Avoiding inappropriate surgery: discussion paper

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Of William Harvey's many contributions to medicine, his recognition that surgeons may be over-enthusiastic was perhaps one of the least popular. Not only was he keen to see that surgical procedures should be carried out after careful consideration, but he was also aware that surgeons may delegate operations to their apprentices without adequate supervision and he sought to forbid this. John Woodall, who was the senior surgeon at St Bartholomew's at the time of Harvey, had written a careful audit of his mortality after amputation, as well as writing an early description of the use of lemons to prevent scurvy in his time as a naval surgeon and he naturally found Harvey's heavy hand irksome¹. The recent publication of the Confidential Enquiry into Perioperative Deaths² is a timely reminder that constant vigilance is necessary to maintain a high standard of surgical care.

Salaried doctors often believe that when procedures are carried out on the basis of a fee for item of service, excess surgery may result and there is much evidence to support this view⁴⁻⁶. Cholecystectomy rates in North America are five times greater than in the UK^{7,8} and not only is the difference in rates largely unrelated to the prevalence of gallstones^{9,10} but it is not impossible that excess surgery may lead to more deaths^{5,10,11}. However, the lower surgical rates seen in the UK may be at the price of greater morbidity and persistent symptoms from unoperated piles, gallstones, hiatal herniae, prostates and the like. Furthermore, a conservative attitude may have an adverse effect on mortality when procedures for cardiac pacemaking and renal dialysis are limited by the provision of resources^{12,13}. The most appropriate frequency for any given procedure should depend on careful assessment of the potential benefits, risks and finally, cost. Instead of which, surgical rates usually depend on local provision of resources, private insurance, social class¹⁴, an individual surgeon's practice style or that of the referring physician, patient expectations¹⁵⁻¹⁷, and the reaction of overburdened medical insurance companies. Sometimes the perceived need for surgery is dictated by culture or just plain fashion.

The number of cholecystectomies done in Scottish Districts show an almost linear relation to the number of surgeons per head of population¹⁸ and, with little private practice, this trend supports the concept of a surgical Parkinson's Law¹⁹. Evidence from the Canadian armed forces also shows that surgeons tend to operate to the limit of the available resources regardless of the method of payment²⁰ but the rates for hysterectomy, cholecystectomy and tonsillectomy in the civilian population in Canada reflect the opposite²¹. It has been suggested that the indications for carotid endarterectomy should be Mid-Atlantic²²

and whilst a compromise between too much and too little surgery may seem acceptable, critical evaluation of the appropriate indications for surgery, with the possible exception of coronary artery surgery²³, is still sadly lacking.

In Britain there are fewer surgeons per head of population than in any other developed country^{24,25} and there is a natural resistance to increasing the number of consultants for fear on the one hand that this would restrict the amount of clinical experience and on the other that it would change the present pattern of a consultant's work. There is an increasing pressure for consultants to be more personally involved in the individual care of their patients and in particular the defence societies urge that the surgeon doing the operation should see the patient before the operation to check that the medical records correspond and that a unilateral operation is marked²⁶. However, it is even more important to ensure that the proposed operation is still appropriate and that the patient has considered any alternative management. Not only does this reassure the patient and correct any misconceptions he or she may have, but it gives another opportunity to discuss probable side-effects of the operation, to answer questions about return to work or normal activity and to discuss any specific risk. This task of informing patients and putting their minds at rest is often delegated to the house-surgeon who is the least-qualified person to do so and in the specific areas of stoma-care and surgery for breast disease, a dedicated nurse may give the best counsel. Whilst it is important not to burden patients with an unnecessary fear of rare complications, when an operation is not always successful in permanently relieving the symptoms of which the patient complains, this should be discussed. That the surgeon should see the patient before the premedication is the strongest safeguard against a wrong operation but if this step is omitted the greatest risk is that the patient will have an inappropriate procedure, albeit without this being very obvious to anyone at the time. Waiting lists may protect some patients from inappropriate surgery by acting as a cooling-off period but if the delay between outpatient consultation and hospital admission has been more than a few weeks, the patient should be reassessed by the operating surgeon. If the surgeon's timetable is too full for this to be a practical possibility, then there must be a strong case for increasing consultant numbers significantly.

There is a wealth of literature on variations in health care delivery but seldom does this emerge on the surgical scene²⁷⁻³⁰. If the surgical trainee is to spend only 6 years in Higher Surgical Training, it is unlikely that 2 years of full-time research will be the appropriate model for the future unless he or she

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intends a career in academic surgery. Research into the outcome of surgical interventions may be less glamorous than the study of oncogenes but it does have a number of virtues. Not only does clinical and outcome research lend itself to in-service training but it should point the way to more appropriate surgical management³¹ and to a clear recognition of the pattern of complications which are sometimes preventable. But it will also create an awareness in the surgical community that the indications for surgical procedures should be constantly questioned so that patients can be adequately informed of the consensus and resources can be used to the best advantage³².

A second opinion before surgery seems entirely alien to clinical practice in the United Kingdom but it is widely required for the insured patient in North America and it would be optimistic to hope that similar pressures will not develop here. A more positive step to ensure appropriate surgery is the introduction of effective audit with regular feedback pointing the way to change in clinical practice and the provision of resources. Regular Death and Complications (Morbidity & Mortality) meetings have become widely accepted as an essential function in a surgical unit but these are more a survey of the damage than a true audit. Several units have published computer-based audits of surgery but not all of these are still active³³⁻³⁵. It is unlikely that Korner-based data will ever be sufficiently sensitive or reliable for an adequate audit of clinical practice and several well-researched computer software programmes are appearing on the market which should enable every surgical unit to achieve a close and up-to-date grasp of workload and outcome. Comparisons over time and between units will enable a clearer picture to emerge and this may not prove to be comfortable. Entry of data into a computer takes time and effort and if the results are to be believed and acted on, accuracy itself must be audited. Inevitably this will allow less time for actual contact with the patient but consultants must be prepared to accept that audit is an integral part of practice and if there is insufficient time to ensure that patient care is optimal, then clinical workload should be reduced. The constant pressure to increase the number of operations performed with ever-decreasing lengths of hospital stay may mean that the over-burdened surgeon is not always able to give his patient the most appropriate care.

The current management of surgical emergencies demands particular attention. Patients who have been admitted during the day are not properly assessed until the evening unless it happens to be at the weekend². Much semi-urgent surgery is therefore carried out at night because neither the surgeon, the anaesthetist nor the operating theatre are available before evening. Inevitably this leads to the consultant operating on relatively low-risk elective cases during the day and the less-experienced trainees are left to cope with the high-risk elderly emergencies at night. Sometimes the hardest but most appropriate decision is not to operate. The management of large bowel obstruction is changing as a result of a multi-centre audit by the St Mary's Large Bowel Cancer Project³⁶ but whilst the consultant will always appear promptly for a leaking aneurysm, it may be more than 24 h before he will see the other acute surgical admissions. This *modus vivendi* has been part of traditional British surgical training for as long as anyone can

remember and it is not surprising that any significant change will be a major upheaval.

But is there need for change and if so, what would this entail? If it is accepted that surgical training is to be concentrated into a much shorter period, it seems essential that closer supervision will be required if this is to be achieved. If emergency admissions were managed by a consultant surgeon and anaesthetist available without other commitment with dedicated day-time operating sessions available, it seems unlikely that the present level of unsupervised surgery by surgeons-in-training would be found acceptable. However, if elective surgery is to continue at the present rate, a greatly increased level of funding and a geographical concentration of acute surgical services into larger units will be required to achieve closer consultant involvement with emergency admissions.

Neither of these measures will be popular with the government or the public but there is need for change and this will not be achieved within the present constraints.

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