Does money or the law reduce doctors' working hours in the UK?

What can be learned from a 45-year journey to reduced junior doctors' working hours? The authors investigated the impact of financially punitive measures (the 2001 New Deal contract) and legislation (Working Time Regulations) on the average working week for doctors-in-training.

The first national contract for the UK's junior doctors came in 1948 when the NHS adopted the Whitley Industrial Relations System; 20 years later the first push to reduce the average working week would come from within the profession (Moreton, 2014).

The 1970s and 1980s saw disquiet among young doctors working 80–100-hour weeks, they wanted a contract 'designed to reduce hours – not to remunerate – to make it more expensive for the hospital service to overwork one doctor than to employ two' (Junior Members Forum, 1973). Subsequently there would be a more explicit contract detailing the expected hours of work, but unfortunately doing nothing to reduce them (Treloar, 1981).

Although a financial incentive existed during the 1980s which aimed to produce rotas with fewer hours, these additional duty hours payments were not robustly implemented. It was commented that forms to claim additional duty hours payments were frequently 'not available', or that 'intimidation' from seniors prohibited the alternative of taking necessary rest (Godlee, 1992). During this period the House of Lords would also debate Bills put before them seeking to legislate for a maximum 72-hour week, but all such attempts would ultimately fail (House of Lords, 1982, 1989). It would be many years until measurable reductions in working hours occurred.

Two new deals

It was not until the 1990s and governmental concern over potential industrial action that some progress occurred, in the form of a contract known colloquially as the first New Deal. This sought to reduce hours to a maximum 83-hour week by early 1993 and then to a 72-hour week by the end of 1994. Unfortunately this second goal still remained unfulfilled 2 years after its target date (Beecham, 1997).

Further assaults on the long working week would come in the form of a second New Deal contract in 2001 which introduced a new system of pay. This remuneration mechanism rewarded (at a premium) those doctors working the most hours at antisocial times. A punitive rate, known as band 3, necessitated the payment of a 100% supplement (potentially doubling a doctor's basic salary) for working patterns not complying with specific hours and rest limits. Although the weekly hours limit remained constant (72 hours for on-call rotas, and 56 hours for shift work), the salary multiplier for band 3 was introduced incrementally, increasing from 62% in 2000, to 70% 1 year later, and to 100% by 2003 where it remains to this day. This staggered introduction gave employers time to revise working practices before the full consequences of non-compliance were felt.

Legally binding limits

More recently, an alternative force impacted on doctors' working hours in the form of hours-limiting legislation arising from a European Union directive. A legal limit on average working hours for doctors was initially set at 58 hours per week in 2004. This decreased to 56 hours in 2007 before being completely enacted in 2009 with a maximum 48-hour week. This would be incorporated into UK law as the Working Time Regulations, although it is commonly referred to as the European Working Time Directive.

This review of published data on junior doctors' working hours sought to examine which constrainer of working time achieved the greatest reduction in average weekly hours in the UK: financially punitive measures (2001 national employment contract for junior doctors), or legislation (Working Time Regulations).

Search strategy and selection criteria

A literature search was undertaken to find studies that collected data on the working hours of junior doctors. The average hours data for each year was compared to the milestones described above.

Medline was searched using the terms 'new deal' AND 'hours'; 'hours' AND 'contract'; and ('EWTD' OR 'WTR' OR 'European working time directive') AND 'hours'. Results were restricted to those published in English between 1985 and 2013. A hand search of refer-

Dr Adam Moreton *is Psychiatry National Institute for Health Research Academic Clinical Fellow (ST3) and* **Dr Andrew Collier** *is Forensic Psychiatry ST5 in Health Education North West, 3 Piccadilly Place, Manchester M1 3BN*

Correspondence to: Dr A Moreton (a.moreton@doctors.org.uk)

ence lists was undertaken. In an effort to capture research that was not published in academic journals, the websites of stakeholder groups (NHS Employers, British Medical Association and the various Royal Colleges of Surgeons and Physicians) were also searched for further relevant studies. For hours data to be included in this review, the applicable year and average working week duration of full-time junior doctors was required.

Results

The Medline search yielded 79 results, and after hand searching reference lists two studies met the inclusion criteria, other papers were sourced via the stakeholder websites listed above. Papers were most frequently excluded for relating only to numbers of patients seen or clinical outcomes (*n*=22), were commentaries or editorials (*n*=18), or related to training and service provision initiatives (*n*=13). Ministerial return data, previously collected by the Department of Health and used to monitor doctors' hours (Jaques, 2011), were not included as these reports only detailed the percentage of doctors falling into various pay bands rather than reporting hours of work.

Hours data were obtained from ten sources (Kapur and House, 1998; British Medical Association, 2003, 2004, 2005, 2010, 2012; Jagsi and Surender, 2004; Federation of the Royal Colleges of Physicians of the United Kingdom, 2008, 2010, 2011) examining working hours between 1995 and 2010. One report (British Medical Association, 2003) contained data from annual surveys carried out from 1996–2002. Most studies were affiliated to stakeholder groups, while only Kapur and House (1998) which studied medical doctors and the mixed medical and surgical cohort from Jagsi and Surender (2004) were not. In total 15 individual datasets were included from these papers. It should be noted that the size of the study populations also varied considerably, from *n*=18 (British Medical Association, 2004) to 2312 (Federation of the Royal Colleges of Physicians of the United Kingdom, 2011). The British Medical Association cohort studies drew results from a mixed speciality group, while those from the Federation of the Royal College of Physicians of the UK contained only trainees in medical specialties.

Table 1 shows how introduction of a financially punitive contract was associated with a 13-hour doctor-reported reduction in working hours (67 hours to 54 hours). As hours-limiting legislation was introduced these fell by a further 5 hours to an average of 49 hours per week.

Table 1. Summary of hours data grouped by constraint

Period (inclusive)	Constraint	Studies (*n*)	Average working hours	Variance from previous period
1995–1999	Baseline	5	67.23	
2000	Financial	2	59.83	-7.40
2001–2002	Financial	2	58.97	-0.86
2003	Financial	1	54	-4.97
2004–2006	Legislation	0	No data	N/A
2007–2008	Legislation	2	51.1	-2.90
2009–2010	Legislation	3	49.07	-2.03

Discussion

The data were plotted to show the average working hours between 1995 and 2010, with the relevant hours constraint shown by arrows (*Figure 1*). The date of implementation for each constraint will have been known long before it was actually enacted and so time would have been available to make changes to working practices in advance of the element coming into force.

These results indicate that the restriction achieving the largest reduction in junior doctors' working hours was the financial constrainer of the 2001 New Deal. During its implementation the average working week reduced from 67 to 54 hours. Legislation had less of an impact (5 hours). Of note is that the Working Time Regulations were introduced gradually between 2004 and 2009 compared to the more rapid implementation of the 2001 New Deal. The motivating potential of a hike in salary costs in the absence of action by managers to reduce doctors' hours is undeniable, especially considering the magnitude of the pay bill rise if rotas with excessive hours were to continue.

External financial pressures, the motivations of different government administrations and structural changes to the NHS will have also impacted on doctors' working patterns. Such external factors will have coincided with the constraints studied, and their influence cannot be adjusted for because of the lack of an unaffected comparator group. Comparison between the four UK nations was not possible as the studies were either based solely in England or were UK-wide without individual nation analyses. Other strands of influence, such as the drive for improved work–life balance, use of locums, working with allied health-care professionals and patient safety initiatives are also likely to have played a part in shaping survey results. Additionally, changes in the gender mix of study populations over time was not examined.

Data used here were often generated from populations comprising doctors of multiple specialties and across grades of seniority – potentially increasing the generalizability of the conclusions while also being a source of inappropriate averaging of constituent study results.

A study of over 250 full-shift rotas and almost 50 non-resident on-call rotas demonstrated variability between specialties with regards to trainees' ability to leave work on time (Moreton, 2015). Shift-working surgeons worked on average 85 minutes more per week than planned, whereas trainees in paediatrics reported working hours much closer to their European Working Time Directive-

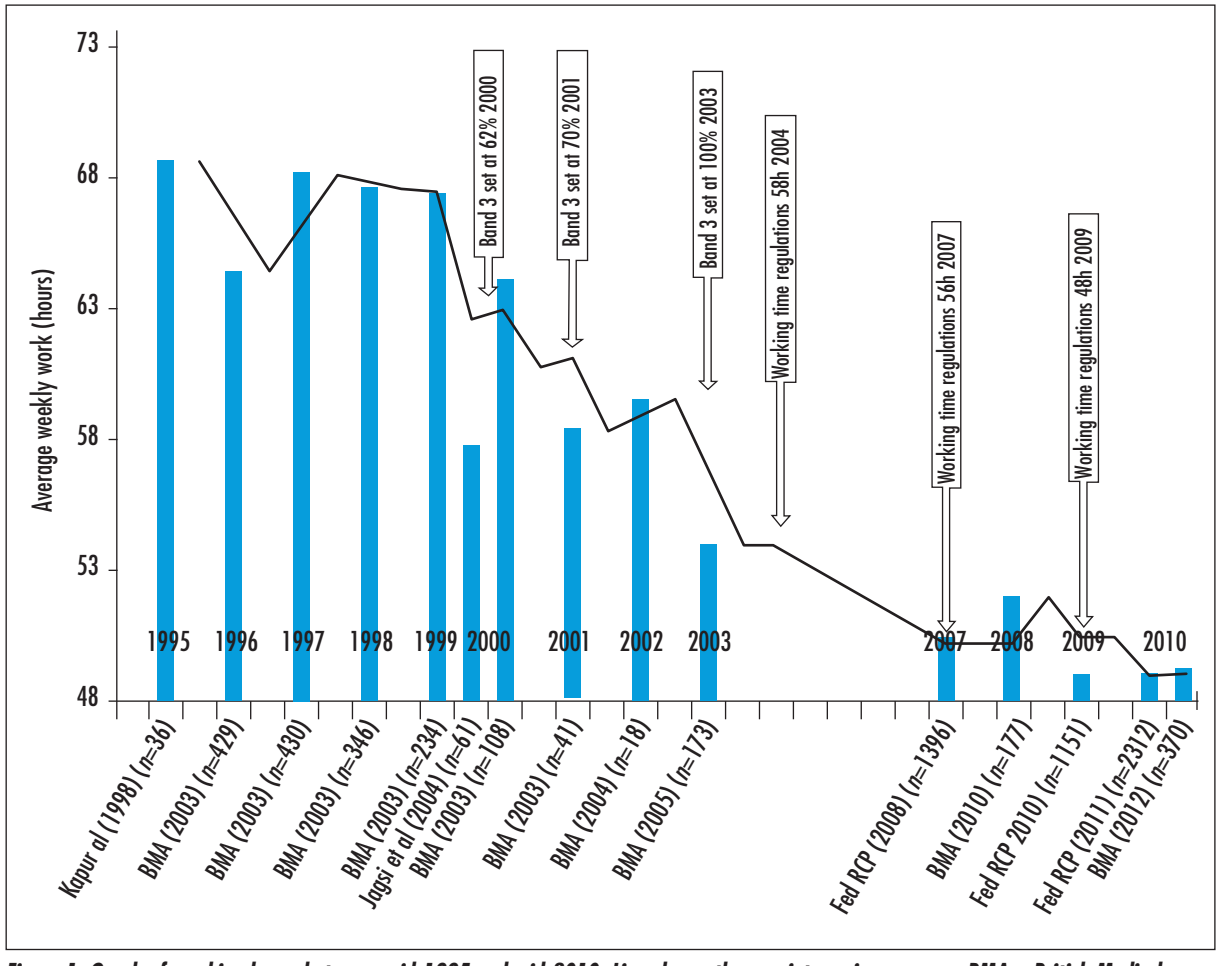

Figure 1. Graph of working hours between mid-1995 and mid-2010. Line shows three-point moving average. BMA = British Medical Association; FedRCP = Federation of the Royal Colleges of Physicians of the United Kingdom.

compliant rota templates. Considerable variation was also seen in the working hours of those following non-resident on-call rotas although the low number of studies per speciality precluded more specific conclusions being drawn.

There is anecdotal evidence to suggest that junior doctors both under- and over-report their hours (NHS Employers, 2013), although the former is thought to be more common (Santry, 2009). This bidirectional misreporting of hours (although only anecdotally) mitigates the risk of inaccuracy in the data.

Often data from multiple surveys over a number of years were combined into a single publication summarizing the results from the preceding years, this occurred with the two annual British Medical Association cohort surveys. In both 1995 and 2006 a cohort of doctors were recruited and surveyed for up to 10 years as they progressed through postgraduate training to become GPs and consultants. As the cohort became more senior the type of work they did changed and it is assumed they would also become more efficient. To counteract the impact of these studies attempts were made to obtain data from more than one source for each year, although this was only possible for 2 years: 2000 (British Medical Association, 2003; Jagsi and Surender, 2004), and 2010 (Federation of the Royal Colleges of Physicians of the United Kingdom, 2011; British Medical Association, 2012).

Conclusions

Punitive financial measures may have achieved the largest reduction in junior doctors' working hours. However, this does not take into account that with the introduction of each constraint, there would be fewer hours remaining for future reductions. As the years progressed constraints were tightened by further increases in the cost of contract non-compliance and reductions in permissible hours in the form of the European Working Time Directive. At no point were any of the hours constrainers removed or relaxed, they were only added to, either with increasing expense or with the later introduction of contracting of legal limits on top of the employment contract. This maintained pressure and made increases in working time unviable for employers, ensuring the direction of travel was one-way.

The lack of data before 1995 may reflect the lack of motivation or means to alter the status quo in the absence of external forces. It may also reflect medicine's hierarchi-

cal system where those on the lower rungs of the career ladder kept their heads down and got on with their work without complaining. As a result it has not been possible to assess the effect of the first New Deal, enforced mostly by professional standards with little financial recompense for the doctors and no legal recourse available for breaches of hours limits.

Analysis of the 15 studies in this review indicates that financial measures reduced working hours for junior doctors to a greater extent than hours-limiting legislation, with the caveats outlined above.

To date no claims have been brought by UK doctors under the European Working Time Directive for having to work beyond its limits. Where such breaches occur they are dealt with through the mechanisms of their employment contract which seeks to increase the doctor's salary until the problem is resolved. Therefore, the power of this legislation to curtail excessive hours has yet to prove itself in the absence of a financially punitive contract. **BJHM**

Conflict of interest: Dr A Moreton is a former medical leadership and management fellow for Health Education North West, where he had responsibility for facilitating the New Deal and European Working Time Directive compliance of doctors across north west England; he is currently Chairman of the BMA Junior Members Forum. Dr A Collier is Co-chairman of the BMA UK Junior Doctors Committee and member of the Junior Doctor Contract Negotiating Team.

Beecham L (1997) British junior doctors still work too long. *BMJ* **314**(7073): 10

British Medical Association (2003) *BMA Cohort Study of 1995 Medical Graduates: Eighth Report – May 2003.* British Medical Association, London: 18

British Medical Association (2004) *BMA Cohort Study of 1995 Medical Graduates: Ninth Report – June 2004.* British Medical Association, London: 16

British Medical Association (2005) *BMA Cohort Study of 1995 Medical Graduates: Tenth Report – June 2005.* British Medical Association, London: 14

British Medical Association (2010) *BMA Cohort Study of 2006 Medical Graduates: Fourth Report – August 2010.* British Medical Association, London: 5

British Medical Association (2012) *BMA Cohort Study of 2006 Medical Graduates: Sixth Report – June 2012.* British Medical Association, London: 19–20

Federation of the Royal Colleges of Physicians of the United Kingdom (2008) *Census of Consultant Physicians in the UK, 2007: Data and commentary.* Royal College of Physicians, London: 4

Federation of the Royal Colleges of Physicians of the United Kingdom (2010) *Census of Consultant Physicians and Medical Registrars in the UK, 2009: Data and commentary.* Royal College of Physicians, London: 4

Federation of the Royal Colleges of Physicians of the United Kingdom (2011) *Census of Consultant Physicians and Medical Registrars in the UK, 2010: Data and commentary.* Royal College of Physicians, London: 261

Godlee F (1992) Juniors' hours: is the end in sight? *BMJ* **305**: 937–40 (doi: 10.1136/bmj.305.6859.937)

House of Lords (1982) Junior Hospital Doctors (Restriction of Hours) Bill. Hansard Parliamentary Debates 427: 506–39

House of Lords (1989) Junior Hospital Doctors (Restriction of Hours) Bill. Hansard Parliamentary Debates 503: 768–814

Jagsi R, Surender R (2004) Regulation of junior doctors' work hours: an analysis of British and American doctors' experiences and attitudes. *Soc Sci Med* **58**(11): 2181–91 (doi: 10.1016/j.socscimed.2003.08.016)

Jaques H (2011) England abandons monitoring of compliance with working time directive. *BMJ Careers* 01 September http://careers.bmj.com/careers/advice/view-article.html?id=20004425

Junior Members Forum (1973) Junior Members Forum: Extra Duty Payment. *BMJ Supplement* 2: 57

Kapur N, House A (1998) Working patterns and the quality of training of medical house officers: evaluating the effect of the 'new deal'. *Med Educ* **32**(4): 432–8 (doi: 10.1046/j.1365-2923.1998.00238.x)

Moreton A (2014) The acrimonious road to the 48 hour week. *BMJ Careers* 03 November http://careers.bmj.com/careers/advice/view-article.html?id=20019902

Moreton A (2015) Working hours: Balancing risk and productivity. *British Journal of Healthcare Management* **21**(4): 176–81 (doi: 10.12968/bjhc.2015.21.4.176)

NHS Employers (2013) Scoping report on the contract for doctors in training – June 2011. NHS Employers, London: 23

Santry S (2009) A third of NHS hospitals could miss EWTD deadline. www.hsj.co.uk/news/workforce/trainee-nhs-doctors-being-told-to-lie-about-long-working-hours/5002032.article (accessed 1 June 2015)

Treloar S (1981) The junior hospital doctors' pay dispute 1975-1976: an analysis of events, issues and conflicts. *J Soc Policy* **10**(1): 101–30 (doi: 10.1017/S0047279400010357)

KEY POINTS

- The hours restrictor associated with the largest reduction in junior doctors' working hours was a financially punitive pay mechanism in the 2001 national 'New Deal' employment contract.
- During the staggered implementation of the 2001 New Deal the average working week reduced from 67 to 54 hours.
- The ability of legislation to maintain the current 48-hour working week has yet to be tested without the dual presence of a national employment contract making excessive working hours expensive for employers.