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Consultant physicians for the future: report from a working party of the Royal College of Physicians and the medical specialties

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ABSTRACT – Workforce planning in medicine is at best an inexact science and at worst a dark art. Over the past year it has become clear that several forces influencing the consultant physician workforce are coming into play at the same time. Many of these forces cannot be easily controlled, but their effects are predictable and thus can be prepared for. Recommendations are made as to how the issues raised should be addressed.

KEY WORDS: consultant physician, manpower, trainees, workforce planning

Introduction

Historically, there have been large swings between undersupply and oversupply of consultant physicians, most notable in respiratory medicine. Such unpredictability is not surprising given the length of time required to train a consultant physician, frequent policy changes and difficulties in matching medical school output with the health needs of the UK.

The King's Fund has recently produced a report, *NHS workforce planning – limitations and possibilities*, which discusses some of the likely workforce problems over the next decade.[1] One theme that emerges is the need to integrate medical workforce planning within the wider NHS. However, there are unique issues with regard to the training of doctors and more specifically physicians which are not considered in the King's Fund overview. This report, produced jointly by the Royal College of Physicians (RCP) and the medical specialties, discusses these issues and the implications for the NHS medical workforce of the next decade.

Oversupply of consultant physicians

Over the next three years there is likely to be an excess of doctors in several medical specialties who have completed their training and are looking for consultant posts. The specialties most at risk from this are cardiology, renal medicine, geriatric medicine, diabetes and endocrinology, and gastroenterology.[2] This excess is due to an expansion of training posts introduced in 2004 because of a feared undersupply for the introduction of the European Working Time Directive (EWTD) and a need for training posts following the expansion of medical school admissions. This expansion was welcomed by most hospitals and specialties as it supported service delivery which was particularly affected by the introduction of the New Deal for junior doctors in 2003 (which reduced junior doctors' working hours to 56 per week).

Although the long-term effect of a permanent expansion in trainee numbers was predicted, no reduction in numbers has yet been seen, despite the need for this having been highlighted. Already, the NHS has seen a fall in consultant vacancy rates for all specialties (surgical and medical) from 4.7% in 2003 to 0.9% in 2009.[3] Currently, vacancy rates are higher (3.0%) for the general medical specialties than others but this is unlikely to remain the case for long.

The immediate reaction to this could be to dramatically reduce trainee numbers. However, this would be potentially disastrous. Firstly, it would do nothing to prevent the problem as the trainees are already in the system. Secondly, dramatic reductions in numbers would result in undersupply in years to come (perpetuating the cycle of oversupply and undersupply). Thirdly, it would potentially cripple the provision of acute services which is reliant on specialist trainees. The bulge in trainee output has already started and the effects have been softened considerably by the increase in acute medicine posts as well as other factors outlined in Table 1. However, further expansion is likely to be limited because of the financial future of the NHS.

The changing financial climate

After many years of increased funding for the NHS, the profession is now set for much more austere times and it is clear that substantial savings will need to be made in healthcare, particularly in the acute sector.[4] Consultant physician expansion in the UK has been fairly steady over the past 10 years at around 4–5% per annum. It seems very unlikely that such expansion will continue to occur across all specialties as acute trusts find ways to cut costs. Importantly, most trusts will make such changes (for example, not filling vacant consultant posts) independent of any national workforce plans or in the context of output of medical trainees.

This highlights a significant problem with 'national' workforce planning, ie that policymakers and workforce planners have only limited influence over employers. This issue was identified by the House of Commons Health Committee in 2007 which made specific recommendations that strategic health authorities (SHAs) and primary care trusts (PCTs) should improve their understanding of workforce demands, and take collective responsibility for improving planning at a national level.

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Table 1. Manpower issues for large specialties in the UK 2010–14. In a very simple model, assuming consultant expansion[2,6] is the same over the next five years (**very unlikely** given the current financial climate) and that an average specialty trainee takes six years to train, certificate of completion of training (CCT) output and consultant post availability over the next five years can be estimated thus:

	New CCT holders	Per annum 2010–14 consultant retirements	Consultant expansion required	Per annum expansion 2006–9	Potential excess CCT holders in 2014 if historical expansion maintained
Cardiology	88	14	74	24	250
Diabetes and endocrinology	67	21	46	34	60
Gastroenterology	87	25	62	33	145
Geriatric medicine	87	5	82	36	230
Renal medicine	67	5	62	44	160
Respiratory medicine	101	16	85	49	180
Palliative medicine	45	3	42	23	95

There are many variables which may increase the number of posts available including: less than full-time working; attrition of trainees moving abroad, entering full-time research or leaving medicine; filling of vacant posts and higher rates of consultant retirement. Furthermore, trainees may opt to go into 'other specialties' such as acute medicine or stroke medicine. The most important variable is the creation of new posts (consultant expansion). The quality of data on this is therefore crucial. The above RCP census figures have been verified with the relevant specialist societies and the NHS Information Centre (IC). Only IC data were available for 2009 for cardiology. However, even with optimistic estimates for all these variables, there is likely to be a huge gap in the number of available consultant posts for trainees completing their training in the next five years.

Some SHAs have produced quite detailed workforce plans for the next few years. Unfortunately, though, these were generally written before the size of the financial deficit facing the NHS was realised. There are likely to be considerable shifts in priorities in an attempt to maintain or increase quality of services while increasing productivity. The effects on the consultant workforce are unknown.

Centralisation of training

Large city teaching hospitals are crucial to delivering high quality training, but the localisation of large numbers of trainees in a small geographical area has created a problem. There is increasing evidence, both anecdotally and from data on unfilled consultant posts, that trainees whom have lived in the same place during most of their training are not keen to move around the UK. However, there are insufficient consultant posts for many of these trainees in the big cities. Furthermore, the needs of district hospitals and rural communities are very different from large city teaching hospitals.

While not a problem wholly specific to London, it is the result of the large ratio of training posts to consultant posts within London which has the most noticeable effect on recruitment in other SHAs. Several specialties have had problems recruiting to posts outside of London and the Home Counties, most noticeably dermatology, genitourinary medicine, rheumatology, medical oncology and neurology (Table 2). Overall, SHA consultant physician vacancy rates are 1.8% in South East, 2.4% in London, 4.1% in South West and 4.7% in Yorkshire and Humber.

This issue is likely to be worsened if there are significant falls in trainee numbers (which may be necessary in light of the previous two issues discussed). Such reductions will result in increasing centralisation of training to a limited number of centres, almost certainly the big cities. For large specialties where there is oversupply of trainees, market forces will ensure vacant posts outside of the large cities will be filled. However, for the smaller specialties (including those in Table 2), this is likely to be a significant issue. Ways of encouraging trainees in these specialties to work throughout the UK need to be found.

The non-consultant grade workforce

While the RCP and Joint Royal Colleges of Physicians Training Board (JRCPTB) have good data on consultant and trainee numbers over many years, the only data on the number of staff grades, associate specialists and other non-consultant grade doctors providing service in the medical specialties comes from the NHS Information Centre (IC). Given the large disparity between IC data for consultants and that collected by the RCP and specialist societies, there are considerable doubts as to the reliability of these data. Therefore, the skills of this valuable part of the workforce are not quantified and it is difficult to have an accurate picture of the whole workforce without understanding the work delivered by this group. The career intentions of this group are also unknown, and whether they will be competing for consultant vacancies that arise. Financial pressures may lead some trusts to create more of these posts, emphasising the need for a robust set of mechanisms for measuring changes and career development of these posts.

Devolution of training

Scotland has long been a net exporter of trained physicians to the rest of the UK and Scotland does not need to train so many doctors to remain self-sufficient. Devolution has meant that Scotland has control of training numbers as well as needing to

Table 2. Outcomes of consultant physician advisory appointments committees (AACs) in five English strategic health authorities during 2008 and 2009 for dermatology, genitourinary medicine and rheumatology.

	South East and London	North West, North East, Yorkshire and Humber
Dermatology		
Number of AACs arranged	42	43
Number of AACs cancelled because of lack of applicants (%)	0 (0)	6 (14)
Number of AACs held where appointment made (%)	24 (57)	28 (76)
Genitourinary medicine		
Number of AACs arranged	29	12
Number of AACs cancelled because of lack of applicants (%)	0 (0)	5 (42)
Number of AACs held where appointment made (%)	15 (52)	4 (57)
Rheumatology		
Number of AACs arranged	15	30
Number of AACs cancelled because of lack of applicants (%)	0 (0)	1 (3)
Number of AACs held where appointment made (%)	8 (53)	28 (97)

Data compiled by the Medical Workforce Unit, Royal College of Physicians (London) from AAC data submitted by RCP representatives.

be financially balanced. There is concern among the specialty societies that the financial climate may result in training numbers in many specialties being significantly reduced in Scotland, thus impacting on specialty provision in England, Wales and Northern Ireland. The effect on large specialties will be offset by an oversupply of trainees in England, but for smaller specialties, already struggling to recruit, this may have a major impact on the consultant supply for the long-term future. Only infectious diseases and clinical pharmacology and therapeutics (CPT) have been affected by this for 2010–11, but decisions to reduce training numbers in Scotland in future years will have potentially de-stabling repercussions elsewhere, for example in genitourinary medicine (Table 3). The Reshaping Medical Workforce in Scotland Project Board currently estimates that Scotland will produce an excess of 1,500 specialty doctors (including surgery) by 2014 and is actively consulting in 2010 on how training numbers will be changed.

Care closer to home

The move to the delivery of care closer to primary care than secondary care, while laudable, has not been the success that was initially envisaged,[5] with little evidence of cost savings, improved quality of care or reduction of work in secondary care. Clinical assessment centres have not reduced workload, and instead there is evidence that they have duplicated work and created unnecessary referrals to secondary care. Dermatology as a specialty has been especially affected by this (Box 1). Furthermore, they have created uncertainty in those specialties affected (diabetes, dermatology, rheumatology) such that recruitment to these specialties has been difficult (Table 4). Until it is clear how Care Closer to Home (CCH) will work in the long run, recruitment will remain a significant issue. There is now considerable evidence that a consultant-provided service is the most cost-effective solution for providing medical care as well as providing patients with the best specialty care.

Effects of the European Working Time Directive

The EWTD has caused considerable consternation among consultants, trainees and politicians. One of the main effects of a reduction in junior doctor hours has been a loss of service, particularly out of hours, but this has allowed a change of focus to the development of a consultant-delivered service. There is good evidence that consultant-delivered service in acute medicine results in reduced length of stay, reduced mortality and improved training. However, the cost-effectiveness has not been proven and the pyramid of training (ie a high ratio of trainees to few consultants with much of the service being delivered by trainees) cannot be inverted in a short space of time.

There is no clear plan for a consultant delivered service, nor a timeframe established over which this can be developed. Combined with the complexities of local funding, availability of trainees in relevant specialties and increasing pressures on the service, this is an issue which needs urgent planning. There have also been concerns about the potential reduction in quality of training and thus the quality of doctors completing the training. Provided the mechanisms for assessing competence of trainees are rigorous this should not be an issue. However, rigor is needed.

Table 3. Training number changes at ST3–7 in England and Scotland.

	England	Scotland		
	2009–10	2009–10	2010–11	Change (%)
Acute medicine	240	44	49	+11
Allergy*	12	0	0	0
Cardiology	545	63	60	−5
Clinical genetics	51	7	8	+14
Clinical neurophysiology	25	3	3	0
Clinical oncology	185	35	36	+3
CPT	43	15	12	−20
Dermatology	160	26	26	0
Endocrinology and diabetes	341	39	36	−8
Gastroenterology	456	39	39	0
Genitourinary medicine*	134	11	7	−36
Geriatrics	430	80	82	+3
Haematology*	347	47	39	−17
Infectious diseases	139	13	11	−15
Medical oncology	185	22	22	0
Neurology	213	25	26	+4
Palliative medicine	177	16	16	0
Rehabilitation medicine	47	9	9	0
Renal medicine	314	37	38	+3
Respiratory medicine*	503	49	33	−33
Rheumatology	203	23	23	0

Data on England from the JRCPTB database January 2010; data from Scotland from NHS Education for Scotland. *Data supplemented by information from the relevant specialty societies. CPT = clinical pharmacology and therapeutics.

Effects of Modernising Medical Careers

One of the effects of MMC has been that doctors are streamlined into a specialty at a relatively early stage, without much flexibility to change career paths. For some small medical specialties, such as audiovestibular medicine and medical opthalmology, the lack of more generic skills (eg acute medicine) has made these specialties unattractive to aspiring trainees (Table 4).

Misalignment of academic workforce planning and NHS needs

Clinical pharmacology and therapeutics is uniquely rooted in the academic sector which makes planning of this specialty very difficult. *Tomorrow's doctors* had made it clear that clinical pharmacology skills in newly qualified doctors are weak. Many training posts in this specialty have previously been supported by the pharmaceutical industry, but this is no longer the case. As there is no alignment between the workforce needs in the NHS and those in the academic sector, this specialty is near extinction. This raises the issue of the contribution of the NHS workforce to research and the academic workforce to clinical work. Both are mutually dependent upon each other, but there is no clear national framework for the workforce development specifically related to either. The RCP, via its academic medicine committee, has set up two working groups to investigate these issues.

The impact of changes to Multiprofessional Education and Training funding

Doctors in training are supported by specific funding via the Multiprofessional Education and Training (MPET) budget. How this money is distributed to hospitals with trainees is proposed to change with a reduction in Service Increment for Training (SIFT) and potential redistribution of funding for trainees. This is likely to have wide ranging implications for

Box 1. The issues of Care Closer to Home in dermatology.

Care Closer to Home (CCH) is part of an NHS programme in England to deliver more services within the community[7]. For dermatology it has had disastrous consequences on patient care. In 2009, the Workforce Review Team recommended no increases in dermatology trainees until the effects of CCH bedded down.[8] However, where intermediate services (eg Integrated Clinical Assessment and Treatment Services or general practitioners with special interests (GPwSIs)) have been put in place the referral rates to secondary care dermatology departments have risen in the order of 30%.[9] In other words, the need for secondary consultant care has increased with no increase in manpower. Although the idea of CCH is popular with patients, it has been shown to be expensive to deliver, costing up to 75% more per patient.[10] There are significant concerns about the 'quality' of care delivered by GPwSIs as, although there are strict governance standards for them, only 64% currently meet these standards (which require training and supervision in secondary care).

There has been a massive increase in skin cancer referrals because of an increase in incidence in the UK, combined with increased regulation on who can manage skin cancer, as well as difficulty with lesion recognition by general practitioners who get limited training in dermatology. Some 90 dermatology posts in the UK remain unfilled or are filled by temporary locum consultants who do not meet the requirements of a substantive post. In some areas of the UK, dermatology services have been decommissioned (eg the Pennine Acute Hospitals Trust) due to lack of suitably trained staff. The British Association of Dermatologists feels that there is an urgent need to train more consultants if consultant-based secondary care services are to deal with the current demand levels.[9]

Table 4. Specialties with problems recruiting to training vacancies. This table shows the number of first choice applications per post in various specialties and deaneries for the ST3 recruitment round in 2007 taken from the MEE website. Data for many specialties are not available (-). The large specialties continue to attract applicants whereas many of the small specialties are struggling to do so, especially outside of London. The lack of applicants for acute medicine is a particular concern.

	Mersey	London and KSS	Trent	Northern	South Western Peninsula	West Midlands	Yorkshire
Acute medicine	–	0.9	1.0	0.8	1.0	2.3	1.6
Cardiology	7.5	6.4	–	3.0	–	5.5	5.0
Dermatology	4.0	6.8	–	2.0	–	1.8	–
Endocrinology	2.1	2.5	2.0	2.0	1.0	2.8	3.0
Genitourinary medicine	0	3.4	–	–	–	0	1.0
Gastroenterology	2.3	5.1	2.5	4.4	1.5	4.8	–
Medical microbiology	–	1.9	–	–	–	–	1.0
Nuclear medicine	–	0.8	–	–	–	0	–
Rehabilitation medicine	0	2.0	–	0	0	0.3	0.3
Renal medicine	1.5	2.7	2.0	1.0	–	4.0	4.0
Respiratory medicine	3.0	2.9	6.0	2.3	–	4.0	3.3
Rheumatology	–	4.3	–	2.0	0	1.7	2.8

workforce planning. This may reduce consultant expansion, particularly in academic specialties. It may also impact on specialties not contributing to the acute medical take outside of large teaching hospitals (eg haematology). The effects of such a system need to be modelled at a regional and local level for the medical specialties (particularly the smaller specialties).

Discussion

Central workforce planning by the Department of Health, primarily using models created by the Workforce Review Team (WRT), has improved matters considerably over the past few years. The Federation of Medical Royal Colleges provides key manpower data through its Medical Workforce Unit (MWU). This unit works closely with the medical specialist societies and the JRCPTB to collect annual data on consultants and trainees. These data are published as the annual consultant census and specialist registrar census.

The importance of manpower planning was recognised by Lord Darzi in his quality workstream. The result of this has been the establishment of a Centre for Workforce Intelligence (CfWI). This body will act as a resource for information and guidance on workforce planning for medical and nursing staff. However, it is currently early in development and is unlikely to be able to have a significant impact on the issues discussed above.

The most significant challenge facing the medical workforce is the impending financial squeeze on the public sector. This period of reduced funding could not have been predicted and as such workforce planners should not be blamed for problems it has created. There is a clear difference in the workforce issues between the large specialties and the smaller specialties which are summarised in Table 5.

Table 5. Workforce issues for large and small medical specialties.

Issues for large specialties	Issues for small specialties
Oversupply of trainees and potential unemployment of consultants	Significant understaffing particularly outside of London and the South East of England
Restriction of growth due to financial pressures	Difficulty in recruitment at both trainee and consultant level
Loss of consultants with service re-figuration and changes to educational budgets	Potential loss of consultants trained in Scotland
Increase in workload due to reduction in junior doctor hours	Increase in workload due to reduction in junior doctor hours

Oversupply of trained specialists is likely to be exacerbated by a slowing of consultant expansion between 2011 and 2014 due to financial constraints. This cannot be ignored. One potential solution is to create an additional tier for accredited specialists. This is considered by many policymakers to be a 'fait accompli' and this is demonstrated both in the King's Fund report (which includes estimates for accredited specialists pay costs, interestingly set at 75% of the current consultant pay band) and in documents from NHS Employers.

Already, some foundation trusts are creating specialty doctor posts with no assessment of job plans, control of continuing professional development (CPD) or career pathways. These doctors are consultants, but not in name. The profession needs to establish professional standards for these posts together with clear stipulations for CPD and career development. The lack of information about other non-consultant grades is that without such professional controls, another 'lost tribe' will be created. Debate about the naming of these posts has deflected the profession from the bigger problem. Many trainees would, perhaps, be willing to enter such posts provided there was a clear exit strategy, CPD and especially development of specialist skills. One solution would be to have a fixed period of such posts after which, provided development goals have been met, automatic progression to the consultant grade would occur.

The traditional response to consultant oversupply has been to radically reduce trainee numbers but, as outlined above, this would be disastrous for patient care. Reductions in trainee numbers are undoubtedly necessary if there is not going to be ongoing large-scale consultant expansion above that which has been present historically. In order to protect patient care, though, reductions in trainee numbers must be matched by increases in specialist/consultant posts to allow service delivery. For each reduction in a trainee post, it would therefore seem sensible to create a new specialist post (possibly funded centrally) to prevent erosion of patient care. This would also promote consultant delivered care. Several smaller specialties are under threat (especially clinical pharmacology and therapeutics, nuclear medicine, rehabilitation medicine, genitourinary medicine and medical ophthalmology), from lack of recruitment to the training grades, reduction in training numbers and centralisation of training. National recruitment and workforce strategies are in place but do not seem to be working. These specialties are easily overlooked given the plight of larger specialties with oversupply. However, these areas provide crucial services to many patients.

There is a lack of long- and short-term control over trainee posts in the specialties. Sudden large fluctuations in trainee numbers are undesirable for many reasons: they result in a shortfall of service at the middle-grade level; they are difficult to manage at both a national and local (deanery) level; and they have significant effects on consultant numbers for individual specialties over a medium term (as historically demonstrated in respiratory medicine. Smaller responsive changes would be much better, but require close communication between the specialist societies, the workforce planners and the employers. This report has not focused on three issues which are likely to have a long-term impact on workforce planning in the UK as they are either adequately discussed in the King's Fund report or do not pose an immediate problem for workforce planning for physicians. These are the increasing proportion of women qualifying in medicine, the immigration of doctors from out-with the UK (and in particular the European Union) and the changing health needs of the population. There is no doubt these will have major ramifications for workforce planning over the next 20 years, but the issues raised in this report need urgent consideration.

The physician workforce of the UK is about to enter a period of significant turmoil. Closer working between all interested parties is needed to minimise the effects of this period on patient care.

Recommendations

1 Workforce plans must be developed with the model of a stable consultant-delivered service as the end point.
2 The profession must act urgently to shape how trainees achieving certificate of completion of training will be employed within the NHS.
3 To maintain patient safety, there should be no sudden reduction in trainee numbers in any specialty as a response to the current financial situation.
4 Any reduction in trainee numbers should occur gradually and should be matched by expansion of consultant posts to protect patient care.
5 Workforce planners across all devolved nations should work together to prevent undersupply in smaller specialties.
6 The role of consultants in CCH and in consultant-delivered services needs to be clearly defined and the future workforce needs to be calculated.

7 The non-consultant career grades must be embraced and brought back into the arms of the profession.
8 Work should be done on exploring ways to encourage trainees to work in undersupplied regions of the country, which may include financial incentives.

Report authorship

This report is the synthesis of a meeting of workforce representatives from the medical specialties held at the RCP on 1 December 2009. A draft report was produced by the corresponding author that was then modified following comments from the individual specialties as well as the RCP's Council. While not all the medical specialties fully endorse the entire report, it represents the majority opinion and has been endorsed by the RCP. The following individuals have contributed to the report either by being present at the meeting or following subsequent modifications of the report:

Dr Lisa Davies (respiratory medicine); Dr David Eedy (dermatology); Dr William Enger (allergy and clinical immunology); Professor Timothy Evans (academic medicine); Dr Pamela Ewan (allergy and clinical immunology); Dr Mike Galloway (haematology); Dr Andrew F Goddard (RCP); Dr Stephanie Gomm (palliative medicine); Dr Mark Goodfield (dermatology); Dr Harriet Gordon (gastroenterology); Dr David Hackett (cardiology); Dr Sue Holder (clinical genetics); Dr Ros Kandler (clinical neurophysiology); Dr Robin Kennett (clinical neurophysiology); Dr Gareth Llewelyn (neurology); Dr Nelson Lo (geriatric medicine); Dr James Mclay (clinical pharmacology and therapeutics); Dr Rob Martin (paediatric cardiology); Dr Phil Mason (renal medicine); Dr Kay Metcalfe (clinical genetics); Dr Albert Mifsud (medical microbiology); Dr Nick Morrish (diabetes and endocrinology); Dr Michael O'Doherty (nuclear medicine); Dr Eoin O'Sullivan (medical ophthalmology); Dr John Olson (medical ophthalmology); Dr Poulam Patel (medical oncology); Dr Colin Pease (rheumatology); Dr Simon Ray (cardiology); Dr Angela Robinson (genitourinary medicine); Professor Anthony Ward (rehabilitation medicine); Dr Peter West (audiological medicine).

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