and will be fewer in number than those at present receiving limited-period oxygen.

We would take issue with the conclusions of Dr Jones and his colleagues. Current domiciliary oxygen supply is costly, inefficient, and uses outdated equipment. Changes will have to be made, but only on the basis of a clearer knowledge of the type of patient likely to benefit, the duration and quantity of daily therapy required for clinical benefit, and a thorough evaluation of new techniques of delivery, "G" size cylinders, oxygen concentrators, or portable liquid oxygen systems.

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of reulceration and of non-ulcer dyspepsia as well as other gastrointestinal disturbances and, very rarely, mortality. Further experience of the long-term treatment of duodenal ulcer disease with cimetidine and of contemporary surgery are required before any firm conclusions can be made for the relative merits of these alternatives.

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- ¹ Burland, W L, et al, in *Proceedings of Westminster Hospital Symposium on Cimetidine*. Edinburgh, Churchill Livingstone. In press.
² Bodemar, G, and Walan, A, *Lancet*, 1978, 1, 403.
³ Wormsley, K G, Symposium on Management of Peptic Ulceration, Royal College of Surgeons of Edinburgh, April 1978.

* * * The authors sent a copy of this letter to Professors Clark and Wyllie, whose reply is printed below.—ED, *BMJ*.

Maintenance treatment of duodenal ulcer with cimetidine

SIR,—In making their case for surgical treatment of chronic duodenal ulcer disease in preference to cimetidine Professors C G Clark and J H Wyllie (8 July, p 123) appear to have made an error in reference to our review of data for recurrence of duodenal ulcer during longer-term treatment with cimetidine.¹ These data are given in the table below and are not dissimilar from those also referred to by Professors Clark and Wyllie which were reported by Bodemar and Walan² and Dr E Gudmand-Hoyer and others (29 April, p 1095). Professors Clark and Wyllie are also concerned about the frequency of symptomless recurrence associated with cimetidine treatment as reported by Wormsley.³ Data for this association from our review are also presented in the table and suggest that longer-term treatment with cimetidine will protect against symptomless reulceration and that short-term courses of treatment with cimetidine are not more likely to be associated with subsequent symptomless reulceration.

Professors Clark and Wyllie do not discuss the merits of additional courses of treatment with cimetidine. Should duodenal ulcers recur during longer-term treatment or when that treatment is discontinued, then a second course of treatment and indeed a third may be as successful as the first.²

They also refer to some of the best results available from proximal gastric vagotomy. While this is becoming the operation of choice, it is fair to say that its long-term efficacy and safety are no more well defined than for cimetidine. Results are likely to improve with increased operator experience, but at present it is an irreversible procedure (unlike medication) associated with a small but real incidence

SIR,—If we made an error of interpretation of the data of Dr Burland and his colleagues others may do the same. From the table, if 2.1 patients on 400 mg cimetidine at bedtime relapsed per 100 patient months, then recurrence would appear to be at a rate of 25.2% per annum (not 13.4%) and we conclude that the average length of follow-up of the 179 patients was 6.4 months. In 184 patients treated with cimetidine 400 mg twice daily the follow-up was 7.2 months with a symptomatic relapse rate of 21.6%. In addition there are a further 7% of patients with asymptomatic reulceration. Their data are therefore not comparable with those of Bodemar and Walan or Dr Gudmand-Hoyer and his colleagues, who followed patients for a whole year.

Our reference to a relapse rate of 40% we regarded as understating what was found in Dr Burland's data at one year—namely, 23 of 47 patients (49% with 95% confidence limits 35-63%). If this is not correct then clarification is necessary.

Symptomless recurrence was seen this week in one of our patients, a man aged 39 treated on maintenance therapy for just over one year. He presented with severe haemorrhage necessitating emergency surgery, a situation which carries an appreciable mortality in elderly patients. We do not dispute that second or third therapeutic courses of cimetidine may be given to those who relapse on maintenance therapy. Nor do we dispute that recurrent ulceration is seen after proximal gastric vagotomy. Indeed, comparing silent recurrence with cimetidine and recurrence after surgery, the incidence is about the same, and it may well be that the risks involved are no different though for different reasons. However, we do think the long-term efficacy

of operation is considerably better defined than that of cimetidine and our original letter was intended to give a temporal assessment on current evidence while the clinical use of cimetidine is being extended.

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Efficacy of rubella vaccination

SIR,—In the staff health unit of this hospital from 31 May 1977 to 1 June 1978 we examined the serum of 112 women and 22 men aged 18-50+ for the presence of rubella antibodies. This test is routine. Personnel when asked direct questions concerning vaccinations cannot give complete answers; we have therefore not asked about rubella immunisation to date. Fourteen women and two men were found by this test to be susceptible.

It is our policy to offer rubella vaccine to all women of childbearing age. Of the 14 susceptible women, 12 accepted the vaccine, of whom nine were aged 18-25. The follow-up rubella haemagglutination inhibition (HAI) test in four of the 12 vaccinated showed evidence of susceptibility at periods ranging from 3 to 6 weeks. In one of these four the test became positive after three months, but in three it remained negative 3-8 months later.

The hospital pharmacist has written to the makers, who have no explanation. The vaccine was stored in the recommended manner and was in date. Three different batch numbers were used as well as different makes at differing times. There is no historical or clinical evidence that any of the women who responded negatively to immunisation have abnormal immunological functions. Blood was sent through the normal hospital channels to a public laboratory for testing.

These results clearly raise a number of issues concerning: (1) the efficacy of the vaccines; (2) the immunological integrity of the individuals; and (3) the integrity of the HAI test. There are also wider implications. If the findings were to be confirmed, then there are certain mandatory steps the profession should take before women of childbearing age can be assured of immunity as offered by immunisation. These must include follow-up studies of allegedly immunised women and a policy of revaccination should this be considered necessary.

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Children who cannot read

SIR,—I was disappointed by your leading article on this subject (1 July, p 3). Ten years as school medical officer have given me a special interest in this problem and I thought your strong psychological bias left a very important group of children too much out of account. These children are far from being negligible in numbers and often have high intellectual ability. As a rule they are psychologically stable, although considerable mental stress may be caused by their disability. They suffer—I use the word literally and purposefully—from an inherited neurological defect which makes interpretation of written symbols

Recurrence of ulceration during longer-term cimetidine treatment

Treatment (No) (Patients entered studies with endoscopically proved healed ulcers)	Symptomatic reulceration confirmed at endoscopy		Asymptomatic reulceration seen at routine endoscopy	
	No (%)	No per 100 patient-months treatment	No examined	No (%) with reulceration
Cimetidine 400 mg at bedtime (179)	24 (13.4)	2.1	75	4 (5.3)
Cimetidine 400 mg twice daily (184)	24 (13.0)	1.8	75	7 (9.3)
Placebo (333)	158 (47.4)	9.9	75*	22 (30.0)

*13 previously treated with placebo and 5 (38%) ulcerated; 60 previously treated with cimetidine and 17 (28%) ulcerated; 2 previously treated with drugs other than cimetidine or placebo and none ulcerated.