The impact of restrictions in the hours of work of doctors in training on service delivery and education

Abstract

This paper examines the impact of the New Deal and the European Working Time Directive on junior doctor education and training within the United Kingdom. It outlines recent changes within the training system and anticipates future ones, taking into consideration the perceived impacts of change and the attitudes of key interest groups.

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Research question

What strategies are available to ensure that postgraduate medical education can be successfully delivered in the face of substantial reductions in the working hours of doctors in training and the introduction of shift working, without prolonging the overall time spent in training?

What is the policy position as regards junior doctors' hours of work in your country and what future changes are anticipated?

The last decade has seen a significant shift in political and cultural attitude in regard to the number of hours worked by junior doctors in the United Kingdom (UK). Prior to this, ninety-hour weeks, disrupted sleep patterns and permanent fatigue were the accepted norm for doctors in training. Life as a junior doctor was tough, but it was a well-established rite of passage and, for the majority, there was light at the end of the tunnel in the shape of a consultancy position. At the same time, such was the experience of all UK-trained consultants, the standard of education and training was generally perceived as being of an exceptional quality.

However times have changed: the image of a trainee doctor who has not slept for 36 hours wielding sharp surgical instruments does not sit comfortably with a 21st century vision for a modern, patient-centred National Health Service (NHS). In addition to this, the emergence of European Health and Safety legislation known as the Working Time Directive[1] (WTD) has pushed the issue of junior doctors' hours to a particularly prominent spot on the British Health agenda.

The first step towards the reduction of junior doctors' hours was taken in 1991 with the publication of 'Junior Doctors - the new deal.'[2] This document proposed substantial changes to doctors' training, not least a capping of the number of hours worked. The New Deal established a maximum limit of 72 hours per week on duty, to include at most 56 hours of actual work. This has been gradually phased in over the last ten years, and will culminate in August of this year when any hospital trust not yet New Deal compliant may be held to account by its junior doctors for breach of contract.

In August 2004, a previously applied exemption expires and the WTD will become a reality for all junior doctors in the UK's medical system. The key aspects of this of this directive are detailed below:

Working hours per week:

- By August 2004, a reduction to overall average weekly working hours of 58 hours;
- An interim 56 hour week by August 2007;
- A further reduction to 48 hours by August 2009 (with a possible extension to 2012).

The New Deal is technically a guideline, albeit it one with a powerful financial incentive; the WTD is a piece of legislation, non-compliance with which will entail breaking the law.

The WTD also features stringent measures around rest provisions and definitions of working time, and these provisions mean that the WTD will represent not just a continuation of the New Deal but a stepped change.

In its SiMAP ruling[3] of October 2000, the European Court of Justice defined 'working time' as:

'Any period in which the worker is working, at the employer's disposal and carrying out his or her activity or duties in accordance with national laws and/or practice.'

Consequently, any hour a junior doctor spends on call within a hospital (even if they are asleep) will be counted towards their weekly total of working hours. It should be noted that the 'resident on call' system has long been a feature of the NHS, and that movement from this is very much a break with tradition.

WTD compliance (with the additional complication of the SiMAP ruling) is a small, but significant part of a wider agenda: the modernisation of the NHS through the implementation of the NHS Plan.[4] WTD is one of the many drivers currently facilitating the changing shape of the NHS. Other examples include increasing sub-specialisations, focusing work processes directly to the patients' experience and the centrality of the clinical governance agenda.

Junior doctors play a major part in hospital service delivery. Some recent/anticipated changes arising from a reduction in their working hours are outlined below:

The most obvious strategy employed by hospital trusts to compensate for a reduction in their junior doctors' hours is to recruit more junior doctors. To allow for this, recent years have seen a significant increase in places at medical schools and there are greater numbers than ever of doctors in training. (The number of medical students rose from 35,197 in 1996/7 to 39,940 in 2001/2, a percentage increase of 13.5% in five years.)[5] However, this strategy cannot be allowed to stand alone as it is not an effective use of financial and human resources, and cannot offer a long-term solution. It is very necessary to consider alternative ways of working to maintain levels of care.

A second way of coping with the reduction of junior doctors' hours is to develop new working patterns. The most notable example of this is the movement from on call rota systems to shift working. There is plenty of evidence to demonstrate shift working enabling New Deal and WTD compliance.[6]

Another example of an alternative work pattern involves switching from 'firm working' (a consultant led group) to 'team working' (a greater skill mix than in a traditional firm, allowing for more flexibility). Pertinent features of team working include the benefit of cross cover, enabling doctors of all levels to work across certain medical disciplines and thus reduce the number of staff needed on call at any one time. This is of particular relevance to doctors working in accident and emergency, general medicine and general surgery.

Multi-professional working and the further development and active promotion of new healthcare roles such as the nurse practitioner and the team support worker is one further method of enabling the reduction of junior doctors' hours whilst maintaining levels of service delivery. The redefinition of professional job boundaries is a key issue to modernisation of the NHS.

The issue of WTD compliance is one of several being addressed by some hospital trusts through substantial service reconfiguration. The Brent Emergency and Diagnostic (BECaD) centre[7] at Central Middlesex Hospital where they are looking at a whole systems reorganisation of surgical services and the unification of the acute service is just one example of this.

Some small District General Hospitals (DGHs) are also considering rationalisation through the trading of services and levels of service with neighbouring hospitals as another, more drastic, method of enabling WTD compliance.

What are the *perceived* impacts of these changes and what are the attitudes of the key interest groups involved?

These changes are substantial ones for the NHS and its employees. Therefore it is not entirely surprising that proposals for reform have been greeted with a whole gamut of emotion: from whole-hearted embrace, through anxiety and scepticism, to downright hostility. Of the many perceived impacts of these changes, a most significant area for concern is the effect of the reduction of working hours on junior doctors' education and training and, by extension, the effect on the quality of patient care.

At the heart of the matter (and the one to which junior doctors, their healthcare colleagues and the professional organisations all allude) is the question: how can the standard of medical education be maintained, given a reduction in junior doctors hours, if length of training is not extended to compensate? Increasing the amount of time doctors spend in training is not an option: qualification in this country already takes substantially longer than it does in Europe and the UK's very real need to increase its consultant workforce must also be taken into consideration. Recent reforms to and future proposals for medical education are intended to counter any possibility of slippage in training standards.

To ensure maintenance of service delivery alongside the reduction of junior doctors' hours, new patterns of working are being implemented in hospital trusts. However, not all new work patterns are perceived as being suitable for addressing junior doctors' educational needs, with shift working causing particular concern.

In some quarters, shift working is seen to be a less flexible way of working and there are fears amongst junior doctors and their trainers that its introduction will impact on the already finite time available for study leave, teaching and pursuing research opportunities. Educators have identified large group teaching activities as a potential early casualty of shift working whilst junior doctors have expressed concern that their experience of less common operations may well be reduced. There is an additional risk that if training standards are perceived to have fallen then the recruitment of junior doctors might become more of an issue.

Team working and the increased use of skill mix that it employs has not been universally welcomed. The blurring of doctor-nurse roles through the performance of

minor surgeries and other traditionally doctorly tasks by non-doctors is already a controversial subject. To enable New Deal and WTD compliance whilst maintaining current levels of service provision, there will need to be a significant increase in this style of working and indeed momentum is building. Considerable effort will be required to overcome cultural resistance towards change of this kind.

Junior doctors are currently responsible for a significant proportion of medical service provision within hospitals. Another perceived consequence of a reduction in junior doctor output is an increase in demand for 'trust doctors.' Recent years have witnessed an explosion in the number of these non-consultant career grade doctors as this has been a popular tactic amongst trusts in complying with the New Deal. As with increasing the number of trainee doctors, this is not seen as a long-term solution to the problem.

A common theme occurring in discussions on the implications of reducing junior doctors' working hours is the impact on the quality of trainee doctors' working lives. Whilst shorter working weeks are very welcome, the necessary changes to working patterns to compensate for these missing hours have not been greeted so favourably. Shift working, in particular, often attracts adverse comments from some junior doctors.

The WTD should be viewed in a positive light: the whole purpose of the directive is to improve the quality of junior doctors' working lives which, in turn, will lead to better quality care for the patient. It is generally accepted that the reduction of working hours will result in less fatigued and demoralised doctors, something which, at the end of the day, can only be in patients' best interests.

What national level initiatives are underway:

- **to measure the actual impact of the reduction of working hours on resident learning?**
- **to modify the structure and conduct of residency programmes to compensate?**

Prior to the introduction of the New Deal, its implementation and the subsequent publication of 'The New Doctor'[8] and 'The Calman Report,'[9] junior doctors managed their own training programmes through a series of applications to a progression of training posts, passing through Pre-Registration House Officer (PRHO), Senior House Officer (SHO), Junior Registrar and Senior Registrar positions on the way to becoming a consultant.

Following graduation from medical school, a trainee doctor must complete a final year of basic medical training in a general clinical environment. This year is an opportunity for a PRHO to put into practice the skills learned and apply knowledge gained during their undergraduate medical education.

In April 1997, the General Medical Council (GMC) (the body responsible for overseeing PRHO education and training, and awarding full registration status on the certification of sufficient educational and clinical progress of a trainee by their university) published a series of recommendations for high quality PRHO education and training. 'The New Doctor' set the standard for PRHO education, clarifying the roles and responsibilities of all involved and identifying the integral components of a high quality PRHO post. These recommendations included establishing mechanisms

for providing PRHOs with educational support, and feedback about performance and progress.

The GMC's Education Committee published the outcome of a series of monitoring visits to university medical schools and their associated postgraduate deaneries which revealed an improvement in the quality of general clinical training.[10] Formal education courses were being provided (although in certain instances access to these courses was something of an issue) and there was evidence of high standards of feedback and support. The introduction of educational supervisors and learning agreements to the clinical setting was felt to have been especially beneficial. It was noted that PRHOs in general practice and speciality posts (for example anaesthetics) were particularly enthusiastic about the education they had received. This seemed to be largely due to the fact that the educational component had been planned as an integral part of these posts and service commitments were not allowed to effect the education and training provided.

Having established mechanisms for improvements to the most junior of doctors' working lives, attention switched to the other end of the scale with higher specialist training identified as the next target for reform. Prior to the publication of 'The Calman Report' in 1998, higher specialist training was a minefield of inconsistency: there were significant discrepancies between the medical Royal Colleges in regard to curricula, timing of examinations and pass marks. The end point of training was ill-defined with considerable variation in duration of training between the specialities. In an effort to redress this and bring the UK in line with the rest of Europe, 'The Calman Report' proposed a radical overhaul of specialist training. These changes can be summarised thus:

Curriculum – setting curricula;
Appraisal – establishing mechanisms for;
Length of training – defining minimum duration of speciality training;
Management of training – clarifying roles and responsibilities;
Assessment – assessment strategies for marking progress;
National standards – ensuring recognition of standards by a competent authority.

Post-graduate deaneries took on a new role, becoming responsible for junior doctors' training programmes through the organisation and management of series of training posts. Rotations (structured programmes) were established in every speciality within each deanery with junior doctors now applying to the deanery for a programme of training posts.

In the 'Evaluation of the Reforms to Higher Specialist Training 1996 – 1999,'[11] carried out by the Open University in 2001, researchers found that, in general, final year Specialist Registrars (SpRs – the replacement grade encompassing both Junior and Senior Registrars) and consultants recently awarded the Certificate of Completion of Specialist Training (CCST) felt they had been adequately prepared for consultant responsibility in terms of procedural skills, clinical judgement, knowledge base, routine work and communication. Clinical work and knowledge acquisition were the mostly highly rated elements of training with service management being singled out as the area in which additional experience would be of greatest benefit.

Consultant opinion was also gauged and echoed the SpR/CCST survey findings: there is widespread satisfaction as to CCST holder competence in clinical matters, but less

so regarding service management, particularly in the areas of financial management and disciplinary matters.

There has been substantial reformation of doctor education and training at both the most junior and senior levels. Consideration must now be given to the education and training of the SHOs, the so-called 'workhorses of the NHS.' In recognition of this, August 2002 saw the publication of 'Unfinished Business,'[12] a proposal for reforming the SHO grade.

There is plenty of scope for reform. Currently SHOs account for almost half the number of doctors in training, but a significant proportion of these posts are not part of a formal rotation or training programme. There is no defined end point to SHO training with progress beyond the grade largely dependent on a doctor's ability to secure one of a limited number of specialist registrar and GP registrar positions. As a consequence of this, most SHOs spend much longer in training than is necessary to satisfy the training requirements. There are no robust mechanisms within the system for regularly appraising performance or for formal assessment – a SHO's suitability to progress is measured by success at Royal College examinations and ability to secure further training posts. There are also marked variations in the amount of service SHOs provide in different posts and inconsistencies in the quality of training received.

The proposal makes it explicit that successful reforms to the SHO grade will need to operate within the continuum of training: there must be clear and effective links to career posts and appointments, and explicit training pathways leading to clearly defined training goals. There is a strong emphasis on flexibility, not only with the need to meet constantly changing and consistently challenging service demands, but also to accommodate individual training needs. Lessons learned from the reformations of the PRHO grade and higher specialist training will be invaluable to this process.

It is envisaged that all doctors will undertake an integrated two-year foundation programme of general training with the first year equating to the current pre-registration programme of general training and the second year, the initial year of post-registration, providing further generic training. Such a foundation programme would extend and consolidate knowledge, skills, values and attitudes acquired in medical school. It is anticipated that second year foundation trainees would be better equipped to provide flexible service cover than current first year SHOs.

During their second year, trainees would compete to enter one of eight broad-based basic specialist training programmes. These programmes would be time-capped; it will no longer be acceptable for trainees to spend a long time in the SHO grade.

There would be sufficient places on these training programmes for all SHOs completing the foundation programme plus room to accommodate overseas doctors coming to the UK for training, although not all trainees would necessarily gain a place on their first choice of training programme.

Greater emphasis will be placed on competency-based assessment throughout training and as evidence of the successful completion of training. Progress will continue to be informed by success in the medical Royal College examinations and through the Record of In Training Assessment (RITA) process. A new, externally accredited body, the Postgraduate Medical Education and Training Board, would be responsible for ensuring all assessments and examinations are appropriate, valid and reliable.

These proposed training reforms are expected to deliver fully and better trained doctors in a shorter period of time. In terms of service provision, this means there will be increased delivery by doctors who have finished their training and by those following non-consultant career grade pathways.

New work patterns and ways of working will alter the opportunities for teaching and learning through face-to-face contact. Educators will need to identify what can be achieved through the relatively independent learning of trainees and to make the most of limited contact time. The identification of learner-based strategies appropriate to each trainee and the consideration of a variety of teaching strategies available in different clinical situations will also be an important future feature of a trainer's role.

What specific local (i.e. in particular hospitals/residency programmes) initiatives are there that have been demonstrated to reconcile reduced hours of work, including shifts, with the provision of high quality education?

One example of a successful local initiative reconciling reduced hours of work with high quality education is detailed by Great Ormond Street Hospital (GOSH) in their report 'Implementing New Deal and working towards EWTD compliance – Lessons from Great Ormond Street.'[13]

Against a backdrop of new role design and with a focus on evolving the workforce around the needs of the patients, a new working pattern was developed. Overnight tiers of cover were reduced and cross-speciality cover increased allowing a reduction in the number of junior doctors working overnight from 11 to three plus one sleeping. SHOs were removed from the overnight rota and instead provided full shift cover from 8:30 to 22:00, seven days a week.

This was beneficial in a number of ways: patients profited from continuity in their day care and the junior doctors from better access to teaching sessions, outpatient work and other forms of supervised learning.

Preliminary findings show that SHOs are generally much happier with the new rota arrangements and are benefiting from increased educational opportunities within the day.

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It is an understatement to say that realising the junior doctor nirvana of a 48 hour working week will be challenging: it will be immensely so, but it will happen. Not least because it has to. Significant results have already been achieved and there are many initiatives underway to support further reductions in working hours. Both the New Deal and the WTD have provided the NHS with a valuable opportunity to look critically at how its services are delivered and how its workforce is organised. Compliance will be realised through a combination of effective resource use and innovative service delivery. And through continued careful management, British junior doctor education and training will maintain its place on the world stage.

References

1. Council Directive 93/104/EC. *Official Journal of the European Community.* 1993; L307: 18 – 24.

2. NHS Management Executive. *Junior doctors – the new deal.* London: Department of Health, 1991.

3. Judgment of 3 October 2000: Case C-303/98 Sindicato de Medicos de Asistencia Publica (SiMAP) v Conselleria de Sanidad y Consumo de la Generalidad Valenciana. *European Court Reports.* 2001; 1 – 7963.

4. Department of Health. *The NHS Plan.* London: DoH, 2000.

5. Higher Education Statistics Agency. *Student Tables; Subject of Study; 1996/7 & 2001/2.* Cited online – www.hesa.ac.uk/holisdocs/pubinfo/student/subject9697.htm & www.hesa.ac.uk/holisdocs/pubinfo/student/subject0102.htm

6. Hale PC, Houghton A, Taylor PR, Mason RC, Owen WJ, Bonell C, McColl L. Crossover trial of partial shift working and a one in six rota system for house surgeons in two teaching hospitals. *Journal of the Royal College of Surgeons of Edinburgh*. 1995; 40: 55 – 8.

7. Department of Health. *Configuring Hospitals – Evaluating the models.* Cited online – www.doh.gov.uk/configuringhospitals/cent-mid-des.htm

8. General Medical Council. *The New Doctor.* London: GMC, 1997.

9. Calman K. *Hospital Doctors: Training for the Future.* London: DoH, 1993.

10. General Medical Council. *Implementing The New Doctor: the Education Committee's informal visits to the UK universities October 1998 to April 2001.* London: GMC, 2002.

11. The Open University Centre for Education in Medicine. *Evaluation of the Reforms to Higher Specialist Training 1996 – 1999.* Milton Keynes: Open University, 2001.

12. Donaldson L. *Unfinished Business: Proposals for reform of the Senior House Officer grade.* London: NHS, 2002.

13. Cass H. *Implementing New Deal and working towards EWTD Compliance – Lessons from Great Ormond Street.* London: DoH, 2002.