consultations per hour in the afternoon). By contrast, the potential consultation time for one of the doctors who held walk in surgeries was eight minutes per patient.¹ The nurses' fee for service work earned about one third of the salary costs borne by the practice.² Most of the tasks that the nurses carried out were simple, such as changing dressings, taking blood pressure, and testing urine; some of them could be delegated to staff who were not nurses, freeing resources for more difficult work such as giving advice on health. Mark R Williamson has argued that venepuncture should be delegated to receptionists.⁴ In the study by Fallon *et al* 9.2% of tasks were venepuncture. Delegating this task would free substantial time.

Fallon *et al*'s study supports the argument for rethinking skill mix in primary care, offers the hypothesis that nurses are popular with patients because they have more time than doctors to spend with patients, and provides further data on the relative costs in relation to consultations undertaken. Policymakers cannot assume that changing skill mix will save money as the advent of practice nurses has shown. With a massive iceberg of unmet need in the population,⁵ changing the skill mix is a way of providing a broader and more appropriate range of services, of freeing highly trained staff for the most demanding tasks, and of enriching the work experience of those who accept the delegated work.

RAJ BHOPAL
Professor

Department of Epidemiology and Public Health,
School of Health Care Sciences,
Medical School, University of Newcastle,
Newcastle upon Tyne NE2 4HH

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Database on clinical negligence

EDITOR,—Little interest has been shown in the steps that the Department of Health is taking to set up a central fund to spread the burden of indemnity payments and legal costs borne by trusts in connection with damage done by clinical negligence. Eventually, as the availability of legal aid becomes increasingly restricted, only the very poor and the very rich will be able to afford to take action in respect of clinical negligence. But trusts will have to bear the burden of past years for some time yet: claims will continue to arise from decisions made and actions taken since April 1991.

Another consideration is much more important than that of spreading the financial burden. When Mrs Bottomley's predecessor destroyed the mechanism operated by the defence organisations for spreading that burden in the hospital and community services he also destroyed the mechanism for collecting, analysing, and retrieving data on damage done by medical negligence in those services. Risk management is probably the only way of lessening the toll of medical negligence; to be effective it requires the formation and preservation of such a database. The defence organisations do their best with information from past years and from private and general practice, but they no longer have access to the vast fund of experience gained in the hospital and community services.

I hope that the department will combine the institution of a central fund with the creation of a

central collection agency that would store and analyse records of clinical negligence in the hospital and community services. The present arrangements for dealing with claims in respect of clinical negligence are sadly defective; they are damaging to patients and clinicians and are of benefit principally to lawyers. The benefit of risk management would be greatly enhanced by the institution of a central store of information about this continuing problem.

G.L.W. BONNEY
Formerly member of council, Medical Defence Union

London W2 3TT

Hospital vocational training

Local audits are helpful

EDITOR,—As a general practitioner, course organiser, and former senior house officer in Wessex, I am keenly aware of the problems in training for senior house officers.^{1,2} Paul Little's survey provides an overview of the situation in Wessex but hides the variation among hospitals and posts.¹ Since the senior house officers who were questioned were in post it has become regional policy for course organisers in general practice to review hospital vocational training.

In Portsmouth we send a questionnaire to all senior house officers on vocational training schemes in the final month of each of their posts. Anecdotal reports about a post may be misleading as they may reflect a poor senior house officer or a poor post. Cumulative data from a series of senior house officers in post provide a better base from which to argue for improvements.

In Portsmouth all doctors on general practice vocational training schemes spend two months in general practice before their hospital training and 10 months in general practice after it; as Little mentions, a quarter (four) of our hospital posts are three months long. Ten of the 12 senior house officers in post replied to our questionnaire in February this year. All stated that they received weekly teaching, and seven thought that it was relevant to general practice. They were not asked the standard of teaching or degree of relevance. Only half had applied for study leave, but all the applications had been successful. Asked how many months into the post it was before they felt competent, one replied never; one, four months; two, three months; two, two months; and two, one month; two did not answer. Problems identified were doing non-medical tasks (eight), lack of appraisal (nine), absence of education targets (eight), no clear source of careers advice (six), and not knowing where to go for support when suffering from stress (seven).

The "lost tribe" of senior house officers has many problems, but Wessex is starting to tackle them. Local educational audit is one way to facilitate improvements in hospital training.

MARK RICKENBACH
Course organiser

Postgraduate Medical Education,
Education Centre,
St Mary's Hospital,
Portsmouth PO3 6AD

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New post addresses deficiencies

EDITOR,—Vocational training is one success of British general practice. Paul Little rightly states that the hospital component needs reviewing as it does not reflect the views and training needs of those participating.¹ The general practice component has been criticised for not preparing

practitioners for their business role. Changes in general practice emphasising the management of chronic disease, health promotion, and survival in the marketplace highlight the need for an understanding of issues concerning public health and purchasing.

The general practice regional adviser for North West Thames and the medical adviser to Kensington and Chelsea and Westminster Family Health Services Authority have developed a post at the family health services authority that aims at addressing these inadequacies. A general practitioner who has just finished his or her vocational training is attached for one year to the family health services authority and department of public health with opportunities for training in public health medicine, NHS organisation and management, and the authority's role and responsibilities, emphasising their application to general practice. Through supervision and teaching the general practitioner develops an understanding of issues including the provision of health care related to needs, preventive medicine, planning, evaluation, and the management of services and how to put these skills into practice. He or she is actively involved in the planning and provision of health care as work undertaken contributes to the development of local services. Weekly sessions are set aside for clinical work to extend training in general practice, which is arguably too short.

The health service gains through the knowledge and skills acquired being carried into general practice, enabling the provision of better care. We hope that similar posts will become commonplace and no more curious than any other on the route to a career in general practice.

ROB HICKS
General practitioner on attachment
SALLY HARGREAVES
Consultant in public health medicine

Kensington and Chelsea and Westminster
Family Health Services Authority,
London W2 5XB

- 1 Little P. What do Wessex general practitioners think about the structure of hospital vocational training? *BMJ* 1994;308:1337-9. (21 May.)

Prevention of suicide

EDITOR,—David Gunnell and Stephen Frankel's review of the literature on the prevention of suicide highlights the difficulties for psychiatric services in identifying those at greatest risk.¹ This point is further illustrated by data from a follow up study conducted in Nottingham. Consecutive first admissions to Saxondale Hospital (the Nottinghamshire County Asylum) were identified for the years 1974 and 1975. A cohort of 91 patients, comprising all those aged between 16 and 65 who were admitted from the borough of Broxtowe (total population roughly 100 000), was followed up 16 years later. Case notes of index admissions were examined to establish a diagnosis (according to the *Diagnostic and Statistical Manual of Mental Disorders*, third edition, revised²) and obtain other relevant clinical and demographic data. All 91 subjects were traced either up to their death or to their current general practitioner. Death certificates were obtained for all of those who had died.

The index diagnoses ranged widely, but 41 patients met the criteria for a major depressive disorder and nine met the criteria for schizophrenia. A suicidal act relating to the admission was recorded for 28, and 36 were noted to have reported suicidal ideation. Sixteen patients had died. All of these deaths had been due to natural causes: none had been due to accidents or suicide and no open verdicts had been recorded.

Such a cohort reflects the social and diagnostic mixture of many psychiatric caseloads and should represent a high risk group in both the short and the long term. Gunnell and Frankel report that in

the month after discharge the risk of suicide is increased over 100-fold. Approximately 2.8% of those presenting after parasuicide will have committed suicide at eight year follow up. For those admitted to hospital the risk might be expected to be higher: 15% of patients admitted to hospital with depression commit suicide.³

The introduction of more complex discharge procedures and the care programme approach have led to a greater concentration on patients who require admission to hospital and suffer severe mental illness. The lack of new resources to implement these time consuming procedures may lead to reduced provision for patients presenting in crisis. The lack of suicides in our cohort, despite important risk factors, illustrates the difficulties for secondary services in effectively targeting those at high risk of suicide. The *Health of the Nation* aims at reducing the rate of suicide by 15% overall and by 33% among people with serious mental illness.⁴ In the absence of meaningful target groups, with limited and redirected resources we run the risk of targeting too specific a group, by default, and failing to meet those aims.

STEFFAN DAVIES
Registrar
ANN BUCKLEY
Registrar
PRAKASH NAIK
Senior registrar
ALAN S LEE
Consultant

Department of Psychiatry,
University Hospital,
Nottingham NG7 2UH

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Guidelines for anticoagulation

EDITOR,—We previously reported an audit of anticoagulant treatment in 100 inpatients with thromboembolic disease.¹ Review of the case notes showed incomplete adherence to hospital guidelines on anticoagulant treatment, suggesting that junior doctors either were unaware of the guide-

lines or found them inaccessible. The guidelines were therefore shortened to 11 important practice points and were pinned to all ward notice boards. The practice points also appeared on the computer screen whenever tests to measure the activated partial thromboplastin time with kaolin and the international normalised ratio to monitor heparin and warfarin treatment, respectively, were ordered through the hospital computer system. For reference, the full guidelines including the practice points were incorporated into the ward information books and sent to all junior doctors.

A second audit, of the case notes of 80 inpatients, detected improvement in the management of anticoagulation for 15 of the 19 standards outlined in the practice points (table). Most changes were small, but significant improvements were recorded in the proportion of patients having an initial coagulation screen, an initial intravenous bolus dose of heparin, a continuous intravenous infusion for heparin treatment, and warfarin on the first day of treatment ($P < 0.05$). In addition, for patients continuing warfarin treatment, therapeutic control was achieved by day 4 for 6 of 62 (10%) patients in the first audit and 15 of 52 (29%) patients in the second audit ($P = 0.02$). Small deteriorations in practice were noted for four standards in the practice points (table), but these differences were not significant. The deterioration in two aspects of management (having at least one measurement of the activated partial thromboplastin time with kaolin daily and having one measure of the activated partial thromboplastin time with kaolin within the therapeutic range daily while receiving heparin) was probably due to a change in the reporting of results of blood tests: during the first audit all reports of test results were filed in the notes whereas in the second audit test results were reported via the computerised system and were not always in the notes.

The more widespread dissemination of the guidelines on anticoagulant treatment probably increased knowledge and awareness of and hence improved adherence to recommended practice. We advise that guidelines should be as short as possible to facilitate this dissemination and suggest the development of practice points. The incorporation of these practice points on to the hospital computer system was probably the most important innovation in this hospital. Computerised reminders about management improve awareness and compliance,^{2,3} and we

recommend that this form of dissemination should be considered elsewhere.

FIONA TAYLOR
Researcher in public health
MARY RAMSAY
Lecturer in public health
ADRIAN RENTON
Senior lecturer in public health
HANNAH COHEN
Consultant in haematology

St Mary's Hospital Medical School,
London NW10 7NS

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Service increment for teaching and research

EDITOR,—Traditionally, most research and education has taken place in hospitals, which was where the service increment for teaching and research was allocated. But the shift to services based in the community requires harmonisation of the new service patterns, education, and research.

At a meeting of the community health services (trusts) operating around London medical schools we learnt how little coordinated strategic activity has taken place. Despite huge investments in education and training only a tiny proportion is spent in primary and community care. We met to exchange information and learn about changes in the undergraduate medical curriculum. From the discussions two important points emerged.

Firstly, current allocations of the service increment for teaching to community health services organisations are hard fought and arbitrary. Several of the organisations do not receive any allocation at all, even though they are all currently delivering many services that could extend students' clinical experiences in hospital. These include consultant led services for children, older people, and mentally ill people and midwife led maternity services. No trusts have successfully bid for the service increment for teaching if they did not have it when they were initially set up, despite huge changes in the delivery of services. The

Results of audit of anticoagulant treatment before and after introduction of shortened, computerised guidelines

Practice point	Aspect audited	No (%) of patients		
		First audit (n=100)	Second audit (n=80)	% Change (95% confidence interval)
Perform objective test for diagnosis, but do not delay start of anticoagulant treatment	Ultrasound scanning or venography performed for suspected deep vein thrombosis	37/40 (93)	37/80 (97)	5 (-5 to 14)
	Chest radiography and perfusion scanning or ventilation scanning, or both performed for suspected pulmonary embolism	37/47 (79)	16/20 (80)	1 (-20 to 22)
Before starting treatment, perform baseline investigations	Result of coagulation screen recorded	52/100 (52)	59/80 (74)	22 (8 to 36)
	Platelet count recorded	95/100 (95)	77/80 (96)	1 (-5 to 7)
	Urea and electrolytes concentrations recorded	87/100 (87)	72/80 (90)	3 (-5 to 7)
	Results of liver function tests recorded	70/100 (70)	49/80 (61)	-9 (-22 to 5)
Note risk factors to anticoagulation	Drug history documented	69/100 (69)	64/80 (80)	11 (-2 to 24)
Start heparin with intravenous bolus dose; continue with continuous intravenous infusion	Bolus intravenous heparin prescribed	29/100 (29)	38/80 (48)	19 (4 to 33)
	Intravenous infusion of heparin given	91/100 (91)	79/80 (99)	8 (2 to 14)
Obtain first measurement of APTT four to six hours after first giving heparin and then daily	APTT recorded within 16 hours of start of heparin*	44/100 (44)	42/80 (52)	9 (-6 to 23)
	APTT documented for each day of heparin treatment	28/100 (28)	17/80 (21)	-8 (-19 to 9)
	APTT within therapeutic range documented for each day of heparin treatment	8/100 (8)	3/80 (4)	-3 (-10 to 4)
	Warfarin prescribed on first day	31/62 (50)	36/52 (69)	19 (1 to 40)
Overlap heparin and warfarin by 72 hours. Stop heparin when international normalised ratio is > 2.0	Both heparin and warfarin prescribed for 3 days	60/62 (95)	46/52 (88)	8 (-1 to 18)
	International normalised ratio within therapeutic range recorded on day heparin stopped	19/62 (31)	14/52 (27)	-4 (-20 to 13)
Measure international normalised ratio daily and at discharge	International normalised ratio within therapeutic range recorded on day of discharge	19/62 (31)	14/52 (27)	-4 (-20 to 13)
	42/62 (68)	42/52 (81)	13 (-3 to 20)	
Test for haematuria	One or more samples of urine analysed	19/62 (31)	21/52 (40)	9 (-8 to 27)
Book appointment at anticoagulant clinic	Clinic appointment documented	47/62 (76)	45/52 (86)	11 (-3 to 25)
Arrange interim check if more than four days to clinic appointment	Interim check arranged	6/26 (23)	6/23 (26)	3 (-21 to 27)

APTT = Activated partial thromboplastin time with kaolin.

*Audit was unable to determine adherence to the precise period of 4-6 hours.