7560 in 1995, these hospitals performed roughly half of all abortions and deliveries in Norway that year and served a similar proportion of the total population. There are no separate abortion clinics in Norway.

Figure 1 shows that the number of abortions had increased by 5% in January and by 11% in February this year compared with the previous year. For the two months combined the largest increase in one institution was 22%.

Fig 1—Number of legal abortions carried out in the nine largest gynaecological departments in Norway, January and February, 1995 and 1996

We consider that the findings reported here are probably representative of those for Norway as a whole. The downward trend in the number of legal abortions has been replaced by an increase of nearly 8% in the first two months of this year; this equals the reduction seen over the preceding five years.

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Depression in carers of elderly people living at home

EDITOR—We wish to respond to the letters¹ generated by our paper on psychiatric morbidity in carers.² R H Bird raises the interesting suggestion that carers of older people may be at risk of drinking excessively. Possibly because we do not work in a substance misuse service, our clinical impression is that alcohol misuse in this population of carers is rare. Bird is, however, correct in assuming that we did not ask about alcohol misuse in the prevalence study. The spouse carers of people with psychiatric disorders have now been interviewed in more detail as part of a follow up study; none admitted to excessive alcohol consumption, although some of the index cases did.

J M Eagles suggests that we have misrepresented his findings.³ Our point was that his study found that "Supporters of demented relatives showed no increase in psychiatric morbidity on the [general health questionnaire] when compared with the supporters of non-demented elderly." It is possible that our results differed partly because of the differences in settings. It still remains true that Eagles *et al* did not make a formal psychiatric diagnosis in the carers and that a

further possible explanation of the difference in findings between their study and ours lies in the method of ascertaining cases.

The interesting study by Orazio Zanetti and colleagues shows the importance of the characteristics of carers in determining vulnerability to depression; these findings can best be seen as complementary to our results in generating a multifactorial model of carers' vulnerability.

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Transdermal glyceryl trinitrate for dysmenorrhoea

Confidence intervals for glyceryl trinitrate do not suggest a significant effect

EDITOR—Effective treatments for dysmenorrhoea (combined oral contraceptives and non-steroidal anti-inflammatory drugs) are available, but, as R Pittrof and colleagues state, contraindications to non-steroidal anti-inflammatory drugs make them unsuitable in some patients.¹ The authors suggest, on the basis of a small clinical trial, that transdermal glyceryl trinitrate is a clinically useful alternative. They quote P values for different outcome measures (total pain score, $P = 0.059$; pain score on worst day, $P = 0.048$; total headache score and headache score on worst day, $P = 0.4$), which to us hardly suggest a clinically meaningful effect. More importantly, in their table of results none of the confidence intervals suggests a significant effect because the differences in the scores obtained during treatment with glyceryl trinitrate and with placebo range from negative to positive.

The contradictory conclusions drawn from the significance levels and the confidence intervals seem to stem from the use of non-parametric tests (for the P values) and parametric estimation of the confidence intervals. Given the emphasis in the *BMJ* and other journals recently on the use of confidence intervals rather than significance levels,^{2,3} we are surprised that Pittrof and colleagues' conclusions should have been allowed to stand.

A larger trial may well produce a more definitive answer, but on the basis of existing data we believe that the authors' assessment of the efficacy of glyceryl trinitrate is unduly optimistic. We would recommend paracetamol for patients who cannot tolerate non-steroidal anti-inflammatory drugs.

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Authors' reply

EDITOR—We fear that A Li Wan Po and R W Stones have missed the main point of our study. We recruited a small, highly selected group of women with severe dysmenorrhoea primarily to see whether a very small dose of transdermal glyceryl trinitrate had any effect on period pain. Using self score charts and standard statistical techniques, we showed an effect on period pain but not on other variables. In this context it is important to note that headache was included not as an outcome of treatment but as a potential side effect.

Readers vary in their preference for parametric and non-parametric tests, particularly when, as in our study, the scale of measurement is not straightforward. As we gave Wilcoxon P values and tabulated confidence intervals (here equivalent to parametric t tests) the concerns of both groups of readers are met with an economy of space. Different tests will yield slightly different results, which emphasises why one should not to be obsessed with $P = 0.05$ as a critical value or 95% confidence intervals that include or exclude 0. In this case, the results of both tests broadly agree and suggest that the treatment is worthy of further interest.

The magnitude of the response is largely irrelevant as we were primarily interested in investigating a pharmacological therapeutic mechanism. Hence our study has not proved clinical usefulness but has suggested a possible treatment; further studies of efficacy, dose, and safety are needed. As for the suggestion that women with dysmenorrhoea who cannot take non-steroidal anti-inflammatory drugs should take paracetamol—most gynaecologists know that women attending their clinics because of painful periods have tried everything already.

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Contamination of ampicillin was probably due to reuse of disposable stoppers

EDITOR—In July last year a small non-government organisation started to support a 40 bed paediatric unit in Afghanistan. Essential drugs were one of the items provided. These drugs were bought from pharmaceutical wholesalers in Pakistan and transported to Afghanistan. In November the medical staff of the unit suspected that excess deaths were associated with a batch of ampicillin for injection. The aluminum seal of the phials was intact, but the underlying rubber stoppers showed puncture marks.

A review of (imperfect) case notes showed eight unexpected deaths after the use of about 500 suspect phials. All of these children had shown sudden deterioration, resembling that occurring in septic shock, some hours after intravenous