Why do we need Royal Colleges?

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ABSTRACT Today’s Royal Colleges can be traced to the guilds that arose during the 13th and 14th centuries. They fulfil similar roles: to maintain the highest standards of practice, professional integrity and self-regulation. This paper traces the development of the Royal Colleges, together with the emergence of specialisation within medicine, with particular reference to anaesthesia as a modern specialty. It considers whether these functions are still appropriate for the rapidly changing practice of medicine today. The colleges have unique strengths, but they also have weaknesses and must be prepared to counter threats to their professional function.

The medical Royal Colleges of today perpetuate a tradition of professional organisation that started as long ago as the 12th century. In the Middle Ages people emerged from serfdom and became members of village communities. Some became skilled craftsmen, including physicians and surgeons, who sold their skills to others and took a pride in their work. They formed guilds or companies in an attempt to ensure that only those with high standards should practise their craft. The guilds regulated their standards by insisting that new entrants should serve an apprenticeship, often followed by an examination, after which a licence to practise was granted. They also served a trade union role in safeguarding the rights of members. To bond their members into a social group they wore distinctive robes, adopted a patron saint and suitably celebrated his feast day. They served a benevolent function by providing support for impoverished members. One of their most important rights was that of self-regulation, the public accepting their authority and allowing them to set their own standards rather than having them imposed from outside. Most of these functions are recognisable in our Royal Colleges today. We even have our patron saints – for example, physicians and surgeons might regard as their patrons William Harvey and John Hunter respectively.

Early physicians were usually clergymen with a university degree, while apothecaries dispensed herbal remedies either for the physicians or on their own behalf. Surgery was practised both by surgeons and barbers. The barber-surgeon came into existence because when Pope Innocent III in 1215 forbade his churchmen to shed blood, the priestly physicians turned, when cutting or bleeding was needed, to those who had the sharpest knives. There were also many other kinds of healers whose activities were completely uncontrolled.

Among the earliest guilds in England was the confraternity of military surgeons formed during the Hundred Years War (1337–1453), but the first known Royal Charter was that given by Edward IV in 1462 to the Company of Barbers. The Company was charged with raising the standard of surgery by ‘the superintendence, scrutiny, correction and government of the freemen of the City being Surgeons’.

During the Renaissance it became fashionable to study Greek and Latin classical texts. The medical teachings of Hippocrates and Galen were widely taken up and practised. Latin was the common language among educated men throughout Europe and scholars travelled extensively. Renaissance man was hungry for new experiences; he wanted to do and be everything. Universities started to award medical degrees although they regarded medicine more as a learned discipline than a means of curing patients. Tending the sick was left to the religious houses, because at a time when few diseases could be cured, hospitals were places where sick and dying patients entered to make their peace with God.

During Henry VIII’s reign, the first medical college was set up, largely through the influence of one man, Thomas Linacre. He was a true Renaissance scholar, studying first in Oxford and then in Italy, graduating Doctor of Medicine at Padua in 1496. Having seen the College of Medicine in Venice, he felt England should also have such a college. He persuaded others and in 1518 the College of Physicians of London (RCP) was founded on the order of Henry VIII. The College was directly responsible to the Crown and its Charter decreed that it should ensure high standards of practice, supervise the apothecaries and provide anatomy teaching by dissection, thus giving it authority over both surgeons and apothecaries. It also reduced the influence of both Church and guilds and gave the physicians themselves the right to issue licences to practise. It is not clear how it became known as a Royal College; the right to be called ‘royal’ is not in any of the Charters but was first used by Charles II in 1674 in a letter to the College, though the title was not consistently used until the 1850s.

The surgeons insisted that their craft must be learned by apprenticeship and tested by examination. The barbers concurred and the two, having long been rivals, were brought together by Royal Charter in 1540 as the Company of Barber-Surgeons. By the end of the 18th century five more similar institutions had been founded: two Royal
Colleges in Dublin, two in Edinburgh and a Faculty in Glasgow.

The union of barbers and surgeons lasted only 205 years, and by 1745 they had quarrelled and separated again. When the surgeons gained collegiate status in 1800, this was partly fortuitous. John Hunter had bequeathed his writings and museum collection to Parliament, which passed them on to the Company of Surgeons. To encourage the Company in its responsibility, George III raised its status to a Royal College of Surgeons (RCS)\(^4\).

The rise of specialisation

The 17th and 18th centuries saw the rise of science in Europe, with medicine moving away from tradition. Scientists wanted to share and advance their knowledge and to this end formed learned societies, distinct from the Royal Colleges but important because they heralded the rise of specialisation within medicine. The first was the Medical Society of London, founded in 1774 and still active today. In 1805 a group of its members broke away, dissatisfied with its authoritarian attitudes, and formed a new society, the Royal Medical and Chirurgical Society (RMChS).

In the Victorian period specialties began to emerge. The discovery of a new technique may stimulate the formation of a separate group, but to become recognised as a specialty an intellectual as well as a manual content is needed. By the end of the 19th century there were at least 22 specialist societies in London. In 1907 the RMChS persuaded 15 of these societies to merge and form the Royal Society of Medicine (RSM)\(^4\).

Anaesthesia: a new specialty

The development of anaesthesia will serve as a model to show how specialties may advance not only their own fields but also medicine as a whole. Attempts had been made from ancient times to use herbal remedies to relieve pain, although it is unlikely that any were consistently successful. In the 1790s, following discoveries in the physics and physiology of gases, Humphry Davy experimented with nitrous oxide and wrote of its pain-relieving effect, suggesting it might be useful in surgical operations\(^6\). Yet, although he had been apprenticed to a surgeon, he did nothing more to develop it, seeming to regard anaesthesia merely as a scientific curiosity. Nearly half a century elapsed before it was regularly used to relieve the agony of surgery. Until then, the only serious attempt was made by Henry Hill Hickman, a Shropshire practitioner, though he experimented not with nitrous oxide but with carbon dioxide. By 1800 all the knowledge needed to produce surgical anaesthesia was available and many have speculated why such a momentous discovery should have taken over 40 years to come to fruition\(^8\). When anaesthesia was eventually used to abolish the pain of surgery, it was not in Britain or Europe, where the preliminary work had been carried out, but in America. On 16 October 1846 the dentist William Morton in Boston, Massachusetts, successfully demonstrated the use of ether to produce unconsciousness for an operation. The news spread swiftly and by December ether was being used in Britain and Europe.

In Britain the use of ether developed quickly, and within six months John Snow, the first specialist anaesthetist, had published a textbook\(^7\). By 1893 there were enough interested doctors to form the first Society of Anaesthetists. They joined the RSM, though not as a founder member because they wished to ensure the rights of the four female members of their society – possibly the first medical society to give full rights to women.

During the First World War the scope of surgery expanded and stimulated an army officer, Dr [later Sir] Ivan Magill, to become an anaesthetist. While his best-remembered innovation was to facilitate endotracheal intubation, he was also largely responsible for inaugurating the Diploma in Anaesthetics (DA) in 1934, an essential step if the new specialty was to progress. The standards of knowledge and expertise required to gain the DA sufficed until the Second World War. After 100 years of anaesthesia, it was still essentially a craft lacking sufficient intellectual appeal to become a science. This changed, however, in the 1940s, when several events combined to raise its status.

In 1942, curare, the first neuromuscular blocking agent, was used in patients by Griffith, but merely as an adjuvant drug\(^10\). However, Gray of Liverpool saw that total muscle paralysis offered the potential for a major conceptual advance that could revolutionise the practice of anaesthesia; it could open the way to more controllable, and hence safer, anaesthesia. However, managing a paralysed apnoic patient demanded a knowledge of physiology that then hardly existed. To exploit it, clinical anaesthetists had to seek the aid of basic scientists. In the following decades the application of physics, physiology and pharmacology to anaesthesia greatly accelerated research and broadened its scope.

Curare provided an intellectual challenge that resulted in ‘balanced anaesthesia’, the use of small doses of specifically acting drugs, rather than a single dose of a less specific drug. The neuromuscular blockers gave anaesthetists the power of total control over pulmonary ventilation, and led to the concept of controlling all systems. Surgeons’ demands for bloodless fields for microsurgery could now be met by deliberately lowering blood pressure; anaesthetists could help protect against surgical shock by inducing hypothermia to reduce tissue oxygen demand, and were able to modify stress responses by manipulating the actions of the autonomic nervous system.

Thus, one single drug revolutionised anaesthetic practice. It was not even a new one; as far back as 1857 the physiologist Claude Bernard had demonstrated its site of action\(^11\), but saw no use for the drug in medical practice. It needed a different environment and different minds to see its potential. However, in the 1940s, before this could happen, it was necessary to find anaesthetists with the desire, training and ability to develop the required research.
Before World War II there were few specialist anaesthetists, and anyone – doctor, nurse or even layman – was expected to give anaesthetics when necessary. When the army in its Far Eastern campaign created mobile surgical teams it had plenty of surgeons but had to train its own anaesthetists. These doctors, having learned anaesthesia under often difficult field conditions, returned to civilian life keen to carry on with their specialty and seeking consultant posts that had not previously existed. They found them at that time in the hospitals taken over by the new National Health Service (NHS), but there was yet another barrier. In setting up the NHS the government had consulted the three Royal Colleges of Physicians, Surgeons and Obstetricians and there was no intention to grant full consultant status to specialists in other fields of clinical practice regarded as subspecialties. To earn consultant status, they had to show some evidence of academic excellence. A way of achieving this was to set up faculties in these specialties.

The Faculty of Anaesthetists

The president of the Association of Anaesthetists of Great Britain and Ireland (AAGBI), Dr Archibald Marston, approached the President of the RCS, Sir Alfred (later Lord) Webb-Johnson, for help. The RCS had already set up a Faculty of Dental Surgery, and Webb-Johnson urged the anaesthetists to do the same with a view to improving training and up grading the DA to the standard of the FRCS and MRCP. In March 1948 the Faculty of Anaesthetists was established within the RCS, and quickly created the academic framework for anaesthesia to become established as a discipline comparable to those of the existing Royal Colleges. The faculties were granted increasing autonomy within their colleges and gained independent representation on all national bodies. By the 1970s they were in the happy position of being independent in the conduct of their affairs, but protected from financial pressures by their parent college. They were certainly not deprived of influence because they were faculties.

However, many specialties felt they deserved the added prestige of collegiate status, and pathology, radiology, psychiatry and general practice established independent colleges. The Royal College of Physicians resisted this trend, and preferred to retain its faculties within itself, arguing that while a college might seem to advance the prestige of a specialty, there was a real danger in the lack of a united academic voice to talk to government and others. Hence, in 1974 the Conference of Medical Royal Colleges and their Faculties (CMRFC) was formed in an attempt to provide a consensus view. Although important, this move has been only moderately successful.

From Faculty to Royal College

By the 1970s some anaesthetists felt that they too should form an independent college. Sir Thomas Holmes Sellors, then President of the RCS, said that if an independent college ‘is ultimately shown to be their democratic wish, the college must be prepared, however regretfully, to permit their separation to take place in as friendly and constructive a way as can be devised, remembering ... the links between surgery and anaesthesia must always be close’.

Like the RCP, many surgeons and anaesthetists in the 1970s were anxious that the proliferation of colleges threatened to fragment the influence of the profession at a time when relations with government were probably the worst they had ever been. While the surgeons did not oppose separation, other options were explored to fulfil the aspirations of the anaesthetists. New ideas were suggested between the extremes of the status quo and a separate college. One was a three-faculty ‘Royal College of Surgical Sciences’ with surgery, dental surgery and anaesthesia as equal partners. Others felt that because a college with a president was more prestigious than a faculty under a dean, a change of title of the RCS would suffice. Not unexpectedly, the surgeons would not countenance either of these proposals, and eventually asked the Privy Council to change the Charter of the College to allow it to create ‘colleges within a college’. In 1988 the ‘College of Anaesthetists of the Royal College of Surgeons’ was inaugurated.

Unfortunately, in spite of the initial support for a concept that might have avoided further fragmentation of the profession, protocol defeated it. Full equality demanded a Royal Charter and the Privy Council would recommend this only for a separate body. In December 1989 the College of Anaesthetists asked for complete separation. The attempt to change the historical pattern of fragmentation had failed on what seemed a formality. Another new college was born, soon to be followed by others. Medicine seems determined to continue by way of fission rather than fusion.

Anaesthesia’s contribution to medicine

In creating an academic base for anaesthesia, the Faculty and the Royal College of Anaesthetists (RCA) have helped to make possible not only great improvements in their own field but also to make contributions to medicine as a whole.

One important result of the great research activity that followed the introduction of curare was the need for meticulous monitoring. Anaesthetists were among the first to instigate clinical measurement and on-line computing for intensive monitoring. Experience in controlling vital functions took anaesthetists out of the operating theatre to treat respiratory problems from other causes and eventually led to the development of intensive therapy, resuscitation and coronary care that today are routine practices in acute medicine.

Developing specialties thus move into fields where perceived needs are not being met. Management of pain outside the operating theatre, both chronic intractable pain and acute postoperative pain, are areas where anaesthetists’ skills in nerve blocking and familiarity with analgesic drugs are valuable. Pain control teams now exist in many hospitals and have stimulated fundamental research into pain.
mechanisms. Having always worked with other people's patients, anaesthetists easily adapt to the multidisciplinary teamwork of intensive care and pain management.

Finally, audit of anaesthetic-related deaths was started as early as the 1950s and has evolved into the present Confidential Enquiry into Perioperative Deaths.

One roof or many?

Is medicine best served by being under one roof or many? Throughout history there have been alternating periods of amalgamation and fragmentation within the profession. The first attempt to set up a joint organisation was as long ago as 1423 when Morsted and Keymer tried but failed to unite the physicians and surgeons in a joint college under the authority of the Mayor of London. Henry VIII's Charter of 1518 giving the RCP authority over surgeons as well as physicians was soon followed by separate Charters for surgeons and barbers, and the profession remained divided until, in the 19th century, specialist skills again came together as the RMChS and the RSM. Foster, writing the history of the Royal College of Pathologists\(^2\), has reflected that the (anti-fission) reactionaries were right to question whether a set of independent colleges, modelled on those of Henry VIII's and George III's reigns, had been the best solution in the long term. The 20th century has seen only fragmentation; will the 21st century redress the balance?

The future of the medical Royal Colleges

In trying to assess where the colleges stand today I intend to provoke thought and discussion, without claiming that my comments are universally applicable. The strengths of the colleges lie in their tradition of high standards, independence from government or other influence, and their right of self-regulation. They are answerable to the monarchy through the Privy Council, and as charities they are guardians of the public interest rather than their own.

The colleges' influence is largely derived from the respect and prestige in which they are held by profession and public. Their actual power is minimal, derived until recently from a single statutory right, that of nominating representatives on consultant Advisory Appointments Committees. The European parliaments now grant them the additional role of Statutory Training Authorities to harmonise high standards of specialist training in the UK and countries of the European Union.

Today they face many threats. Their rights are being challenged by the public, there are threats to their self-regulatory role by trusts and other bodies, and there are concerns that standards imposed from outside would be those of the market-place and not of a learned profession. The universities' postgraduate deans control educational budgets and are tending to take over continuing medical education. This may happen if colleges persist with traditional methods, now known to be ineffective, of altering doctors' clinical behaviour. It has happened before in Europe; the Venetian College that inspired Linacre was submerged by the universities and finally closed by Napoleon in 1801. While the monarchy is unlikely to close our Royal Colleges, they may become irrelevant, squeezed by the universities, by the General Medical Council's extending authority for education, and by the political and trade union activities of the British Medical Association.

The colleges' greatest weakness is their division. The CMRCF has changed its title to that of 'Academy of Royal Medical Colleges', but still has a low profile and its decision-making appears slow and cumbersome. It was unfortunate that this change of title occurred at the same time as the Academy of Medical Sciences appeared, but now that both exist they must collaborate.

New clinical groupings are forming that cut across the traditional specialties on which the colleges are based. For example, oncologists are involved in virtually every specialty, and we anaesthetists are becoming perioperative physicians needing to liaise widely. Perhaps our extended role, coupled with the increasing subspecialisation in medicine, destined us to become the last of the general physicians. Yet our public image remains poor, the layman still asks: 'Do you have to be a doctor to be an anaesthetist?'. Furthermore, our College is not alone in being criticised by its younger members and failing to convince them that colleges are not here to frustrate their radical ideas but to help them to maintain their standards.

However, these same threats present opportunities for the future. The colleges are having to alter their ways to deal with changing situations. Long-established organisations tend to respond slowly to change, but whether the newer colleges will prove more innovative and responsive remains to be seen. Modernisation does not mean abandoning all the ancient traditions we have inherited from our medieval precursors. Sir Douglas Black, commenting on the robes and rituals of the Royal Colleges, said that far from regarding them as stuffy, outdated nostalgia, he felt that they gave a sense of continuity with those who have practised medicine before us and from whom we have inherited a respect for learning and for professional dignity\(^3\). This surely is what the colleges still stand for.

The Royal Colleges fulfil a unique role that separates them from other bodies in medicine, but they may have to fight to hold on to this role against the many pressures of the modern world. No one knows how medicine will develop in the future, but that very uncertainty is one of the joys as well as a challenge of being part of a learned profession whose first concern is its patients' welfare. The colleges will retain their professional influence only as long as they satisfy everyone that they are successful in achieving the best possible professional, educational and ethical standards for the benefit of our patients' welfare.

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