

nitrite. Taking the results of culture as the gold standard for defining an infection, the nitrite test gave 43 true positives, 109 true negatives, four false positives and 88 false negatives. From these figures, test parameters were calculated³ giving a sensitivity of 33%, a specificity of 97%, a positive predictive value of 92% and a negative predictive value of 55%.

The value of the nitrite test must be assessed according to the circumstances in which it is used. For example, results obtained in elderly, male or infant populations, and in symptomatic and asymptomatic patients will differ owing to the different prevalence of urinary infection in these groups. In a laboratory series, prevalence will be approximately 20%,⁴ in screening of asymptomatic schoolgirls approximately 1.5%,⁵ and for symptomatic patients in general practice approximately 50%.^{1,2} This makes for widely differing predictive values, even when the sensitivity and specificity are the same.⁶

Few studies on the nitrite test have been reported from general practice. Ditchburn and Ditchburn,⁷ using a different test strip, obtained slightly better results than those reported here, while the data of Dobbs and Fleming⁸ cannot be compared directly as they did not culture all urine samples tested with N-Labstix.

Our results show that N-Labstix produces a disappointingly high proportion of false negative nitrite results, which in turn gives a poor predictive value for a negative test. Unless this problem can be overcome, we conclude that the nitrite test in the general practitioner's surgery will not be helpful in deciding whether symptomatic patients have a urinary infection or urethral syndrome.⁹

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A4 medical records

Sir,

I was sad to read Julian Tudor Hart's statement that less than 5% of practices in England and Wales use A4 records and that the Department of Health has no plans to encourage their use (March *Journal*, p.116). A4 medical records were adopted as the official medical record for patients in Scotland with effect from 1 April 1990¹ and are currently used by some 80% of general practitioners in this country. I will resist the temptation of drawing any conclusions from these facts.

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Computer generated discharge summaries

Sir,

Since February 1991, the Cornwall Stroke and Rehabilitation Unit has been providing computer generated discharge summaries for patients leaving the unit. A brief description is given of this important development in the field of medical rehabilitation and its relevance in the new style National Health Service where purchasers are being asked to review provider contracts, to assess both the organization of and access to rehabilitation services.

The rehabilitation medical data index is a specialized database linked into the patient administration system database for Cornwall. Basic information on each patient, such as name, date of birth and

a medical history, is automatically incorporated into the medical data index. All episodic information on each patient, including test results and outcome measures such as mobility range and dependency levels, is taken via code lists and added to the rehabilitation medical data index by the secretary on the ward during patient admission. Code lists in the rehabilitation medical data index cover all parameters of patient information, from the patient's type of accommodation to details of carers. The use of code lists forces clearer thinking, prevents errors in data entry and so allows retrieval of uncorrupted data. The choice of data collected was influenced by bodies such as the King's Fund consensus on stroke¹ and the British stroke research group.² Written records are kept in parallel for medico-legal reasons.

The discharge summary produced is dependent on the information stored in the rehabilitation medical data index for that patient. The index has been set up with summary print formats which produce a report whose order follows that of a conventional discharge letter, but which is in a standardized and readily understandable form. A brief narrative of progress is added just prior to discharge, together with details of the patient's dependency levels and the community follow-up plan. The discharge summary includes information relevant both to the general practitioner and to other involved parties.

Under the data protection act, each patient is entitled to see stored information on him or herself, and for this reason the contents of the discharge summary are shown and explained to the patient before discharge. Occasionally, a delicate balance has to be struck if any details have to be excluded from the discharge summary.

Measuring the effectiveness of stroke management is difficult, but scores have been produced assessing dependency for seven basic faculties: mobility, continence, personal hygiene, dressing/undressing, feeding/drinking, food preparation and communication. These should not be confused with activities of daily living indices;^{3,4} our scores measure the dependency of the patient on people or equipment. The assessment of dependency for seven basic faculties is a relatively crude measure, but clearly demonstrates increase in independence during rehabilitation. In future, as part of the audit of stroke rehabilitation, it will be essential to define any recovery or regression which occurs at points following discharge from hospital and, with this in mind, these scores can be modified both by the general practitioner and by

other involved paramedical staff, such as physiotherapists.

This work is among the first of its kind in the United Kingdom and with time may prove to be a powerful system for evaluating and improving the care of patients with a stroke. As has recently been pointed out such research is much needed.⁵

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GP referrals for x-ray examination

Sir,

Recent studies^{1,2} of referral for x-ray examinations have recommended active promotion of the Royal College of Radiologists' guidelines³ among general practitioners. These guidelines are not intended to replace clinical judgement but to enhance it in times of doubt or difficulty. However, as far as we are aware general practitioners who refer patients to St George's Hospital, London, for diagnostic imaging have not yet received copies of the guidelines.

As a pilot study on compliance with x-ray guidelines in general practice, x-ray referral forms were analysed for 518 general practice patients who attended the department of radiology at St George's Hospital, London on one day each week during July and August 1991. A total of 598 patient examinations were performed.

The types of x-ray requested were chest 32.6%, spine 28.3%, joint 24.9%, bone 10.5%, abdomen 1.2%, and others 2.5%. The information on each x-ray form was assessed by the authors for compliance with the Royal College of Radiologists' guidelines.³

A total of 389 requests (65.1%) conformed to the guidelines; 209 requests (34.9%) did not. However, this is better than found in a review of 100 general practitioner requests for lumbar spine radiography where 52% were judged to be outside the guidelines.² Overall, 37.5% of x-rays showed positive clinical findings. This rate is comparable with previous studies in general practice.⁴

It has been estimated that at least 20% of radiological examinations carried out in National Health Service hospitals are clinically unhelpful.¹ Although evidence suggests that general practitioners use direct access to x-ray diagnosis responsibly and with discrimination,⁵ it seems likely that there may be room for improvement. Our data lend additional support to previous recommendations for the promotion of the Royal College of Radiologists' guidelines among general practitioners.

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General practice research

Sir,

We read with interest the helpful and informative discussion paper by Murphy and colleagues (April *Journal*, p.162). As researchers who continue to benefit from fruitful collaboration with general practitioners we found much in the paper that accords with our experience. However, we have noted a worrying trend over the last year, that general practitioners are increasingly reluctant or unable to participate in such research.

There remain three fundamental barriers to research in general practice: lack of a solid academic tradition in general practice; increasing emphasis on financial remuneration as a consequence of health service reorganization and fundholding; and the limited value placed on research output in the career structure of general practitioners.

Only when these problems are addressed will research in primary care settings reach its true potential.

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Telephone consultations

Sir,

I read with interest the editorial by Virji (May *Journal*, p.179) and the research papers on telephone consultations by Hallam, and Nagle and colleagues (May *Journal*, p.186, 190) as I had undertaken a project in my training practice investigating doctor initiated telephone consultations. The study was carried out to establish whether telephoning in advance those patients booked to attend the surgery the following day would provide an efficient and acceptable additional service. The hypothesis was that the time saved by patients no longer wishing to attend the surgery following a telephone consultation would be greater than the time spent telephoning.

Using medical notes already prepared for the next day's surgery no additional note retrieval was required and patients were telephoned after evening surgery finished at 18.00 hours in the order of their booked attendances. If the patient was a child, the parents were telephoned. Patients were not telephoned if it was known from a previous consultation that they would need a face to face consultation or if the telephone call would be likely to cause embarrassment. Clearly, the patient needed to have a telephone and the number needed to have been recorded in the notes. On four evenings in different weeks, telephone calls were made to eight, four, five and three patients, respectively, which took 45 minutes, 30 minutes, 25