health care utilization does vary importantly. For while social class (as measured by the Registrar General) measures an attribute between which mortality rates are very different it might simply be too crude a measure to pick up whatever differences in utilization may in part be responsible for those mortality differences.

However, even if, as seems quite likely, the variation between general practitioners (adjusting for patient differences) is a large component of total variation in the way services are used the inference that Dr Crombie draws seems to us to be dubious. He seems to take this variation as evidence of equal (or roughly equal) effectiveness, and we wonder how he can do this. To us it represents prima-facie evidence of clinical uncertainty, to which the proper, if tedious, response would be to advocate and design practical clinical trials to test hypotheses about relative effectiveness.

Therefore, because Dr Crombie's two basic findings remain unproven much of what follows in his argument does not have the coherence that he assumes. In particular the idea that ability to cope is a strong discriminator between social classes, while convenient to his thesis, is largely a matter of faith. Such assertions beg the question, 'cope with what'? Moreover, they beg the basic question of what social class differences there actually are in the circumstances that have to be coped with. Wealth, job security and satisfaction, leisure opportunities, physical environment and many other important facets of life vary systematically by social class, and of course, have varying effects on the day-to-day lives of people. The idea that people in social class V are in the predicament because they cope less well than others really does require proof and, again, Dr Crombie has not provided it. In fact his social analysis is somewhat naïve and appears to pay no heed to the changing occupational status of women and the differential effect of unemployment on health status and occupational structure.

Finally, it must also be said that his review of the literature is extremely selective. Firstly, while citing Collins and Klein[6] he neglects to tell us about its serious methodological critique by Scott-Samuel[7] which casts considerable doubt on the validity of their conclusion that general practitioners do compensate for social deprivation. Much of Scott-Samuel's critique stands as valid criticism of Dr Crombie's analysis for, in essence, use of general practitioner services is taken as serving equal needs and, of course, there is no reason to suppose that such an assumption is remotely justified. Moreover, Dr Crombie fails to utilize the data, for instance, of Cartwright and O'Brien[8] which suggests that general practitioners consult much more effectively with middle class patients. He also ignores the analysis of le Grand[9] which suggests that even leaving this consideration aside, per capita health expenditure adjusting for illness rates is lower among the lower social classes.

This is a truly difficult question to address adequately but answers will not do. Could we recommend a more thorough analysis of this unique data base as, for instance, has just been published by Blaxter.[10]

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Fluoridation update

Sir,

This well written article (June p. 350) with plenty of factual information, in which Mr Smith has pointed out that the ingestion of free fluoride ions via other sources than water may well have resulted in an almost universal decline in the incidence of dental caries. The point that he seems to have failed to have picked up is that if fluoride ions are maintained at a controlled level in the water supply and removed from 'cosmetic' and 'toilet' preparations etc. then the daily dose will be more accurately adjusted to the requirement of the individual.

Thus we would achieve *minimum* blood levels by default in those who do not clean their teeth, and *lower (and more appropriate) blood levels* amongst those who obtain their fluoride ions at present from other sources than water.

'Dental fluorosis' is, as he states, a cosmetic problem of questionable significance. 'Skeletal fluorosis' has not been demonstrated to be harmful — indeed it reduces the incidence of menopausal osteoporosis. 'Skeletal fluorosis' should not be confused with 'toxic fluorosis', which is a condition in which the available reservoir of hydroxyapatite becomes so low that parathyroid hypertrophy ensues.

Mr Smith does not produce any scientific evidence with regard to the effect of the fluoride ion on intracellular enzyme activity. Indeed, his reference from the New Scientist, July 1981, states 'what it may be doing in the living cell, whether for good or ill, remains to be discovered'.

Homo sapiens has been drinking naturally fluoridated water up to 5 ppm (five times the recommended level) in a considerable number of geographical locations ever since the evolution of the species and there is no evidence to suggest that the incidence of 'genetic damage, birth defects, cancer and allergy response' is statistically at variance with that pertaining in communities living in areas where free ingestible fluoride ions do not occur naturally.

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Childhood urinary tract infection

Sir,

Dighe's and Grace's paper (June *Journal* p. 324) in common with other recently published papers,[1,2] continues to convey the widely held view that all children who have a urinary tract infection will require an intravenous pyelogram (IVP) and if under five years old a micturating cystourethrogram (MC). This view stems from the conclusions drawn by Smellie and colleagues 1964.[3] Briefly, Smellie investigated 200 children 0-12 years referred to the Paediatric Department of University College Hospital who had a laboratory diagnosis of urinary tract infection (UTI). Of the 188 children who underwent radiological investigation, 94 (50 per cent) had an abnormality of the urinary tract, in the majority of which the clinical course could be modified by appropriate treatment. Smellie concluded that 50 per cent of *all* children with a urinary tract infection will have abnormal urinary tracts and she advocates radiological investigation of such children.

I feel it is time for doubt to be cast on the validity of this conclusion as her population of children was highly selected. Of the 200:

1. Forty-five (22.5 per cent) were newborn, of whom 34 were found to have UTI before discharge from the obstetric unit.
2. Seven children (3.4 per cent) were transferred from other hospitals with known urinary tract abnormalities.
3. All others were referred to the Paediatric Department.
4. Twenty-six (13 per cent) had other congenital abnormalities.
5. Ninety-six (48 per cent) were thought or known to have had a previous UTI.
6. In many cases the child's symptoms were of long duration.
7. The children often presented with non-specific symptoms which did not suggest urinary tract infection.
8. Seven (3.5 per cent) had hypertension.
9. Eight (4 per cent) had palpable kidneys.
10. The mean height of those with abnormalities was on the 35th percentile.

Smellie's population was, therefore, a highly selected group and her extrapolation to the general population is of questionable validity.

To make matters worse, other authors have quoted Smellie's conclusions uncritically[1,2,4,5] despite evidence that the characteristics of children with urinary tract infection seen in general practice differ markedly from Smellie's group[4] and that the rate of abnormality seen on X-ray in general practice is considerably less.[4]

Furthermore, general practitioners are criticized for their lack of referral of children with a UTI for radiological investigation.[1,2,6] On discussion with experienced general practitioner colleagues, it is evident that many question the quoted abnormality rate of 50 per cent and do not feel that the available evidence justifies the risks, in physical and psychological terms of performing IVP and MC in all children with their first UTI.

What is now needed is a prospective longitudinal study from general practice of childhood UTI to identify the child at risk and to determine the optimum general practice management for the majority who may be at greater risk from the 'best current management' than from the disorder itself.

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