productive work and to me the whole document is nonsensical verbiage.

I imagine the majority of anaesthetists will be surprised to hear of these new developments in nursing circles and will want to know more about the origins of these ideas and the need for yet another "tier." It would also be equally interesting to know who has had the training, and the time, to produce three foolscap pages of meaningless job description.

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SIR,—When Mr Brian Thorne, in his article on "Counselling and the student" (20 November, p 1245) succeeded in advocating medical methods of treatment while refuting medical opinion on the incidence of mental disturbance in students and finally concluded by asking for "medical and psychiatric support" (my italics) I felt that the zenith of infiltration into matters medical had surely been reached. But no, the letter from Dr D W Eyre-Walker (4 December, p 1386) asking—pertinently—what is a "clinical nurse consultant (anaesthetics)" opens up new vistas of intrusion which brook no delay in reply.

Let me lay my opinion on the line. I believe that the practice of medicine depends, fundamentally, upon a relationship between two people, and only two: a patient and a doctor. All else, however desirable and indeed helpful, is secondary, auxiliary, and ancillary.

When this view gains general credence—not least of all in the BMA—we may achieve a National Health Service which puts first things first and of which we can be rightly proud.

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New teaching in pathology: use and misuse of IPALS

SIR,—Dr W F Whimster (23 October, p 994) reports briefly on the abortive lecture-hall testing of a few tape/slide sessions of the Integrated Pathology Audiovisual Learning System (IPALS) demonstrated to a large audience of students who had presumably not previously studied the appropriate chapter of the basic text to which the slides and the tapes serve as illustrations only. Since some readers may be under the impression that his criticism is based on a proper use of the whole system I feel, as chief editor of IPALS, that some comments on Dr Whimster's testing and the system in general would be in order.

IPALS is a complete system for teaching and learning general pathology, with emphasis on learning. The ready-made elements, which can be bought from the publishers, are a textbook for each student and a suitable number of audiovisual programmes, each consisting of 1000 transparencies and 40 tapes. The pathology teacher is not meant, however, simply to play the tape/slide part to the students without further ado. The intention is not to emulate Lord Home's science master; on the contrary, our idea has all along been to avoid preprogrammed, computer-type teaching as having no place in medicine.

So any institute of pathology that wishes to use IPALS properly and get good results from it has to put a good deal of work into its implementation. First the students should be encouraged to form their own discussion groups, and tutorials with a

pathology teacher and at most 12 students must be organised, with ample time to discuss the subjects taken up in the basic text. The institute should also make available sets of histological slides, with a work-book containing descriptions of the slides and explanations of their relevance to the principles of pathology presented in the basic text. Gross specimens, fresh or from the museum, must be provided and can be examined and discussed at the tutorials.

At this institute, for example, general pathology is taught at the beginning of the clinical curriculum as a concentrated course lasting six weeks, during which the other subjects taught are general clinical chemistry, pharmacology, and training in the clinical examination of patients. The institute has a study room containing 30 study cubicles, each equipped with a microscope, a box of histological slides, and a work-book as well as the usual audiovisual equipment. There are 72 students in each class and three classes per year. The investment, we found, was not heavy when divided by the number of students who will use the cubicles for many years to come.

At a preliminary lecture the students are introduced to the system and told how to use the study cubicles. They then read the IPALS basic text, which is a set book, and study the audiovisual programme and the histological slides in the cubicles on their own—not, of course, all at once, but in sections as it suits each student—as background for the discussion groups and tutorials. I must emphasise that the tapes are *not* a systematic text in general pathology; they are comments on the slides, which are themselves the illustrations to the book. It is perfectly true that any student who sits down unprepared and simply follows a tape/slide section of the programme will find it difficult to grasp and will have to go to a pathologist for an explanation of the whole thing afterwards. The same would apply to an evaluation of any textbook of general pathology based purely on the figures and legends. Nor is the book, judged on its own, comparable to traditional pathology textbooks. It is meant to be read as part of the system.

For discussion purposes four rooms at the institute are put aside where the students can look at slides and play cassettes together and discuss among themselves. Each student also has three hours a week in a tutorial led by a trained pathologist in which a group of not more than 12 students takes up and discusses problems arising from their study of the material. Gross specimens are on display in a special room put aside for the purpose.

Twice a week the students attend a clinicopathological conference (CPC) at which a clinician, a clinical biochemist, sometimes a pharmacologist, a general practitioner, or a specialist in social medicine, and a pathologist present and discuss a patient whose disease illustrates some aspect of general pathology being studied at the time.

We have the impression that since we changed over from ordinary lecturing to this system the amount of work put into learning general pathology by each student has increased on average by a factor of at least four. The students are very enthusiastic about the tutorials and the CPCs and show a good deal of initiative in introducing new subjects. The staff at the institute have also had a great deal more individual contact with the students, who often approach them personally with questions outside the tutorials—for instance, to ask for literature references on a particular problem.

Thus what we mean by claiming that IPALS can "largely replace lectures" is *not* that it can replace teachers but that it obviates the necessity for classical, old-fashioned, ex cathedra lecturing, which has incidentally never been noted for its flexibility in "adjust[ing] to indications from the audience that the intellectual level of what was said was too low or too high." We also hope to encourage students to be less passive and to take some responsibility for their own learning.

If an institute is interested in this student-centred way of teaching but not yet convinced that it is appropriate to make a complete change without more experience it is possible to make a test by setting up five study cubicles and letting groups of 12 student volunteers follow this type of education instead of the classical one. Results of such testings have been published,^{1,2} and it is interesting to note that the students who selected the audiovisual method had on the average the highest IQ and did very well at the examination.

So far as I can judge from Dr Whimster's paper he has not followed the guidelines given in chapter 1 of the textbook for the use of the system and so cannot properly be considered to have tested it. But he is cordially invited to visit the University of Oslo or Erasmus University, Rotterdam, and see how IPALS really works.

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¹ Bertram, E, Ruf, G, and Sandritter, W, *Beiträge zur pathologischen Anatomie und zur allgemeinen Pathologie*, 1974, **152**, 334.

² Mittermayer, C von, and Haas, M, *Deutsche zahnärztliche Zeitschrift*, 1976, **31**, 580.

Sexual disinhibition with L-tryptophan

SIR,—The phenomena observed by Drs G P Egan and G E M Hammad (18 September, p 701) and Drs R P Hullin and T C Jerram (23 October, p 1010) were first reported in 1962¹ and are not confined to psychiatric patients. Lewd and libidinous behaviour (as Scots law has it) was noted by colleagues and myself² after both oral L-tryptophan and intravenous 5-hydroxytryptophan and I can testify that among those who responded were some within the normal range for medical research workers; none were like the dogs who, after tryptophan, got spontaneous orgasms.³

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¹ Smith, B, and Prockop, D J, *New England Journal of Medicine*, 1962, **267**, 1338.

² Oswald, I, et al, *British Journal of Psychiatry*, 1966, **112**, 391.

³ Himwich, W A, and Costa, E, *Federation Proceedings*, 1960, **19**, 838.

General practitioners and coronary care

SIR,—Dr J S Geddes's criticism (27 November, p 1325) of the implication he has drawn from the recently reported study by Drs J D Hill and J R Hampton (30 October, p 1035) that general practitioners cannot play a useful role in the operation of prehospital coronary care schemes because they involve too long a delay requires further comment. I would suggest that this is not the main implication of the study. On the contrary, it could be argued that GPs have a very valuable role to play such that, having played it, the resulting prognosis of the group of patients to be admitted is so good as not to require the services of a mobile coronary care unit (MCCU) in the majority of cases. I would, though, argue that if the general practitioner felt that his patient might clearly benefit from the services of the MCCU (for example, if in unstable rhythm) he could summon it. On the