fessor Kay's comment (ref. 2 in our article) 'there have been no reports of British epidemiological studies on this subject in the past two decades'. This was further supported by Dr McDonald of the Institute of Psychiatry in his publication of 1986 (ref. 9).

We compared our results with a study on depression in London published in 1986 which is more recent than the study in London quoted by Dr Ames. Our paper was submitted for publication in 1986 and, as Dr Ames suggests, could not possibly have referred to the studies in Liverpool and Scotland, published in 1987.

I maintain that the clinical diagnosis of depression should not be made on questionnaire results alone. Professor Goldberg and associate (ref 17) appear to support my view.

I thank Dr Ames for his support for further epidemiological studies and for informing me of the recent publications on the subject.

I wish to report a printing error in the text. A sentence in the second paragraph of the discussion should read: 'However, their study was selective and did not include those patients...', rather than 'our study' which confused some readers who brought the error to my attention.

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## Bacteriology of a rural practice

Sir,

I was most interested to read Ditchburn and colleagues' retrospective bacteriology survey (March *Journal*, p.110). However, I do not entirely agree with their proposed antibiotic regimen.

Most general practitioners are faced with having to prescribe an antibiotic before bacteriological results are available, based on the most likely causative organism. With respect to urinary tract infections, in this study *Escherichia coli* and *Klebsiella pneumoniae* were the commonest causative organisms, *E. coli* being six times commoner than any other organism. As 95% of these organisms were sensitive to nitrofurantoin and 79% to trimethoprim it would appear that either drug would be a reasonable choice to cure a majority of patients while awaiting bacterial culture results.

The advantage of trimethoprim over nitrofurantoin is that it is well absorbed, attaining high concentrations in blood and other tissues, and therefore effective in patients at risk of developing an ascending pyelonephritis. Trimethoprim is one of very few antibiotics which penetrates prostatic tissue in therapeutic concentration and thus is very useful in this difficult therapeutic area.<sup>1</sup>

Either nitrofurantoin or trimethoprim may safely be used for long-term prophylaxis in children with anatomical abnormalities of the urinary tract which predispose to infection — the commonest organisms involved again being E. coli and K. pneumoniae.2 The high blood concentrations achieved with trimethoprim may confer advantages and tolerance appears to be better than with nitrofurantoin. In contrast, cephalosporins are not suitable for long-term prophylactic use. Unfortunately, the authors give no indication of the sensitivity of E. coli to cephalexin in their series, although they recommend its use.

In bacterial upper respiratory tract infections, trimethoprim has recently been shown to be as effective as amoxycillin in a prospective, randomized double-blind trial in general practice.<sup>3</sup> It penetrates sputum well and is an effective alternative to the penicillin group.

Trimethoprim is usually ineffective against *Pseudomonas aeruginosa* and *Neisseria gonorrheae*, neither is it recommended for use in pregnancy. With these provisos it remains a safe and effective antibiotic in the general practitioner's armamentarium.

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## References

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- White RHR. Management of urinary tract infections. Arch Dis Child 1987; 62:
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Sir,

Dr Ditchburn and colleagues are to be congratulated on their assiduous retrospective six year study of bacteriology in rural general practice (March Journal, p.110). My surprise on reading this article — and I suspect that it also surprised the authors — was the relatively high percentage resistance of urinary tract pathogens to trimethoprim.

One reason for this may be that they analysed all positive urine cultures together whether the samples were obtained from patients with acute or chronic problems. The latter tend to have repeated cultures from which may be grown colonies of bacteria of unusual genera and resistance to antibiotics. In this study,

culture rates of *E. coli* were perhaps less than one would expect while those of *K. pneumoniae* were perhaps higher. This again suggests an unusual predominance of chronic infection.

If the authors could separate from their figures those results derived from acute urinary tract infection and so prove their point, I should feel happier in discarding trimethoprim as my first choice in the treatment of acute urinary infection. Nitrofurantoin, which the authors suggest as their drug of choice, is more expensive, associated with more side effects and is contraindicated in the presence of renal failure.

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Sir,

We are grateful to Dr Miller for his comments on our paper. We had considered the possibility that an unusually high number of chronic infections might have been responsible for our finding of a high frequency of resistance to trimethoprim in urinary pathogens. However, this does not appear to be a significant factor. Of the 325 urinary pathogens isolated, 54 came from patients with recurrent infections caused by structural or functional abnormalities of the urinary tract. These indeed had an atypical flora — only 31% grew E. coli and 26% K. pneumoniae. Among the remaining 271 'normal' cases 68% grew E. coli and only 8% grew K. pneumoniae. The sensitivity trimethoprim in these cases was still only 72%. This is because of the relatively high resistance to trimethoprim of all the urinary pathogens including E. coli. Trimethoprim resistance was present in 21% of E. coli strains, 45% of K. pneumoniae strains and 43% of Streptococcus faecalis strains. Thus, although Dr Miller may be right in ascribing our relatively low frequency of E. coli in urinary infections to abnormal cases, these do not explain most of the trimethoprim resistance found.

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## Medicine in South Africa

Sir,

I read with interest Dr Donald's editorial (March *Journal*, p.97) on international aspects of general practice. The author states with some pride that 'within three