EDITOR,—Renewed interest in the activities and professional training of counsellors in general practice is welcome.[1,2] In the 1990s there will be a concerted move by professional bodies such as the British Association for Counselling and the British Psychological Society to regulate counselling and ensure that those who practise are both competent and qualified to do so. Contrary to some popular wisdom, bad counselling can be damaging to patients.

The question of who counsels patients in medical settings needs to be addressed. There is some difference between being a counsellor and having counselling skills. Almost all health care professionals with primary training in medicine, nursing, physiotherapy, or other allied professions counsel people during their work: if the broadest definition of the term is used an episode of counselling occurs in every medical consultation. Health care professionals constantly give patients information, clarify treatment options, and help people to adjust to new, and sometimes unwelcome, circumstances. Specialist counsellors, on the other hand, have usually had advanced training in counselling, psychotherapy, or family therapy, and some may be professionally trained in other disciplines such as medicine, clinical psychology, social work, or nursing. Although specialist training is not a requirement to practise as a counsellor, a professional may occasionally refer a patient to a specialist counsellor in the same way that a doctor may refer medical problems to a specialist colleague.[3]

Clinical and counselling psychologists do not deal only with mental illness. Our training (at MSc level) emphasises the need for counselling skills for people with many complex medical problems, including HIV infection, management of diabetes, infertility, problems after disasters, pain control after surgery, and neurological problems. In addition, psychologists conduct collaborative research with their colleagues in general practice, provide health education to patients, and conduct psychosocial assessments and may also provide a consultation and liaison service. Though there may currently be an undersupply of qualified and accredited counsellors, this should not deter doctors from referring patients to them when resources permit.

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1 Sibbald B, Addington-Hall J, Brenneman D, Freeling P. Counsellors in English and Welsh general practices: their nature and distribution. *BMJ* 1993;**306**:29-33. (2 January.)
2 Pringle M, Laverty J. A counsellor in every practice? *BMJ* 1993;**306**:2-3. (2 January.)
3 Bor R, Miller R, Goldman E. *Theory and practice of systemic HIV counselling.* London: Cassell, 1992.

EDITOR,—The editorial and paper on counsellors and counselling in primary care are misleading.[1,2] Mike Pringle and John Laverty's editorial seems to muddle Balint's work in developing the psychotherapeutic skills of general practitioners to aid their work in consultation and the role of a counsellor or psychotherapist working alongside the general practitioner as part of the primary care team.[1] Pringle and Laverty also state that counsellors who work in primary care should concentrate on non-directive counselling. That is only one form of counselling or psychotherapeutic approach. Many others are now being used effectively—for example, brief therapy models, behavioural change techniques, and gestalt—as the counsellors match the patients' needs to therapy and not vice versa.

Pringle and Laverty are apparently unaware of the many family health services authorities that have set up approval procedures for employing counsellors in primary care. The imminent publication of guidelines on employing counsellors in primary care prepared by a working party of the British Association for Counselling will greatly help those family health services authorities and general practitioners who have yet to develop such guidelines or do not understand how to assess the qualifications and competence of counsellors they wish to employ and work with.

Bonnie Sibbald and colleagues conclude that, because general practitioners did not know the qualifications of the counsellors they employed, those counsellors were probably unqualified.[2] As most general practitioners would be hard put to describe accurately the qualifications of the nurses they employ, this, I believe, is an unwarranted conclusion. I hope that Sibbald and colleagues will go back to the practices in their survey to examine this important issue and to explain the uneven distribution of counsellors working in general practice.

Research by the Counselling in Primary Care Trust has shown that in an admittedly small randomised sample of counsellors working in primary care 24 of 26 had had three or more years of training. Nearly all were undertaking their own personal therapy or had done so in the past, and all were appropriately supervised.

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1 Pringle M, Laverty J. A counsellor in every practice? *BMJ* 1993;**306**:2-3. (2 January.)
2 Sibbald B, Addington-Hall J, Brenneman D, Freeling P. Counsellors in English and Welsh general practices: their nature and distribution. *BMJ* 1993;**306**:29-33. (2 January.)

Monitoring treatment with aminoglycoside antibiotics

EDITOR,—Guidelines for monitoring aminoglycoside antibiotics are essential, but those provided by J K Aronson and D J M Reynolds contain many misleading statements.[1]

Kanamycin is included in the guidelines, but this has long been superseded by other aminoglycosides.[2] The article fails to emphasise the two most important tenets of safe prescribing of aminoglycosides—namely, that they should be used only if clinically justified and that they should be stopped as soon as the patient's condition permits. We are concerned that those who prescribe aminoglycosides will be distracted by the minutiae of calculations concerning half lives and body loads from the real problem of deciding whether the agents are indicated at all. Infections requiring prolonged courses (more than seven days,[2] or in our opinion five days, not one to two weeks as the authors suggest) are uncommon, are unlikely to be encountered by most clinicians, and require expert supervision. Gram negative endocarditis is exceptionally rare and certainly does not include that due to *Streptococcus faecalis*, which is a Gram positive organism correctly called *Enterococcus faecalis*.

The case histories quoted highlight the common errors in prescribing aminoglycosides. Firstly, there is ignorance of their synergistic role in the treatment of viridans streptococcal and enterococcal endocarditis. A 120 mg loading dose of gentamicin followed by 80 mg eight hourly is excessive for such infections. National recommendations are clear: 60-80 mg of gentamicin twice a day,[2,3] and peak concentrations should be between 3 and 5 μg/ml,[3] not 9 μg/ml as suggested in the first case history. Secondly, adjustment of the aminoglycoside regimen during treatment often leads to the course being prolonged unnecessarily and diverts attention from the selection of suitable alternatives (cases 2 and 3).

Finally, it is unrealistic to recommend (desirable though it might be in theory) repeated estimates of auditory and vestibular function and, likewise, to believe that busy house officers will take samples for measurement of peak concentrations precisely 15 minutes after the end of an infusion and one hour after intramuscular administration as the authors advise. We, and others,[2] recommend that a sample should be obtained after one hour for both routes and are pleased to receive one at all, for it immediately involves the medical microbiologist in the care of the patient, and close cooperation is important.[4]

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1 Aronson JK, Reynolds DJM. Aminoglycoside antibiotics. *BMJ* 1992;**305**:1421-4. (5 December.)
2 BMA and Royal Pharmaceutical Society of Great Britain. *British national formulary, number 24.* London: BMA, RPSGB, 1992.
3 Working Party of the British Society for Antimicrobial Chemotherapy. Antibiotic treatment of streptococcal and staphylococcal endocarditis. *Lancet* 1985;ii:815-7.
4 Cooke EM. Aminoglycoside toxicity. *Journal of the Medical Defence Union* 1988:23.

EDITOR,—J K Aronson and M Hardman do not do justice to the range of antimiocrobial drugs for which monitoring of serum concentrations is necessary,[1] and Aronson and D J M Reynolds include several statements that we find unacceptable in their review of monitoring of aminoglycoside antibiotics.[2]

Serum estimations are of proved value for all aminoglycosides and for the closely related agent streptomycin. Serum concentrations should also be assayed in all patients receiving vancomycin, flucytosine, or cycloserine; neonates and perhaps those under 4 years old receiving chloramphenicol; those with severe sepsis receiving teicoplanin[3]; and patients receiving prophylactic itraconazole.[4] With all these agents serum concentrations have been putatively related to toxicity or clinical efficacy or there are inconsistencies between the dosage and serum concentrations. In selected patients assays of penicillin, co-trimoxazole, flucloxacillin, ciprofloxacin, metronidazole, and rifampicin may also be of clinical value.

Serum aminoglycoside concentrations should be measured one hour after the dose, not 15 minutes after as stated.[5,6] One hour after the dose the phase of rapid equilibration between the blood and tissues is generally complete and the elimination phase becomes dominant, and thus the observed concentration more accurately reflects the concentration in tissue, where the infection is most likely to be. The serum concentration is falling rapidly at 15 minutes, and small changes in the timing of the sample will greatly affect the observed result, which could result in day to day inconsistencies and unwarranted changes in dosage. We suspect that the high concentration in the first clinical vignette was due to sampling too early. There is little evidence, however, to correlate serum concentrations after the dose with toxicity, and indeed experimental nephrotoxicity caused by gentamicin is more severe when the total daily dose is divided than when it is given by a single bolus, when concentrations after the dose are higher.[7]

Two other inaccuracies are perpetuated. One is that a loading dose is required in patients with apparently normal renal function, and the other is that the "standard" dose is 80 mg intravenously eight hourly. We disagree strongly with any calculation of dosage being based on plasma half life derived from the difference between only two observations, especially if the first of them is taken early in the distribution and not in the elimination phase. A half life calculated in this way would be falsely short.

It is also important to realise that alternative and less toxic antimicrobials were probably available for the patient who had sepsis due to *Escherichia coli* and renal impairment.

Finally, aminoglycoside concentrations are