with a two week

history of diarrhoea; cryptosporidium oocysts were detected in the faeces and no other pathogens were present. The mother then became unwell with vomiting and diarrhoea and her partner was given general advice for gastroenteritis by a locum general practitioner. Four days later she died, following a sudden and rapid deterioration in her condition.

Post-mortem examination suggested dehydration and confirmed the features of Sheehan's syndrome, with a pituitary gland largely replaced by fibrous scar tissue. The adrenal and thyroid glands also showed severe atrophy. Cryptosporidium oocysts were detected in the faeces but no other enteric pathogens were present. A post-mortem blood sample showed an elevated urea level (10.8 mmol l⁻¹) (suggesting dehydration) and a normal cortisol level of 301 nmol l⁻¹ which indicates that there had been no response to the stress caused by the severe infection.⁴ Death was attributed to circulatory failure and no other natural disease was found.

Severe metabolic disturbance and death has been attributed to cryptosporidiosis in a small number of immunocompetent adults.³ In this case, intramuscular hydrocortisone administered for the duration of the acute, gastrointestinal illness may have prevented the fatal outcome.⁴

D S TOMPKINS

P A BATMAN

Bradford Royal Infirmary
Duckworth Lane
Bradford BD9 6RJ

References

- Wolfson JS, Richter JM, Waldron MA, et al. Cryptosporidiosis in immunocompetent patients. *N Engl J Med* 1985; **312**: 1278-1282.
- Casemore DP. The epidemiology of human cryptosporidiosis. *PHLS Microbiology Digest* 1989; **6**: 54-66.
- Casemore DP. Human cryptosporidiosis. In: Reeves DS, Geddes AM (eds). *Recent advances in infection*. Volume 3. Edinburgh: Churchill Livingstone, 1989: 209-236.
- Drury PL, Besser GM. Adrenal cortex. In: Hall R, Besser GM, (eds). *Fundamentals of clinical endocrinology*. 4th edition. Edinburgh: Churchill Livingstone, 1989: 153-184.

Preventive care of elderly people

Sir,

In his editorial (September *Journal*, p.354) Dr Tulloch states that there is 'clear cut evidence from controlled trials that screening and functional assessment reduce institutional care significantly among elderly people'. This view is supported by four references, one of which is in Norwegian. The study by Hendriksen and colleagues¹ was conducted in