- 3. Royal College of General Practitioners. Healthier children thinking prevention. Report from general practice 22. London:
- RCGP, 1982.
 4. Bolden KJ. Developmental assessment: necessity or luxury? Proc R Soc Med 1976; 69: 13-16.
- 5. Freer CB, Ogunmuyiwa TA. Pre-school developmental screening in a health centre — the problem of non-attendance. J R Coll Gen Pract 1977; 27: 428-430.
- 6. Hendrickse WA. How effective are our child health clinics? Br Med J 1982; 284: 475-477.
- 7. Starte GD. Developmental assessment of the young child in general practice. *Practitioner* 1974; 213: 823-828.

 8. Bain DJG. The results of developmental screening in general
- practice. Health Bull (Edinb) 1974; 32: 189-193.

 9. Hart H, Bax M, Jenkins S. Use of a child health clinic. Arch
- Dis Child 1981; 56: 440-445.
- Barber JH. Preschool developmental screening the results of a four-year period. Health Bull (Edinb) 1982; 40: 172-178.
- Wilmot JF, Hancock S, Bush J, Ullyett P. Paediatric surveillance: performance review and the primary care team. J R Coll Gen Pract 1984; 34: 152-154.

- 12. Hartropp P. Child care. Update 1986; 33: 463-469.
- 13. Drillien C, Drummond M. Developmental screening and the child with special needs. London: Spastics International Medical Publications, 1983.
- 14. Kholer L. Early detection and screening programmes for children in Sweden. In: McFarlane JA (ed). Progress in child health. Edinburgh: Churchill Livingstone, 1984.
- 15. Kennedy FD. Have school entry medicals had their day? Arch Dis Child 1988; 63: 1261-1263.
- 16. Hall DMB (ed). Health for all children. A programme for child health surveillance. Oxford University Press, 1989.
- 17. Burke P, Bain J. Paediatric developmental screening survey of general practitioners. J R Coll Gen Pract 1986; 36: 302-306
- Secretaries of State for Health, Wales, Northern Ireland and Scotland. Working for patients (Cm 555). London: HMSO, 1989.
- Townsend P, Davidson N (eds). Inequalities in health. The Black report. Harmondsworth: Penguin, 1982
- Office of the Chief Scientist, Department of Health and Social Security. Two reports on research into services for children and adolescents. London: HMSO, 1980.

Direct access to hospital investigative facilities: threats and opportunities

IRECT access for general practitioners to hospital pathology and radiology investigations was recommended in the UK before the introduction of the National Health Service, but in 1948 these services were largely restricted to hospital practice. Excessive outpatient referrals were one result.

The case for open access to these and other facilities is strong; it is widely accepted that the resulting enhanced role of the family doctor is beneficial to patient management^{1,2} and raises the standard of primary care. The joint working party of the Royal Colleges of General Practitioners and Radiologists, for example, recommended that family doctors should have the same right of access to radiological imaging facilities as consultants.2 Despite this, there is still wide variation of access to certain services, from complete to virtually none.^{3,4} Of the districts surveyed by Thorpe, 5 under half had direct access to ultrasound scanning or contrast examinations (other than barium meals and cholecystograms). Inconsistency in the availability of services not only between regions but between neighbouring health authorities in the same region has been demonstrated⁶ suggesting that there is no coordinated policy at regional or national level to ensure an equitable and logical distribution of open access services.

Variation between health authorities

The reasons why open or direct access is so variable are twofold: there is resistance from some consultants who feel that their departments will be swamped by frivolous and unnecessary requests,4 and there are restrictions by hospital managers who for financial reasons seek (or are forced) to limit demand.6 These attitudes and prejudices dictate which facilities are provided, as although 'open access' has been Department of Health policy for years, its implementation has been left largely to the hospitals. Neither argument for restricting access to hospital services is justified, given that the evidence points towards extending open access, not restraining it. In general, such services are used responsibly, efficiently and with discrimination.⁷⁻⁹ Fears that increased availability leads to increased demand¹⁰ are unfounded; a new service usually has its peak demand within the first two years, settling down thereafter. 11-13 General practitioner requests for X-rays, for example, remain at about 10% of the work of most departments. 6,14 A low level of general practi-

tioner usage (but wide variation) of pathology services has also been demonstrated.4 No noticeable abuse of direct access to Xray departments^{7,15,16} has been seen and in many respects the general practitioner's use of unrestricted facilities compares favourably with that of outpatient departments.8 Furthermore there is evidence that restricting general practitioner access actually increases the workload and pressure on hospital services. 4,8,9 In some districts it is stated that certain services (for example intravenous pyelogram) are only available 'by consultant referral to limit demand'.6 If a patient needs an investigation or service, it is (at the least) inefficient to put obstacles in the way. If the view is that the investigation is being performed unnecessarily, then discussion, constructive suggestions and education are the answers, not blanket restrictions which penalize those professionals (and patients) who use the facilities responsibly and with discrimination. Waiting lists work in the same way to restrict direct access and again the eventual result is more. not less, strain on the hospital services. Some X-ray departments now publish guidelines for local general practitioners to indicate their particular imaging policies. Many radiologists feel that they are in the best position to decide which imaging test is the most appropriate in any given clinical situation, a point recognized by the joint working party of the two royal colleges.² An X-ray request thus should be analogous to a request for a clinical outpatient consultation.²

Variation between general practitioners

Like referrals to outpatient departments, however, the rates of referral to radiological departments and other laboratories show considerable variation among general practitioners, even when standardized for important patient characteristics, indicating that doctors have unique 'referral thresholds'. 17 Forbes 18 reported a 40-fold variation in general practitioners' use of local laboratories in Kent in the 1960s, while Ashley¹⁹ found discrepancies of up to 25-fold between different hospitals in the use of laboratory tests for the same case. Smith9 demonstrated a dramatic variation in the referral rate for diagnostic radiology: while the average number of referrals was two each week, one doctor referred only one patient in six months while two doctors referred over 100 each. Even greater variation in these referral rates has been demonstrated between general practitioners with differing com-

mitments, for example, part-timers (who have a higher investigation rate), full-timers, trainees and even those in different age groups.²⁰ No clear explanations for the variation in referral rates have been forthcoming; Wilkin and Smith²¹ failed to show that referrals were demand led and Morrell and colleagues²² concluded that the variations reflect diagnostic uncertainty. While some doctors are undoubtedly guilty of over use, it should be of equal concern that others do not use the available diagnostic services enough. It would be interesting to see if the introduction of guidelines had any influence on local variation in referral rates between different practitioners. To our knowledge no such study has yet been attempted.

General practitioners' decision-making

The decision to perform a diagnostic test is a complex matter of balancing the costs (in every sense) against the potential benefits, at a certain level of clinical uncertainty. In practice, such decision-making is often a subconscious process based on past experience, and forms the basis of clinical judgement. Four main motives for initiating investigation in general practice have been suggested — to confirm a diagnosis or obtain supporting evidence, to exclude a diagnosis, to monitor treatment or surveillance, and screening.²³ Smith's⁹ study found the top four reasons were: to aid diagnosis (84.3%), patient reassurance (11.5%), patient request (2.4%) and medico-legal (0.2%). Although hospital practitioners have the same reasons for initiating investigations the balance is clearly different. Negative findings may be as important to the general practitioner as positive ones, and have been shown to be therapeutic to the patient. 15 Most general practitioners are convinced of the value of reassurance but few radiologists would agree that this alone justifies X-ray. A negative result is not an unnecessary test and is not adding to wasting resources as some have advocated.²⁴ But frequently the general practitioner has more than one clinical purpose in referring his patient.

General practitioners' use of direct access facilities differs from that of outpatient departments in that, while the distribution in the type of investigation requested by these two sources is remarkably similar, general practice referrals have been shown to produce fewer repeat and follow-up requests, fewer multiple requests and a greater proportion of abnormal results.8 Wright even demonstrated a higher standard of referral form than from outpatient requests.8 Other studies have also shown that general practitioners compare favourably with hospital staff in the detection of abnormalities. 7,15,25 Some demonstrate no less a successful pick-up rate for certain investigations (such as barium enemas)²⁶ than hospital doctors, which is impressive when the unsorted nature of the general practitioner's patient is considered. It is doubtful, however, whether pick-up rates or comparison of performance with doctors from other specialties are helpful; as has been shown, the general practitioner has a different approach, using tests to exclude rather than confirm a diagnosis. 4,22 Pick-up rates take no account of the considerable value of the negative result; in general practice a low positive yield from simple low cost tests used to exclude readily diagnosable disease is not only acceptable, but is the essence of good primary care. A better criterion against which to assess appropriate usage would be the 'expected result', that is, confirmation of the general practitioner's initial diagnosis of abnormal or normal. A high percentage of general practitioners get the X-ray results they expect.²²

Benefits of direct access

Smith's study estimated that 66% of patients would have required an appointment at a hospital clinic if direct access to radiology had not been available. Other studies also suggest that

open access reduces the load on hospital beds and outpatient clinics, with one claiming that open access led to a 15% reduction in new medical outpatient attendances.⁴ An open access gastroscopy service enabled 88% of patients examined (with an abnormality detection rate of 58%) to remain under general practice management without requiring a subsequent specialist referral.²⁷ A study of an orthopaedic appliance clinic²⁸ showed that general practitioners used it with discretion and skill and that only a few patients required a specialist opinion. The need to join and thus lengthen a long outpatient queue to see a specialist to get, for example, a soft collar (44% of appliances supplied by the above clinic) helps no one and actually wastes resources. With open access to a sigmoidoscopy/proctoscopy service, requests for barium enemas fell substantially.²⁹ Direct access to physiotherapy has been shown to lead to prompter treatment, a quicker recovery, and less use of consultant outpatient clinics.30 The Duthie31 report recommended open access orthopaedic clinics, but they are slow arriving, despite the report originating from the Department of Health.

Open access is Department of Health policy, partly because the efficiency of such a system can clearly be seen from a central viewpoint, but locally it will always meet obstacles when primary care and hospital budgets are separated. The government's white paper Working for patients³² seeks to make health services more responsive to the needs of the consumer, to raise standards of primary care and to improve value for money. The development and extension of open access to diagnostic facilities by general practitioners is essential if these aims are to be realized.

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References

- Godber G. Joint working party on general medical services. London: HMSO, 1973.
- Royal College of General Practitioners/Royal College of Radiologists. Joint working party report on radiological services for general practitioners. J R Coll Gen Pract 1981; 31: 528-530.
- 3. Morgan G. Open access to radiological services: availability to general practitioners in the UK. Br Med J 1985; 291: 1175-1176.
- Green RH. GPs and open access pathology services review of the literature. J R Coll Gen Pract 1973; 23: 316-325.
- Thorpe GW. Use of hospital-based investigations. J R Coll Gen Pract 1987; 37; 482-483.
- Douglass RA, Hungin AS. Discrepancies in the availability of open access services: comparison between Northern and Oxford regions. J R Coll Gen Pract 1988; 38: 28-29
- Cook PL. Experience in the first year of an open door X-ray department. Br Med J 1966; 2: 351-354.
- Wright JJ, Swinburne K, Inch J. The general practitioner's use of diagnostic radiology. J R Soc Med 1979; 72: 88-94
- Smith GL. An evaluation of direct access radiology in general practice. J R Coll Gen Pract 1979; 29: 539-545.
- Darby SC, Kendall GM, Rae S. The association between frequency of diagnostic radiological examinations and allocation of resources in the National Health Service: implications for future demand. Health Trends 1981; 13:
- 11. Wallace BB, Millward D, Parsons AS, Davis RH. Unrestricted access by general practitioners to a department of diagnostic radiology. J R Coll Gen Pract 1973; 23: 337-343
- 12. Anderson JD. Requests for X-ray examinations from general practitioners and hospital out-patients. Lancet 1968; 2: 97-99.
- Lewis JN. The Belfast experiment in direct access to contrast radiography. *Ulster Med J* 1978; **47:** 157-161.
- Department of Health and Social Security. Health and personal social services statistics for England 1978. London: HMSO, 1980.

 15. Davis RH, Williams JE. X-ray unit for general practitioners.
- Br Med J 1968; 1: 502-504.

- 16. Conry BG, McLean AM, Farthing MJG. Open access endoscopy...or barium meal? Br Med J 1985; 291: 900-901.
- Cummings RO, Jarman B, White PM. Do general practitioners have different referral thresholds? Br Med J 1981; 282: 1037-1039.
- 18. Forbes GB. The use of hospital laboratory facilities by general
- practitioners. J R Coll Gen Pract 1966; 11: 143-149.

 19. Ashley HSA, Pasker P, Beresford JC. How much clinical investigation? Lancet 1972; 1: 890-892.
- 20. Mills KA, Reilly PM. Laboratory and radiological investigations in general practice. Br Med J 1983; 287:
- 1033-1036, 1111-1113, 1198-1190, 1265-1268. 21. Wilkin D, Smith AG. Variation in general practitioners' referral
- rates to consultants. J R Coll Gen Pract 1987; 37: 350-353.

 22. Morrell DC, Gage HC, Robinson MA. Referral to hospital by general practitioners. J R Coll Gen Pract 1971; 21: 77-85.

 23. Lloyd G. The use of investigations in a general practice. J R
- Coll Gen Pract 1973; 23: 326-336.
- Sandler G. Costs of unnecessary tests. Br Med J 1979; 2: 21-24.
 Petrie JC, Needham CD, Gillanders LA. Alimentary radiology findings in NE Scotland region (1967-70). Br Med J 1972; 1: 78.
 Vellacott KD, Virjee J. Audit in the use of barium enemas.
- Gut 1986; 27: 182-185.
- 27. Hungin AS. Use of an open access gastroscopy service by a general practice: findings and subsequent specialist referral rate. J R Coll Gen Pract 1987; 37: 170-171.
- 28. Payne S, Ramaiah RS, Jones DT. Open access to orthopaedic
- appliances for general practitioners. Br Med J 1987; 294: 485-486. 29. Donald IP, Fitzgerald-Frazer JS, Wilkinson SP. Sigmoidoscopy/ proctoscopy service with open access to general practitioners. Br Med J 1985; 290: 759-761.
- Gentle PH, Herlihy PJ, Roxburgh IO. Controlled trial of open access physiotherapy service. JR Coll Gen Pract 1984; 34: 371-376.
- 31. Duthie RB, Bussey AL, Da Costa OS, et al. Orthopaedic services: waiting times for out-patient appointments and in-patient treatment (Duthie report). London: HMSO, 1981.
- Secretaries of State for Health, Wales, Northern Ireland and Scotland. Working for patients (Cm 555). London: HMSO, 1989.

HANDBOOK OF PREVENTIVE CARE FOR PRESCHOOL CHILDREN

Second edition 1988

The first edition of the Handbook of preventive care for preschool children, published in 1984, was the result of a joint working party between the College and the General Medical Services Committee. The College was responsible for the handbook and the General Medical Services Committee was responsible for the accompanying record cards, each group having cross-representation.

A second edition of the handbook has now been published by the College working party, chaired by Dr Colin Waine. This includes a complete review of the text and takes into account many of the comments made about the earlier edition. The record cards are again included.

The Handbook of preventive care for preschool children is available from the Central Sales Office, Royal College of General Practitioners, 14 Princes Gate, Hyde Park, London SW7 1PU, price £5.00 including postage. Payment should be made with order. Access and Visa welcome (Tel: 01-225 3048).

Handbook of preventive care for preschool children: correction

Paragraph 2.26 on page six of the College's publication Handbook of preventive care for preschool children reads: 'In Britain measles, mumps and rubella immunizations are now to be given in the second month of life'. This should read: 'In Britain measles, mumps and rubella immunizations are now to be given in the second year of life'.

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