Crystal ball gazing: planning the medical workforce

Should we try to plan to produce a medical workforce that meets the future needs of patients? Or should we abandon the impossible task and let the market rip? While we can never predict the future precisely, we owe it to patients to do the best we can.

By 2010 the output from England's medical schools will be around 6000, over 40% more than in 2004. When the decision for this increase was made in 2000 few people in the NHS would have predicted the huge improvements in cancer and cardiac care, the dramatic reductions in waiting times and the variety of attempts to create an NHS 'market'.

Will the numbers of doctors we produce meet the needs of a modernized NHS? Will the careers we offer them meet their expectations?

Experience so far

The UK makes more effort to plan its medical workforce than other countries (Department of Health, 2000). The US system relies largely on market forces and on being able to import international medical graduates (IMGs) to fill gaps. England also has a medical workforce of whom only 62% qualified in the UK, but has a commitment to be less reliant on international recruitment. Australia too is keen to avoid an unsustainable reliance on health workers trained in other countries (Lennon, 2005).

In the UK a decision was made to increase the number of medical students (Medical Workforce Standing Advisory Committee, 1997; Department of Health, 2006), partly to reduce excessive reliance on IMGs, some of whom were badly needed in their own countries.

This decision to change medical school numbers will take over 20 years to begin to affect the number of fully trained specialists and GPs. Advances in medical technology and changes in political priorities occur much faster than this. How do we know the numbers will be right?

Shortages may have profound impacts on care for patients. Less popular specialties, and parts of the country suffer disproportionately. Yet if we train too many, we have not only wasted the investment in their training, but we have drained the country of its limited supply of high quality science graduates for nothing.

Much publicized mismatches between supply and demand overshadow the large proportion of the 57 specialties where there has been a steady increase in supply to meet a steady increase in demand. Specialties that have demonstrated consistent growth since 1999 include gastroenterology, respiratory medicine and cardiology.

Predicting supply

To a certain extent we can predict the supply of doctors. We know the number of medical school graduates expected; we can get a reasonable handle on retirement trends and the smaller numbers who leave medicine, or the country. True, we can't be sure how many doctors from Europe will choose to come and work here, nor how many IMGs will be able to find suitable posts. The deans know how many doctors are training to be specialists and GPs, so we can make a reasonable estimate. We are currently on course for an increase in specialists and GPs shown in *Table 1*.

Assessing likely demand

What is the likely demand for specialists and GPs? The demand for doctors, both in total and in terms of different specialties, is determined by a number of factors. While we might like to think that demand is driven by the health needs of patients – changes in the burden of disease or increases in treatment or palliation options – more powerful drivers are the total amount of money available for health services, the pattern of services and the skill mix of staff available. In the search for productivity and the drive to meet targets and the Working Time Directive, options for providing services with fewer doctors are actively pursued. In practice, there is no central planning of demand. The total demand for specialists is the sum of a multiplicity of decisions made by individual employers. The main employer at the moment is the NHS, although universities and the private and voluntary sectors also employ doctors. With increasing plurality of provision, the range of employers will increase, with an increasing proportion of services paid for, but not provided, by the NHS.

Two of the widely quoted 'failures' of workforce planning – obstetrics and gynaecology, and cardiothoracic surgery – resulted largely from overestimates of future demand which did not materialize. It could be argued that workforce planning did not 'fail' patients, as it secured more doctors than they needed in those specialties. The surplus in obstetrics and gynaecology was eventually small, partly as a result of the corrective action taken. Arguably, the rebound effect has been greater in the continuing difficulties in recruitment into obstetrics and gynaecology.

How many doctors do we need to train?

In addition to the uncertainties already described, there is a further factor to consider. What proportion of their lives will doctors devote to work? Will they take career breaks – whether to have children or to sail around the world; will they want to work part-time (Mather, 2000)? Much has

Table 1. Headcount supply forecasts of specialist and GP registers

	2004 Headcount*	2010 Headcount†	2020 Headcount†
CCT holders	30 650	39 500	57 250
GPs	31 523	34 800	N/A

From *Department of Health (2005); †Workforce Review Team (2005). CCT = Certificate of Completion of Training

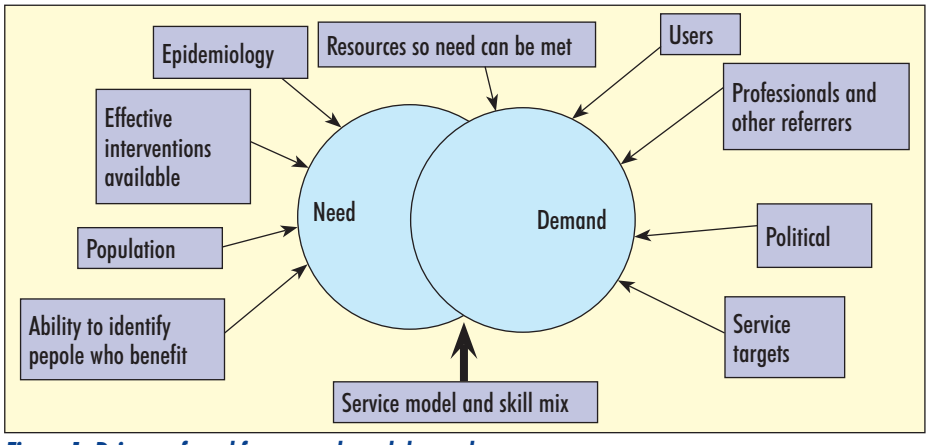

Figure 1. Drivers of workforce supply and demand.

been made of the increasing proportion of women entering medical school (now 60% of the total intake in England). The evidence is that both men and women hope to work part-time for at least some of their careers (over 70% in the British Medical Association 1995 cohort study; British Medical Association, 2004) so when, and how completely will they retire?

However, there is a greater challenge looming – by 2015 all new hospital specialists (and of course GPs) will have worked a maximum 48-hour week throughout higher training. They will expect controllable lifestyles and will not be prepared for the 60-hour weeks that many of our colleagues currently put in for the NHS. So the hours worked per doctor will reduce as the existing consultants are replaced with doctors who have no expectation of working the longer hours of the current senior consultant workforce.

Medical unemployment

Can we, as a country, tolerate medical unemployment? Last summer there was considerable political and media interest when a survey of a small number of recently registered doctors indicated that one third had not been offered a post to start in August 2005 (British Medical Association, 2005). A similar storm broke over a misunderstanding about Modernising Medical Careers numbers. If we maintain a modest over-supply of doctors will this secure us a willing workforce in less popular specialties and geographical areas? Or will it merely result in the emigration of a disillusioned group to countries that have no expectation of being self sufficient in doctors?

Expectations of young doctors

Medicine remains a challenging and rewarding career but some young doctors may have unrealistic expectations of being able to choose both the specialty and geographical area in which they practice. There is less competition for psychiatry rotations in the north of England than for cardiology in the south.

Should we try to plan the medical workforce?

We need to recognize that workforce planning is not an exact science but is influenced by advances in medicine, socioeconomic conditions and changing political strategy. It involves making decisions on the spending of taxpayers' money, taking into consideration both 20-year planning of doctor supply and short-term financial issues. So the best we can hope for is to be right in some of the specialties some of the time. Those who argue for a free-market economy must be prepared to accept greater shortages in some specialties and some parts of the country as well of the risk of headline-grabbing medical unemployment. BJHM

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British Medical Association (2004) *BMA Cohort Study of 1995 Medical Graduates.* 9th report. British Medical Association, London (www.bma.org.uk/ap.nsf/Content/cohort2004 accessed 20 July 2006)

British Medical Association (2005) *Shortage of senior house officer (SHO) posts – An interim report of a survey undertaken by the BMA in July 2005.* British Medical Association, London (www.bma.org.uk/ap.nsf/Content/SHOposts accessed 20 July 2006)

Department of Health (2000) *The NHS Plan: A plan for investment, a plan for reform.* Department of Health, London

Department of Health (2005) *NHS Staff 1995–2005.* Department of Health, London (www.ic.nhs.uk/pubs/nhsstaff accessed 27 July 2006)

Department of Health (2006) *Extra Investment and Increase in Home-Grown Medical Recruits eases UK Reliance on Overseas Doctors.* 2006/0093. Department of Health, London

Lennon B (2005) *International Physician Migration – The Push for Self Sufficiency: Ninth International Medical Workforce Collaborative Conference 2005, Australia.* International Medical Workforce Collaborative, Melbourne, Australia (www.health.nsw.gov.au/amwac/amwac/pdf/9_migration_aust.pdf accessed 20 July 2006)

Mather HM (2000) *The Royal College of Physicians Specialist Registrar Survey.* Royal College of Physicians, London (www.rcplondon.ac.uk/professional/spr/spr_survey2000jun.htm accessed 20 July 2006)

Medical Workforce Standing Advisory Committee (MWSAC) (1997) *Long-term demand for doctors in the United Kingdom and the measures needed to meet that demand.* Department of Health, London

Workforce Review Team (2005) *Healthcare Workforce Proformas.* Workforce Review Team, Winchester (www.healthcareworkforce.org.uk/C16/Proformas/default.aspx accessed 27 July 2006)

KEY POINTS

- The UK makes more effort to plan its medical workforce than other countries.
- A decision to change medical school numbers will take 20 years to affect the number of fully trained specialists.
- Advances in medical technology and changing political priorities occur faster than we can produce trained specialists.
- Shortages may have profound impacts on care for patients. Less popular specialties and parts of the country suffer disproportionately.
- Medical unemployment is wasteful of training investment but doctors need to be realistic about choices of career and location.
- There remains considerable uncertainty about the size of the medical workforce the new mix of providers will wish to employ, and the proportion of their lives that new doctors will devote to medicine.