Similar teaching has been available on an introductory course for casualty officers since 1984[2]; but here again the problem of maintaining the momentum of teaching depends on the enthusiasm of intermediate and senior staff in the accident and emergency department.

S S TACHAKRA

Central Middlesex Hospital,
London NW10 7NS

1 Walker A. Teaching doctors practical procedures. *BMJ* 1991;**302**:306. (9 February.)
2 Tachakra SS, Beckett MW. An induction course for casualty officers. *British Journal of Accident and Emergency Medicine* 1987;2:8.

Medical registrar training

SIR,—In 1952 the Ministry of Health and the University of London agreed that senior medical staff at the Royal Postgraduate Medical School, Hammersmith Hospital, should be university appointments whereas junior staff were NHS appointees, and the number of junior staff was increased to provide postgraduate training opportunities for British graduates. In March 1990 the France committee commended this example of an organisational model that integrated academic and clinical resources in support of a common goal.[1] The Joint Planning and Advisory Committee proposals[2] linking the number of medical registrars directly to the needs of the NHS and to consultant posts pose a serious threat to an approach oriented to academic medicine. To assess the impact of the proposed reductions in numbers of registrars we investigated the progression and training programmes of medical registrars at Hammersmith during 1980-90 to determine whether a high proportion of these registrars still pursued academic careers.

Questionnaires were circulated to all 11 specialist units of the department of medicine, requesting information on the subsequent employment of doctors holding NHS funded registrar posts between 1 January 1980 and 31 December 1989. Information was obtained on sex, country of origin, dates of employment, subsequent employment (with source of funding if appropriate), and position in July 1990 to determine how many had obtained permanent academic and clinical posts.

Over the period 1980-90, 175 doctors had occupied NHS funded medical registrar training posts at the Hammersmith Hospital; 150 were British nationals, with a male to female ratio of 5·5:1. Nearly two thirds (110) went on immediately to full time research training posts, and most spent three years in basic research training often as Medical Research Council (57) or Wellcome (11) training fellows. Over the period, 27% of the 214 MRC training fellowships in internal medicine were awarded to Hammersmith registrars.

The career destination of medical registrars was ascertained from their present jobs; obviously, many are still in training. Of the 1980-4 registrars, 68% (56 of 82) have achieved consultant status or equivalent, while only 12% (11 of 93) of the 1985-9 registrars have completed their training. Over a third (38%, male to female ratio 8·6:1) of the cohort have already obtained senior lecturer or consultant grade positions, and this was used to determine the proportion continuing in academic medicine. Thirty seven were in full time academic posts, as professors, readers, or senior lecturers (31 in the United Kingdom and six abroad), and 30 were in predominantly clinical jobs (19 in the United Kingdom and 11 abroad); five others were working outside the NHS hospital system. If doctors working outside Britain are excluded (usually those who returned to their countries of origin) 31 of the ex-registrars are in full time academic posts and 19 are in NHS clinical posts (11 in teaching hospitals and eight in non-teaching hospitals). The strong bias toward academic posts is also seen at senior registrar level, with 20 ex-registrars now in lecturer posts and 12 in NHS senior registrar posts.

This survey shows that of the medical registrars at Hammersmith in the past 10 years, most pursued academic careers, nearly two thirds proceeded to research fellowships immediately, and a substantial proportion returned to academic posts afterwards. Five have been appointed to chairs in the United Kingdom, four are readers, and 20 are senior lecturers. Only about a quarter of the cohort will eventually become NHS consultants.

There may be grave consequences for academic medicine in the United Kingdom if the number of registrar posts at institutions like the Hammersmith is linked solely to NHS job opportunities at consultant level.

DAVID WYNICK
ANDREW J REES
JONATHAN WAXMAN
STEPHEN R BLOOM
SIR COLIN T DOLLERY

Department of Medicine,
Hammersmith Hospital,
London W12 0NN

1 Steering Group on Undergraduate Medical and Dental Education. *Second report*. London: Health Publications Unit, 1990.
2 Joint Planning and Advisory Committee. *Definitive quotas for career registrars*. London: Department of Health, 1990. (EL(90)P(47).)

Spontaneous pneumothorax

SIR,—Dr Douglas Seaton and colleagues report an elegant and high tech method—cost of apparatus £2340—to predict the outcome of manual aspiration of spontaneous pneumothorax.[1]

May I ask if they have compared these results with those obtained by using sensitive Stott's apparatus or the rather cruder Maxwell's box? Both detect a continuing leak but seem to be underused. Before investing in a specialised flame ioniser—and the good will of pharmaceutical suppliers—I would urge all chest physicians to scour the cellars and storerooms of their hospitals for a Stott's apparatus, or even for a Maxwell box.

They—and their patients—will be rewarded.

I LENOX-SMITH

Welwyn AL6 9TE

1 Seaton D, Yoganathan K, Coady T, Barker R. Spontaneous pneumothorax: marker gas technique for predicting outcome of manual aspiration. *BMJ* 1991;**302**:262-5. (2 February.)

AUTHORS' REPLY,—Stott's apparatus and the Maxwell box were both used to introduce and remove gas from the pleural cavity in the era of the artificial pneumothorax. The Maxwell box incorporates an aneroid manometer and Stott's apparatus a simple U tube for measuring intrapleural pressure. Both these techniques fell into disuse with the advent of effective antituberculous chemotherapy. The equipment is no longer produced; indeed, any surviving examples of Stott's apparatus are probably now valuable antiques, and even the more robust Maxwell box cost about £350 when last marketed.

Any equipment incorporating a manometer could be used to detect an alteration in the position of the intrapleural pressure swing during breathing, indicating a large or moderate sized leak, but it is unlikely to be able to show the very small but nevertheless clinically important leaks detectable by the marker gas techniques that we have reported. Thus if 5 ml of labelled gas were to leak into a 2500 ml pleural space during the test the flame ioniser method would have no difficulty in detecting this (chlorofluorocarbon concentration more than one part per million). If, however, 5 ml were to enter the space during a pressure measurement with the Stott or Maxwell apparatus it would be undetectable.

On the question of "the good will" of the metered dose aerosol manufacturer, we would point out that whereas metered dose inhalers containing active medication must be paid for, placebo inhalers are available free of charge from Allen and Hanburys, Astra, Boehringer Ingelheim, Fisons, Glaxo, and Riker. One placebo canister containing 200 puffs would represent one year's supply for our average of 40 patients with spontaneous pneumothorax a year. Respiratory physicians could easily accumulate a sufficient supply now to last them for the rest of their professional lives.

DOUGLAS SEATON
KATHIR YOGANATHAN
THOMAS COADY
RICHARD BARKER

Department of Thoracic Medicine,
Ipswich Hospital,
Ipswich IP4 5PD

Referrals to rheumatology

SIR,—Dr P S Helliwell and Professor V Wright argue that the non-inflammatory musculoskeletal disorders seen in general practice should be managed by "the generalist" and imply that such disorders should not unnecessarily inflate rheumatology clinics.[1] May I juxtapose this viewpoint with the recent list of general practitioners' preferences for postregistration experience to which recruits should be exposed.[2] In spite of the fact that 20% of consultations in general practice are for musculoskeletal conditions, rheumatological experience was not even mentioned. It is clear that many doctors do not feel confident in this aspect of medicine. This reflects the inadequacy of rheumatological training in medical schools and the virtual absence of rheumatology posts in vocational schemes. Nor is this deficiency repaired by an osmotic acquisition of relevant knowledge and skills with general clinical experience. Open access to radiology, pathology, and treatment is widely available—yet the summit of some doctors' achievement is the overprescribing of non-steroidal anti-inflammatory drugs and a referral letter to a rheumatology clinic.

All doctors should be able to perform an adequate musculoskeletal examination and determine when a direct referral to a physiotherapist would be more appropriate than a rheumatological assessment; they should also possess simple manual skills—for example, they should be able to give injections for the carpal tunnel syndrome and tennis elbow, which are less difficult than venepuncture. Relevant training must be included in all vocational schemes without delay.

A J CRISP

Addenbrooke's Hospital, Cambridge CB2 2QQ

1 Helliwell PS, Wright V. Referrals to rheumatology. *BMJ* 1991;**302**:304-5. (9 February.)
2 Barber SG, Staveley K, Down A. Choosing a partner in general practice. *BMJ* 1991;**302**:53. (5 January.)

The well managed laboratory

SIR,—The report on the Audit Commission's investigation of pathology laboratories[1] seems to agree with the premise that price is the best marker available for good management and that centralisation is the most desirable solution for pathology laboratories.

In any discussion of the management of laboratories, however, it is important to distinguish