the present study were similar to those in group NI children in an earlier paper on isoflurane induction in children published by two of us [2].

We agree with Dr. Lewis's opinion that oximetry becomes less useful if it distracts the anaesthetist from assessing and managing the airway, but suggest that this is much less likely to occur if an induction technique with a low incidence of respiratory complications and consequent desaturations (such as that used in our group C children) is used.

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REFERENCES

UNEXPECTED, DIFFICULT LARYNGOSCOPY

Sir,—Williams, Carli and Cormack [1] have misread the paper by Doré and myself [2], and have drawn some erroneous conclusions. In several places they maintain that the incidence of difficult laryngoscopy was 1 in 300 in our study, the incidence of grade 3+4 difficult laryngoscopy [3] was 1 in 292, that the anaesthetist failed to see the cords only once in 292 patients, and that he had an incidence of grade 3 laryngoscopy of one in 292 patients.

We reported on 19 patients "in whom tracheal intubation proved particularly difficult", that is, those who had "more severe degrees of difficulty" at intubation, associated with difficulty at laryngoscopy "such that the anaesthetist could only see the epiglottis (sometimes not even that)". Six of these patients had cervical arthritis, and the overall prevalence of this particularly difficult intubation was 0.5%.

It is inappropriate to exclude patients with neck pathology when quoting the incidence of intubation difficulty. None of our 14 control patients had angle B (V21, our measurement of atlanto-occipital extension) less than 115°, while only three of our difficult intubation patients had a measurement of more than 115° for this angle. Wilson and colleagues [4] found that 46% of their difficult laryngoscopy patients had a clinically appreciable reduction of atlanto-occipital extension.

The Cormack and Lehane grading of difficult laryngoscopy had not been described when our study began, nor did we purport to include all those patients in whom the larynx could not be exposed at laryngoscopy. We did not count those patients whose difficulty of intubation was "inconsequential", but adopted "the more stringent criteria", "admitting only those patients with more severe degrees of difficulty". Wilson and colleagues [4], and now Williams and colleagues [1], give the same reason, both point out that the incidence of difficult tracheal intubation should be less than the incidence of difficult laryngoscopy.

For these reasons, Williams and colleagues cannot take the results of our study to "obviate some of [their] reservations" that the "original estimate of Grade 3 frequency [at] 1 in 2000...may be too low".

Wilson and colleagues [4] found the incidence of Cormack and Lehane grade 3 (when laryngeal pressure was applied) was 5.4% in a retrospective series (they suggest eagerness in reporting or a lower proportion of experienced anaesthetists), and 1.3% in a prospective series; their incidence of grade 4 was 0.5% and 0.3% in the retrospective and prospective series, respectively. Of course the frequency with which these grades occurs varies from one group of 1000 patients to the next, but my unpublished experience leads me to support the figures reported by Wilson and colleagues.

P. BELLHOUSE
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REFERENCE

Sir,—May we comment briefly on the letter from Dr Bellhouse.

 Patients with neck pathology. These were excluded from our unexpected difficult intubation group because difficulty in such cases is not unexpected, or should not be. In our 1984 study, we stated that if Caesarean section is to be carried out in a patient with neck pathology, such as in Still's disease, a senior anaesthetist must be notified. Two years later, a Confidential Enquiry [1] reported a death in a severely arthritic patient—the registrar had carried out a standard failed intubation drill to the best of his ability, but fatal Mendelson's syndrome occurred. Was he wise to start this case on his own?

Patients without neck pathology. The study by Bellhouse and Doré [2], in which they claimed to be able to predict nearly all difficult intubations is well known, and rightly so. Scurr remarked many years ago that an experienced anaesthetist may know when trouble is brewing, although he may be unable to state the reasons. Unfortunately, it has become clear that, for most of us, this is not true. Despite world-wide efforts to solve this problem, the results have been disappointing—for example, a recent survey [3], using both Mallampati's sign and Wilson's risk-sum method, found that 50% of the difficult cases were missed. Clearly, this strategy is not going to work unless the methods can be improved.

Thus difficulty is easy to predict in arthritic patients and trouble can be forestalled; the problem cases are those which are difficult despite the absence of neck pathology. After subtracting the arthritic patients from the data of Dr Bellhouse, the incidence of unexpected difficulty is 0.3%, as we stated, not 1.3%.

It is perhaps an academic question which of these figures is correct, as the main conclusion is the same from both, namely that junior anaesthetists will have had little or no experience in managing difficult intubations by the time they start doing "full-stomach" cases on their own. It follows that a training