The future of surgical training

With the prospect of a 30-year medical career, surgical training today needs to meet the demands of society and the surgical landscape of the future. Surgery provides a stimulating, satisfying and rewarding career. This can only be maintained if we recognize and confront the challenges of modern surgical training.

Surgical training in the UK has traditionally been based on an apprenticeship model which was arduous and fiercely competitive. It produced individuals who were very experienced in both the generality and the speciality of their choice. The end result was that surgeons were appointed to a consultant post in their mid to late 30s in which they could remain for the rest of their professional lives. This model relied upon the willingness of young doctors to work long hours, and the only end point was a consultant appointment in a predefined speciality. This model is no longer fit for purpose.

Challenges

Modern surgical training needs to address a number of important challenges. Arguably, the greatest of these is the restriction on working hours as a consequence of European Working Time Regulations and the New Deal. It has been estimated that, since August 2009, when the working week was restricted to 48 hours, the average trainee now receives a total of only 6000 hours training (compared with 30 000 hours previously). Trainees in the future will therefore inevitably be less clinically experienced than they were in the past.

One consequence of a reduced number of hours for training, compounded by cost considerations, has been an expansion in the appointment of non-consultant career grade doctors. These doctors are responsible for much routine surgical practice. Many work in an unsupervised role and the majority are highly skilled and invaluable assets to their hospitals. However, these surgeons often do not have a certificate of completion of training or equivalent. This circumvents the present training and employment regulations, and threatens the standards which have been set by the surgical Royal colleges. Many of these posts are on short-term, time-limited contracts and are unsatisfactory.

Increasing specialization is another challenge which cannot be ignored. While it is inevitable, and correct, that specialization will continue, there is increasing recognition of the need to produce 'generalists' who can provide emergency cover. Targets for elective, often specialist, surgical care have the unintended consequence of diverting scarce resources away from emergency care. It is now well known that outcomes for emergency care are very variable throughout the country. If the district general hospital model of care is to survive in any form, then recognition must be given as to how to these hospitals will attract and retain good quality surgical staff.

Surgical training has been described as 'too hard, too long and too angry'. Training programmes in the UK are among the longest in the world. A majority of graduates from medical schools in the UK now are female. If surgery wishes to continue to attract the brightest and the best, many of whom will be female, then training and employment within surgical specialities must, in future, be more flexible, more friendly, easier and shorter. And this needs to be achieved with no diminution of standards of care.

Some other considerations

The cancer reform agenda has led to the centralization of major cancer surgery into high volume units where the outcomes are better. While there is no doubt that the management of patients with malignant disease has benefitted, there is an emerging consensus that there needs to be more focus, in the near future, on non-cancer and, in particular, emergency care.

Much hospital work is routine and can be safely performed without the need for sub-specialized consultant staff. Routine surgery forms the bulk of surgical practice and, at present, is often performed by various grades of staff, occasionally in an inconsistent and variable fashion. This important part of surgical service delivery should be regulated, and unsupervised surgical procedures should only be performed by validated 'trained' surgeons. Award of a certificate of completion of training or equivalent indicates that a surgeon is trained, and this should be awarded to surgeons at a stage when they are competent to deliver routine and emergency surgery.

The last 10 years or so has seen a significant expansion of consultant numbers. It is unlikely that this expansion will continue in the future as cost constraints weigh heavily on all aspects of NHS delivery. There is already evidence in some specialities of trainees with a certificate of completion of training being unable to find consultant appointments. Manpower projections for the next decade suggest that this problem is going to get worse. We owe it to trainees to accurately forecast likely vacancies in the future so that they can select appropriate training programmes.

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Proposals for the future

Future surgical training needs to consider the following: a re-emphasis on the importance of emergency surgery and the role of the generalist, a redefinition of the consultant role and a commitment to focussed training.

Emergency surgery

The provision of surgical services in the UK should be determined by the needs of the population. The commonest reasons, by far, for admission to a surgical bed in the UK are trauma or a general surgical problem such as abdominal pain. It is no longer acceptable for emergency care to be the 'Cinderella' of specialities. Optimal emergency care needs dedicated personnel and facilities. There is good evidence to show that outcomes for emergency surgery are significantly improved with such dedicated facilities (Association of Surgeons of Great Britain and Ireland, 2007).

The generalist

Most surgery carried out in the NHS is for a limited number of common conditions. Complex surgery is, numerically, much rarer and needs to be performed in highly specialized facilities, often by multidisciplinary teams. Specialized surgery of this nature will not be performed in all hospitals.

In surgical practice, the common operations are relatively easy to identify. It seems logical to ensure that surgeons in training are trained to competence in these procedures. It is, therefore, possible to conceive of a system which would allow the award of a certificate of completion of training once competence is achieved in these common procedures. Thus, the definition of a 'trained' surgeon relates to competence in performing the majority of the common surgical procedures in the specialty. If a trained surgeon is defined in this way, then the length of training will shorten. Subspecialization can occur later, and should be determined by service needs.

The whole premise of this article requires an adjustment of the expectations of all involved in surgical training. It shifts the focus of training to the needs of patients and the service. All parties have to accept that this is what determines the pattern of training. It is important to emphasize that this is not 'dumbing down' surgical training, but is merely changing the end point. It keeps the award of a certificate of completion of training to indicate that an individual is trained to a certain level of competence, which enables that person to independently manage the generality of the specialty, both elective and emergency. Individuals who wish to develop further subspecialty interests may require additional experience and training which, in some specialties, may be achieved pre-certificate of completion of training and, in others, may require post-certificate of completion of training training, entry to which would be on a competitive basis. This will ensure that high standards are achieved and maintained.

Redefining the consultant role

The lack of hierarchy or progression within the consultant grade is an outdated model, and needs to change. The journey through consultant life needs to be better defined with clear aims and goals for progression. The profession must embrace the concept of modification of the consultant grade. One proposal is that the consultant role evolves over time. This model presupposes that there will be three phases in a consultant career:

- Phase 1 on first appointment, during which posts are front-loaded with emergency commitments
- Phase 2, when consultants would have evolved a subspecialty interest and reduce their on-call commitment
- Phase 3, the latter part of a surgeon's career when he/she might be expected to come off the on-call rota and place more emphasis on teaching, administration or research.

Such a three-phase model of a consultant career may discourage early retirement, would certainly promote teamwork and recognizes the importance of lifelong learning. Such change and development would imply titular or fiscal alterations to the grade, and provide a more explicit recognition of professional strengths and responsibilities at different stages. Appointment to a grade before the age of 40 years without a development plan, other than through the appraisal process, is a lost opportunity. A more robust portfolio should feature to include the development of interests in areas of management, leadership, education and research, along with a clearer presentation of these duties in work plans.

There is an expectation that a consultant would have a front-loaded emphasis on emergency care during the earlier years of his/her consultant practice, which would reduce as the consultant nears retirement. It is also recognized, however, that the smaller specialties involve smaller numbers of consultants within the team, and the luxury of discontinuing emergency on-call is not an opportunity equally accessible across all surgical specialties. Professional development within consultancy is currently an extremely opportunistic event and that lottery of opportunity should be removed through better use of job planning and revalidation.

There should be no confusion around graduation within the single rank of consultancy being aligned with the notion of a sub-consultant rank. We need to move away from reliance on all non-consultant grades. A certificate of completion of training or equivalent must be a baseline credential for all surgeons.

In this new model of graduated consultancy there would be a spectrum of individuals with different levels of expertise and experience and there would be an expectation that all would work in teams. This situation already exists in much of Europe where there is no single end point of training.

Reconfiguration of services

The current trend in configuration of services seems to be towards centralization, but the emergence of managed clinical networks and managed service networks has allowed retention of appropriate levels of activity outwith centralized units, a particular requirement of more rural settings. While local political imperatives often militate against centralization, there is a need to retain sufficient clinical activity for the purposes of skill maintenance for preservation of high-quality district services.

What is less clear, however, is the appetite for current and future generations of surgical trainees to work in a district hospital setting, and there is a significant need for such a forecasting project. Consideration must be given as to how surgeons can be 'incentivized' to work in district hospitals. Failure to do this will result in diminution of standards in some hospitals, which is unacceptable. Financial incentives together with a wish to work as a generalist may be sufficient incentives for some. Not all aspiring surgeons wish to work in high intensity environments.

A centralized service does not preclude high-quality outreach or high-quality shared care arrangements. This would appear to be a preferred model for several surgical subspecialties, and many specialties have already identified that a proportion of trainees and young consultants would be satisfied with this form of job description, at least for a finite time in their career. There would need to be an exit strategy from this kind of post. This would appear to be the most dependable model for future planning of specialist services.

KEY POINTS

- There is a need to train surgeons to meet the demands of society. Therefore, not all surgeons will be able to enter the specialty of their choice, and the expectations of trainees should be managed accordingly.
- More emphasis is needed on the provision of emergency services. This may require dedicated consultant appointments and financial rewards for on-call delivery.
- Appointment to consultant posts is likely to remain intensely competitive. The numbers and nature of posts available will be determined by market forces and reconfiguration. It is probable that not all certificate of completion of training holders will necessarily take up consultant posts immediately.
- Some subspecialty training may be carried out after the award of a certificate of completion of training, although in some specialties this can, to some extent, be accomplished in the later years of pre-certificate of completion of training training.
- It is likely, in the future, that first appointments after certificate of completion of training will have a significant initial emphasis on emergency work and/or the development of a general practice within the specialty; this balance will vary according to speciality, but there should be contractual agreement that opportunities for career development will be available.
- Strategic phased career development within the consultant grade should become standard.
- There is an urgent need to ascertain policy commitment to the continuation of the district general hospital as a model for service provision. Thus, there is a need to align the surgical curriculum for practice in this setting, and to avoid unnecessary emphasis on subspecialty training, so that surgical education is fit for a variety of purposes.

Conclusions

The conventional training of surgeons in some specialities is no longer appropriate to meet the demands of a changing society, where emergency surgery is the most common reason for hospital admission – something that will only increase with our growing ageing population and changing patterns to patient care. In recent years increasing specialization and centralization mean that we have fewer 'generalist' surgeons to provide emergency surgical cover. This has led to emergency surgery to being considered by some as second class and as a result often under-resourced. This may compromise the future of the district general hospital model of care, and risks not meeting the needs of society. **BJHM**

This article is based on a paper sponsored by the Surgical Forum of GB and Ireland, a full copy of which is available from the Forum secretariat (carolyn.capps@rcpsg.ac.uk)

Conflict of interest: none.

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