Surgeons and the 20-80 rule

Our American colleagues have an enthusiasm for organisational analysis, a zest for self-criticism, and an ability to get-up-and-go that produces reports which often put us to shame. Recent studies on surgical manpower and work loads are no exception and serve to remind us that, though Jeremy Bentham is credited with originating the planning maxim “Investigation, legislation, examination, and report,” the initiative has now passed across the Atlantic.

The Study of Surgical Services in the United States (SOSSUS) has become relatively well known (at least to surgeons) both here and in America.1 An overlapping investigation from Harvard2 3 has now added support to the conclusion that for the United States as a whole there are too many surgeons chasing too little operative work and that some rationalisation (dread word for us in Britain) could achieve substantial economies. No doubt the methods used will be criticised, but on the whole the conclusions seem inescapable and do not conflict with the fact that many surgeons are extremely busy. The distribution of activity seems to follow an old engineering design law (the 20-80 rule) which states that 20% of the people do 80% of the work (the same rule is also said to apply to such matters as the consumption of alcohol and social services).

The design of their investigations did not permit the authors of SOSSUS nor those of the more recent Harvard study to comment on the possibility that inside the skew distribution of surgical labour there is also much “unnecessary surgery,” about which Dunca was recently writing in these columns.4 Nevertheless, as he pointed out, the recent surgical statistics in the USA do allow the inference that non-specialists doing surgery are probably more likely to misjudge the medical indications for it. Bunker5 hinted at a similar conclusion some years ago.

These assessments of the work of surgeons are not without serious implications in any cost-conscious society. There seems little doubt that two chain reactions will follow. Firstly—and this will be found only in societies in which fee-for-service is the way of life—there will be a gradual change in the earning structure of the man who at the moment does surgery but lacks the appropriate specialist qualifications; for better or for worse, he will be gradually squeezed out by board-qualified surgeons. The process may be slow so long as a good income can be earned from a fairly light work load, so reducing the impetus of the specialist to build up his practice. Secondly, and of greater potential relevance to us in Britain, is that there is already a strong movement to reduce the number of surgeons in training and thus the number of residency training programmes in the United States (equivalent to our higher surgical training schemes). Such a reduction in turn will inevitably affect quality of staffing, and if the trend were followed in Britain might arrest or reverse the trend (on the whole desirable) towards spreading senior registrars into socalled non-teaching hospitals. In Britain, where we think we have got the numbers in higher surgical training right in relation to the jobs available, the problem of work loads is inextricably linked with those of resources and staffing. Unfortunately we lack facts, though an outlier of SOSSUS visiting Britain in 1975 found wide variation of commitment to clinical surgery in a small cross section of British surgical clinicians.6 In the absence of data it seems unrealistic to make sweeping changes in resource allocation among regions; nor should we be over-hasty in redeploying either fully trained surgeons or those accepted into higher surgical training.

Though we might not wish to reproduce the complexities of SOSSUS or to introduce a European equivalent of the California Relative Value-Weighted Operative Work Scale (four tonsillectomies equal one hernia), we cannot afford to go on making virtually wholly non-numerical statements, particularly when administrators will then, faute de mieux, use crude economic yardsticks. Perhaps the Royal Colleges of Surgeons in Britain, as guardians of the quality of the surgery here, might take the lead in telling us what surgeons really do; what relationship this has to need; and where, in detail, there is dissonance between the two.


Safety of children in cars

The importance which is rightly attached to child pedestrian casualties has tended to overshadow the risks to children of travelling as passengers in cars. During 1974 in Britain no fewer than 2260 children under 15 years old were killed or seriously injured in cars. Cars are designed for adults and not for children, so that the protection of children travelling in them presents special problems, which have been studied by the Transport and Road Research Laboratory. The results need to be more generally known.1

Special allowance has to be made for changes which occur in the child’s physical development until he can wear an adult type seat belt. Very young infants should be carried in a carry-cot placed transversely across the car. Restraints can be obtained which attach to the bodywork of the car and so prevent the infant being ejected. As soon as the child can sit up, a moulded bucket seat with a built-in harness can be used.

Laetrile: quacks and freedom

Quack cancer cures have been around for a long time. Sooner or later each one is exposed as worthless and is then forgotten, after a period of notoriety in which the gullible and desperate may have been cheated out of their money and seen their soaring hopes dashed. So long as conventional medicine cannot cure all patients with cancer some will be willing to try anything that they think might help. This grasping at thin straws is more part of the American medical scene than the British, though the episodes of Naessens’s serum for leukaemia and the Issels clinic showed what can happen when the machinations of obscure men are given enough publicity by the media, driving innocent people to acts of sheer folly against the best advice of the medical profession.

In America medicine for the paying patient is in an unhappy state. “Do you really trust your doctor?” is the name of the game, and the size and numbers of the law suits show the level at which it can be played. In these circumstances it is hardly surprising that Laetrile, a compound of no proved value in the treatment of cancer, is having such a long run in the public eye and is such a source of anger and embarrassment to the Food and Drug Administration, who want to stamp out its use in the United States.

Laetrile is extracted from apricot pits (pips or stones in English usage). It was thought to be the glucuronide of 1-mandelonitrile, but in fact the commercial product is amygdalin (the β-glucoside). Its promoters claim Laetrile will bring relief from pain, prolong survival, and sometimes cause complete remission of cancer. The theory is that the compound will release cyanide in cancer cells, but there is no evidence that this is true. Mandelonitrile is a highly toxic compound, while amygdalin is fairly safe even in large doses—no doubt one of the factors that has kept the makers in business.

A few years ago, at the request of Beno Schmidt, one of the President’s advisers on cancer, the Sloan-Kettering Institute in New York became concerned in an assessment of Laetrile; but, apart from a leaked, unconfirmed, internal report that it appeared to show some activity in mouse lung tumours, the results of all investigations were negative. Fortuitously the leak occurred when some doctors were standing trial in California for illicitly prescribing Laetrile.1 In September this year there was still enough mileage in the story for Science to carry a long article by Constance Holden,2 and there are signs that the affair is far from closed.3-5

Laetrile production is centred in Tijuana, Mexico, where the going rate of an injection is $9; but with an average mark up of 600%, in the United States tablets sell for about $1 each. The Contreras clinic in Tijuana is estimated to treat about 600 Americans a year at a cost of about $2000 for a course lasting one month. Several American organisations promote the idea that cancer is a deficiency disease, and they are powerful forces for keeping quack cures in the limelight. Laetrile fulfils their criteria, for its promoters say it is vitamin B17—and the fact that no such vitamin is known to biological science seems to be immaterial. The largest of these outfits is the Committee for Freedom of Choice in Cancer Therapy, with a membership of 23,000, including 800 doctors, some of whom have been indicted for Laetrile smuggling via the Mexican connection—there is nothing like a few martyrs. The Food and Drugs Administration have tried to control the sale of Laetrile by going to law, but its efforts are being threatened. The Governor of Alaska recently decided to veto the anti-Laetrile legislation in his state, which has opened up the way

2 Farr, B F, Safety Belts and Child Restraints—the proportion of cars fitted and of occupants using them, TRRL Laboratory Report No 644, Department of the Environment, Transport and Road Research Laboratory, 1974.

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Both the chair and the seat to which it is attached must be securely anchored. A crotch strap is recommended, to prevent the lap belt of the harness riding up over the abdomen—the iliac crest, which secures the lap belt in adults, is not sufficiently developed in children. Americans seem to prefer rearward facing chairs or devices incorporating padded shields in front of forward facing children. They can be obtained in Britain, but there is some consumer resistance from children, who like to see where they are going. Later on, a child safety harness can be used without a special chair, but again care has to be taken to ensure that the lap belt does not ride up. A high lap belt angle can be obtained by seating the child on a hard cushion, which has the added advantage of enabling the child to see more easily.

In the past 12 years, since the first British standard was introduced, over half a million approved child restraint systems have been sold here. Yet a random survey carried out in 1974 of 4466 children travelling in cars showed that only 12% of under the age of 13 were wearing a restraint.2 As only 5% of children injured as passengers in 1973 and 1974 were found to have been restrained there is some evidence that wearing a restraint does reduce the risk of injury. In fact, only five children killed as passengers in 1974 were wearing approved restraints. Where protected and unprotected children were travelling in the same car the unprotected child was generally found to have been more severely injured. Most of the moderate or severe injuries sustained by children wearing restraints were not caused by any shortcomings in the device used.

In the United States it has been claimed that the use of proper restraints for children under 5 would save the lives of 91% of children killed in car accidents and reduce injuries by 78%. The corresponding figures for older children if they wore seat belts are 81%, and 64%4. Yet only 15% of children in the United States are protected in this way. “Preventive counselling” of pregnant women in infant travel safety has been suggested as an important role for the paediatrician in the United States. When expectant mothers were given a fact sheet and shown a five-minute film it almost doubled their use of restraints, as compared with controls.4

More and more young children are travelling in cars. Their safety is a matter that should be drawn to the attention of the motoring public, and reliable information should be made available on the best ways of protecting them. The Government has proposed that persons under five feet tall should be exempted from legislation enforcing the wearing of safety belts. But in countries which have accumulated experience of compulsory seat belt wearing there are plans to remove the exemption for children in the hope of reducing mounting child casualty figures.5 Indeed, 70%, of the child road accident casualties admitted to the Royal Children’s Hospital in Melbourne were below the age of 8—when seat belts become compulsory in the State of Victoria—and children under 8 were found to have a higher incidence of major injury than those over that age.