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**SHAPE OF TRAINING**

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## **History of postgraduate medical education and training in the last 60 years**

*Adapted from: Career Structure in the UK Medical Profession, Presentation at the International Medical Workforce Meeting 2008*

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### **Introduction**

1. The current structure of the medical workforce in the United Kingdom (UK) traces its origins back to the beginning of the National Health Service (NHS) 60 years ago. At that time the provision of health services was devolved, with a combination of private hospitals and charitable foundations providing healthcare that was not free to the population in general. Many of the senior doctors working in this system gave their services to charitable foundations for free, their income coming from private practice. The junior staff were employed by the local institutions in which they worked. The NHS was founded on the principle was that care should be free to individuals and these charitable and community run institutions were brought under the aegis of the new health service. Consultants and general practitioners (GPs) were also brought into the system, but in order to persuade them to work within a radically different structure they were allowed to maintain certain privileges: for GPs, this consisted of continuing to run their own practices as independent businesses, while consultants were allowed to continue to see private patients, although they were now paid for the work they did within the health service.

2. At the lowest level of the medical careers structure, doctors worked to gain full registration. This was intended to take a year, following which time doctors chose the specialty into which they wished to go. Some moved out to general practice rapidly, whilst others followed a career structure within secondary care. The career structure within secondary care evolved over time; doctors passed through senior house officer and then registrar grades, moving up into a senior registrar role. The pyramid structure became gradually smaller

towards the top and any doctors who failed to move up the career structure usually went into primary care general practice. Thus the system remained relatively balanced.

3. From the 1960s onwards there has been a steady increase in the number of medical student places. These have been controlled centrally by the government as the cost of training medical students in the UK is high and requires central money through both the education and health departments. This planning process has resulted in periods of feast and famine in the production of doctors; in the 1970s, for example, significant numbers of senior registrars went abroad from Scotland to find consultant posts in other parts of the world.

4. This career structure remained remarkably similar until the early 1990s. General practice training underwent some changes, with a tightening of control over the types of specialties that doctors needed experience of before gaining general practice accreditation. Control of the structure was held largely by the Royal Colleges as doctors climbed the ladder by passing Royal College examinations along the way. The examinations proved an effective barrier for some, but for others were the gateway into the higher levels. At that time there were no clear curricula to follow; training was a combination of self-directed book learning, often helped by exam-orientated text books, and experiential learning directed by more senior doctors. The goal for many trainees within the system was to become a consultant or a partner in general practice. This was driven in part by the lure of private practice for some specialties – the freedom of running one's own business within a GP partnership and a considerable reduction of working hours at a time when many were working up to 120 hour weeks.

5. In the early 1990s there were two events that further influenced the development of the medical career structure: the first was the result of a paper written by the then Chief Medical Officer in England, Professor Sir Kenneth Calman, in which he proposed that the senior registrar grades should effectively be removed, and that doctors appointed as specialist registrars should automatically move through the training years (accompanied by appropriate assessment and appraisal) to become eligible for consultant posts once they had received the Certificate of Completion of Specialist Training (CCST); the second great change was a reduction of hours, which has progressed since the late 1980s, enshrined within the New Deal regulations (1), and driven by increasing evidence that doctors (like other high risk professionals such as airline pilots) are more likely to make errors and harm themselves or their patients if they work too many hours (2). One can see that the influence of societal changes drove these changes further, as changing public expectations dictated the need to reduce waiting lists and improve patient experience.

6. In order to support this reduction in hours at a time when the health service was expanding, a large increase in doctors was needed – especially at junior levels. Many of these doctors came from the traditional commonwealth countries and provided a valuable labour resource at that time. In 1997, however, central government committed to train in the UK the total number of doctors needed to work in the service, thereby reducing NHS dependence on doctors from overseas. The confounding factor here is the legal requirement under the European Medical Specialist Qualifications Order to allow freedom of movement of labour within the EEA; the numbers of doctors that might want to work in the UK remains an unknown variable as does how competitive they might be within the UK system.

7. At around the same time, a new government decided that large scale reform of the NHS was needed. In 2000 the NHS Plan called for both more consultants and GP partners. Along with this came the realisation that the medical career structure, although now seamless and run-through at registrar level, left a large number of doctors providing service and getting somewhat variable training at Senior House Officer level, before spending many years trying – and sometimes ultimately failing – to get into higher training. The desire to move to a more consultant-delivered service under the NHS plan required a more streamlined training that ensured more doctors were working to a curriculum leading directly to completion of training. The reforms occurred under the umbrella title Modernising Medical Careers (MMC) (3) and aimed to ensure that training was competency rather than time based. There was an emphasis on dealing with the acutely ill and on better safeguards for patients. It was also decided that every specialty should have a clear curriculum. The time frame for this major change was extremely challenging and, although the formation of the two year Foundation Programme was successful, difficulties with recruitment to specialty training led to major problems in the summer of 2007.

8. The future direction of the medical career and training structure in the UK clearly needs considerable work. However, it is important that in the future service and workforce planning implications are integral to the planning process. It is a recognised axiom of workforce planning that it is impossible to plan unless the structure and future direction of the health service is known.

9. An interesting current issue is the difference in service structure between the four countries of the UK, with England moving towards a multiplicity of providers including private companies, whilst the other devolved nations maintain a more health service employed model. In England the Darzi reforms (4) suggest a clear commissioner and provider split with more care being delivered in the community. Scotland is also looking at how services can move to community settings but some areas have to manage a thinly-spread population alongside geographical obstacles – a situation mirrored to some extent in Wales.

## **Demography and aspirations of current medical graduates**

10. There are three demographic factors in particular that need to be taken into consideration: gender balance, the changing ethnic and socioeconomic balance, and generational changes.

### *Gender balance*

11. Since 1960 there has been a four fold increase in the number of doctors qualifying in the UK each year. The number of men qualifying has doubled in that time, but the number of women has increased by ten fold. More than 60% of medical graduates are now female. In previous years, many women who continued in medicine did not combine their career with the demands of a partner or children. Of those women who did, many spent a part or all of their careers working part time or have taken career breaks to raise their children. They may also have had to balance their careers with consideration of their partners' needs, rendering them less flexible in seeking jobs in particular specialties or parts of the country.

12. Since the late 1960s, the UK has developed pathways for Less Than Full Time Training (LTFT). This has enabled retention of graduates and met the demands of growing numbers of female graduates, and services have adapted to deal with more part time workers. Evidence shows that these doctors are just as likely to complete their postgraduate training as full timers and to enter the specialist workforce. Some specialties such as paediatrics, psychiatry, obstetrics and gynaecology, and anaesthetics have high numbers of part time female trainees – up to 50% of all trainees in some programmes.

### *Changing ethnic and socioeconomic balance*

13. As well as the increase in female medical graduates, there has been a change in the ethnic and social background of UK graduates, with an increase in those from ethnic minorities and a deliberate attempt to attract people from lower socioeconomic groups through widening access programmes. This will also affect the long term career aspirations and working patterns of doctors in the future. For example, graduates who come out of medical school with large debts may need to work more full time than they had originally intended. Social and family pressures on some ethnic minority graduates may determine their working patterns, career pathways, and flexibility to move to where work opportunities may occur.

### *Generational changes*

14. There is increasing literature on the aspirations and lifestyle choices of generations since World War II. These socioeconomic factors are likely to

influence the working patterns of the doctors of the future and these factors need to be taken into consideration in the course of workforce planning. For many years, when doctors in training have been asked about their desire to work less than full time, surprisingly large numbers have come forward. However, the cost of living, mortgages and education of children have often led to different realities. Workforce planners in the future will need to track these factors and understand the working motivations of future generations.

15. Retention of Scottish and Welsh graduates after the Foundation Programme in their countries of training is another significant issue. These are relatively small countries and many young doctors wish to explore working in other areas of the UK and overseas. In recent years the postgraduate deanery in Wales, the British Medical Association (BMA) and the Welsh Assembly Government have worked together in promoting Wales as a centre of excellence for training, with many potential benefits for those following careers in medicine.

16. It is clear that the training system and career structure in the UK will need to be responsive to the changing aspirations of future graduate cohorts. This might mean that doctors may need to be able to enter and leave training during their careers with greater flexibility than at present, or risk being lost to the future workforce, with the associated waste of investment in their training and an overall reduction in the available workforce. It is clear that attracting good quality candidates and retaining them in medicine will continue to be important. It is also possible that an economic downturn may keep more doctors working full time. Current projections suggest that the ratio of headcount to full time equivalent numbers (participation rate) is probably the most sensitive factor in workforce planning for the future. The current average participation rate in secondary care in England is 0.93, but this is falling and in some specialties is already as low as 0.79. Trying to understand the balancing forces at work will be the task of workforce planners in the future.

### **Drivers for changing the career structure**

17. These drivers can be divided into service needs and educational needs, and should also reflect the needs of the individual as discussed above. It is difficult to plan for a service in a constant state of change and re-development, and one which is also influenced by the changing aspirations of politics and politicians. The nature of current medical training is that the overall timeframe from starting medical school to receiving a Certificate of Completion of Training (CCT) in a recognised specialty is 10 – 16 years. This does not engender the flexibility needed in the medical workforce when changes in the way the service is delivered and developing technologies require different skills. Part of the process of MMC was to try to achieve this flexibility, but so far it has resulted in

many ways in a less flexible workforce with difficulties in moving from one area of practice to another.

18. Some specialties and geographical locations are inherently more popular than others among graduates, but the health service, of course, needs doctors in all areas of practice and geography. This means either that an excess of doctors must be trained, so that the market determines that all posts are filled, or filling those less popular positions with graduates from overseas. We might also influence trainee choice with better statistics, different selection methods for and teaching in medical schools, and a more open market approach with financial incentives. A more regimented approach to doctors whose training has been funded from the public purse might also be adopted, with trainees required to enter particular posts for a set period of time – a practice which occurs in some other European countries already. The Greek government, for example, has attempted to address the problem of the majority of their doctors being located in Salonika and Greater Athens, with far fewer working in rural areas, by including a compulsory period of training in rural practice. Scotland and Wales have similar problems in this respect as there is a need for rural practice, but difficulty in providing the required numbers of cases and variety of experience for both the training and maintenance of skills of individuals practising in small centres. Even well populated parts of England have a problem with providing local services for rare conditions.

19. This problem of staffing smaller units has been made more acute by the advent of the Working Time Directive (WTD), implementing the requirement of a reduction of average working hours to 48 a week by August 2009. The overall effect of the reduction in working hours is to reduce the experiential learning for trainees meaning that they need to be much more focused during their training time. The Royal College of Surgery has estimated that hours of learning have reduced from over 20,000 to 8,000. This means that in order to make the best use of working hours, trainees need to be in units where they can gain the most experience in the time worked. They also need appropriate supervision. However, smaller units still need doctors to deliver service.

20. This may suggest that there needs to be a fundamental review of the nature of staffing units to provide more trained personnel directly delivering service. This has been seen by many as too expensive since the advent of the new consultant contract in 2003, although various solutions have been suggested; these include employing doctors holding their CCT on different types of contracts (rather than solely on consultant or staff grade contracts) or varying skill mix using other professionals. Many of these solutions appear cheaper, but have not been tested widely enough with respect to productivity, quality assurance and long term sustainability.

21. The consultant contract in Wales, introduced in 2003 after negotiation between the BMA and the Welsh Assembly Government, is different from that in the rest of the UK, and has several perceived advantages, for example more time for supporting professional activities and a commitment to a 37.5 hour week for full time workers. However, it has possible adverse financial implications for the service.

22. In England, where competition is being introduced into the NHS with an increasing plurality of providers vying for business, including Foundation Trusts, the sort of collaboration advantageous to providing services on, perhaps, a hub and spoke model is made more difficult. The key may lie in the sophisticated commissioning of services, across different providers and traditional primary and secondary care boundaries, to deliver truly patient centred care. Such commissioning would probably need to include the education, development and training of the workforce required. Currently, the lack of integrated information systems and the delay in providing working IT solutions makes this potential model ever more complex.

23. In Scotland work is underway to try and improve medical workforce projections using a consistent methodology with the Health Boards, coordinated by Regional Workforce Directors. The Health Boards are aiming to project trained workforce requirements based on modelling that currently shows significant reductions in the availability of doctors in training for service delivery. It is expected that the boards will be able to provide increasingly accurate future projections as issues such as the future role of the doctor and flexibility within the consultant contract are addressed.

24. The regulation of medical training adds to the lack of flexibility in the medical career structure. This has improved since the merger of The General Medical Council (GMC) with the Postgraduate Medical Education and Training Board (PMETB) in April 2010 as the GMC is now responsible for the quality assurance of medical education from the beginning of medical school until the doctor retires. With the introduction of revalidation later this year and a better understanding of the scope of practice of doctors on the register, this may open other avenues, for example the concept of credentialing, which has been investigated but not taken further at this time. This might allow doctors to step on and off the training ladder at various points, with appropriately recognised – albeit limited – skills to deliver service in specific areas of practice and may be a solution to the needs of a workforce who may value different working patterns at particular times in their careers and to a service trying to deliver care closer to the patient (4). The GMC is responsible for approving all curricula but is in itself constrained by the European regulations around minimum time for medical training, and the rule that all training programmes must be prospectively

approved to allow for the award of a CCT. This restricts flexibility further when trying to design different specialty training paths.

### **Differing perspectives on the career structure**

25. The problems of the recent changes in the British medical career structure have brought into sharp focus the differing perspectives of the constituencies involved in the health service. Much work has focused, quite rightly, on the requirements patients have of the service. Already there has been great success in reducing waiting times for operations in increasing engagement to involve patients in their care. The English government is keen to widen access to services, for example via extended opening hours for general practice. This may be appropriate for some patients but other surveys suggest that continuity of care, a complete examination by the doctor and an effective out of hours service are equally valued (5, 6, 7).

26. The medical profession was criticised in the Health Select Committee 2007 report (8) for failing to speak with one voice. The trade union view through the BMA is that we should increase the number of consultants in the service. The Royal Colleges also support the consultant expansion, but the consistency of that vision from individual members is not as clear, with some supporting the expansion of other senior grades in the service. One perception at present is that consultant expansion within the new consultant contract is unaffordable. However, this has not been tested and is a possible area for further research.

27. It is within the service that the economic reality becomes apparent. The service has traditionally been dependent on doctors in training, with the funding streams for this coming from outside the direct commissioning process. This has the effect of making trainees look cost effective to the service; however, little has been done to evaluate the hidden costs to the service of frontline dependence on trainees. These might include more litigation, longer lengths of stay, more investigations and higher admission rates, as well as the time required to train appropriately. While the service still needs to provide access for medical training, increased supervision from fully trained doctors around the clock might have greater benefits both to patients and training. Further work is needed to evaluate this and to look at the economic modelling of the career structure. In addition, an evaluation of the productivity and cost effectiveness of other professional groups taking on some of these different roles is needed. NHS employers need to be encouraged and supported to look at these aspects of planning for the future.

## **Conclusion**

28. Medical workforce planning remains challenging due to the many influential and unknown variables, including service redesign, the shifting balance of care into the community, changes in the structure of postgraduate medical education, and the understanding of what is meant by a trained doctor delivered service.

29. Each country in the UK has a different approach to service management, so that different approaches to workforce planning are necessarily required. Issues such as WTD and changing workforce demographics will be similar nationally but approaches to dealing with them may be quite different.

30. A significant challenge for workforce planning will be anticipating flows, not only across borders within the UK, but increasingly across the rest of Europe as well.

## References

1. Department of Health. (2000). *The new deal on junior doctors' hours*. London: Department of Health
2. Brennan, TA and Zinner, M J. (2003). *Residents' work hours: a wake up call?* International Journal for Quality in Health Care 15: pp 107-108. Available from: <http://intqhc.oxfordjournals.org/cgi/content/full/15/2/107> (accessed: 28 August 2008)
3. Donaldson, Sir Liam. (August 2002). *Unfinished Business – Proposals for reform of the Senior House Officer Grade*. London: Department of Health
4. Department of Health. (30 June 2008). *NHS Next Stage Review: A High Quality Workforce*. London: Department of Health. Available from: [http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_085840](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_085840) (accessed: 27 August 2008)
5. Cheraghi-Sohi, S, Hole, AR, Mead, N, McDonald, R, Whalley, D, Bower, P, and Roland, M. (2008). *What Patients Want From Primary Care Consultations: A Discrete Choice Experiment to Identify Patients' Priorities*. Annals of Family Medicine 6: pp 107-115. Available from: <http://www.annfammed.org/cgi/content/full/6/2/107> (accessed: 28 August 2008)
6. Coulter, A. (2005). *What do patients and the public want from primary care?* British Medical Journal 331(7526) pp 1,199-1,201. Available from: <http://www.bmj.com/cgi/content/full/331/7526/1199?ck=nck> (accessed: 28 August 2008)
7. Coulter, A and Elwyn, G. (2002). *What do patients want from high quality general practice and how do we involve them in improvement?* The British Journal of General Practice 52 (Suppl): pp S22-26. Available from: <http://www.pubmedcentral.nih.gov/articlerender.fcgi?tool=pubmed&pubmedid=12389766> (accessed: 28 August 2008)
8. House of Commons. (2007) *Health Select Committee Report on Workforce Planning*. Available from: <http://www.publications.parliament.uk/pa/cm200607/cmselect/cmhealth/171/17102.htm> (accessed 28 August 2008)