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

evidence available, however, the exclusion of GPs' cases would seem to be a rational reallocation of resources.

I would also like to stress the importance of the findings of Drs Hill and Hampton in terms of which type of MCCU should be provided—that is, "doctor-manned" or "paramedical-staffed." As previously shown¹ in Brighton the latter type has achieved similar levels of life-saving to the former type in Belfast, partly by accepting more calls from the public, thus increasing the scope of the service, and partly by reaching more patients earlier, thereby increasing the chances of success. If, as Drs Hill and Hampton's findings would suggest, it is the publicly summoned cases in which the greatest potential for life-saving lies, then the type of service best equipped to deal with this group should be the one which is advocated. This, for the reasons given previously,^{2,3} would be the emergency ambulance service already under obligation to answer these calls.

By performing a randomised controlled trial of MCCUs on the population shown to be at greater risk Drs Hill and Hampton are clearly performing a valuable service. I would also contend that Dr Geddes's advice is misplaced and that, as the Belfast service does not generally accept calls direct from the public, it is he, to use his own words (my emphasis), who should direct his energies "toward bringing treatments of proved value to the maximum number of patients at . . . greatest risk, whether medical advice is sought through a general practitioner or the emergency ambulance service." This is precisely what Drs Hill and Hampton are seeking to do within the confines of a limited budget.

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¹ Orchard, T J, *Lancet*, 1974, 1, 263.

² Orchard, T J, *Lancet*, 1974, 1, 1169.

³ Orchard, T J, *Lancet*, 1974, 2, 780.

Chemoimmunotherapy of advanced breast cancer

SIR,—The article by Dr Jordan U Gutterman and his colleagues may overemphasise any virtues of BCG treatment for breast cancer (20 November, p 1222). In examining their results, as well as giving graphical equivalents of life tables they give overall figures for deaths in those receiving and not receiving BCG. However, since controls were historical rather than contemporaneous there has been a longer follow-up in the non-BCG group. Some of the deaths in this latter group have occurred late, but there is no way of knowing if those receiving BCG will suffer a similar fate. It therefore seems unfair to quote the overall death rates in the two groups, since like is not compared with like, and then to give a probability value beside them (which bears a strong resemblance to a figure derived from a simple χ^2 derived from them).

Secondly, they say in the text that one-tailed tests were used. This implies that BCG can only do good, but from our experience in treating melanoma we have reason for believing that BCG can do harm. The use of a one-tailed test gives a greater apparent degree of statistical confidence than is really justified. Thus, their figure 1 is accompanied by a P value of 0.07. This looks impressive but if

converted for a two-tail value suggests a chance finding of approximately one in seven times (2×0.07), a value much more in accord with the small difference between the graphs.

No data have been presented on the total dosages of chemotherapeutic agents given to either treatment group. It is possible that any difference in remission or survival rates may result from the stimulus of BCG allowing more cytotoxic drugs to be given to the patients rather than from enhanced immune reactivity directed towards breast cancer.

Finally, we doubt the propriety of using historical controls. They have the virtue of allowing quicker data collection on a new treatment but suffer from the problem that complete comparability with a novel treatment group can never be assumed since the availability of new treatment which is enthusiastically pursued must be likely to introduce biases in patient collection.

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SIR,—From the data provided in the paper by Dr J U Gutterman and others (20 November, p 1222) it is not clear whether the two treatment groups had the same dosage of FAC-CMF. Although the dosage in the first cycle was the same, provision was made for its increase or decrease by 20% according to individual bone marrow tolerance.

It was not shown by the authors that this tolerance was not augmented by the addition of BCG, thus enabling this group to benefit from an increased dosage or frequency of chemotherapy, postponing the tumour's "escape."

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Low-oestrogen oral contraceptives

SIR,—I was surprised to read in your leading article on this subject (20 November, p 1216) the statement that "pharmaceutical companies seem to be preferring 17 α -hydroxyprogesterone derivatives in oral contraceptives."

The last surviving product on the British market containing one of this variety of progestogen (megestrol acetate) disappeared when Volidan was withdrawn in 1975. The 22 combined pills (containing 50 μ g of oestrogen or less) and the four progestogen-only preparations currently available in this country all rely on 19-nortestosterone derivatives. Of these, norgestrel has no inherent oestrogenicity and yet when as little as 0.15 mg is combined with only 30 μ g of ethinylestradiol it provides the degree of reliability quoted in your article.

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*.*Our leading article was, perhaps, misleading on this point. Certainly all the combined oral contraceptives currently available in Britain use 19-nortestosterone derivatives for

their progestogen component—and there are good commercial and clinical reasons for that choice. However, a switch to 17 α -hydroxyprogesterone derivatives would make it easier to calculate the oestrogen content of contraceptives without having to make allowance for a variable amount of metabolic conversion from nortestosterone. There is, we believe, a resurgence of interest in that alternative, though no new formulations are yet on trial.
—ED, *BMJ*.

Student health

SIR,—I have read with interest your articles on "Aspects of student health." The student body as a whole has few health problems indigenous to that population alone. However, many would agree that sexual, especially contraceptive, and psychological problems do play an important role. These latter I feel might be more ably dealt with by a larger student counselling service than exists at present in many higher education establishments. Certainly where examination problems exist, especially common around finals, although chemotherapy is fast to act, tranquillisers commonly prescribed have the disadvantage of counteracting that all-important "adrenaline response" which brings out the best in all of us at exam time. Counselling may take time but in the end I am certain it is more effective in bringing the student to terms with his or her problem.

Finally, I feel that in any university the size of Manchester's a student health centre, with all its advantages pointed out by Dr K G Dickinson (13 November, p 1177), presents one major headache to a student in a large population dealt with by so few—the inevitable appointment system. Add to this the students' lecture curriculum and many illnesses go self-treated or, worse, untreated. Thus we have a constant dilemma to the student: "Which is more important, health or education?"

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Quis whatsit?

SIR,—The criticism of those who criticise continues. Dr J S Bradshaw (4 December, p 1387) has committed three offences against English grammar of the type known as fused participle, which is well described by Fowler.¹ Since I wish to keep a whole skin, I shall take Fowler's advice and not venture on the frank description of this error that Fowler believed to be formerly but, alas, no longer reasonable.

Dr Bradshaw writes: "The alternative to Dr O'Donnell imagining himself to be volumes and so years ahead of the rest of us is that you have erroneously imputed such notions to him; though as between the possibility of the editor of *World Medicine* having delusions of grandeur and that of the editor of the *British Medical Journal* ignoring conventions I should prefer not to speculate." "Dr O'Donnell," "the editor of *World Medicine*," and "the editor of the *British Medical Journal*" should all be in the possessive case, since "imagining," "having," and "ignoring" are not used as participles but as gerunds—that is, nouns.

Without being aware that such words,