Despite these findings and the well documented data on adults, pulse oximetry and cardiac monitoring have not been universally used in children undergoing endoscopy under sedation.⁴ Clearly, if paediatric endoscopy is performed in this way similar recommendations concerning careful monitoring and supplemental oxygen must apply.

There is, however, a safer and possibly better alternative. After witnessing several major hypoxic events and a respiratory arrest in centres where paediatric gastrointestinal endoscopy is performed under sedation, we have made it our policy to undertake these procedures under short general anaesthesia. This permits both detailed cardio-respiratory monitoring and constant supervision of the patient's airway by the anaesthetist. The procedure is well tolerated (and much preferred by those who have previously undergone endoscopy or jejunal biopsy under sedation) and can usually be carried out on a day case basis. General anaesthesia allows the endoscopist to concentrate on the examination without distraction, and therapeutic interventions such as dilatation of an oesophageal stricture or injection of oesophageal varices can be undertaken during the same session.

In a personal audit of over 300 diagnostic or therapeutic flexible gastrointestinal endoscopies performed in children aged 1 month to 17 years under general anaesthesia since January 1994 there were no major adverse events and all patients recovered fully. The patients included children with severe cerebral palsy, congenital heart disease, and other complex medical problems, who are at greater risk of cardiorespiratory disturbances.

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Italian data support upper gastrointestinal endoscopy without sedation

EDITOR,—J E Charlton claims that closer monitoring, as well as routine oxygen, during upper gastrointestinal endoscopy would reduce morbidity related to this procedure.¹ Charlton wonders whether it is safe to dismiss cardiographic abnormalities and low oxygen desaturation, since in a recent survey nearly all the complications were respiratory or cardiovascular.² In the same survey 85% of upper gastrointestinal endoscopies were performed under sedation, a figure similar to that detected in a survey in 1990, in which sedation was shown to be the main cause of adverse outcomes.³

We believe that performing upper gastrointestinal endoscopy without sedation would greatly improve its safety and cost effectiveness without any appreciable reduction of efficiency. In our institution, since May 1993, we have performed upper gastrointestinal endoscopies routinely without sedation, with local anaesthesia by lignocaine spray of the oropharynx. We have reviewed the incidental endoscopies performed in the past three months (n=353) to assess the true need for sedation (table); we separated emergency or "operative" from diagnostic upper gastrointestinal endoscopies, because in emergency cases sedation is often performed without prior assessment of the patient's preference. Four per cent of the 285 diagnostic examinations were done under sedation, partly because of patients' explicit request. Among the remaining 273 diagnostic

Number of upper gastrointestinal endoscopies in which sedation was given

	Diagnostic	Operative or emergency	Total
No Sedation given	285	68	353
Sedation given	12	33	45
No sedation given (interrupted)	273 (2)	35 (0)	308 (2)

endoscopies, which were performed without sedation, only two were interrupted or judged technically unsatisfactory, or both, because of the patient's intolerance. These data support our opinion that sedation is not generally needed for upper gastrointestinal endoscopy and that the procedure is well tolerated. We therefore conclude that the easiest, safest, cheapest way to reduce morbidity and mortality associated with upper gastrointestinal endoscopies is to perform them without sedation.

We use sedation at the patient's request, if the patient is overconcerned about the procedure, and in "operative" or emergency settings. This allows a reduction in the number of sedations (and hence in adverse outcomes related to sedation) of over 80%. Pulse oximetry and administration of oxygen could be reserved for patients undergoing sedation—who should be a minority—and their role eventually assessed in a formal randomised controlled trial.

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Hypoxia during endoscopy also occurs in unsedated patients

EDITOR,—J E Charlton emphasises the risks of upper alimentary endoscopy, particularly in high risk patients undergoing the procedure with sedation,¹ but fails to emphasise that the risk can also occur in unsedated patients. We have previously reported an oxygen saturation of $\leq 92\%$ in 41% (24/59) of unsedated patients breathing room air.² The proportion of unsedated patients with an oxygen saturation of $\leq 92\%$ fell significantly to 11% (6/56) when supplemental oxygen was given. Similar findings were found in a group of patients undergoing endoscopy with sedation. In line with Charlton's comments, however, there were no significant differences in maximum pulse rate in any of these groups, indicating that alleviating the hypoxia may not reduce the cardiac risk. Despite this we agree that it would not be safe to dismiss the benefits of supplemental oxygen during endoscopy and believe that it should be part of routine practice.

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Open access echocardiography

EDITOR,—We have six years of experience of open access echocardiography for general practitioners, so we read the paper by C M Francis and colleagues¹ and the accompanying editorial by J R Hampton and A R Barlow² with interest.

We have performed a retrospective study of echocardiograms ordered by general practitioners at a health teaching centre of family medicine between January 1985 and April 1991. The centre has six general practitioners and covers a population of 22 000. There are also six trainees in family medicine and a paediatrician. The echocardiography was done by an experienced cardiologist working at a large hospital, which covers a population of 350 000.

There were no predetermined criteria for ordering echocardiograms. During the study period 127 echocardiograms were requested, but data were missing in 14, leaving 113 for analysis.

Eighty echocardiograms had been ordered because of persistent symptoms, 25 because of dyspnoea, 21 because of palpitations, 14 because of chest pain, and five because of syncope. Ninety one had been ordered for diagnosis and 22 to assist management in patients with existing diseases. Sixty eight echocardiograms showed abnormal results, including 39 valve abnormalities and nine conditions that did not affect the valves. Pathological heart murmurs were less common in patients aged 20 and under. Symptoms and pathological findings on echocardiography predicted referral to a cardiologist.

Our results strengthen our impression that echocardiography is useful to exclude or confirm disease in primary care.

We think it necessary to outline some referral criteria in coordination with the cardiology department, which also prepares the trainees in family medicine in the use and interpretation of echocardiograms.

Our experience was wholly satisfactory. Unfortunately, the echocardiography department is now overworked and the cardiologist must decide whether to perform echocardiography.

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Patients' perceptions of need for primary health care services

Patients could consider general good rather than their own

EDITOR,—Jane L Hopton and Maria Dlugolecka examine the feasibility of using patients' perceptions of need for primary health care services to develop priorities.¹ Their study illustrates three important deficiencies in engaging the general public to develop priorities for health care services. Firstly, we wonder how representative the respondents were of the general population. As 64% of the

respondents were home owners and 61% car owners, was recruitment principally from the upper social class? Furthermore, it would have been beneficial if the authors had described the sociodemographic characteristics of the non-respondents, thereby allowing comparison with those of the respondents.

Secondly, respondents were asked whether particular services would currently be of some help, great help, or no help to them personally. It was therefore no surprise that the "healthy" group gave higher rankings to health promotion activities than to symptomatic treatments compared with the "unhealthy group." Ill individuals may be best placed to put a utility value on their own state of health. Sick people, however, would not be able to give "informed" opinions about health states that they have not experienced, and their judgment may be consciously or subconsciously biased. It would have been more useful for prioritisation purposes to have invited respondents to be more altruistic, by asking them to value primary care services for society as a whole. This would be similar to Rawls's "original position," when subjects are asked to make judgments from behind a "veil of ignorance."²

Thirdly, it was disappointing that Hopton and Dlugolecka dealt very superficially with ethical issues such as equality and equity and then only at the end of their paper. Equity is similar to Aristotle's concept of justice, whereby equals are treated equally and unequals unequally, in proportion to their relevant differences.³ While the respondents in this study are different in terms of health state, there may be other factors of moral worth that we wish to consider. In any case, Hopton and Dlugolecka do not indicate how the views of unhealthy people may be given more weight. We would prefer to appeal to the ethical principle of equal consideration of interests. Since we are all potential users of health care, we should all have a right to participate in decisions on prioritisation, even if this is biased towards conditions that we would be least likely to experience rather than actual experience of a reduction in quality of life associated with different health states.

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Authors' reply

EDITOR,—An important deficiency in the burgeoning research literature on health needs assessment and priority setting, particularly in attempts to incorporate users' views, is a preoccupation with methodological debate in isolation from debate about principles of social justice and morality. We attempted in our paper to deconstruct our own methodology to raise this debate rather than to summarise it. We are pleased that others are eager to take up the debate, and the issues raised by Quentin D Sandifer and colleagues are valuable in moving forward from our necessarily superficial coverage.

In the context of our concern with the nature of the debate, the key issue raised by Sandifer and colleagues is that of framing participation in the

process of priority setting or needs assessment in terms of Rawls's "original position" and asking participants to make judgments from behind a "veil of ignorance." With this approach important challenges remain. A method needs to be developed that can critically assess the extent to which a veil of ignorance has been established. At a conceptual level health services and local needs (as opposed to needs of society as a whole) have to be placed within an original position. We agree that there may be factors other than health state that may be of moral worth. Again this is a matter for debate, along with consideration of their place within health services needs assessment and priority setting.

Sandifer and colleagues also raise the issue of comprehensiveness of participation, both in methodological terms, by considering the characteristics of non-respondents and in conceptual terms, by appealing to the ethical principle of equal consideration of interests. The issue of non-respondents or non-participants is common to all methods, and we acknowledge the limited representativeness of our sample. With regard to equal consideration of interests, only if our analysis is interpreted as a substitute, rather than a stimulus, for negotiation does considering the preferences of different groups conflict with this principle. In other words, everyone has the right to negotiate how or whether the preferences of different groups are given more weight.

Habermas's approach of rational communication that is comprehensive, understandable and truthful as the basis of a model of democratic reason has also been suggested as a basis for social negotiation of needs.¹ A weakness of this model is that professional knowledge is often disempowering. It seems to us that the greater challenge is to ensure that this debate moves from the professional arena into everyday negotiations.

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measures of activity: finished consultant episodes, admissions, and patients. Finally, we derived the ratio of finished consultant episodes to admissions and patients treated (table).

The number of admissions (day cases and ordinary admissions) increased 98% between 1989 and 1993 (table). The number of patients admitted, however, rose by only 14%. Most of the increase in finished consultant episodes and admissions was therefore due to repeat admissions and readmissions of the same patients. In 1989 the ratio of all admissions and finished consultant episodes to individual patients was 1.23 and 1.33 respectively, but by 1993 these ratios had risen to 2.13 and 2.24 respectively. Thus in 1993 there were 2.24 finished consultant episodes and 2.13 admissions per patient treated.

The implications of this for contracting are threefold. Firstly, admission rates are often used as a proxy measure for the population's access to treatment and care, but the paradox is that an area with high admission rates may admit few patients (with numerous readmissions) while, conversely, areas with low admission rates may admit many patients but with fewer readmissions and repeat admissions. Secondly, because the admission or finished consultant episode includes day cases it may give a spurious picture of the use of resources and patterns of care. Thus an area with low admission rates may have higher costs because more patients are admitted as inpatients; conversely, an area with high admission rates where many day case procedures are undertaken may have low costs. We are undertaking further analysis to ascertain how admissions relate to actual treatment of colorectal cancer. Thirdly, our findings support the Radical Statistics Health Group's conclusion that the increase in the number of finished consultant episodes in recent years cannot be used to support ministers' claims that more patients are being treated.¹

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1 Radical Statistics Health Group. NHS "indicators of success": what do they tell us? *BMJ* 1995;310:1045-50. (22 April.)

General household survey provides valuable data

EDITOR,—The authors of the article on NHS "indicators of success"¹ make only passing reference to the general household survey.² This continuous survey throws light on some of the questions regarding trends in use of the NHS by people resident in private (that is, non-institutional) households. Since 1972 the survey has provided data on the percentages of people who consult an NHS general practitioner in a 14 day period and who attend an outpatient or casualty department in a three month period. Since 1982 information has also been collected on the proportions of people who had an inpatient stay in hospital in the previous year (figure), and since 1992 similar data have been collected for day patients. The rates presented in the figure have been age standardised to the "old" European population³ and are shown as three year rolling averages. The standardisation

Measuring NHS activity

Admission rates are misleading

EDITOR,—We recently analysed five years of statistics on hospital episodes for all residents in the South Thames region admitted with a diagnosis of colorectal cancer between 1989 and 1993. Using date of birth, age, sex, and postcode as patient identifiers, we were able to link finished consultant episodes to admissions to calculate both the total number of admissions and the total number of patients treated. Data on 35 230 finished consultant episodes were obtained; these related to 20 434 patients, who had 32 364 admissions for colorectal cancer. We then examined trends in hospital activity over time, using three different

Trends in finished consultant episodes and admissions for colorectal cancer between 1988 and 1993 in South Thames

Year	Finished consultant episodes	Inpatient and day case admissions	Patients with at least one inpatient or day case admission during year	Finished consultant episodes/patient	Admissions/patient	Finished consultant episodes/admission
1989	5105	4737	3851	1.33	1.23	1.08
1990	5809	5385	3781	1.54	1.42	1.08
1991	6642	5830	4109	1.62	1.42	1.14
1992	7839	7050	4306	1.82	1.64	1.11
1993	9835	9362	4387	2.24	2.13	1.05