

‘Surgery in the Undergraduate Curriculum’



**Report by the Education and Professional Development Committee
of the
Society of Academic and Research Surgery**

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Introduction

All UK medical schools (both old and new) have recently achieved, or are in the process of implementing, curriculum reform in accordance with the GMC requirements in “Tomorrow’s Doctors”¹. A recent review of the recommendations by the GMC has re-emphasised most and modified others. Enforcement has been assured by regular GMC inspections and by the recent QAA (Quality Assurance Agency) appraisal of medical schools where scores are allocated to six aspects of undergraduate tuition – including curriculum development. Although not necessarily evidence-based, the principles underlying these educational reforms have been generally accepted by clinical and non-clinical teachers alike. Whether, in the fullness of time, they will result in a higher calibre of doctor able to communicate, diagnose, and treat patients in a more effective and desirable manner remains to be seen.

Several of the key recommendations relate to the acquisition of generic skills as well as the appreciation of health and disease in the community. Accordingly there is the perception that emphasis should now be placed on teaching in the community (possibly up to 30% of all clinical teaching). The implication being that acute hospital environments are not as effective as the community in allowing students to empathise with, and appreciate the holistic problems that patients experience as part of the family or community unit. Although theoretically highly desirable, one wonders how much of this approach has been triggered by the inexorable reduction in the ability of many acute trusts to provide an appropriate environment and resource (staff) to maintain a pre-eminent position as a provider of undergraduate medical education.

From a teaching perspective the “surgical firm”, in the past often the highlight of the undergraduate clinical programme, has diminished in importance for a number of reasons unrelated to the requirements of the new curriculum. These have previously been documented in detail².

Inevitably two uncomfortable questions need to be faced;

1. How important is hospital based ‘surgery’ in the modern undergraduate curriculum?
2. Do we still need academic surgical units to be responsible for the undergraduate teaching programme?

Although a negative reply might be regarded as equivalent to “turkeys voting for Christmas”, SARS believes that the answers to those two questions are an unequivocal ‘essential’ and ‘yes’. However academic surgical units and NHS surgeons must accept modernisation in undergraduate teaching and adapt their working practices accordingly to ensure that surgical teaching remains a major component of the undergraduate curriculum.

Surgery in the undergraduate curriculum

The surgical firm has traditionally provided students with some of the most memorable and influential teaching experiences. Good clinical teachers are remembered throughout a professional career. “A teacher affects eternity – you can never tell when his influence stops”, as stated perceptively by Henry Adams. A well-organised surgical teaching programme provides unique and important educational experiences and as previously stated², allows students;

- a) To become skilled in and to learn the importance of careful history-taking.
- b) To become skilled in eliciting and interpreting physical signs which can indicate urgent life-threatening conditions.
- c) To learn the appropriate use of investigations, especially interventional investigations.
- d) To appreciate the importance and need for careful, accurate and speedy decision-making.
- e) To become familiar with the spectrum of surgical care available and to develop a critical attitude to assessing its value in relation to less invasive forms of treatment.
- f) To observe and become involved with the management of surgical emergencies, especially in life-threatening conditions.
- g) To understand and be involved with the management of acutely critically ill patients.
- h) To acquire communication skills, particularly with anxious and depressed patients and to explain in simple lay terms, complex procedures.
- i) To supplement teaching on anaesthesia and to apply the pharmacology of various drugs including analgesics.

- j) To emphasize the important ethical, moral and social issues involved in surgical practice and to introduce discussions on cost-benefit analysis.
- k) To appreciate the appearance of normal and abnormal tissues in the operating theatre.
- l) To develop a healthy critical faculty.

The challenge is to deliver a sufficiently robust teaching programme which enables the delivery of these objectives in a modern hospital environment. With appropriate leadership, planning and commitment on the part of surgical teachers, whether HEFCE or NHS funded, SARS believes it is possible to continue high quality teaching within a “surgical firm” environment.

Considerations which must be taken into account to achieve this are as follows,

1. The principles of history taking, clinical examination, acquisition of communication skills and principles of diagnosis can be taught on any surgical patient whether admitted under the care of vascular, urology, GI or cardiothoracic etc units. We do not teach surgery but principles of the clinical method on patients who have “surgical” disorders. Consultants in all these specialties should be provided with details of a core curriculum to ensure that students allocated to them achieve appropriate objectives.
2. By imaginative structural arrangements students can rotate between different specialties. On balance attachments for less than five weeks suffer from being disjointed and lack continuity.
3. It is essential to identify a core curriculum which can be delivered to either large or small groups (depending upon staffing members) in the form of interactive lectures, seminars or by problem based learning techniques. The full range of audiovisual technology should be utilised in this regard.
4. Full utilisation of the teaching experience in outpatients should be achieved. Appropriate facilities and resources need to be made available – adequate sized rooms, nursing staff with an appreciation of the importance of teaching, a sensible patient throughput to ensure quality teaching in a relatively stress free environment.
5. Full use of day theatre activity must be ensured. This will enable students to appreciate clinical signs in large numbers of patients and is most cost effective.

6. The teaching of trauma and of the critically ill should be included within the student surgical curriculum. Students must see a full range of emergency admissions and be involved in the rudiments of resuscitation, diagnosis of the acute abdomen and trauma.

The academic surgical unit and undergraduate teaching

The key to providing an appropriate structure for surgical teaching lies unequivocally with the academic surgical unit. There is a danger that this function might be transferred to a central administration as a result of an integrated clinical curriculum. The temptation might be to offer little resistance to this because of increasing workloads and pressures created by a busy clinical service, increased commitment to structured postgraduate surgical training and the desire for high RAE recognition. This would be an enormous error.

Only by elevating excellence in undergraduate teaching and providing appropriate recognition for high quality committed teaching can this trend be reversed. It is a recognised fact that one can become a national and internationally famous surgeon with invitations to exotic locations as a result of often modest research activity or an unproven but “sexy” surgical innovation, whereas the acquisition of star status as a brilliant undergraduate teacher results in fame confined solely to ones own institution with little or no tangible rewards.

Few academic surgeons claim to be professional, qualified educationalists and even fewer are engaged in educational research and development. In the main however they are leaders in surgical education and should be involved in curriculum planning and assessment as well as providing an appropriate organisational structure to teach the fundamentals of clinical methods and communication skills.

The academic unit with its senior personnel must provide leadership and expertise which is recognised by surgical colleagues. Laying down agreed and acceptable standards and ensuring a deliverable undergraduate course are prime responsibilities. Quality bedside teaching skills are difficult to teach but are developed often by positive feedback mechanisms. The thrill and feel

good factor obtained by knowing that one has conducted an educationally sound clinical session in which important specific symptoms and signs have been elicited and explained to a group of intelligent and receptive students is so strong that a “thank you” from the students at the end of the session provides sufficient reward. Compare this to the anguish that students feel towards a “no show” teaching slot. This is often irreplaceable and represents a lost opportunity, often interpreted by students as an indication of disinterest and even contempt.

The provision of high quality, well-organised undergraduate teaching has always been the responsibility of the academic unit and this should remain a major priority. Surgical departments must demand appropriate recognition for high quality teaching by the medical school. It is not unreasonable that interview committees at Lecturer and Senior Lecturer level should give equal recognition to a teaching/active individual as to a research/active individual. In this regard perhaps teaching fellowships for surgeons should be instituted.

Both the GMC and government require high quality, cost effective teaching of medical students, at a time when numbers are increasing (1000 additional students per year). Appropriate clinical skills, attitudes and professionalism must be acquired and Academic Surgical units have a major role to play in achieving these objectives. Recruitment problems are real and HEFCE funded academic staff numbers have diminished. There are over 400 unfilled clinical academic posts in the UK – including one third of all Chairs. At the same time NHS consultant numbers are increasing at 4-5% per annum hence increasing amounts of clinical teaching will be undertaken by non-HEFCE funded employees. The Academic Surgical unit must provide the leadership and organisation to ensure that the aims and objectives of clinical curriculum committees are effectively communicated to all teachers and the level of commitment provided with skill and enthusiasm. All surgical teachers must feel ownership of the curriculum and medical students.

Conclusion

It could be argued that nowadays the single most important function of “modern” Academic Surgical units now relates to the provision of a well-structured and imaginative educational programme for undergraduates. Surgical Academics must take the lead to ensure the organisation and effective leadership of undergraduate surgical education. Surgeons must be represented on the key Faculty Curriculum committees and be responsible for implementation of decisions by all staff (both HEFCE and non-HEFCE funded).

Academic Departments of Surgery should regard undergraduate education as a major responsibility and Medical School Appointment and Promotion Committees should regard teaching activity *as important as* research activity.

References

1. Education Committee of the General Medical Council. Tomorrow’s Doctors. London. General Medical Council. 1993.
2. Taylor I and Johnston I D A. (1990)
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