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CORRESPONDENCE

● ***All letters must be typed with double spacing and signed by all authors.***

Peaks and troughs in demands on hospitals

SIR,—Some of the alleged "inefficiencies" of the National Health Service may be, paradoxically, the direct effect of the so called "efficiencies."

The authors of performance indicators were at pains to point out that they should be used to promote a questioning of current practice but should not be used as targets. Recently the Secretary of State was quoted as having contrasted two surgical departments with turnover intervals of one and three days, suggesting presumably that the former was performing better than the latter, yet such an analysis takes no account of the capacity to accommodate emergencies.

Although clinicians have always been aware of the peaks and troughs in demand for their services, this phenomenon appears to have attracted little attention from planners and managers. While some specialties such as ear, nose, and throat surgery and ophthalmology have only modest demands made on them by emergencies (less than 20% of all admissions), others are heavily committed to pŕviding emergency services. In Ipswich about 90% of all medical admissions are "immediate," as are nearly 50% of general surgical cases, and in traumatic and orthopaedic surgery the figure is over 60%.

In these three specialties we looked at the distribution of daily emergency admissions. In general medicine the daily average was 13 (range 1-30, SD 3·6); in general surgery 9 (range 1-20, SD 2·94); and in traumatic and orthopaedic surgery 4·4 (range 1-11, SD 2·13).

The frequencies showed roughly normal distributions so it was reasonable to conclude that unless the general medical department planned to carry 16 empty beds at the beginning of each day it would be unable to accommodate its emergency demands on a third of occasions (the mean+1 SD), which means, of course, having to "borrow" beds about twice a week. If, however, the department has 21 empty beds it will be in difficulty only about one day in every three weeks. Similarly, general surgery should plan its work to carry 15 empty beds to cope with emergencies on all days except one every three weeks, and in trauma and orthopaedic surgery nine beds would be needed to meet the same standard. Failure to appreciate this results in frequent cancellations of elective procedures at very short notice since emergencies have to be dealt with at once.

In obstetrics we have an average of about 10 births a day, but an examination of the number of births notified each day during a single month showed as few as two and as many as 19. The mean was just under 11 (SD 3·8). Thus unless the unit is of sufficient size and is staffed and equipped to cope with 15 births a day it will fail to meet demands more than once a week.

Unless more attention is given to the fluctuating demands on those clinical departments which deal with large numbers of urgent cases and less given to securing the highest possible throughput the service to patients will deteriorate, and the pressures on medical and nursing staff will become increasingly intolerable. It is, of course, true that for every peak there is a trough, and there would be an apparent underuse of hospital beds, but it is the compensatory pauses in hospital activity that allow the services, and indeed the staff, to recuperate sufficiently to maintain high standards of care.

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Should the pill be stopped preoperatively?

SIR,—I could not disagree more with the conclusion of Mr H Sue-Ling and Professor L E Hughes (13 February, p 447) that "the pill should not be withheld from young women who require abdominal operations." As the author of your earlier leading article[1] I submit that the moderate policy proposed both there and in the *British National Formulary*[2] is rational (comparing known risks against benefits), prudent ("primum non nocere"), and practical, despite the problems of "our stretched health service."

My recommendations were that combined oral contraceptives should be discontinued four weeks (not six weeks) before major elective surgery or surgical procedures to the legs and that when discontinuation was not possible subcutaneous heparin should be considered. Deep venous thrombosis and pulmonary embolism are potentially fatal. The onus of proof is on those who seek to change a widely accepted policy. Absence of evidence is not evidence of absence, and there is evidence, some of it in the references selectively quoted by the authors.

It is undisputed that: (*a*) major surgery increases the risk of postoperative deep vein thrombosis and pulmonary embolism; (*b*) associated prothrombotic changes occur[3]; (*c*) the older higher oestrogen combined pills increased the risk of idiopathic deep vein thrombosis and pulmonary embolism by a factor of 2 to 11[3,4] and postoperative deep vein thrombosis and pulmonary embolism up to sixfold[3,4]; and (*d*) there are potentially synergistic prothrombotic changes in the blood of women using every marketed combined pill.[4-6] Mr Sue-Ling and Professor Hughes have faith in the modern low oestrogen pills, but how much better they are is unknown. The risk ratio of 11 for deep vein thrombosis and pulmonary embolism among users of such pills in a very recent study suggests that the problem has not gone away.[7]

It seems imprudent avoidably to put together two risks—major surgery and oestrogen consumption. Moreover, there is an undiagnosed group with procoagulopathies such as hereditary protein C deficiency. If the routine policy of discontinuing the pill perioperatively were abandoned the consequences for them could be fatal.

Absence of statistical significance in Vessey *et al*'s 1986 paper[8] does not mean absence of risk: indeed, their risk ratio estimate[2] is probably about right. The attributable risk is not negligible, at about 1 in 1000 cases of postoperative deep vein thrombosis and pulmonary embolism in current users per month.[4]

The low incidences in the first two ^{125}I fibrinogen scanning papers[9,10] quoted may be due to exceptional features (known and unknown) of the populations studied. Tso and others[9] quote several references for their statement that deep vein thrombosis and pulmonary embolism "seldom occur in