frequently if the supply seems inadequate, because more frequent feeding increases supply; a simple but little-known fact. Of course, if he is allowed to, the baby will do this himself by demanding more frequent feeds. Thus he will adjust his mother's supply to meet his individual needs rather than the certain number of ounces four-hourly that someone else decides he needs.

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ECFMG and FLEX

SIR,—I write concerning the American FLEX examination, discussed in the letter from Dr B W McGuinness (28 August, p 518), but in my case from six weeks on.

I qualified in London this past May and have occasionally entertained the idea of going abroad for a year or two. Earlier in the year I made inquiries into practising in America. I was told, as Dr McGuinness states, that ECFMG was a mandatory start for entry and sat that exam in January. I was then informed by heads of hospital programmes and by the California licensing authority that if I desired to take an active pre- or postregistration position in, for example, California, I would first have to pass the California FLEX. I thus agreed to sit the FLEX in California this past June, six weeks after completing the MB.

My preparation for FLEX consisted in passing the MB, a five-week holiday, and a week of looking through atlases and the *Medical Examination Review Books* as Dr McGuinness suggests. On sitting the exam I found it taxing and tiring, but many questions could be logically worked out on the basis of medical school experiences. The time factor was not a particular problem, as I and all around me had time to double-check every question before leaving. There were obviously many questions on long-forgotten 2nd MB details and more advanced specialist subjects which were unanswerable. There were a number of questions on American legal and public health schemes which necessitated random guessing. The majority of the questions were, however, straightforward clinical medicine.

After reading Dr McGuinness's letter I became quite concerned about the contents of my mail, but was relieved to hear I have passed the exam. This having been done with a normally relaxed medical school training and final MB revision, I can only conclude that any MB graduate recently qualified should be eminently capable of passing FLEX and need fear it no more than any exam.

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Pathogenesis and epidemiology of schizophrenia

SIR,—In your leading article on this subject (18 September, p 662) you wish "to find an explanation for schizophrenia that will both stand up to scientific criticism and have clinical application." Presumably it is because these criteria are not seen to apply that psychoanalytical insights and advances are not referred to. Yet it is not so long ago that the causes for hysteria were being looked for in brain instead of mind, while it is significant

that we still appear to lack in Britain units designed for a specifically psychotherapeutic approach, in the absence of which provision its wider application to schizophrenia is uniquely hampered.¹

In his Nobel Prize lecture "Ethology and stress diseases"² Professor Nikolaas Tinbergen, focusing on early childhood autism, recommends a return to the old method of "watching and wondering." He reminds us that it can prove premature to comment on the abnormal while neglecting extensive observation of the normal in order to possess ourselves in the first instance of an adequate working spectrum in the absence of which we could be ill advised to rule out environmental traumatisations merely because its specific nature is still obscure and/or possibly unwelcome.

The ethological and psychoanalytical approaches have much in common and should jointly press for a pilot scheme of appropriate units suited to their purposes to provide us with working keys to a language of interpersonal interactions whose prevalence and wider implications could prove one of the major resistances to progress in this area of disarray.

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¹ Rosenfeld, H A, *Psychotic States: a Psychoanalytical Approach*, p 117. London, Hogarth Press and Institute of Psychoanalysis, 1965.

² Tinbergen, N, in *Les Prix Nobel en 1973*. Amsterdam and New York, Elsevier. In press.

Effects of pethidine on the bronchi

SIR,—Whereas morphine is generally considered to be bronchoconstricting in man,^{1,2} pethidine has been reported as bronchodilating³ or bronchoconstricting.^{4,5} Shemano *et al*⁶ reported that pethidine injected intravenously in dogs produced bronchoconstriction in dosages ranging from 0.5 to 2.5 mg/kg body weight. Goodman and Gilman⁷ report that deaths have occurred in patients with pethidine during an asthmatic episode but conclude that death was related to depression of respiratory drive, decrease in cough reflex, and drying of secretions rather than as a result of bronchoconstriction.

In a teaching session we have investigated the bronchoactivity of orally administered pethidine hydrochloride by whole-body plethysmography. Three adult male students with normal ventilatory indices took one 50-mg tablet each on successive days. The figure shows that, with one exception on one day, bronchoconstriction (reduced specific

conductance) was present at 1/2 h and reached a maximum between 1 and 2 1/2 h after taking the drug.

These findings suggest that pethidine should be avoided in patients with airways obstruction and alternative analgesics which have a bronchodilating action—for example, methoxyflurane—should be considered.

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- ¹ Adriani, J, and Kerr, M, *Anesthesiology*, 1953, 4, 253.
² Higgins, H L, and Means, J H, *Journal of Pharmacology and Therapeutics*, 1915, 7, 1.
³ Eisleb, O, and Schaumann, O, *Deutsche medizinische Wochenschrift*, 1939, 65, 967.
⁴ McDermott, T F, and Papper, E M, *New York Journal of Medicine*, 1950, 50, 1721.
⁵ Mitchell, H S, and DeJong, J D, *Journal of Allergy*, 1954, 25, 302.
⁶ Shemano, I, Wendel, H, and Katinsky, H. Personal communication.
⁷ Goodman, L S, and Gilman, A, *Pharmacological Basis of Therapeutics*, 4th edn. London and New York, Macmillan, 1970.

Further nursing care in general practice

SIR,—There are now many well-documented instances in which nurses are employed by general practitioners, thus allowing the GPs to concentrate on areas where their skills are more definitely needed. Have such GPs measured the increase in the appropriate use of their skills? Are visits by GPs to patients in these practices now more frequently appropriate? I would be interested in these results if they have been documented.

Nursing managers are concerned that nurses undertaking more "medical-type" procedures may well be depleting the district nursing services. The population may in fact be getting less nursing care, particularly as there is an increase in the elderly population. Preventive medicine is important, but who decides the priorities?

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Acute abdominal pain in childhood

SIR,—We were surprised that neither in your leading article on acute appendicitis in children (21 August, p 440) nor in the article on acute abdominal pain in childhood by Mr P F Jones (4 September, p 551) was reference made to a paper by Jackson¹ entitled "Parents, family doctors, and acute appendicitis in childhood." Jackson recorded that parents often delayed calling in the family doctor and that the family doctor himself was often unsure of the diagnosis, especially in the younger child, and often visited again before requesting admission to hospital. The author again drew attention to the increased risk of peritonitis and abscess formation in the child under 6 years old and suggested sedation with paraldehyde before reassessment in the difficult toddler.

Ten years after this paper we reviewed the admissions between March 1973 and February 1974 of children aged 3-15 years complaining

of an acute episode of abdominal pain and presented the findings at the meeting of the British Paediatric Association in 1975. Briefly, we found that the 235 admissions with acute abdominal pain accounted for 9.4% of non-waiting-list admissions in that 12-month period. Thirty-one admissions were for chronic or recurrent pain and 204 for acute pain. A breakdown of diagnoses followed the same general pattern as found by Mr Jones and was as follows:

Unexplained	36%
Appendicitis	28%
Upper respiratory infection (including 7 cases of influenza B)	11%
Constipation with soiling or urinary retention	3%
Gastroenteritis	3%
Urinary infection	3%
Mesenteric adenitis	3%
Major psychological problems	3%
Pneumonia on chest x-ray	2%
Miscellaneous (including 5 admissions with duodenal ulcer pain)	8%

Laparotomy was performed in 78 instances and in only five was no abnormality found. Seven of eight children aged between 3 and 6 years with appendicitis had peritonitis or abscess formation at the time of laparotomy and only 37.5% of these were in hospital within 48 h from the onset of pain compared with 83% of children aged 9-12 years. Overall, for children with appendicitis there was a significant difference in the delay before admission to hospital between the uncomplicated and the complicated cases. Reasons for delay were not always recorded, but in five of the 14 instances in which delay extended into the third day the family doctor had not been called. In another five instances the family doctor had visited before the third day but thought that the pain was non-surgical in origin and did not arrange admission.

Thus 10 years after Jackson's paper we found continuing evidence of the same delays. Further improvement in the morbidity and mortality of acute appendicitis will come only when parents are educated to call the family doctor if any abdominal pain in a child lasts eight hours or more and family doctors refer the young patient with abdominal pain to hospital earlier than at present.

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¹ Jackson, R H, *British Medical Journal*, 1963, 2, 277.

Closure of dirty and untidy wounds

SIR,—It is always reassuring to see fundamental principles of surgery being restated as in your leading article on this subject (11 September, p 600). I would suggest, however, that those of us who instruct undergraduates and junior doctors in the management of dirty and untidy wounds in accident and emergency departments are in a very strong position to inculcate these basic principles at the beginning of their training. There are many so-called minor wounds (such as animal or human tooth wounds and flap avulsion wounds of the shin in middle-aged or elderly ladies) which are best treated by adequate primary excision followed by delayed primary closure, as indicated in your leading article. This can often be carried out as an outpatient procedure.

Good habits instilled thus early in training are likely to be carried over into the more major injuries which a doctor will be meeting later in his professional life.

Finally, application of these principles to such minor wounds must surely result in a greater total saving of disability in the community than results from the proper treatment of the much less common, but more serious, wounds which require inpatient treatment.

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Medical newspeak

SIR,—I wonder if many of your readers are subjected to this latest craze. I know psychologists often have a varied and difficult professional task. Nevertheless, is the jargon in this copy of part of a letter from a psychologist to her psychiatrist about a patient of mine really helpful?

(1) Ventilation of sexual material with the view to a reduction in her tremendous sense of guilt and worthlessness.

(2) Deflection of her present involvements into more satisfactory and acceptable people of both sexes.

(3) Lessening of her social phobias by planned outings, etc.

(4) Exploration of the family situation and assistance in separating herself from them, aiming towards moving out of home eventually.

(5) Exploration of the possibilities for improvement in her work situation, through help toward accepting more responsibility leading towards promotion or a change of job.

I cannot print my partner's interpretation of the first undertaking. Though somewhat cryptic, could we not have had:

(1) Talk sex to gain confidence.

(2) Select friends.

(3) Go out.

(4) Leave home. (In fact this would have solved the lot.)

(5) Change job.

J LAURENT

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Teaching of anatomy

SIR,—As your leading article (11 September, p 603) rightly suggests, the teaching of anatomy to the undergraduate and to the surgical trainee are not separate issues. Poor pay, inferior status, and the continuing rigid boundaries between preclinical and clinical departments have led to a dearth of medically qualified teachers in anatomy. This can result only in anatomy teaching which is research and not clinically relevant, confirming the opinions of those misguided medical educators who see no reason for any anatomy teaching at all.

The solution is in the form of the anatomy demonstratorship for surgical trainees. This fulfils two needs. The first is for clinically relevant topographical anatomy teaching which is economical in its consumption of curriculum time. In Bristol the demonstrators prepare dissections before teaching and as a result students spend only 160 hours in the dissecting room in their two preclinical years. The second need is for a basic anatomical grounding for the surgical trainee. In no other situation can the aspiring surgeon enjoy open access to dissection material and this unique opportunity to learn anatomy. I would urge that at least six months in an anatomy demonstratorship be included in the long-term surgical training programmes which are now evolving

in many centres, for the benefit of the future of surgery and the quality of undergraduate anatomy teaching.

Continuing education in anatomy for the surgeon goes hand in hand with increasing operative experience; this could be supplemented by the use of audiovisual aids, such as film loops on the anatomy of a specific area, or even the provision of a prepared cadaver as in some residency programmes in the United States. After all, some of our most eminent surgical forefathers spent an hour in the dissecting room before tackling a particularly challenging case.

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Management of appendicitis

SIR,—The complications of appendicectomy continue at an unnecessarily high rate, possibly because the facts available in the literature have not been combined in a single clear statement.

I recently carried out a retrospective survey of wound infection in 140 consecutive appendicectomies in the King's College Hospital Group with particular reference to the antibiotic-using habits of the surgeons (all senior registrars or registrars with FRCS) supervising or performing the operation and the state of the appendix at operation. If we exclude those who did less than five operations or who were totally consistent in their use or non-use of antibiotics there remain 94 operations performed by discriminating surgeons. When the appendix was described as infected or inflamed by both surgeon and histologist they used antibiotics 15 times, with two subsequent wound infections, and refrained 42 times, with 11 infections. This is the same advantage of 1:2 found in the prospective study of Gilmore and Martin¹ and so confirms the notion that there is no way of judging when to use an antibiotic in these circumstances. When the word "pus" or "gangrene" appeared they used antibiotics four times and refrained 13 times, with a total of eight wound infections. When the word "perforation" was used 10 out of 11 gave antibiotics, with nine infections, while the eleventh patient, without an antibiotic, suffered both a wound infection and a pelvic abscess.

I believe there is now sufficient information on which to make rational choices in managing this disorder, based on the appearances at operation:

(1) If the appendix is normal or inflamed a topical antibiotic or povidone-iodine will decrease the chance of wound infection by half or more (roughly, from 20% to 10%).¹ Systemic antibiotic treatment will very probably eliminate the chance of intraperitoneal complications at all stages of the disease but will have to be given to 40 patients in this group unnecessarily for each successful prevention.²

(2) If the appendix is gangrenous the chance of wound infection increases to 50% or more, the most effective local agent is probably povidone-iodine, and the chance of intraperitoneal complications rises to about 12%, making systemic antibiotic treatment more worth while.²

(3) If the appendix is perforated the chance of wound infection rises to 80% and of intraperitoneal complications to 40%. Clearly systemic antibiotics are indicated, with a wider spectrum than metronidazole alone, but neither systemic nor topical antibiotic treatment improves the wound infection rate,^{1 2} and rubber drains are valueless.²

May I suggest that we cease to suture the