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The Impact of the Working Time Regulations on Medical Education and Training: Final Report on Primary Research

A Report for the General Medical Council

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Acknowledgements

Executive Summary

Background

This report presents the findings of primary research that aimed to evaluate the possible effects of the Working Time Regulations (1998; the WTR) on postgraduate medical education and training across the UK. It follows a literature review conducted as part of the same tender, delivered in January 2012.

Methods

Two methods were adopted:

- Organisational case studies were conducted in nine deaneries across the four nations of the UK to identify the range of approaches to the implementation and management of the WTR. These were informed by meetings with deanery and Trust/Health Board staff (including clinical, educational, and human resources management staff).

- Trainee perspectives were obtained through focus groups and telephone interviews with 82 trainees in the same nine deaneries (53 were in the Foundation Programme, 29 in specialty training). Trainees were asked about their perceptions of their working hours, reasons why they may be working beyond rostered hours, their attitudes to the management and monitoring of working hours, the perceived effects of compliance on their educational experience, and any personal effects they experienced (including fatigue).

Findings

Implementation of WTR

- The introduction of WTR was not an isolated change, but one of many changes affecting postgraduate medical education over many years. There is not a simple causal relationship between the introduction of the WTR and the experience, or the outcomes, of medical education. The WTR were not a simple intervention, but a change to an already complex system.

- There is some conflation and confusion between the WTR and the restrictions in place since the contractual changes implemented by the New Deal for Junior Doctors in 1996.

- The case studies identified that successful implementation of the WTR requires a number of elements: effective leadership; collaboration between those on clinical, educational and management sides; and a preparedness to make changes to working practices.

- Successful implementation of changes also requires the engagement of trainees, including in the design of rotas, and appropriately targeted resources including staffing and supporting technology.

Management of WTR

- The need for dual-compliance with WTR and New Deal restrictions complicates the design of rotas, and the management of hours. Rota design is not always felt to be appropriate or well matched to workload. Reconciling the tensions between WTR and New Deal may simplify the issues.

- Working time is not addressed explicitly in existing quality processes as set out in the Quality Improvement Framework. However, Deaneries and education providers generally feel that existing processes are sufficiently sensitive to detect any educational or personal issues arising from working hours. The GMC National Trainee Survey questions relating to working time were felt to be are not entirely appropriate, but adequate for the identification of areas of concern.

  o Because of this perception of sensitivity, there is a risk of false negatives, that problems related to working time are not being addressed because organisations expect existing processes to identify them.

- The only monitoring processes for actual hours worked are designed for New Deal, with WTR compliance extrapolated. There is no direct link between the New Deal monitoring and educational management.

  o However, even if processes were reviewed, there is a lack of trust in monitoring processes. Trainees often do not engage because they do not trust monitoring, feeling it does not accurately reflect hours actually worked, and that obstacles in the system make it hard to be accurate.

  o There is a perception that monitoring is a management tool, and while few trainees referred to direct pressure to record incorrect hours, there was frequent reported pressure to work unrepresentative, but compliant, hours during monitoring. Some trainees feel demoralised and unappreciated by this process, and feel that their professionalism is undermined.

Impact of WTR

- The restriction of working hours has brought benefits to many trainees, with consistent agreement that the long working hours of the past were counter-productive, and dangerous.

- Many trainees felt that the 48-hour limit is appropriate and that they gained sufficient training experience within the current limit, although they were frustrated by a perceived lack of flexibility.

- However, many of the problems the WTR were intended to solve persist, and trainees still work tiring, and potentially dangerous, working patterns.

- o Some working patterns are particularly fatiguing, with long hours and long periods without days off.

- o Shorter working hours have increased work intensity in some areas as workload has not proportionately decreased.

- o Workload and work intensity are exacerbated by understaffed rotas, with gaps unfilled because of other changes (such as the restriction on recruitment of overseas-qualified doctors).

- Educational opportunities vary with time of day, and with specialty. Foundation Programme doctors find that out-of-hours work provides them with useful experience, but with the caveat that the availability of consultants and other seniors at those times to directly teach and supervise is limited. Senior presence was felt to provide the best educational experience.

- Pressure to deliver service means that more educational activity, including reading and completion of e-portfolio but also attendance at some clinical opportunities (e.g. ward rounds, theatre, and clinics), takes place in the trainees' own time.

- The WTR and loss of the 'firm' of junior and senior doctors working closely and regularly together have changed the educational relationship between consultant and trainee, with consequences for training, assessment and recruitment.

- Acute fatigue and stress are still a concern for trainee welfare, and are perceived to impact on patient safety. There were specialty differences in the stresses on working time. Medical specialties were reported to be more consistently intense than surgical specialties, even across shorter hours, and so would have more tasks building up through a shift. A shorter, more intense period was felt to be as fatiguing as a longer, less intense one. The same issues were present across nations and training grades.

- The WTR are not, however, the sole or primary cause of ongoing problems of fatigue. Other changes in medical training, and the composition of the medical workforce, have led to strains on medical rotas.

- o A lack of supernumerary posts compared to previous eras may place pressure on trainees, as well as limiting the amount of rounded experience they receive.

- o It was suggested that dedicated educational time be included on a rota, during which trainees would be supernumerary to service delivery, but still be recognised as doing work.

Conclusion

The Temple Review urged that medical education and training make 'every moment count', meaning that medical education should be embedded in medical practice, and that service delivery should be aware of its educational component. This is not yet the case for many trainees, and there is an

increasing separation between work and education that may be adding new stressors to the trainee population. Moves to further implement the recommendations of the Temple Review (a consultant-delivered service, concerted faculty development, and greater integration of education into service) should address some of the concerns arising from this research.

If working time is to be considered as a component of educational governance and quality improvement, monitoring processes need to be reviewed, and their acceptance and trust by organisations and trainees ensured, to guarantee that any links between working time and education are reliably identified.

The GMC has power as the regulator of medical education, and may be able to redress the balance of education and service through its role in quality assurance. Education and training should be placed at the heart of service delivery. Education is not seen as at the expense of patient care, but as a means of maintaining it.

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Glossary of terms

Advanced nurse practitioner	A registered nurse who has undertaken a specific course of study of at least first degree (Honours) level and carries out advanced nursing skills www.rcn.org.uk
ARCP	Annual Review of Competence Progression. The process by which trainee doctors progress from each year of a training programme. It will usually involve a review of evidence provided in a portfolio – including logbooks, assessments and reflective accounts – and a meeting with an assessment panel.
Banding	A pay banding system came into place on 1 December 2000, replacing the Additional Duty Hours (ADH) pay system. The bands reflect whether the post is compliant with the working hour controls and rest periods under New Deal, and also whether the doctor works up to 40, 48 or 56 hours a week, the type of working pattern, the frequency of extra duty and the unsocial nature of the working arrangements.
CEPOD	Originally National Confidential Enquiry into Perioperative Deaths, latterly the National Confidential Enquiry into Patient Outcome and Death. CEPOD recommended the elimination of all but the most urgent surgical procedures out-of-hours. This has consequences for the design of rotas for trainee surgeons.
Derogation	The facility in the first two years of the WTR for a rota to be exempt from the 48 hour limit and allow working up to 52 hours. Derogations had to be applied for by employers, and were agreed in the 2009 amendments to the WTR. All derogations ceased in August 2011.
DRS	Doctors Rostering System. An electronic system for designing rotas and ensuring compliance with New Deal (and by extrapolation WTR). http://users.drstest.co.uk/public/main.asp
Firm	The organisation of a medical team common before the reorganisation of training grades following the Calman review in 1998. The 'firm' would consist of a group of doctors including all grades (consultant, senior registrar, registrar, SHO and house officer) who would work together and share on call hours.
Full-shift rota	A working pattern where doctors have defined start and finish times regardless of time of day or week. Contrasted with 'on-call'.
Hospital at Night (H@N)	A system for delivering out of hours care with a minimum of medical staff. Rather than junior doctors being bleeped directly from a ward, all calls are routed through a co-ordinator who triages and routes them to the most appropriate member of staff. The aim is to ensure junior doctors do not have to work outside their competence, or spend time on duties better carried out by other staff.
House officer	Historically the initial grade of doctor in postgraduate training, known as 'pre-registration house officer' following the Calman Report. The first foundation year is now this first year of work, but the term 'house officer' is still widely used to refer to this grade and role (cf. SHO and registrar).
Hybrid rota	A rota that combines elements of shifts and on-call.

iBleep	A system using software and handheld devices to improve the effectiveness of on-call management.
Ministerial return	The requirement to return New Deal monitoring data to the relevant Department of Health.
Modernising Medical Careers (MMC)	The programme of work that moved postgraduate medical education and training in the UK towards structured programmes, with competency-based progression. The Foundation Programme, introduced in 2005, was the first step of MMC, but the term is more commonly used to refer to the restructuring of specialty training in 2007.
New Deal	The New Deal for junior doctors, introduced in 1991 to provide minimum standards of accommodation, breaks and working hours, in response to the perceived exploitation of junior doctors. In 2003 New Deal was supplemented with a system of banding rotas (see 'Banding').
Non-resident on-call	An on-call period in which the doctor is not on hospital premises during periods in which they are not directly involved in care.
On-call	A period of work in which a doctor holds a bleep for a clinical area, and is therefore responsive to requests to deal with patients from other staff rather than routine work. In vernacular usage, on-calls are often differentiated from 'shifts' by doctors, although the hours worked may be the same. Since the introduction of the WTR, on-calls are differentiated into 'resident' (in which the doctor is on the hospital site) and 'non-resident' in which they are at home or other off-site accommodation.
Opt-out	The facility within the WTR for a trainee to voluntarily opt out of the 48 hour limit, and work up to 56 hours per week (averaged across the same reference period). A rota cannot be designed around the requirement to opt out.
Phlebotomist	A healthcare worker trained in venepuncture for the specific purpose of taking blood samples.
Prospective cover	Time built into a New Deal rota in which staff cover colleagues' annual or study leave.
Registrar	Historically the training grades above SHO. The Calman report replaced registrars and senior registrars with 'Specialist Registrars' (SpRs). While MMC replaced these grades with Specialty Training (and Core Training) grades, the term is still used to refer to 'middle grade' doctors, more experienced and senior than juniors, but some way off being consultants.
Resident on-call	An on-call period in which the doctor is resident on hospital premises. Under the terms of the SiMAP ruling on the EWTD, all time spent in the workplace counts as working time. For this reason, low-intensity on-calls are less likely to be resident under the WTR.

SHO	Historically the grade of post-registration doctor that delivered much of service, with no clear distinction between service and training. SHOs were approved training posts, but there were no defined educational goals and no clear educational or career pathways. SHOs worked under supervision and successful completion of each rotation (mostly 6 or 4 monthly) was signed off by a supervising consultant. Doctors expected to work a few SHO posts for a period of years before embarking on specialty training. Although the SHO grade has not existed for some years, the term is still used to refer to a junior tier from F2 through core training.
SiMAP and Jaeger rulings	Two rulings by the European Court which provide case-law guidance on the interpretation of the EWTD. The SiMAP ruling clarified that any time spent on work premises is classed as 'work' for the basis of calculating hours. This means that time spent (resident) on-call but not actually working still counts towards total hours worked. The Jaeger ruling further clarified that rest periods within a working period are effectively reset if a rest period is interrupted.
WTR	The Working Time Regulations (1998), as amended in 1999, 2001, 2002, 2003, 2005, 2006, 2007 and 2009. The Statutory Instrument by which the EWTD was enacted in the UK.
Zero day	A day in a rota which is not annual leave or study leave, but in which a doctor is not rostered to be at work. It is a means of reducing the average number of hours worked.
Zircadian MRM-Live	An electronic rostering system developed by Zircadian.

1 Introduction

This work was commissioned by the General Medical Council (GMC) to consider the effects of the Working Time Regulations (1998, as amended) on medical education and training. The Working Time Regulations (WTR) were the UK government's implementation of the 1993 European Working Time Directive (Council Directive 93/104/EC, amended by 2003/88/EC), which restricts the average number of hours worked to 48 per week, across a reference period of 26 weeks for doctors in training (the reference period is 17 weeks for most workers outside specified sectors including healthcare). Individual employees may opt out of the WTR through written agreement with their employer.

Doctors in training were exempted from the original introduction of the European Working Time Directive (EWTD) across Europe, with a phased reduction in hours to 58 hours in August 2004 and 56 hours in 2007, with final compliance with the 48 hour limit required from August 2009. Doctors in training were also exempt from the specification of rest periods in the WTR until August 2004.

In the UK, doctors' hours had already been limited in 1991 by the New Deal for Junior Doctors contract. This is still in place, as revised in 2001, and sets out the requirements for trainee doctors' contracts of employment, including hours. It includes a system of bandings of hours worked, with additional payments for antisocial hours. For junior doctors the WTR opt-out defaults the maximum hours that can be worked to the maximum of 56 hours per week specified by the New Deal.

A literature review conducted as part of the current work (Morrow et al. 2012) identified a number of potential effects of restricted working time. Benefits include improved work-life balance and reduced fatigue, while risks include reduced educational opportunities.

Attempts to achieve restricted working hours while maintaining education were identified, including the redesign of clinical services, changes to rotas and working patterns, the redistribution of workload to non-medical staff, or to doctors in non-training posts, and the use of technology to facilitate reduced working hours. However, the literature does not provide clear evidence of simple effects; rather any effects are specific to local circumstances and clinical and training needs. It was concluded that changes need to be designed with the specific organisational and clinical requirements of a particular context in mind, and that solutions cannot just be dropped into an organisation without close management. In part because of this contextual dependency, simple metrics or indicators were not identified.

With awareness of this literature, the primary research presented here considered the context of postgraduate medical education and training in the UK.

1.1 Aims

Two of the aims stated in the project's Operational Proposal related directly to this phase of primary research:

> " 3. To assess the circumstances and impact of WTR non-compliance on training, the feasibility of identified metrics, and how non-compliant rotas are dealt with

4. To consider trainee experiences of working in compliant and non-compliant rotas "

<div align="right">(from the Operational Proposal of the research)</div>

The first of these aims was refined into the following objectives:

- To explore means by which different regions had addressed the implementation and management of the Working Time Regulations.

- To identify any effects of compliance with the WTR that had been identified.

- To review processes by which effects on trainees, both educational and personal, were monitored and responded to.

The second aim was refined into the following objectives for the consideration of trainee experiences:

- To gather trainees' perceptions of their working hours.

- To investigate reasons why trainees may be working beyond rostered hours.

- To understand trainee attitudes to management and monitoring of working hours.

- To explore perceived effects of compliance (and efforts to achieve compliance) on their educational experience.

- To explore effects on personal wellbeing (including fatigue).

Two approaches to data collection were taken. Firstly, case studies were developed through meetings with staff in different organisations. This provided insight into different organisational approaches to WTR implementation, management and monitoring of working hours, and mechanisms for managing educational quality. Secondly, focus groups and telephone interviews were conducted with trainees working with the WTR limits. These identified experiences of different working patterns, perceptions of hours worked, and personal and educational effects.

2 Method

2.1 *Case study development*

2.1.1 *Identification of organisations*

The study aimed to sample a range of regions defined both by geography and existing issues with WTR compliance. As a starting point, the 2011 GMC National Trainee Survey (NTS) results were considered, particularly the seven items relating to working time. These were:

- TGD01. In this post, were your rostered working hours compliant with the European Working Time Directive (EWTD) i.e. is your rota compliant on paper - regardless of the hours you actually work?

- TGD02. In this post, have you been asked or felt pressured to submit a record of hours that are compliant with the European Working Time Directive (EWTD), when the hours you actually worked were NOT compliant?

- TGD03. In this post, how often have you worked beyond your rostered hours?

- TGD04. In this post, how often did your working pattern leave you feeling short of sleep when at work?

- TGD40. Overall do you feel that your training needs were met within the average weekly working hours specified by the European Working Time Directive (EWTD)?

- TGD41. As a result of having your weekly working hours specified by the European Working Time Directive (EWTD), is it taking you longer to achieve the required educational competencies?

- TGD42. In this post, have you been asked to sign a waiver opting out of the European Working Time Directive (EWTD)?

All of these may be diagnostic of trainee perceptions of problems around the management of working hours. TDG01 and TDG03 refer to straightforward perceptions of working hours, TDG02 and TDG42 to the management of hours beyond WTR, TDG04 to the fatigue as a consequence of specific working patterns, and TDG40 and TDG41 to the perceived impact of WTR on education.

The main area of concern was identified as the extent of potential non-compliance with the regulations; that is the perception of hours worked compared to WTR. This focused attention on TDG01 and TDG03. The responses to TDG01 indicated that between 2.5% and 9% of trainees stated their rota was not compliant. This seemed anomalous because all rotas (bar a relatively few derogations) should have been compliant on paper in 2010-11. It may be that these figures are influenced by trainees' lack of understanding of compliance. TDG03 was therefore assumed to be the more appropriate indicator item for the selection of a range of Deaneries. Nine Deaneries were selected from across the UK, representing a range of responses to TDG03 (between 4.7% and 9.8% agreeing that they 'never worked beyond their rostered hours').

Initial contact was made with the postgraduate deans of each deanery to ensure their agreement for the Deanery to take part in the research. Initial meetings were held to identify salient issues in each region, and particular Trusts/Health Boards which may be considered. Where possible, two trusts were contacted in each deanery.

Across all the deaneries, 58 individuals were involved in meetings or telephone discussions, including: postgraduate deans (PGDs), associate deans and other staff involved in quality management in deaneries. In NHS Trusts or Health Boards informants included: directors of medical

education (DMEs) and associate DMEs, HR/medical staffing managers, education service managers, junior doctors liaison staff, workforce information and systems managers, and medical manpower managers. In each organisation these individuals were nominated or suggested by PGDs due to their particular interest, expertise, or organisational memory. The information obtained therefore reflects different experiences.

2.1.2   Content of meetings

To ensure consistency in the information obtained, a set schedule of guide questions was developed, and where possible this was shared with staff ahead of each meeting. This is included in Table 1.

Table 1. Guide questions for meetings with organisations

Introduction of WTR

What was the overall approach – who led on it (e.g. SHA, Deanery, Trust) and who was involved?

What went well and what was challenging?

Management of WTR

Service design

Have there been any particular service design strategies in light of the WTR? (e.g. Hospital at Night, Front/Back of house, rationalisation of departments/sites, etc)

Rotas

Who designs rotas, what clinician/trainee involvement is there, and what consideration of training?

What software is used (DRS etc)?

Does the approach differ between specialties?

How are rota gaps managed? (e.g. through trainees, trust doctors, locums)

Monitoring

What are the internal processes for monitoring compliance – who is responsible, who is reported to?

Are actual hours monitored – by whom, and how? (e.g. diaries, sampling)

How are opt-outs triggered? (e.g. do trainees ask, do HR monitor hours, do services request?)

Impact on training and trainees

How would anyone know if WTR and/or efforts to manage WTR impact on training (e.g. records/outcomes; feedback from trainees – surveys or complaints; feedback from consultants)?

Is there any risk assessment of rotas?

What is the impact of trainees working beyond WTR, e.g. to cover rota gaps?

How are issues dealt with?

Is there any feedback to the Deanery (or elsewhere)?

Are there processes for dealing with non-compliance?

Have the WTR had any impact on trainees' well being? (e.g. fatigue, stress)

How is/could this be monitored?

Have there been any changes to training because of WTR compliance?

2.2   Trainee views

2.2.1   Recruitment

The initial intention was to conduct focus groups with Foundation and senior Specialty trainees, to gain the views of those who had only experienced the restricted hours, and of those who had worked through the introduction of the limits.

Local advice was taken on the best way to reach trainees in order to invite them to a focus group. In some cases this was through the Deanery, in others through education centres in individual hospitals. In some cases Deanery trainee representatives were invited and in others a general call put out.

However, there were problems both with arranging groups because of trainee availability, and with attendance (several trainees had to drop out at short notice because shifts over-ran, or they had to provide last-minute cover). For this reason, telephone interviews were offered to trainees through the same channels as the original invitations.

2.2.2   Procedure

Focus groups and interviews followed the same basic structure, illustrated with example questions in Table 2. The particular sequence and follow-up questions varied with each group or interview, and whether trainees were in Foundation Programme or specialty training (e.g. specialty trainees were asked if they had been aware of any particular changes), but the overall areas covered were the same. Focus groups and interviews were recorded with written consent at the start of focus groups and verbal consent at the start of interviews, and later transcribed. All participants were assured of anonymity to encourage open discussion of the relevant issues.

In one location, a focus group was arranged as part of foundation programme teaching, leading to a larger than normal number of participants. This was therefore run with a slightly different format, with smaller groups discussing the questions separately, and returning to the larger group to feed back.

Table 2. Format of focus groups and interviews, with example initial questions (all would be followed up with probes, e.g. 'How?', 'Why do you think that?'

Knowledge of WTR

How much did you know about working time regulations?

Where did that information come from (Deanery, Trust, College, colleagues)?

Experience of working hours

What sort of shift patterns do you work?

Do you know if your rota is compliant?

Have you opted out of WTR?

Have you ever had any concerns about your rota?

Do you have to cover gaps in rotas?

Educational opportunities and supervision

What do you think the best training opportunities are for your specialty/grade?How do you feel your learning opportunities vary with different shifts?

How does the level of supervision vary between shifts?

Do you feel you miss out on any opportunities?

Has WTR affected your ability to collect evidence for portfolios?

Are there any activities that you feel have less educational value?

Monitoring

Have you taken part in a monitoring exercise?

Were you able to report your hours accurately?

Do you keep track of your working hours yourself?

Personal effects

Do you ever feel the hours you work are too long?

Have you experienced any adverse effects from long hours (e.g. fatigue, time off)?

Have you experienced any positive effects from the reduction in working hours?

2.2.3   Analysis

The transcripts were coded qualitatively using a framework approach (Ritchie & Spencer 1994). The stages of the analysis involved:

> *Familiarisation* – gaining an overall view of the data that had been collected. This involved reading the transcript data and noting the range, depth and diversity in the data collected. Meetings between all four researchers engaged in the same process enabled discussion of the concepts and themes that emerged from the data.

> *Identifying a thematic framework* – identifying the key issues, concepts or themes by which the data could be examined and sorted. The construction of the framework drew upon:

- a priori issues – those issues that guided the study aims and were developed into the interview schedule (e.g. knowledge of WTR);

- emergent issues – those issues that were raised by the respondents (e.g. issues relating to work intensity);

- analytic issues – those themes that emerged from patterns and re-occurrences in the data (e.g. professionalism).

Findings from the case studies and focus groups are presented separately, and are followed by a synthesis which aims to bring together the themes identified in both, and draws on the opinions and contextual information obtained through organisational meetings, as well as the trainee viewpoints.

3   Case studies

3.1   Common ground

There are many elements covered in the case studies which are the same for all areas, either because of legislation or convention.

Most areas use an electronic system for rota development and monitoring. The majority use the Doctors Rostering System (DRS) which was developed by Skills for Health to aid New Deal implementation, although others such as Zircadian MRM are also used. These systems have common functionality of allowing template rotas to be designed around numbers of available staff and grades, and comply with the requirements of the New Deal and WTR, including average hours, shift lengths, 'prospective cover' for the annual leave of others on the rota, and breaks. The systems also facilitate the comparison of monitoring data with finalised rotas. Some systems allow real-time rota-checking, although none of the sites in this study currently used one.

Regarding the monitoring of hours, there is no statutory requirement for compliance with WTR to be monitored. There is however a requirement for New Deal compliance to be monitored, and until 2010 there was an annual 'ministerial return' across the UK, with data reported to each nation's respective Department of Health. However, this was suspended in England in 2010 and in Wales in 2011.

Quality processes are defined in the GMC's Quality Improvement Framework (QIF, GMC 2011). Consequently, processes across the UK are similar for identifying concerns, and for examining and escalating those concerns where necessary. There are three levels of quality processes: quality control, quality management and quality assurance. Responsibility for these is distributed between Local Education Providers, Deaneries, and the GMC, as indicated in figure 1. Local education providers are responsible for quality control, which is the means by which 'local education providers ensure that medical students and trainees receive education and training that meets local, national and professional standards'. Deaneries are responsible for quality management, which 'refers to the arrangements through which a medical school or deanery satisfies itself that LEPs are meeting the GMC's standards' (GMC 2011, p.9). The GMC is responsible for quality assurance, which involves approving medical education by ensuring that policies, standards, systems and processes are in place and meet required standards. This is conducted through regular reviews and visits, and the National Trainee Survey.

Figure 1. Elements of the GMC Quality Improvement Framework
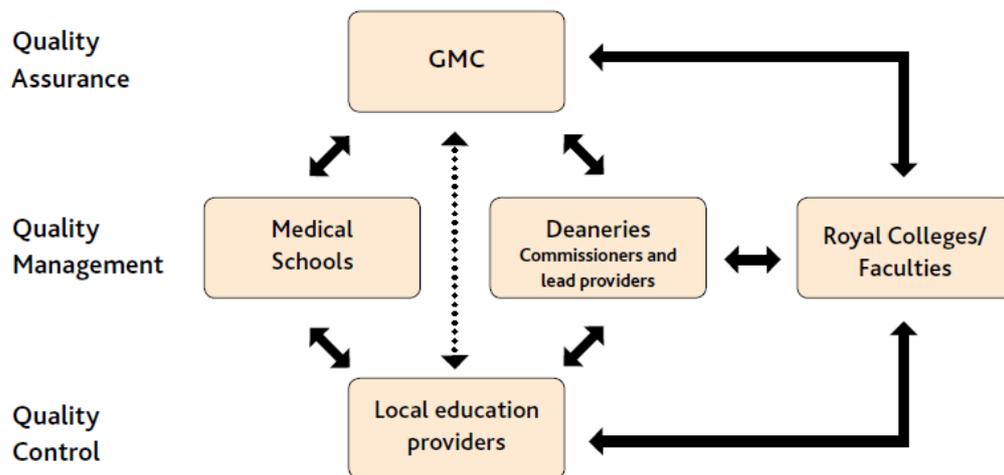
(From GMC, 2011, Quality Improvement Framework, p.8)

All Deaneries use the GMC National Trainee Survey within their quality management processes, as a primary indicator of concern and a trigger for quality management processes (although they will consider other evidence in parallel). While specific processes vary, the benchmarking data presented in the GMC questionnaire (placing the unit of analysis – Deanery, local education provider or programme – in the quartile of population scores) allows each domain to be flagged for concern if it is in the lowest quartile. (There are no criteria for an acceptable standard on these domains, so a relative indicator is the most effective.)

Initial concerns are reviewed with the local education provider (each provider will have a director of medical education and training/Foundation programme directors whose offices will be involved at this stage). Where problems are not resolved, intervention may escalate to a formal deanery triggered visit, during which meetings will be held with trainees and relevant senior staff. If there are still unresolved concerns, a visit by the GMC and/or Royal College can be triggered. The final sanction for a deanery is to withdraw a training post from a training unit. All Deaneries also have regular routine visits to each training unit, usually biannually.

3.2   National differences

The case studies were carried out across the UK, and are anonymised regarding the nation and region in which they were conducted. However, there are salient differences between the nations of the UK that are worth highlighting explicitly. Details of the situations in Scotland, Wales and Northern Ireland, where there is a large degree of centralised management regarding WTR are included in Appendix A. England varies more on a regional basis.

All nations, and regions, have issues relating to the geographical distribution of their populations, and the need to have services that are accessible. However, Scotland and Wales have areas of

particularly low population density which are a considerable distance from hospital centres and have slow transport links (including slow, rural roads). In these areas the introduction of WTR compliant rotas may present particular challenges as the consolidation of services on single sites, allowing rotas to be enlarged, is simply not possible while maintaining an accessible service. In Wales there are also issues arising from the need to have Welsh-speaking doctors in some regions.

The health budget is one of the devolved powers in Scotland, Wales and Northern Ireland, meaning that the processes by which funding is distributed to NHS organisations differs, but also that the relationship between national governments and the NHS is closer than in England. At the time of the study English trusts reported to strategic health authorities (SHAs), whereas provider organisations in other nations (Trusts in Northern Ireland, Health Boards in Wales and Scotland – although see Appendix B regarding Wales) reported directly to their respective Departments of Health. This closer political relationship may make some service-related decisions more vulnerable to electoral pressures, although informal discussion suggests this may also be true in England. England is the only nation to have Foundation Trusts, which further localises responsibility, including financial management. The changes to the NHS in England enabled by the Health and Social Care Act (2012) may increase the differences between the nations of the UK. SHAs are in the process of being abolished and Trusts will become more autonomous, with no legislated political accountability for healthcare.

Employers in all nations were initially required to submit a 'ministerial return', submitting data regarding working time compliance to their respective Department of Health (albeit referent to the New Deal). However England suspended this centralised monitoring in 2010, and Wales in 2011. At present, Scotland and Northern Ireland continue with their respective ministerial returns.

Political influences are also relevant in some aspects of changes to services. While private finance initiative (PFI) hospitals have been built across the UK, the PFI was embraced far more readily by the NHS in England than elsewhere. In 2009, England had 76 PFI hospitals (House of Commons Committee of Public Accounts 2009), whereas Wales has only one, which opened in 2011, ten years after the first one in England.

While specific strategic responsibility rests with employers/education providers across the UK, there seems to be a more coherent national approach regarding education and the WTR in Scotland, Wales and Northern Ireland. NHS Education for Scotland (NES) has oversight of educational issues for the whole of Scotland, and has identified WTR as a particular priority to be addressed by a working group (to report during 2012). There is also a national WTR advisor for Scotland, enabling greater consistency of approach and strategy across the country. Northern Ireland has a similar function held by a Board Liaison Group, which acts in an advisory capacity. In England, although there was national oversight and guidance regarding WTR implementation through Skills for Health, the EWTD National Stakeholder Group and the NHS Programme Delivery Board, strategy was developed at the level of the Strategic Health Authorities (as they existed before April 2012), there was no on-going national body after the introduction of the WTR, and no direct responsibility for educational oversight outside of the Deaneries.

3.3 Case study local details

This section summarises the similarities and differences between each region in a number of areas. Information true of the whole UK is discussed in section 3.1, with national differences within the UK described in section 3.2.

The full narrative case studies obtained in each region are contained in Appendix B. There are a number of caveats to how they should be read. The unit of analysis for each case study was the deanery, and while information was gained from up to three trusts in each region, in some cases this constituted only a small proportion of the trusts in the deanery area. Each case study was developed through consultation with individuals who had relevant expertise in the three key areas of WTR implementation and management – clinical, educational, and human resources management. However while educational, clinical and HR expertise was drawn on in each area, individual perspectives varied, and people had different involvement and first-hand knowledge.

The case studies therefore are illustrative. Drafts of each narrative case study were checked for accuracy by the contributors, but it cannot be guaranteed that there are no omissions because of the different stakeholders who contributed to their development. The intention of the case studies is to show the range of experience at an organisational level, rather than to provide any detailed guides for practice.

3.3.1 Introduction of WTR

This section summarises approaches to the introduction of WTR. Table 3 summarises the location of strategic leadership, and particular initiatives aimed at facilitating compliance, either directly or incidentally. Implementation in all regions was managed at Trust/Board level, but the degree of regional/national involvement varied.

All regions had implemented substantial programmes of work which aimed to achieve compliance, either as a primary aim, or incidentally. Some degree of service reconfiguration was reported everywhere. In some cases this involved new-build hospitals allowing consolidation of services, while in others confederation across sites was developed. Local reconfiguration such as Hospital at Night (H@N) or out-of-hours service was common. Other roles such as advanced nurse practitioners (ANPs) or physician's assistants were used to enable the redistribution of workload from junior doctors.

Not all of the initiatives were in direct response to WTR, and some, particularly capital building programmes, predated the introduction of the WTR. All however were reported to have some influence on the introduction of the WTR.

Table 3. Summary of leadership, service and staffing strategies

Deanery	Introduction of WTR	Service Reconfiguration	Staffing strategies
1	Led by project group in SHA	Major reconfigurations in both trusts, WTR was a factor in one, less so in the other. Specialty-specific H@N.	Nurse practitioners, surgery assistants, phlebotomists funded in Trust A. Trust B developed own training for ANPs.
2	Aimed for early compliance in 2008. Liaison team led by junior doctors. Deanery steering role.	Concurrent service reconfiguration in maternity and children's services, with WTR driver for change in number of units. Some confederation of out-of-hours services. H@N in some specialties, with increase in nursing posts to support junior doctors at night.	Increased use of non-medical staff, e.g. nurses working DVT and pulmonary embolism clinic. Nurse practitioners, ANPs, specialist cardiology nurses, medical support workers. Resident consultant posts created to cover evening shifts. Improvement and extension of hours of phlebotomy service in one Trust.
3	Working group of SHA Workforce Director, Postgraduate Dean and Deanery Quality Manager.	Increasingly consultant-led frontline service in an emergency department. Surgical services moving to multiple sites. Region-wide ophthalmology and ENT services. Major reconfiguration of Front & Back of house services in one Trust. H@N in operation. One hospital working with IT companies to create a system to co-ordinate hospital care at night, weekends, bank holidays.	Employment of emergency nurse practitioners. Increase in physician assistants, ANPs. Development of venous access teams. Mental health crisis teams to support assessment 24/7.
4	Implementation run through SHA reporting framework set up by DH. SHA/Deanery team mandated to collect data through Trust HR. High level support from Deanery and Trust Liaison Deans (TLDs). Aimed for compliance by August 2008.	Hot and Cold teams in one Trust. All emergency admissions streamed through new Acute Care Unit (Hot Team); non-ACU doctors are Cold Team. Physician post-take ward round moved to 9.00pm to coincide with start of trainees' shift. H@N implemented across region. One Trust has an extended H@N model to encompass Hospital by Day (24/7)	Increased daytime consultant presence in some specialties.
5	SHA led, with Deanery delivering information on good practice; planning groups in Trusts	New rota in Acute General Medicine enabled compliance and enhanced medical cover across sites. H@N introduced across region	Advanced nurse practitioner posts created..
6	Owned and led at Trust level as a workforce issue. Little Deanery input. Regional implementation support group.	Rationalisation of some services onto single sites. H@N introduced across area, both hospital wide and specialty specific.	Nurse-led Psychiatric Assessment Team introduced out of hours. Nurse specialists in paediatrics; anaesthetic assistants; physician's assistants, ANPs. Extended or later-starting consultant shifts in some specialties (initially in response to New Deal).
7	Trust H@N/EWTD steering group, chaired by Medical Director, representatives from Deanery and some specialties. Regional implementation support group.	Change to nurse practitioner-supported crisis team in psychiatry; rationalisation across three sites. H@N; nurse practitioners and co-ordinators.	Changes in nursing roles. Advanced neonatal nurse practitioners being trained to work at middle grade. Extended consultant cover in medicine (to 10.00pm).

Deanery	Introduction of WTR	Service Reconfiguration	Staffing strategies
8	Largely Trust level, Deanery input through visits to discuss rotas where compliance would not be achieved.	H@N now in operation across Deanery; Acute 24/7 core team in one Trust.	Extended role practitioners; Clinical nurse specialists. Specialist nurse practitioners appointed as H@N co-ordinators and bed managers.
9	Initially Trust level, implementation support group subsequently established at regional level to guide and assist; successor body retains this function.	Some service redesign e.g. moving some services from two sites to one. H@N introduced across region; some hospital-wide, some in particular specialties.	Extended nursing roles developed.

Some changes to education had been made in all Deaneries, such as the rearrangement or repetition of formal teaching so it was more accessible to trainees on different shifts. Simulation was also developed substantially across the UK. Table 4 summarises the changes to training that were discussed, along with other approaches used in the Deaneries.

Table 4. Summary of changes to training and other strategies

Deanery	Changes to training	Other strategies/ interventions
1	Investment in simulation technology. Move to lunchtime teaching. Front and Back of House training placements in one Trust. Pharmacists and nurse practitioners deliver some training. Increase in online e-learning.	iBleep used extensively in one trust.
2	Increase in simulation. More concentrated blocks of training introduced. 'Hot and cold' rostering introduced; more planned educational activity on 'cold' rotas.	iBleep software implemented for task allocation, improvements needed to Wi-Fi system for full implementation. Tablet devices on wards to reduce time spent waiting or staying behind to access equipment e.g. to write discharge letters.
3	Move towards regional training and rotating training around days and sites. Repetition of training needed.	
4	Large Deanery investment in simulation, including large simulation centres.	Working towards confederation of services, with consolidated rotas for specialties in fewer sites.
5	Increased use of simulation across Deanery. Training events organised to allow greater flexibility. Changes mainly managed at School level.	
6	Increased use of simulation, with the rest of the region	
7	Increased use of simulation.	
8	Reconfiguration leads and local faculty leads for Quality being appointed to help ensure curriculum requirements are being met under reconfiguration.	
9	Increase in online learning modules and online availability of training presentations.	

3.3.2   Management of WTR

This section summarises the approaches of the different regions to the direct management of
working time, including the design of junior doctors' rotas, management of opt-out, and the
monitoring of working hours (see Table 5). Again processes are similar, with all areas using the same
basic approach – with a few exceptions, rotas are designed by HR using software templates, and
reviewed by trainees and the DME within a training provider, or his/her nominee, before final
educational sign-off at Deanery level. Monitoring is explicitly for New Deal compliance only, but is
included here because it is a key part of governance. Monitoring varied between locations, with most
using retrospective computerised systems but some still using paper diaries. In one case a biometric
'clocking in' system had been introduced.

Table 5. Summary of strategies for management of WTR

Deanery	Rota design	Opt-out	Monitoring Processes	Rota gaps and cover
1	Developed by HR using DRS, reviewed by clinicians then trainees; signed off by TPD/Dean Rotas <48 hrs to enable flexibility.	Opt-outs not encouraged – triggered by 'extra duties forms' completed for internal locums	Trust A uses paper monitoring. Trust B has introduced electronic clocking in and out for monitoring.	Some specialties have larger pools of trainees to draw on for rota gaps. Large numbers of Teaching and Research fellows/academic trainees to draw on for cover.
2	DRS across region; consultant and trainee input. Liaison team approves new working patterns and rotas; rotas signed off by trainees then DME. Rotas are <48 hrs to allow leeway.	Trainees sign opt-out if they undertake internal locum shifts.	Diary cards or electronic systems in use. Monitoring information remains with Trusts. Trusts can take queries to liaison team.	Most gaps at middle grade/in rural areas. Trust doctors used, but hard to recruit. Use of MTI and increasing independent overseas links. Internal locums where possible for short-term cover with central Trust co-ordination; external agency for longer-term gaps.
3	Deanery initially funded Zircadian software, Trusts now choose and pay for their own software. Rotas designed by administrators in discussion with, agreement of, clinicians including trainees. QM signs off rotas to check compliance.	Information given by Trusts in induction pack. Deanery collects information from each rotation. Deanery analyses opt-out information by grade/specialty and ensures this is voluntary.	Online diaries. Results reported to Medical Directors and shared with doctors; issues managed locally. Deanery collects monitoring information and analyses compliance on behalf of SHA Workforce Directorate; action plan if necessary.	Gaps may be filled by Trust grade doctors; local advert; then going to internal then external locums. H@N posts more specialised, often recruited through agencies. Trainee swapping notified to central point. Deanery analyses vacancies that could affect training rotas.
4	DRS used. Contract held with CRS to support Trusts. Rotas designed by HR managers, with significant trainee input and consultant overview.	Opt-outs arranged between individual trainees and Trusts. Deanery does not record opt-out information but would investigate if became aware of large number through Schools.	Paper diaries for monitoring.	Large number of clinical research fellows helps fill rota gaps.

Deanery	Rota design	Opt-out	Monitoring Processes	Rota gaps and cover
5	Trusts use software and design rotas with DME involvement. Deanery takes overview e.g. adherence to Deanery directive to avoid 7 consecutive nights.	Opt-outs requested by individual trainees.	DRS-3 online system for monitoring.	Large number of academic posts helps fill rota gaps.
6	All Trusts use DRS software and include trainee and senior clinician input, but specific processes vary e.g. initiation by HR or senior clinician. All rotas reviewed for educational content and signed off by Deanery.	Not generally permitted through a regional directive, but may be triggered in exceptional circumstances to cover gaps. Trainees contractually proscribed from working elsewhere, but no mechanism to prevent this.	Paper diaries across Deanery. Awareness sessions with trainee reps, or meeting with HR before monitoring begins.	Rota gaps dealt with locally in advance where possible by moving trainees. Trainees actively discouraged from rearranging/swapping shifts themselves.
7	New Deal monitoring team in HR develop rotas using DRS, with consultants /trainees/TPDs. Signed off by Dean for educational acceptability; input from TPDs and trainees.	Policy of no opt-out at organisational level; difficult to control or enforce.	Paper diaries. Results fed back to department, trainees and Deanery.	Shortage of locums, although some trainees do take up internal locum shifts. Pressure on junior/middle grades to cover gaps, or on consultants to back-fill. Some slack in rotas helps trainees remain compliant.
8	Rotas designed by Trust HR using Zircadian Rotaworks with lead clinician involvement; signed off by assistant DME/chief of staff then Deanery.	Policy of no individual opt-out.	Zircadian MRM used across Deanery; Deanery has central access.	Clinical research fellows act as effective locum bank; but more difficult to hire locums in rural and remote Trust. Some trainees work some extra shifts.
9	Initial design of rota by HR using template (most Trusts use Zircadian). Rota reviewed by doctors concerned; approved by majority of trainees; signed off by an Educational Supervisor and DME or nominee.	Practice varies by Trust; use of opt-out not widespread.	4 Trusts use Zircadian, one uses manual system. Any concerns would be channelled from service groups through DMEs.	Trainee recruitment difficult in some geographical areas and some specialties; supplemented by staff grades, or long-term locums if unable to recruit these.

3.3.3 Educational governance

As described in section 3.1, the basic indicators and quality management and educational governance processes are consistent across deaneries, with similar processes for escalating concerns through investigations to formal triggered visits, initially by the Deanery, ultimately by Colleges or the GMC. Differences between deaneries related to their use of other indicators beyond the GMC survey, such as local end-of-placement questionnaires, and the specific tiers of review through particular committees or boards defined in local governance structures. All involved clinical and educational review, with HR involvement if rota change was indicated. Most cases would be dealt with by employers, but the Deanery would be appraised of any action. One deanery had explored the use of ARCP outcomes as a means of diagnosing particular effects of the WTR. This highlighted that using ARCP outcomes is problematic and is complicated by several confounds (see Appendix C).

One issue raised in relation to governance was the extent to which organisations are aware of the wellbeing and general health of trainees. The aim of the WTR was to improve the health and safety and working lives of all employees, and so the extent to which these areas may be reviewed to assess the regulations' impact was considered.

There were no formal measures of trainees' health and wellbeing. It was suggested though that any issues arising from fatigue or stress could be expressed through end-of-placement evaluations, face-to-face meetings held as part of the ARCP process, and deanery visits. One deanery also suggested that fatigue and wellbeing could potentially be monitored through reflective accounts in Foundation Programme learning portfolios, and that reflection on performance as well as the use of diaries could be further developed.

Sick leave has been reported to have increased following the introduction of the WTR (McIntyre et al. 2010). It was suggested that HR and Occupational Health would be aware of cases of fatigue and stress, but that it would be difficult to isolate any specific effects of working time. It was suggested that investigation of adverse incidents might also reveal whether fatigue was a contributory factor, although no deaneries reported currently carrying out this activity or planning to do so.

3.4 Summary of case studies

Many respondents during the case study meetings emphasised that the WTR were not an isolated change, but were one of many changes affecting postgraduate medical education over many years. As such, management of the WTR was implicitly part of a wider response to a changing environment.

There was a great deal of similarity in the approaches of the different regions to the implementation and management of the WTR at an organisational level. In part this is due to a similar policy and statutory framework, but also down to communication between regions, with several organisations referring to meetings with people in other areas to learn from their experiences. Some regions referred explicitly to the Temple Review as a current driver for ongoing development, and its recommendations as targets for change and improvement.

Effective leadership, and collaboration between those on clinical, educational and management sides, were commonly identified as being necessary for success (or at least minimised problems). At Trust/Board level the engagement of Chief Executives as well Directors of Medical Education was highly important for ensuring organisational strategy delivered effective education and training within the WTR. Good communication with deaneries was also important.

The overlapping of the WTR and the requirements of New Deal was frustrating for some, as the need for dual compliance complicates the design of rotas, and the management of hours. Many difficulties identified in rota design were felt to be avoidable if only one set of restrictions applied.

It was stressed that monitoring is designed with New Deal compliance in mind, and that WTR compliance is estimated by extrapolation. Some variation was apparent in the way that Trust-originated monitoring information is shared with deaneries. For example Deanery 3 and Deanery 8 reported being closely involved, and having direct access to monitoring data, while Deanery 2 and Deanery 7 reported being less involved, receiving reports from Trusts. This may reflect a difference in

perspective, as well as fact, and does not mean that some deaneries are ultimately more informed, but there is apparent variation.

Trainee engagement with monitoring was felt to be low, with some individuals feeling that some trainees may want to work higher-banded rotas (with more unsocial hours) for financial reasons. There was a feeling from at least some deaneries that working time was not something trainees were concerned about, except where it related to banding.

The WTR were felt by some to have changed the educational relationship between consultant and trainee, with implications for mentoring and role modelling, targeted educational input, and recruitment. Assessment was felt to perhaps 'miss' some elements of practice, because it was not based on this personal relationship.

Quality processes did not directly address issues relating to working time, including trainee wellbeing. Nonetheless, deaneries and trusts felt that existing quality management processes were sufficiently sensitive to any issues arising, because such issues had been identified in the past. For example, the GMC National Trainee Survey questions were not felt to be entirely appropriate regarding working time, as they could produce a large number of false positive red flags, but were felt to be sufficiently sensitive to identify areas of concern around excessive hours. Similarly, while the ARCP process was not felt to be ideal in the areas of practice it assesses, it was generally felt that it would identify any severe problems in the experience trainees were gaining in placements.

There is obviously a tension here between the lack of explicit, directed attention to issues arising from working time, and the perception that systems were adequate. The assumption was that severe issues would emerge through existing quality processes. However while those processes may be sensitive to some issues, there is no assurance that they are sensitive to *all* issues.

4 Trainee responses

4.1 Respondent demographics

Eleven focus groups and 30 telephone interviews involving a total of 82 trainees were conducted across the study sites. All nine deaneries were represented. Participants included 53 Foundation Programme trainees (40 Foundation Year 1 [F1], 13 Foundation Year 2 [F2]) and 29 specialty trainees (7 in core or specialty training up to ST3, who were likely to have started specialty training after the WTR introduction in 2009, and 22 in ST4 or higher). Foundation Programme numbers were enlarged by the focus group in one location that involved 21 Foundation Year 1 doctors.

Thirty-six participants were male and 46 were female. Specialty trainee participants were training in a wide range of specialties: psychiatry, paediatrics, orthopaedic surgery, plastic surgery, ophthalmology, anaesthetics, obstetrics and gynaecology, general medicine, acute medicine, respiratory medicine, neurology, diabetes and endocrinology, occupational medicine, care of the elderly and medical microbiology.

During data collection and initial review of the transcripts, there were no strong differences in the themes emerging in geographical regions, clinical areas or level of training. However, differences within themes arising from level of training or specialty were noted in the analysis.

Findings are structured under the main a priori themes of 'knowledge of WTR', 'working patterns', 'perceptions of compliance', 'reasons for exceeding hours', 'perceptions of monitoring', 'learning experiences and educational opportunities' and 'personal opinions and consequences'. Although the National Trainee Survey results were used to identify a range of deaneries, the opportunistic sampling of participants meant that any differences found could not be attributed to deanery-level variability, and the issues regarding the sensitivity of the survey identified in the case studies suggested it may not be a reliable predictor of individual experience. Comparison of deaneries was not therefore pursued, although in any case trainees reported similar experiences in all regions.

While differences between Foundation and Specialty trainees are discussed where they were apparent, no differences between lower and higher specialty trainees are discussed, as very few participants were in lower specialty training.

4.2 Knowledge of WTR

Trainees' awareness and understanding of the WTR was variable, with the majority knowing little beyond the existence of a 48 hour limit, and some not being aware that the regulations apply to an average taken across a reference period (even among those who knew of a reference period, not all knew it was 26 weeks). Very few mentioned the rest period requirements of the WTR. Some were aware that the intention of the WTR was to improve their wellbeing and work-life balance, and its consequences were often also discussed in terms of patient safety.

Trainees reported receiving little formal information about the WTR, or at least little that had been retained. Foundation doctors recalled some introduction at medical school through lectures, or from

employers during induction (for example a page in an F1 starter pack). Fewer mentioned receiving information from their Deanery. Specialty doctors had no consistent sources of information, but did report gaining information and guidance from the GMC and the BMA, as well as from journals such as the BMJ. The majority of reported awareness developed informally, through discussion with colleagues, from other trainees to consultants, and from news reports in the general media.

A few trainees, however, were extremely knowledgeable about WTR, for a variety of reasons. Many of these had been involved in rota design to some extent, although some had been involved in the BMA and in one case, through preparation for a presentation.

Where references were made to information from employers, some referred to job banding, and some had been involved in grievances and appeals to get particular rotas up-banded. Banding relates specifically to the New Deal contract, and appeals often related to the proportion of out of hours (or 'unsocial hours') work, rather than the number of hours worked. The frequency of references to banding when asked about understanding of WTR indicates a degree of conflation or confusion between the two restrictions. Rotas were often described in terms of their New Deal banding, indicating the salience of New Deal, being pay related, compared to WTR.

There was limited awareness of the ability to opt out of the WTR, with some trainees being aware that such a thing existed because they had been asked to sign a form on starting work enabling them to cover shifts as internal locums, but many were unaware that it was a component of the WTR. Some had heard of the term, but saw it as a moving to completely unregulated hours, rather than an opt-out to the New Deal limit.

4.3   Working patterns

Trainees described a range of working patterns. Most Foundation and many specialty trainees worked a mixture of short days (typically daytime shifts of eight to nine hours, between 8am and 5pm, or sometimes twilight shifts between 3pm or 4pm and 11pm), long days (13 hour shifts e.g. from 8am to 9pm), nights (13 hour shifts e.g. from 8pm to 9am), and weekends (long days, including resident on-calls). Weekend shifts varied between one in eight and one in twelve.

Trainees differentiated between 'shifts', which they identified as being based on a single ward or unit, and 'on-calls'. Being on call refers to a period of work in which the doctor holds a bleep for a clinical area, which could be a single ward, a whole department, or include cross-cover across different specialties. 'On-calls' are therefore distinguished from 'shifts' by doctors mainly because of how they work rather than simply the length of time worked. A rota will include a mixture of 'shifts' and 'on-calls'. Most on-calls were resident, meaning the doctors were on hospital premises for the entire period (under the SiMAP ruling on the EWTD, all time on site, even if not working, is classed as 'work'). Some specialty trainees also worked non-resident on-calls, some overnight, some over 24 hours and full weekends. While non-resident, some of these doctors would stay in hospital accommodation (near the main site) during the on-call, while others (particularly in psychiatry) would be effectively mobile, covering multiple sites. Some also spoke of doing 'hybrid rotas' to describe a mixture of the two different patterns of work, for example a shift system during weekdays, including a rotating long day, in parallel with a weekend on-call.

Achieving WTR compliance means that hours are not always constant, to maintain a low enough average. Some rotas include half-days to balance hours, while others have 'zero days' – days which are not annual or study leave, on which a trainee is included on the rota, but for zero hours. There was a suggestion that half-days may not work in practice and that consultants may not be fully aware when a particular trainee should be going home for a half-day. Some participants were rostered for more half-day shifts because they were employed on a less than full-time basis. This could be achieved by working a percentage of the full-time shifts (for example working three days out of five), or alternatively by working shorter hours across the same number of shifts, although this was harder to achieve.

> "The difficulty is you may be entitled to various half days but the chances of them actually materialising are very slight…unless these things are really formalised and recognised they just don't happen. I mean you can just about get your half day off before nights because everyone understands that you're about to start nights…but the rest of them just don't happen." (Tel. Int. 19, Foundation)

> "We have just never taken the half days because we're so busy, you know; we could have done, but would have screwed over our colleagues." (Focus group 2, Foundation)

Rota differences between specialties were described by specialty trainees. Some specialties, particularly surgical specialties and psychiatry, would more often work on-calls out of hours, as there would be less continuous workload for them overnight (out-of-hours surgery being restricted by CEPOD), and any emergencies would be less likely to require immediate urgent attention. Other specialties on the other hand, particularly acute medicine, paediatrics and anaesthetics, were more likely to work full shifts as there was a more intense turnover of work, and their immediate presence is more essential for patient care.

Those working nights generally worked three and four nights, separated by two days off, as is recommended by Royal Colleges and best practice regarding fatigue. There were though examples of rotas where seven consecutive nights were still worked, including by Foundation Programme trainees.

Some rotas involved periods of substantial consecutive daytime work, of which the most extreme was a "barbaric" medical rota (Tel. Int. 11, Foundation) in a very busy hospital, which involved working twelve consecutive days, of which nine were long days. Another Foundation Programme rota involved up to 12 consecutive days working, including two long days, and this was felt to be particularly stressful.

> "I worked out that I was working about forty-nine hours a week on average, over a four month period, and sometimes much more than that. For instance at the moment over twelve days, I have four days off…and nine of those days are twelve and thirteen hour shifts." (Tel. Int. 11, Foundation)

A few though felt that working longer periods of time had benefits in terms of continuity of care, and that working more nights in a row 'got it out of the way', rather than switching between days and

nights. Overall though, long periods of duty were viewed negatively, and several participants questioned the effectiveness of the WTR if reference period averaging meant that working weeks could still be of upwards of 70 hours and remain compliant.

4.3.1 Work intensity

While work intensity varied between specialties, and between specific departments, there was a common feeling that reduced working hours increased intensity, because the same amount of work is felt to be fitted in to fewer hours. This was often exacerbated by staff shortages and could be stressful.

> *"I think I feel like what's happened is we have the same amount of jobs to do, if not more because of all the added paperwork and all the added new investigations and everything that are coming out, but we have so far less time to do it in that something has got to give and I feel like we're very much service provision as opposed to learning and development now."* (Tel. Int. 16, Foundation)

> *"I'm stressed and overworked because I feel that I'm not able to offer the care I should be able to offer patients and not able to spend the time I should to ensure that I've done everything with every patient and be thorough and rushing and hopefully not cutting corners, but there is much more potential for mistakes, things to be missed, people to be not looked at as thoroughly."* (Tel. Int. 21, Foundation)

> *"You're working, working, working, so your time to stop and think is less…the actual training bit [is less], because you're working like a machine."* (Focus group 8, Specialty)

Other Foundation trainees reported on their reaction to a training opportunity being presented when they already had a large number of jobs to do:

> *"Once I got asked to go to theatre because they needed some help quickly and my heart sank just knowing how many jobs I had to do and it shouldn't be that way, I should be excited about going to theatre but thinking, oh and staying until nine o'clock tonight, I should have been thinking that's a great learning opportunity, you sort of get your priorities changed around when you've got a lot to do."* (Focus group 5, Foundation)

> *"Even if the consultant does drag you, like, sometimes, 'No you're coming', I find myself stood there thinking I can't enjoy this because I know as soon as it finishes I'll have to go and do this."* (Focus group 5, Foundation)

Some rota patterns were found to be particularly long and intense, although averaging meant that hours were ultimately compliant.

> *"Although it's 48 hours, like some weeks, this weekend I've done three long days and another long day so you're approaching 90 hours in a week in that week…it does average out because they give you days at a later time but at one part of the rota you're working quite intensely."* (Focus group 10, Specialty)

> *"I counted up, I think I did 110 hours maybe over ten or twelve days, but then that disappears into the rest of the rota but that period was horrendous."* (Focus group 10, Specialty)

There was a perception that twelve-hour on-calls were more intense than the longer on-call sessions worked previously.

> *"I think the intensity of the on-calls can be quite heavy because that's just from what I hear from people who are a few years ahead of me - that because we do 12-hour on-calls and they tend to be very condensed and intense periods of time, you might only get stopped maybe for 15 or 20 minutes during the whole time."* (Tel. Int. 6, Foundation)

Intensity could vary with the amount of cover included in an on-call. Changes in out-of-hours work had meant increasing the extent of out-of-hours responsibility for junior doctors (one F2 reported covering 17 wards overnight, with at least 20 patients in each ward). Alongside this, other changes were noted that were felt to contribute to pressure and stress of the job, for example changing patient demands (including increasing numbers of complaints) and increasing numbers of investigations.

> *"The difference is long working time but less pressure, less stress, but now stress and pressure a bit more but time is less…fatigue more or less the same."* (Focus group 4, Specialty)

Some felt that longer on-calls would be less intense than shorter, compliant shifts, because there would be less pressure to complete work in time – implicitly that this would aid their time management. Workload could vary substantially within shifts, with reports that in one medical ward while the afternoon staff would be "fighting for patients", later in the day they would be pressured to get work completed. Here there is an implication that shifts do not necessarily optimally match workload.

> *"When it was just me and a registrar on-call during the night time…I was the first person to bleep unless the patient was going straight to resus with the registrar, so I have to make the initial assessment, then discuss it with my reg so you definitely do learn a lot more when you are by yourself…there was about five of us SHOs that would start fighting for jobs to do…when you get eight SHOs on a day shift and everyone is fighting for the cannula."* (Focus group 5, Foundation)

"certainly the intensity over night is such that you could be, you'd normally be well rested for the following day, there would be occasions when you know that would be a problem but the intensity of the work here at the moment doesn't seem to be too large [that] to me a 24 hour shift is not workable." (Tel. Int. 14, Specialty)

4.3.2 Gaps, locums and cover

Most respondents were aware of gaps in the rotas they had worked, because of unfilled posts, people leaving or moving on before the end of a rota, or sickness. The majority of cover in such cases was internal, that is, provided by other doctors on the rota. Often this would mean informal cover, with workload being shared between other staff already rostered at that time (usually the case in the daytime when other trainees would usually be present), and in some cases trainees coming in on days off without extra payment, although some were able to take the time back later. This made work busier and increased the intensity of those periods.

Internal locums were also used, with doctors from the same rota or elsewhere in the same hospital providing cover and being paid at locum rates. Usually this would be the case out of hours, where cover is essential, and there may be only one or two doctors on a particular rota. Internal locums were generally dealt with centrally in the hospital, and there was no reported pressure to undertake locum shifts. Internal locums would be cross-referenced against rotas to ensure an individual did not exceed WTR hours.

In some places agreeing to do internal locums meant the trainee had to sign an opt-out, as their volunteering to do additional hours raised the risk of their breaching the WTR limit. In other places this was dealt with pre-emptively, with trainees being offered the opt-out on starting to enable them to cover and remain within permitted working hour limits. (Some areas had a 'no opt-out' policy though, and opt-outs would only be granted in exceptional circumstances).

If no internal locums were available, external locums may be used. As well as being more expensive, this was felt to be less reliable, and there were examples of trainees having to provide short-notice cover, for example from holding a bleep at the end of a day shift to staying to work a full night, because an external locum had not arrived. Difficulty in recruiting locums was sometimes reported, which could be partly due to unpopularity of the geographical location. That external locums are paid more than internal locums (sometimes considerably more) was raised as an issue by some trainees.

"They were desperate one day for a locum so I agreed to cover it, someone pulled out I think about seven hours before their nightshift was to start so as a last resort I agreed to do it." (Tel. Int. 24, Foundation)

"They try to fill with locums but their problem is getting locums of the desired quality at the moment so some of them have actually chosen not to employ the locum doctors just to go with a gap." (Focus group 8, Specialty)

Undertaking locum shifts was often seen as an opportunity to gain additional experience, including that of different hospitals' policies and procedures as well as seeing a larger number of patients. The

extra pay was often the motivating factor though. Being pulled in to cover elsewhere could, however, be detrimental to training, particularly in specialty or subspecialty training where specific exposure to that specialty may be required. For example a vascular or orthopaedic surgeon would not gain the required targeted and focused training when covering general surgery. This may also affect trainee morale.

> *"I've registered with a locum agency because I will kind of locum some extra weekends to get some money to help pay off my debts."* (Tel. Int. 6, Foundation)

> *"When I started this post, it's a community post, but I was called in to cover the wards because there's not enough people to cover the wards which is not my place of training but, yes, the service requirement comes first, so come and do it."* (Focus group 8, Specialty)

Unfilled posts were more problematic in some hospitals than others, as specialty doctors in particular will want to be working at centres of excellence, and may not be attracted to posts where they may see fewer patients, or fewer cases felt to be interesting or educationally valuable . Furthermore, staff shortages were perceived to be putting middle grade applicants in a good bargaining position, for example if they did not wish to do on-call work.

There was also a suggestion that there was insufficient 'slack in the system' and that rotas were constructed on the assumption of full coverage.

> *"Most of them [rotas] seem to be like at the right level I think, as I say it's just there is no slack at all so one person who's off and then suddenly it all gets much more stretched and then it declines from there, so if you've got someone off on long term sick and then you've got someone who's…off a few days this week and a few days that week and so therefore unreliable, and then you have just general sickness because it's the time of year, the whole thing kind of falls apart and suddenly you've got people covering wards at different hospitals and running backwards and forwards."* (Tel. Int. 19, Foundation)

> *"In our hospital there are two house officers covering all the surgical patients in the hospital at night and so you have four bleeps between you and two of you look after all those patients. If, as happened to me, one of the house officers was sick, the other house officer is just handed all four bleeps and is suddenly expected to look after double the usual number of patients."* (Tel. Int. 29, Foundation)

Some rotas were also designed with less cover out of hours, increasing the amount of cross-cover, where trainees in one specialty cover another. As noted above, this has implications for specialty trainees, but with a knock-on effect on Foundation Programme trainees. One example given was a senior trainee in plastic surgery no longer solely covering plastics and burns on-call but also covering general surgery, meaning their total exposure to their sub-specialty was reduced (because the cross-cover time reduced their specialty time). It could also mean covering specialties in which trainees had had no daytime exposure at all in the case of Foundation Programme trainees (one F1 on a

surgical unit overnight was also on-call for the Care of the Elderly ward), or on which they had not worked for a long time, in the case of specialty trainees.

Cross-cover increased the intensity of work as there is less 'down-time' during an on-call, and also reduces time for study that may have previously been available during quieter periods. One trainee commented on there being a cultural problem or mind-set within medicine whereby sitting and writing up an audit report or revising for an exam would not count as work, which was viewed solely as service provision.

4.3.3   Hospital at Night

All regions used a Hospital at Night (H@N) system to some extent. Opinions expressed about this by trainees were generally positive. Foundation doctors in particular felt they were well co-ordinated, and that the triaging system provided by the co-ordinators meant a more appropriate distribution of workload than might otherwise have been the case.

> *"I find the Hospital at Night system is very well organised and at night times it's very easy to seek advice and support because it's managed by a clinical co-ordinator who is usually a very senior nurse and so she knows about all the issues, all the sick people in the hospital, she can delegate if someone is really busy, she can delegate a job from that department to a different department and there's always somebody to seek advice from."* (Tel. Int. 15, Foundation)

> *"I find that [Hospital at Night] works quite well because the nurse practitioners often act as kind of another Foundation almost…so you get less calls about bloods…and more calls that are kind of like treating the sick patient and a bit more educationally relevant."* (Tel. Int. 22, Foundation)

However, there were negatives, with some feeling that the lack of direct contact with a referring department/nurse could mean information was being lost, and a risk that the urgency of a call was not accurately relayed, and a doctor could arrive under-prepared for the call. It was also suggested that junior trainees may not be learning to prioritise as much.

> *"With Hospital at Night, because I can't ask questions because the person who answers the co-ordinator will take a message that says 'Okay the patient's sats have dropped to blah, blah, blah, and they've got a background of COPD', would anybody be too worried about that? Whereas if the nurse was on the phone I could even have been like 'Oh what was that noise in the background?' I don't have the opportunity to ask my questions for the things that I need to know for me to prioritise. I want to see that patient, that's taken away from me and that's not fair."* (Focus group 9, Foundation)

Some senior trainees also felt the system undermined the personal relationships between professions – whereas before nurses would have known who held a bleep, and would know in what

circumstances to bleep them, the centralisation of H@N lost this facility. Some nurses would still bleep doctors directly though, and some specialty trainees mentioned that they preferred this.

Advanced nurse practitioners were able to take on duties at night such as cannulas, taking blood and death certification. There was some reference to the number of advanced nurse practitioners being reduced in individual hospitals. There were issues with advanced roles taking experience from the trainees though.

> *"I know that some junior trainees in some places complain that they're not actually able to see enough acute assessments or emergency assessments because they are being filtered off by somebody else a lot of the time."* (Focus group 4, Specialty)

4.3.4 Trainee influence on rotas

Trainees described having influenced rotas either proactively during consultations on rota change, or reactively through making complaints or raising concerns.

There were some cases described of specialty trainees having quite significant input into the design of a new rota system, as in the following example of a change from a 24-hour on-call to a full shift system, although considerations mainly seemed to relate to service rather than educational need.

> *"The actual rota itself has been written between…one of the consultants, one of the managers and one of the senior orthopaedic registrars…but there have been meetings with all of the resident registrars and trainees about what the plans are and suggestions for how we wanted to work and then provisions made off the back of that…Things have changed on the back of our input …we said [we] wanted to take our holidays when we'd like to, so yeah our input has been listened to and welcomed and it has made the difference."* (Tel. Int. 14, Specialty)

> *"We had to sit down and work out how, practically, [the hours] could be achieved, so they had some shifts which had people on later at night and we said, well, that doesn't work, essentially we need more people in the morning, at the weekends, and trying to fit around the challenges that we had experienced and try and find time points or a ward, a specific ward or a specific kind of clinical area where you needed more staff to get things done."* (Tel. Int. 19, Foundation)

There were some cases of trainees raising concerns about their rota, and some of these, but not all, had led to change. Some had highlighted issues of wellbeing and patient safety, while others had highlighted problems with educational content. At one trainee's suggestion, an outpatient clinic was changed from a Monday morning to a Wednesday afternoon, as the rota had required the trainee to work on-call from Friday evening to Monday morning continuously and they did not feel they were able to give their best to the patients. A group of F2 doctors on a cardiothoracic surgery rotation spoke to a consultant and then liaised with HR about moving more of their scheduled time into daytime periods as there was greater activity and work to be done during the day and there were

more learning opportunities than when patients were largely asleep during the night; this led to the introduction of a 3.00pm to midnight shift.

> *"I know it's about averaging, but on my [A&E] rota there's like seven day periods when you're working about 82 hours in a seven day period, and so by the end of that you're just really tired, you can't think through problems, you're sort of working on auto pilot. So there are times I feel dangerous because I'm so tired…I've raised that with my clinical supervisor, I've raised it with my educational supervisor…they've made some changes to the rota in that they've changed the nightshift, the Monday to Thursday nightshift, and they're only 12 till 8 rather than 8 till 8…but the rota is still punishing."* (Tel. Int. 2, Foundation)

> *"I really pushed them to make sure that they put the teaching onto the rota and counted it as working time because they weren't doing that, even in the mandatory CMT teaching on the Thursday morning for two hours every week…eventually I managed to get them to do that, but whenever I tried to do the same with the Admissions Unit teaching which was quite clearly mandatory as well…they said they couldn't because there wasn't the flexibility within the rota."* (Tel. Int. 7, Specialty)

Some suggested solutions, for example all trainees leaving half an hour earlier on a particular day of the week, were seen to be unrealistic, as in reality they would still stay until jobs were completed.

A small number of Foundation trainees reported that they intended to raise concerns that they hoped would bring about change for those following them. However, there was also a perception among several trainees that nothing would happen if they did raise concerns. There were also several examples of Foundation and Specialty trainees reporting that they would not raise concerns because they were concerned about potential consequences for themselves and their on-going working relationship with the registrar or consultant who designed the rota. They did not want to 'rock the boat' amongst those who would be signing them off at the end of their placement, or providing them with a reference. It was easier to raise concerns with non-clinical managers.

> *"I was planning on probably locuming in that department afterwards while I was on my un-banded job so I thought there's no point making a fuss, it might look badly on me if I make a fuss about the rota…and also because it seemed quite a lot of hassle, I wouldn't know who to email it to or who to contact about my rota and I was busy enough and had other things which were more of a priority to me than trying to sort that out and fight that battle."* (Tel. Int. 4, Foundation)

Most concerns were, however, reported in terms of banding for the post and pay rather than impact on training or trainees' health and wellbeing.

4.4 Perception of compliance

Participants were asked whether they felt their rotas were compliant. The most common responses were variations on 'Well, it's compliant on paper, but…', meaning that while trainees felt the rota

was approved as compliant, the actual hours they worked were not. There was often an assumption that rotas must be compliant, and trainees did not necessarily check them. Some referred to rota compliance as something to which they paid little attention. Again, there was an implication that there is no distinction between New Deal and WTR.

> *"They say it is, I haven't checked, I haven't confirmed it, they say it is because we've got the HR department monitoring us every so often and they claim it's compliant."*
> (Tel. Int. 3, Specialty)

> *"I believe it has to be, I don't know, they never say this…Yeah it has to be because it has to pass…I can't make sense of our A&E rota as in time-wise, because if you added up all the hours that we worked I'm sure it does stick to the rules because it has to stick to the rules but they don't really say, it means that you just kind of hope it does."* (Focus group 3, Foundation)

The majority felt that they worked in excess of their rostered hours on most shifts, with up to an hour being standard, and two hours not unusual. Some reported having consistently worked several hours beyond the end of a shift.

There were examples where working hours were easier to adhere to. These included specialties where there was little or no on-call activity (examples in our sample included occupational and laboratory medicine), but also in a critical care unit where work was more easily planned in order to be completed during a shift. Reasons for exceeding working hours are discussed in more depth in the next section.

There were only isolated instances of trainees keeping their own record of hours they had worked; whilst they were conscious of working beyond their rostered hours in general, only very few collected data for any length of time. This was partly due to their view of medicine as a profession and the nature of the work meaning that this was unimportant, although in cases of consistent perceived breaching of hours more detailed record keeping would be considered. Record keeping could also help trainees to keep track of hours they could recover.

The WTR specify that compensatory rest should be taken following night shifts, and while some stated that they were able to take the following two days off, this was not always included on the rota, and the rules were not entirely clear.

> *"You're supposed to take compensatory rest depending on how much of the night you're up…but I have to say that's not always been terribly clear and I wouldn't know what was a breach and what wasn't for definite…and it's very difficult to do actually - you can't not book clinics and activities in, and if you're up a significant part of the night, because when I do get called I tend to get called after about midnight, and quite a lot of the time I probably wouldn't take compensatory rest just because it's inconvenient and it impacts on other aspects of my training, and if I wasn't absolutely shattered and wasn't going to be dangerous then I would still do the clinic…if I was going to a management meeting then I might miss the management meeting, or if I was doing my research."* (Tel. Int. 5, Specialty)

4.5   Reasons for exceeding hours

It is important to note that exceeding hours, even consistently, does not necessarily mean trainees were breaching the WTR, because many rotas had sufficient leeway in the actual number of rostered hours (for example a trainee rostered for 46 hours a week would have up to 52 hours 'spare' across the reference period to still be 48-hour compliant). Reasons for exceeding working hours fell into three main groups: the pragmatics of work, trainees' own sense of responsibility towards patients and colleagues, and the expectations of others.

4.5.1   Pragmatics

The pragmatics of work related to the capacity to fit jobs into the working day, and was particularly true of shift working, where there was a feeling that jobs not done by the end of a shift may not get done. By contrast, at the end of an on-call the trainee would hand over the bleep to the doctor relieving them, and so could leave on time. Perhaps surprisingly, one respondent in an emergency medicine placement made a similar point, feeling that it was easier to leave on time because they were responsible for a limited number of patients to manage in the emergency department until discharge or admission, whereas on wards there was a more continuous flow of work. Emergency medicine was felt to be generally better staffed though. It was also noted that handover time was increasingly being incorporated within rota times.

> *"When you're on-call you leave on time because of the handover so you never really stay late on-call, you know, half an hour or something here or there, but not like you stay in a normal day."* (Focus group 5, Foundation)

> *"[You] just plough through it until it is all done, sometimes until seven or eight in the evening without stopping really…the on-call picks them up after five but then you're mopping up the leftovers on the day that's not appropriate to give to them, you're not doing it because it's urgent, you're doing it because if you don't do it now you will have twice as much tomorrow."* (Focus group 6, Specialty)

> *"A&E is easier to keep to your hours…when I used to do ward work I used to be there, at least one or two days out of a week, I would be there two, three hours after I was supposed to have finished, for various reasons…you kind of know yourself if I was to leave this work it's only going to be there for me in the morning and there's a ward round in the morning so I will have to get loads more work handed my way, so you want to get things finished."* (Tel. Int. 2, Foundation)

Some shift changes led to bottlenecks, meaning there was simply too much work for the incoming shift to manage. For example, three F1 doctors may hand over to two F1s, or to a shift without an equivalent tier at all, meaning that jobs may not get done until the following day. Such jobs included letters and ward administration, but also more critical clinical interventions such as cannulation.

> *"I seem under pressure to stay and make sure all of my work is finished because I don't feel that it's appropriate to be handing over, plus because of the new European Working Time Directive we're constantly handing over and I think the more you hand over the more things that are missed and that affects patient care."*
> (Tel. Int. 15, Foundation)

The design of work would also unavoidably lead to a need to stay late. For example, an F1 described a shift in medicine which was due to finish at 9pm, but the department held a handover meeting from 9 to 9.30pm which trainees were expected to attend. In surgery this was common, with shifts often due to finish at the same time as, or only shortly after, the end of the theatre list. For specialty trainees who had been in theatre this meant they had to stay late to review their patients post-operatively on the ward, rather than handing this over to a medical registrar. This was not exclusive to surgery though, and other specialties reported similar scheduling problems.

> *"We're seeing patients at half six that they timetabled in even though I finished at five, my timetable says patient to be seen at half six."* (Tel. Int. 21, Foundation)

The need to gain educational experience was also part of a pragmatic decision to stay late. Foundation programme trainees who had not been in theatre would also want to stay late to observe and be part of post-operative ward rounds, for their educational value (in contrast to the professional, patient-focused imperative felt by the specialty trainees). There were other examples of trainees opting to stay on, or come in on days off, in order to make the most of learning opportunities that were missed during routine work. These included the opportunity for surgery and anaesthetics trainees to gain additional time in theatre, or to be involved in particularly interesting cases, and for trainees to gain experience of practical procedures (e.g. bronchoscopy) and attend clinics.

> *"I've got no problems with the fact that I work a little bit over and take the extra time to get training opportunities and that increases my hours to get better at my job. That's personal sacrifice, personal advancement type stuff to get a better job to become a consultant."* (Focus group 11, Specialty)

There were examples of trainees using days off intended as compensatory rest following night work in order to attend conferences or courses. Annual leave was also used to attend formal educational activities, and in some cases this was because study leave could not be arranged.

4.5.2   Commitment to patients

This judgement of whether jobs could be left was not always simply pragmatic, and overlapped greatly with the trainees' sense of professional responsibility, to patients and to colleagues. Respondents described considering their impact on patient safety and patient care. Even if they had to hand over tasks at the end of a shift, some participants stated that they would ring from home to check what had been done, and the outcomes of their own actions. The imperative, or *"moral bind"* (Focus group 10, Specialty) to ensure continuity of patient care was seen as fundamental by some: *"You don't walk out on a sick patient"* (Focus group 11, Specialty).

It could also be more expedient, and safer, to stay and hand over a patient leaving a department, rather than force two handovers (this was the case in A&E – the doctor would stay to complete an admission, rather than hand over to another F2, who would then have to hand over to the specialty where the patient was being admitted).

> *"I think that if you've got to refer somebody it's a lot easier referring them yourself because you've taken their history, you know the patient, and I think it's very difficult to pass that over, to say 'oh, this person needs discussed with neurosurgery, just read what I've written'… or if you're halfway through stabilising someone you can't really just leave them."* (Tel. Int. 2, Foundation)

Risks were identified from the loss of continuity of care. There were concerns about patient safety issues around handover, and the additional risk of information being lost through unnecessary handovers was a major reason given for working late.

> *"It was just easier for me to do the jobs and make sure I could sleep at night because Mrs Such-and-Such has been looked after properly and she was going to be alright."* (Tel. Int. 18, Foundation)

> *"Sometimes if I've been dealing with somebody who is unwell then I don't feel comfortable leaving on time to hand over to a doctor who doesn't know the patient, but not everyone is like that…quite often I've stayed late just for my own security so I don't have to go home and worry about the person."* (Tel. Int. 15, Foundation)

> *"People didn't appreciate the urgency in the handover and as a result time went by when the patient could have been treated, there was a golden hour when that patient could have been treated and instead they died of something that should not have killed them and I genuinely believe that the shift patterns that we were working was a contributing factor for that. I would have loved to have filled out a critical incident form that explained that but I was too scared to because I thought I might get into trouble with my consultant."* (Tel. Int. 29, Foundation)

While the attribution of the case in the last quote above to working time is the trainee's own opinion, and such cases often have multi-factorial causes, the fact of that trainee's association between error and working time illustrates that the management of working time is problematic.

4.5.3   Commitment to colleagues

There was also a strong sense of collegiality, expressed as a responsibility not to burden colleagues with routine tasks. The person they were handing over to would be likely to have immediate demands on their time from new patients, and not be in a position to prioritise jobs handed over to them, so it was felt to be 'fair' to complete those tasks. Most participants identified a quid pro quo, that they would similarly benefit when they were receiving handover, although one or two did intimate that it was not always appropriate, but there was an expectation they would stay behind.

Some F1s described helping each other towards the end of the day and leaving together rather than leaving a colleague behind.

4.5.4   Expectations of colleagues

The responsibility to patients and to colleagues may be considered to be part of the doctors' own professionalism. There was though apparent pressure to work beyond rostered hours from seniors, and from other professions, which was described less positively.

Participants (particularly more junior trainees) spoke of some consultants being dismissive of the working time regulations, and a perceived attitude that 'it didn't do me any harm' (a view that was also expressed by some senior trainees). One referred to a 'misplaced nostalgia' on the part of some consultants, that long hours were necessary to become a doctor.

> *"It's something like misplaced nostalgia for when they worked when they were junior doctors and they worked 'Oh when I was a junior doctor I worked 100 hours a week', but their duties, their roles and responsibilities were very different to ours."* (Focus group 9, Foundation)

> *"You have an obligation to sort of stay for the patient, for the work that needs to be done and…there's also an added pressure from people that have trained in that particular format who are essentially our consultants, who I think would kind of expect you to stay as well at the same time to get the work done, so there's a professional obligation to the patient and then there's also an expectancy as well."* (Focus group 1, Specialty)

However it could be framed in educational terms:

> *"When I had the initial induction meeting with my educational supervisor, one of the first things he said to me was nowadays with the new working pattern you won't get the experience if you just stick to your nine to five hours which I thought was a little bit harsh given that I don't think my hours are nine to five."* (Tel. Int. 27, Specialty)

Some felt that leaving on time was looked down on as unprofessional, with a potential impact on their reputation and future career. As with the question of raising concerns over a rota, some commented that being seen to leave on time may have an adverse effect when they require a reference from a senior.

> *"The majority of people will need a job either at this hospital or maybe a hospital we worked in, or will need a reference from these people, and they're also looking at you as fellow colleagues for the future; you can't, if I give you the example that you're going to leave at 4.00 because that's what it says on this piece of paper in your contract, they're going to look at you and go, well, is this a good person to work with in the future, so you're always acutely aware of that; I mean, the higher up the food chain you go the more acutely you become aware of it."* (Focus Group 1, Specialty)

> *"I mean it would also be looked down upon quite a lot if I was to at 5 o'clock, if there was still things to be done, if I was to say to my seniors 'Oh, you know my time's up, I'm off going home, I'm not going to do that', that really wouldn't reflect very well on me at all, and I don't think it would do my career any favours."* (Tel. Int. 10, Foundation)

> *"There's still a culture that if you hand things over unnecessarily that you can stay and do, you get a reputation for being someone that doesn't, that won't, go the full distance."* (Tel. Int. 8, Specialty)

There was also pressure from the expectations of nurses, who would interrupt breaks or ask doctors to do something as their shift ended. The doctors did not feel they could refuse such requests, as it would make them look less professional.

> *"The nurses can put on the staffroom door do not disturb nurses, obviously we can't do that, nobody takes your bleep off you while you're on break and they can disturb you."* (Focus group 5, Foundation)

> *"As a Foundation doctor you're obviously at the mercy of the nursing staff and if they think that something needs to be done at that time, regardless of whether it does, if they feel that it does need done then they're not gonna think twice of phoning you."* (Focus group 9, Foundation)

Some junior trainees also referred to an implication from some areas that staying late was due to their lack of efficiency. They acknowledged that it was particularly unrealistic to adhere to their hours when they first started work as they were learning systems and procedures, but some suggested that this may be used as an excuse to avoid addressing issues of under-staffing.

However, even among junior trainees the perception of medicine as a career in which pressure, intensity and long hours are to be expected was prevalent.

> *"If the people who expected to do 9 to 5 in medicine didn't read the manual, they should have read the manual before they signed up, because it's not that."* (Focus group 9, Foundation)

Ironically though, there was a feeling from one senior trainee that the extended working day of a consultant was less attractive.

> *"The working day has been progressively extended and people aren't happy about it, they didn't sign up for that in the first place and they've come through [training] just before me, before EWTD, they expect to have a little bit of payback for that as consultants."* (Tel. Int. 13, Specialty)

There were reports of conflicting messages regarding working hours. On the one hand trainees may be expected to come in early because a consultant decided they should, but on the other there was pressure to keep to their rota, and take breaks. Some trainees noted that there may be a conflict between the clinical service demands that are the consultants' priority, and management's imperatives to meet clinical targets, while also complying with working time restrictions.

> *"On surgery…we are expected to come in early and if we don't come in early we're told off but then we get an email saying don't come in early and take breaks, and when we work there we're expected not to. So it's a bit of a game…we don't really mind and the pay that we get …most of us are happy, but I think we find it a bit insulting getting an email saying that and then getting told off if we actually stick to that…and that we should work but not getting the recognition that we do…I think it's affected the morale."* (Tel. Int. 9, Foundation)

One trainee reported being told that it would be noted who was staying late and they would be asked to go home, which:

> *"feels off to almost be, not punished, but being kind of singled out for staying later because you want to do a better job."* (Tel. Int. 20, Foundation)

4.6   Perceptions of monitoring

Pressure to adhere to contracted hours was particularly intense during monitoring exercises. All employers must periodically monitor the hours of each rota for New Deal compliance, to ensure the post is appropriately banded, and many estimate or extrapolate WTR compliance from these figures.

4.6.1   Lack of trust in process

Most participants had experienced a monitoring exercise in at least one of their rotas. Overall there was a degree of scepticism about the validity of monitoring results. This stemmed from concerns about the effectiveness of the mechanisms used for monitoring, and about perceived manipulation of monitoring by management. Monitoring was sometimes seen as a means of down-banding rotas and so paying trainees less (it was in these cases that issues tended to arise for trainees), or to justify the current staffing of a rota. The process was seen by many to be unrepresentative of what happened in reality.

Some trainees reported that they had not received information about the monitoring period in advance, or did not know it was happening. Others though said they did not really engage with the process, for example returning their forms too late, filling in their hours at the end of the period or

simply not really thinking about it. The enthusiasm and motivation of the trainee asked to circulate paper diaries were also seen as a factor in successful returns.

There were reports of monitoring exercises that were expected to be non-compliant being 'lost' by HR, and so exercises being repeated. In many cases the results of monitoring exercises were not transmitted to the trainees, leaving them feeling they were being kept in the dark.

> *"I think there's always a general feeling that we should be writing down what we actually worked but we shouldn't be, there's always rumours but I don't know how true they are that the rotas that aren't compliant get lost or they refuse to, if you stayed late one day, they won't accept it unless it's actually been signed off."* (Tel. Int. 15, Foundation)

> *"We don't understand how things are calculated from that, it's very hard to get clear answers. I think that quite a lot of people…feel that they are being duped or they certainly did in the first four months, we're not entirely sure…something wasn't quite right about the way it was all being done, what we were having to work and what they were saying, we think we were working more than we should have been and we were being paid for."* (Tel. Int. 11, Foundation)

Most respondents used online collection of monitoring data – either diaries, which were emailed back to HR departments, or direct recording through a web-interface – although some still used paper diaries. Whichever mechanisms were used, there was a feeling that they were not effective at capturing the hours worked simply because of the 'hassle' of completing them accurately. Even for those individuals who said they were able to complete their hours accurately, people's absences and working different shifts meant it was hard to achieve the 75% response rate (of a whole rota) necessary for results to be actionable. While a low response rate would automatically trigger repeat exercises, many respondents had the impression that this was a case of repeating the exercise until a compliant result was achieved.

There was also some confusion about what should be entered in monitoring, for example in relation to on-calls and study sessions. The complexity of averaging over six months when placements only lasted four months was also mentioned, as was a suggestion that monitoring over four weeks rather than two might give a better reflection of hours worked, although this might have further implications for response rates.

4.6.2   'Hassle' of monitoring processes

Many trainees felt that the obstacles created by the process made it harder to complete the exercise if hours were non-compliant, and there was implicitly some suspicion that monitoring exercises were deliberately under-supported in order to disguise non-compliance.

In order to record hours worked beyond a rota, it was necessary to justify those hours. For some this meant having to record the approval of a senior clinician or manager at the time, and get a code to enter into the diary. For others it meant providing a textual justification in the form. On many

occasions these were felt to introduce a 'hassle' or obstacle to the process that was not worth overcoming, so they would record compliant hours for simplicity.

> *"So I think there is a pressure that you just, if you work fifteen minutes late then you just say forget it, I'll just put that I was on time because I'm not going to have the hassle of phoning up some manager to tell me I'm inefficient so yes, there is that pressure. I think that also leads to people just not bothering to hand in their diaries a lot of the time because of the hassle of saying what they're actually working. I think part of it also is that a lot of us feel we don't really mind working a little bit late, we think we're getting paid probably a good wage compared to a lot of people so we don't want to make a fuss."* (Tel. Int. 21, Foundation)

> *"If you clicked that you started at 8.00 and you were meant to start at 9.00, you had to explain...why did you do it, so quite a lot of the time I wouldn't put down that I started before 9.00 because I knew I was going to have to justify that I came in before 9.00."* (Focus group 5, Foundation)

In some cases, however, it was simply a case of consultants being unavailable to sign within the given period. It was also reported that trainees sometimes feel *"it's easier to keep the peace and say you're coming in at 8.00 if you're coming in at 7.30"* (Focus group 10, Specialty) to avoid any repercussions for themselves or the Trust, or to record rostered rather than actual hours worked on the basis that hours would even out over time. Some trainees selected whether to record rostered or actual hours according to the nature of the work they were staying on to do.

> *"If I visibly stayed late and it was really quite busy and I stayed late simply because there was a lot of work to be done I might actually put my actual finishing time down. If I stayed around to get some admin out of the way and it wasn't because of clinical care then I might put my official finishing time down and not be fussed over it."* (Tel. Int. 23, Specialty)

4.6.3   Pressure to be compliant

There were few reports of direct pressure to falsely record compliant hours (although there were several second-hand reports from participants of such pressure). More common though, as well as the more passive manipulation of recorded hours through the obstacles described above, was pressure to *work* compliant hours during the period of a monitoring exercise, even if that was unrepresentative of the usual functioning of the rota. There were isolated reports of emails from the Chief Executive to trainees reminding them to stick closely to their hours, and more severe pressure to record compliant figures, with references in one discussion to 'a threatening letter' from a medical director. Consultants would also apply pressure, but it was seen as their responding to pressure from above. One example was given of a 'verbal warning' from a consultant if a junior did not leave on time (although it was not clear if this was a formal warning, or an informal 'telling off').

> *"Last time the problem was that one of the consultants kind of got people together and said, you must not stay, you know, late…or come in early, and if you do then you don't put it down because…we're not asking you to…and then when people put in the times that they actually came and left they were brought in and asked to change it, so we complained and that's why we're doing it again I think."* (Focus group 9, Foundation)

> *"I know people personally who have been threatened very severely by the trust that they would be reported to the GMC for issues about monitoring."* (Focus group 10, Specialty)

Further indirect pressure came in a desire to maintain the status quo in a working pattern, with some trainees indicating that they falsely recorded compliant hours because they did not want to risk their rota being changed to full shifts from on-calls. This was particularly true of specialty trainees working on-call rotas, who saw shifts as an implicit (and in one case explicit) threat if their hours were found to be non-compliant.

> *"The one issue is that any time you mention rotas and the fact that you're not complying, the one thing that is always brought back to us is well if you don't like it you will have to go on to shift work and that's the threat that gets waved to us everywhere we go and as a speciality we don't want to go on to shift work because we don't want to do a week of nights for the reasons I've already said before because you don't do anything on nights so that actually will be a waste of training."* (Focus group 1, Specialty)

> *"Although we're probably over the hours that we should be working, we're all very happy with the rota that we have, so it may be non-compliant but we're ok with that, because we think it's better than the alternative, because the only alternative is shifts."* (Focus group 11, Specialty)

The pressure to be complicit in a system which they did not trust was an issue for some trainees, with one contrasting the apparent message to misrepresent hours with the centrality of probity to the medical profession.

> *"They were under pressure from their seniors and they put pressure on us, the juniors, to do that and it is very difficult to resist those pressures if you are a very junior doctor, you feel as though you have to do what your consultant is saying and I think that that, I mentioned professionalism earlier, and I think that that is really hard to stomach if you are a new doctor, you care about probity and professionalism, it's been drummed into you all through medical school that you have to uphold a higher standard of integrity and then if your seniors, your consultants are effectively telling you to lie on your monitoring forms, that's so demoralising and what kind of example does that set to new doctors?"* (Tel. Int. 29, Foundation)

4.6.4   Monitoring perceived as a threat to professionalism

Issues raised in the preceding sections have touched on the morale of doctors, and a feeling that the monitoring process was demoralising and a threat to their professional autonomy, and responsibility.

Managers in particular were felt to undermine the trainees at times, and 'blame' trainees for working late because it was their own inefficiency leading them to work late, which could be 'hurtful'.

> *"We are treated usually like we are working late due to our own failings which is not a nice atmosphere to work in, I think it's very important that you feel you are working, especially as a junior in a new career, you're working somewhere you are appreciated, valued and not being looked at suspiciously."* (Tel. Int. 21, Foundation)

While working beyond hours is allowed in cases of emergency, there was a disconnect between the trainees' and managers' definitions of emergency, with one trainee commenting that their definition of an emergency would be lack of adequate cover, because anything can happen in that time, whereas that of a manager might be limited to an acute event such as a cardiac arrest.

The monitoring process was also reported by some to have personal effects, for example a feeling that work, and the commitment it represents, was not being acknowledged or recognised. This could result in a loss of morale, if a rota was reported to be compliant when trainees believed they were actually working over those hours.

4.7   Learning experiences and educational opportunities

Participants were asked about how their learning experiences vary across their working pattern, and whether they felt they missed out on educational opportunities because of their working hours.

4.7.1   Access to learning opportunities

There were a number of factors influencing the access trainees had to learning opportunities. Staff shortages, and the need to cover short-term gaps or vacant posts, were considered to impact negatively upon training opportunities and on performance.

> *"When you haven't got enough people, I mean if you haven't got enough time to eat or go to the toilet, you can't leave work on time, then you definitely don't have time to go to clinics, you definitely don't have time to do audits or anything like that during work, it basically means that anything that is exclusively for your own training is basically done in your own time and the amount of time available to you is really diminished."* (Tel. Int. 7, Specialty)

> *"When the rota is full it works, we're not too busy and we're not too quiet but when it gets down to two people covering things tend to get a bit hectic…I certainly don't do my work as good as I would want, I don't have a chance to follow up patients, we don't get to teaching much [which] will eventually impact on work, and I get snappy on the phone."* (Tel. Int. 12, Specialty)

> *"Yes you want to do service and that's why you all get paid…but unfortunately training takes a back seat when you're short staffed…I think clinics take a back seat, which are very important."* (Focus group 8, Specialty)

Some shift patterns were seen as detrimental to learning, either in their impact on the ability to retain information or in their leading to subsequent absence from opportunities because of compensatory rest. Twilight shifts were seen as service oriented and meant not being available to discuss those patients on the ward round the following morning.

> *"The amount of information you can then absorb…is limited because your brain becomes fatigued, even if the best consultant in the hospital takes you away and teaches you directly, how much you retain of that is reduced when you're doing these jumbled up shifts."* (Focus group 10, Specialty)

> *"I think the shifts were configured in such a way to deal with the very busy late afternoon and evening time, so mainly to provide service and keep the shifts compliant, it was not possible to then be around the next morning to discuss the patients on the ward round…and the only way of then finding out what had happened is to go back and see the patients at a later opportunity and look at the notes and see what decisions were made…but I think it's easy for someone to get distracted or bogged down and not have an opportunity to do that and I think learning opportunities would be lost if that were to happen."* (Tel. Int. 23, Specialty)

Several spoke of the loss of experience of continuity of care for patients, as impacting on their training as well as on the patient experience. This was seen to affect both junior and senior trainees, with interruptions to continuity described by some trainees as affecting their ability to make decisions about patients' care, limiting feedback they received, and impeding how they felt they were progressing.

> *"Because of the way we've had to change to partial shifts, people going and doing nights relatively frequently, you know having to move wards to plug gaps, there's a total loss of that continuity and I think…if you're only on a ward for two weeks as opposed to six weeks then you'll lose something in learning about the on-going, how the patient's doing in the longer term, about you know building relationships with complicated patients and their relatives, you know, managing longer term problems…it's not something you can count or quantify but I definitely think losing that continuity affects your training to some degree."* (Tel. Int. 17, Specialty)

Losing continuity of care was also seen as less meaningful and fulfilling for trainees who felt they had less ownership of their work, and were also less of an integral and important part of the team, both of which were described as de-motivating factors. Some trainees spoke of seeing 'snippets of people' or 'snapshots' rather than seeing how judgement developed and decisions played out. For specialty trainees, this could mean junior trainees being unable to give them the information they needed:

> "You come and you ask someone, tell me about this patient – 'Oh, I don't know, I haven't been here the last few days'; 'What about you?' 'Oh, I was on nights last week', and 'What about you?' 'I was off last week' – 'Who knows the patient?'"
> (Focus group 6, Specialty)

From junior trainees' point of view:

> "My previous ward job…it was pretty much purely gastro, there were learning opportunities and they were teaching us how to do drains and taps and the patients were quite interesting but two of us on my ward, myself and the SHO, had these two extra weeks of on-call so we did six weeks off the ward just doing on-call plus all of our holiday, which actually meant we spent half of our entire job not on the ward so when we did come back to the ward we didn't know any of the patients and therefore didn't have the opportunities we would have had if we were there for longer…they wouldn't turn round and say you've been looking after this patient a week, do you want to come and learn how to do the drain or whatever, because you just turned up on the ward after two weeks of nights." (Focus group 5, Foundation)

Some felt strongly that the limited hours, and for craft specialties (e.g. surgery, obstetrics and gynaecology, anaesthetics) the limited numbers of cases, would have serious consequences for the development of expertise. Surgical and anaesthetics trainees reported coming in on days outside their normal rota pattern to get signed off on particular competencies.

The concern was not limited to craft specialties though, with some in medical specialties also expressing concerns about seeing fewer patients and having fewer opportunities to practise. A surgical trainee, however, commented that there was more protection for training now in terms of having educational and clinical supervisors through whom gaps in experience could be addressed. Several respondents noted that learning opportunities could still be gained if trainees themselves were proactive in involvement in cases.

> "It's scary being a consultant now [these days] because most of us feel like we haven't got the training…my colleagues who have not had the extension of training by doing paediatrics first or whatever they all feel too young and without experience to actually be consultants because then the buck stops with them and to do that you need to have had significant amount of difficult cases, challenging cases, on-calls, help to make decisions, we don't get anywhere near enough like that anymore." (Focus group 8, Specialty)

There was a sense in which several trainees saw rotas as being designed around the needs of the service rather than the needs of the learner, and that this means trainees are not gaining enough experience.

> *"I think there's definitely room for improvement, I don't feel that I'm up to scratch compared to some of the registrars when they were at my level, I certainly don't feel that I'm up to scratch…I just worry that we're getting a lot of inexperienced SHOs who haven't got the skills really after progressing up the ladder too early and I think there's too much pressure on us to keep to this EWTD and people are, you're caught between a rock and a hard place, there's finishing on time or getting the experience and as I'm getting older I'm realising it's the clinical experience that's more important, not the fact that you need to finish at five o'clock."* (Tel. Int. 28, Foundation)

Some trainees reported being able to make informal arrangements with colleagues so that they could attend theatre or clinics, others reported that this was not feasible on busy wards, particularly factoring in absence due to annual leave or study leave.

> *"Rotas are so tight now and receiving is so busy that junior doctors get to far fewer clinics than I did when I was a junior doctor, I think that is a definite impact, and the clinics are an important part of the way you learn outpatient care…people work shorter hours and also there's been at the same time…a reduction in the number of junior doctors so there's just far fewer junior doctors in the hospital so there isn't the spare capacity for people to go down to clinics anymore, they have to stay on the ward."* (Tel. Int. 17, Specialty)

> *"That depends on how many Foundations are working because there's two of us at the moment on urology, there's probably only been maybe six weeks out of the full four months when we've both been working on the wards together which means once we've got most of the things done one of us can go off and do what we want to, but a lot of the other time one of us will be on-call, one will be on annual leave, so it will leave you on the ward and you'll be left to cover the rota and you can't really go away to theatres or to clinics."* (Focus group 7, Foundation)

It was reported that on an orthopaedics placement there were almost daily opportunities to attend theatre and bleeps were held by another SHO. Opportunities were sometimes presented by consultants inviting a trainee to attend a clinic or theatre with them. When this meant staying late it could present difficulties for those with childcare arrangements.

Some felt there were educational benefits from having more time outside work to study for professional exams, and reference was made to some membership exam pass rates improving since introduction of WTR.

"I was doing a professional exam in January and if it wasn't for this compliant rota I wouldn't have passed it, there's people who I know who have done it who weren't in comfortable 48 hour week rotas and you know some of them did do well and some of them didn't and you know part of that was the fatigue of working a longer than usual shift," (Focus group 9, Foundation)

"There's no secret that examination results, post-graduate, have improved, I think certainly in the last two, three years locally… we've gone from a situation where not many people were duly receiving the membership first time...up to now we've had pretty much a clean sweep in the last two years." (Tel. Int. 8, Specialty)

However, loss of experience was felt to be potentially damaging to career progression, with a lack of 'CV time' to develop interests and take on additional training opportunities.

"Maybe you could be rota'd on for ward-work and for some weeks for a certain number of hours, but then a certain number of hours you're on for like gaining experience and teaching etc. so you're not on call for anything and you're not expected to do the repetitive monotonous jobs, it's your free time to go and seek out things… Maybe having rota'd CV time and development time would help so that it just protects your learning time and it doesn't get encroached on by paperwork and other things that really kind of hamper your learning." (Tel. Int. 16, Foundation)

"Whilst there are opportunities we're still there to kind of do our job as an employee primarily, so if you're too busy to go off and do something which would be more beneficial for your educational reasons, or progress your career in what speciality you want to go, I mean you've got to understand you're not always going to be able to take every single learning opportunity that does come up but you try your best to get to as many of those as possible, some days you may miss it because you're just feeling too tired and you'd like to just sit down for that time and other times you're kind of jump at the chance to go to a few extra things." (Focus group 7, Foundation)

4.7.2 Daytime work

Most distinguished between the learning available during the day and that available out of hours. Most felt that daytime working was when they received most direct teaching from seniors (or potentially other staff), through which they would develop their clinical knowledge.

There was, however, some difference between grades. Some F1s felt that daytime ward working was, after the initial adjustment to work in their first placement, often dominated by routine work of little educational value, such as administration, taking blood and cannulation.

"Ward jobs are muppet jobs." (Focus group 2, Foundation)

Some F2s on the other hand felt that they received more education than as F1s, and got the chance to perform more supervised medicine during day shifts, and this was even truer of specialty trainees. This was not related to working time, as much as to the different roles in the clinical team of trainees at different stages.

There was also a difference between specialties, with surgical placements for a junior being of minimal educational value in the daytime, as all seniors were in theatre or at clinics while the F1 would be left to run the ward. Surgical ward rounds were often felt to be more perfunctory, from an educational point of view, than medical rounds. Daytime ward work was described by one F1 as 'fire fighting' rather than an opportunity for teaching:

> *"It's purely fire fighting to try and get things done and there's literally not enough time for teaching, but you can get that on receiving."* (Tel. Int. 16, Foundation)

The variation of learning opportunities with the time of day made it more important for the trainee to be proactive, some felt. There were cases where people would stay late at work for educational opportunities, although as discussed above this was rare in comparison to the cases of staying simply to get jobs done. Some respondents, particularly specialty trainees, would go into work on days off so that they could learn without being interrupted to undertake 'menial and repetitive' tasks, or adopted other strategies:

> *"Sometimes what I'll do if I'm staying past the time is I'll sit there and put my jacket on, so if I am just going through something with a registrar or something or getting some teaching, that I feel like I can't be interrupted, but you still do get interrupted if you stay behind."* (Tel. Int. 16, Foundation)

It was possible for some at least to benefit from protected educational time at work. One example was given, of an F2 on-call rota in cardiology in which the first four hours of a 12pm-9pm shift were allocated as educational time, in which to observe procedures or carry out audit for example, before taking over the bleep at 2pm. If the ward was particularly busy though this protected time would not be taken.

4.7.3 Out-of-hours work

Out-of-hours work, in contrast to daytime working, was felt by several F1 doctors to be more valuable, as it gave them experience of taking on the responsibility of being first to attend a patient and of exercising their own clinical judgment under pressure. It also provided a greater variety of cases and greater immediacy than daytime ward work.

> *"The house officer will be the first port of call…If you get out of your depth with a patient you bleep your senior [but] sometimes the senior may be looking after a sick patient elsewhere, they may be in theatre doing surgery, sometimes they just don't even answer their bleep and that's very challenging when you're junior and you're looking after very sick patients but I'd also say it's an amazing learning experience as well, it's how you learn to be a doctor."* (Tel. Int. 29, Foundation)

This experience aside though, it was felt overall that out-of-hours working was predominantly service-oriented, and as such had a far smaller educational component. Service commitments out of hours could mean losing access to training opportunities the next day, including theatres and clinics: *"I think we've put our cover of on-call as a priority rather than training"* (Focus group 8, Specialty). This was particularly the case for senior specialty trainees.

It was felt to be important that the right level of support was available out of hours for trainees not to feel 'abandoned'. For the majority, the available support and supervision from on-call registrars and consultants was appropriate, but it was acknowledged that seniors would themselves often be busy and not always available to answer a bleep (for more on supervision see section 4.7.5 below).

For surgical trainees educational opportunities were limited at night by the CEPOD guidance which means that only emergency surgery takes place at night, procedures in which trainees would have a limited role. Because of this, surgical on-call rotas at night would be of limited value to specialty trainees. A side-effect of this though was increasing cross-cover for medical trainees, which may not always provide useful educational experience for them.

4.7.4 Access to formal teaching

Access to formal teaching was limited by working hours, but mainly because limited staff numbers meant trainees could not get away from wards. Some teaching was scheduled for the end of shifts at 5pm, but as will be apparent from earlier sections, this would often mean going back to the ward afterwards in order to finish jobs, and so not leaving work until much later. It was also reported that trainees often came in on afternoons off or stayed behind after night shifts to attend teaching sessions. There were some cases of trainees approaching consultants about a course and being given permission to request being 'rota'd off' for that morning. It was helpful when teaching sessions were repeated, meaning there were alternative dates to attend.

Whilst circulation of meeting minutes and electronic distribution of information were helpful, a move to entirely online learning would be considered by one trainee as a 'dangerous move' due to loss of contact with peers and seniors in an education session. There was also the question of time and facilities for online learning. It was reported by a specialty trainee to be difficult to get time off from daytime work to attend educational activities as rotas were stretched. Simulation was felt to be helpful in some areas, by those who commented on it, but not a substitute for direct experience.

Another point was that while rotas are often planned six months in advance, educational activities may only be planned two months in advance, which would be short notice in some cases for arranging leave; a surgical registrar spoke of adjustment being made regarding existing commitments if six weeks' notice was given. This presented difficulties particularly for more senior trainees who might be wishing to attend a five-day or monthly course for their continuing professional development (CPD). One trainee reported taking annual leave and using their days off before and after night shifts to complete their certificate of clinical education.

There was a case of weekly mandatory teaching for Core Medical Trainees (CMTs) running from 8am to 10am and the day shift being 10am to 10pm, effectively meaning a shift length of 14 hours,

although the rota was later amended. There was also an expectation that an additional hour's teaching in another unit would be attended, and trainees give presentations, making a shift length of 13 hours, although the rota did not allow for this to be made mandatory. Some rotas did not allow for the taking of study leave for set periods, which was felt to impact upon MRCP preparation and attendance at courses – in contrast to other reports that exam results had improved.

4.7.5 Supervision and mentoring

Supervision was felt to be accessible, even out of hours, and seniors were generally described as approachable and happy to take calls out of hours, although F1s did refer to SpRs not always being accessible because of their own workload out of hours. While consultants were seen as available and happy to be called out of hours, there was a reluctance or uncertainty about when may be appropriate to call them about routine matters which would be easy to ask about in the daytime. Rota changes could affect the available support. One example was a changed rota which reduced cover from two tiers of specialty trainee above an F1 to just one, who could be of any specialty trainee grade; this could mean that an ST2 could be the most senior specialty doctor available, reducing the available educational contact both for the F1 and the ST2.

There was more support during the day from the wider availability of other professionals such as pharmacists. Support and supervision out of hours were also considered to be person-dependent, with some seniors being easier to ask than others. There was considered to be less opportunity to learn whether decisions were right or wrong when working out of hours:

> "Out-of-hours work when you're on-call, you generally have to make a lot more clinical decisions and so you do learn more from that, but you can only really learn from it if you get a chance to find out if what you did was right or wrong…most of the time you just make your plan and you don't really find out if it was good or not." (Tel. Int. 4, Foundation)

One issue raised by several trainees was the absence of an educational relationship between trainee and consultant, compared with the earlier system. Previously a consultant would get to know a trainee, their strengths and weaknesses, and guide them towards educational opportunities, thus developing their expertise and judgement through knowledge and trust in their capabilities. Now, however, the disconnect between consultant and trainee may mean that fewer opportunities are offered. However, this was recognised as not being due to the WTR per se, but to other changes. MMC and the loss of SHO jobs were felt to be particularly damaging to trainees' ability to gain wide experience.

> "The other downside of the shift pattern and that your nights are split is that our juniors fail to make any kind of connection with their senior consultant who's supervising them, and the consultant's report I don't even know who that person is or we don't form any kind of rapport, so they don't know what the trainee's good at or any development… you could go for six months and hardly see some of the people that you're working with." (Focus group 8, Specialty)

"They won't be aware of what you are or what you are capable of and, particularly in an emergency situation, they'll be much more keen to do things themselves, whereas if you're working with your own consultant and they know you're perfectly capable of doing the thing then they would have you doing more of it, albeit spending more time training you in the doing of it." (Tel. Int. 14, Specialty)

One trainee also commented on the effect this might have on the development of professional relationships and communication skills:

"You'd learn to communicate with people that are a bit more senior with you, so it's not just like the medical knowledge that suffers; it's your communication skills with other colleagues I think." (Tel. Int. 16, Foundation)

One Foundation Programme trainee contrasted the learning experiences of two rotas, both of which involved a shift system, and both of which involved working beyond the rostered hours. However one was seen as educationally valuable, and the extra hours were not minded, because it was felt there was a team atmosphere, and that seniors wanted to teach.

"We all as new house officers felt empowered to ask for training opportunities and to try and seek them out. So, for example, if we were on a busy take admitting new patients into the hospital, if a patient needed a lumbar puncture I would feel able to ask my registrar and my consultant please could you watch me do a lumbar puncture, please could you show me how to do it and they would happily give up their time to do that even though it might mean that we all had a little bit of extra work to do." (Tel. Int. 29, Foundation)

There were a few such examples of consultants who provided an educationally valuable experience for trainees, and encouraged a learning culture.

4.7.6 Completion of portfolios

Completion of portfolios was not felt to be a particular problem in relation to WTR, although fitting in assessments around periods of high intensity was difficult. Most educational work though – particularly reflection and reading – took place outside of working hours, which was not always easy, and it was felt that in previous, longer but less intense working hours, some of this could have been done at work.

"On a long day we wouldn't have a break for 13 hours so, you know, if we're not even eating we won't be sitting down doing portfolio, it's just too busy." (Tel. Int. 9, Foundation)

"It's not about collecting it at work, it's about having the time to sit and write it down for your portfolio, I mean sometimes when you've done an on-call there's lots of good opportunities you can reflect on but the last thing you want to do when all you've got time for is to sleep and eat is to spend another extra hour reflecting on your day." (Focus group 5, Foundation)

4.8   Personal opinions and consequences

4.8.1   Positive consequences

Many trainees, particularly the more junior respondents, felt the WTR were a positive move, and that they were glad to be training under restricted hours, compared to the extremely long hours they heard about from seniors. While some, particularly among more senior trainees, felt that they would be happy to work longer, in the region of 60 hours, the main criticism of the WTR was their perceived inflexibility, rather than the limit per se.

> *"I work a lot of hours and I think working more would just make me very unwell to be honest, and I wouldn't be able to learn any more."* (Tel. Int. 4, Foundation)

Overall, the reduction in working hours was seen by the majority as positive in terms of personal impact, particularly in relation to work-life balance, with several referring to their ability to see more of friends and family and to 'have a life'. It was perceived by some to have resulted in reduced stress and greater alertness overall, although other factors, such as particular shift patterns, worked against these improvements. Some participants suggested that it had made the profession more appealing and enjoyable, and more appropriate for the changing demographics of the medical workforce.

> *"I think, speaking to people who didn't have the forty-eight hour working time directive thing, we get a lot more time to go home and enjoy ourselves and be outside the hospital than they ever did and I think that's a good thing, I feel like I've got a bit more of a life."* (Tel. Int. 22, Foundation)

Foundation trainees reported no particular difficulties in adapting to working on a rota system and several felt the experience was better than expected, although some did find it more difficult to adjust to changing between days and night shifts with little recovery time in between.

The WTR were also described as a protective mechanism for trainees, without which more time would be spent on service duties rather than training duties and opportunities such as time for research, but the system was not helped by reductions in trainee numbers.

4.8.2   Negative consequences

There were a number of negative consequences of working hours restrictions. Some of these were problems that respondents did not feel had been resolved by the introduction of the regulations, while others were consequences of the regulations themselves.

4.9   Fatigue

Fatigue remained a problem for trainees. 'Long day' and night shifts of 13 hours were felt to be tiring, but continuous working of up to 17 hours was not unusual, and the WTR-required 11 hours rest before the next shift was not always taken. Some referred to pressure being such that they were unable to eat during a long shift, and would be disturbed during breaks by bleeps and phone calls.

Many participants reported not receiving adequate breaks, which was particularly notable on long shifts of 12-13 hours, although breaks were reported to be taken in A&E and more likely in surgery than medicine. Reasons included not being told about breaks, workload, not wanting to delay jobs that needed doing, not wanting to be seen to be taking a break if the ward was very busy, perceived attitudes of others (*"they see us having five minutes rest and they think we're just skiving off."* Tel. Int. 9, Foundation), and being disturbed during breaks. This was reported to impact on health and wellbeing and on practice. It was also acknowledged, however, that trainees could be more proactive themselves in taking breaks. Some contrasted their experience with the working practices of nurses who had timetabled breaks they would not expect to have interrupted, and for whom it was more acceptable to leave on time.

> *"I think the 12 hour shifts are fine when we get the allocated breaks…but it's when you're not getting your breaks, you're not getting the rest…you get hungry and hunger really affects my practice."* (Tel. Int. 2, Foundation)

> *"I've done 12 hour shifts before where I haven't had a proper break and that's happened quite a lot…I think [it affects you] psychologically more than anything, you feel like you don't enjoy your job very much, you feel taken for granted really."* (Tel. Int. 4, Foundation)

> *"I think all of us have probably lost weight in the last month and that's unintentional, it's just because we don't eat and we're on our feet and we're so busy for such a long period of time."* (Tel. Int. 7, Specialty)

Facilities for taking rest during a night shift were variable, and better in some places than others.

> *"The trouble with night shift is being able to sleep during the day and most hospitals have no facility to actually catch a nap while on night. The last time I worked in a hospital with bedrooms for on-call staff was in 2007 and that's despite guidance from the Royal College of Physicians that it should be possible for someone to have a short nap…I think sleeping on a chair is criminal…when the Working Time Directive came round, even in 2004, trusts started shutting their on-call rooms."* (Tel. Int. 23, Specialty)

For some, shift length was less of a problem than the number of days without a break, which was also felt to be particularly tiring. As noted earlier, working ten to 12 days in a row was not unusual.

> *"You shouldn't be allowed to do twelve shifts in a row I don't think, especially not with three [of them] being twelve or thirteen hour shifts, you should have a day's break in the middle of that just to catch your breath, I think if you had the Monday off it would make the world of difference for how you performed as well as how mentally stable you were."* (Tel. Int. 11, Foundation)

"I don't think the hours are long, so doing a 12 hour day or 13 hour day is fine, I think doing 12 days in a row you hit delirium about day ten and then you over-ride it…so I don't think it's the shift I think it's the number of days you work in a row." (Focus group 3, Foundation)

"When you do a week of 13-hour shifts, by the end of it you're just emotionally drained as well because you're still running through everything about work because you still feel like you're in there." (Focus group 5, Foundation)

While few worked seven nights in a row, where nights were split some felt the moving between days and nights was not beneficial, and they would rather get nights 'out of the way' than have to adjust their sleep pattern several times. The lack of continuity in terms of day and night working, meaning that there was no set pattern for particular days of the week, was felt by some to lead to fatigue in itself and impact on learning. Working long shifts at unusual times of the day (e.g. 2.00pm to 2.00am) and with no set pattern was also found to be disorientating. The rest period between working nights and days was sometimes regarded as inadequate for recovery purposes. Some found that switching to night shifts was less detrimental to their health and fatigue than working a 24-hour on-call, but others would prefer the 24-hour pattern.

"Because your sleep and working balance is very much upside down and we start on a Monday and work to Friday morning and those four nights it's just about working and sleeping and trying to get your hours in and then if there's anything interesting happening then you can't stay to see that because you've got to come back the next night…I personally find it more psychologically draining [than a 24-hour pattern]." (Focus group 10, Specialty)

"I only worked shifts in casualty and it was extremely tiring, these four nights and three nights and you're working so many, you know, five weekends out of eight, it was just terrible, your personal life suffered, you literally came home in the morning and you don't know whether to eat your breakfast or your dinner, you're completely upside down and that feeling of nauseated tiredness for four days in a row and then you sleep and then you're back at work and you've missed a whole week, it's inhuman, it's horrible." (Focus group 10, Specialty)

"I remember our last set of nights when we had the day off before starting days again, by the time it got back to days every single one of us just felt like a zombie, we couldn't concentrate, we didn't feel like we could do anything properly, you know, it got to the end of that shift and we were trying to hand over and people were looking at the computer printout of names of patients and they couldn't remember anything about the patients they had spent an hour with, you just weren't able to function. It means from a personal point of view you can't actually do anything other than sleep or basically function on autopilot at home because you're so tired, you're not even getting to the point where you are recovering and you are back at work." (Tel. Int. 7, Specialty)

The variability of working hours, and lack of routine, were a particular problem for some.

> *"There's no pattern to the shifts, so your body clock just gets…you just get really disorientated and confused as to what you're doing or where you're going or what time of day it is because you're working such random hours."* (Tel. Int. 2, Foundation)

Restricted working time, and shift working in particular, were felt to have increased work intensity, and so stress. Many made particular note of it not being the restricted hours per se that caused problems, but that work had to be completed in a shorter amount of time. Several trainees commented that, in relation to fatigue, the number of hours worked was less of an issue than the intensity of work.

> *"It's not the extent of the hours that makes you feel exhausted, it's the intensity of what I'm dealing with, sometimes that can make me more exhausted, out of hours service and when you're on-call, and getting certain things done and escalating certain patients can be very stressful, so I think that would be the case no matter how many hours I worked."* (Tel. Int. 6, Foundation)

Detriment to performance

Concerns about the effects of fatigue over long periods of work, and deterioration of skills and judgement were identified by several trainees, although they indicated they were sufficiently aware of these detriments to manage them. This meant that they may become less efficient – taking longer over procedures, having to ask more questions of seniors and nurses – rather than less safe.

> *"You don't make as good decisions and you're more grumpy, you're less likely to be good with the patients, you know, you're more likely to just go in there and take the blood rather than actually you know being a doctor to them…so you have to be a lot more careful when you're tired I suppose."* (Tel. Int. 9, Foundation)

> *"I think when you were getting to the end of a thirteen hour shift you found that your technical skills, like your ability to put a cannula into someone and stuff like that, it certainly decreases, I find it gets a lot harder to do things that require more concentration, things like that, but I think you're also quite aware of that, so patient safety wise you are aware that you are not at your best so you often check more of your decisions with other people and things like that."* (Tel. Int. 22, Foundation)

> *"You're sort of working on autopilot so there are times when I feel dangerous because I'm so tired."* (Tel. Int. 2, Foundation)

Intensity of work was said to impact on fatigue and performance:

> *"If you're having a really busy day you could be absolutely wiped out by 5.45, whereas [other times]…you could work relatively safely until 7.30, 8.00, 8.30, it depends on how manic it's been."* (Focus group 2, Foundation)

> *"I don't mind the odd day off, also with the intensity of the work you do need the days off because you're just wrecked and it's not safe if you're that tired."* (Focus group 10, Specialty)

Some mentioned the intensity being such that they did not eat or drink properly for the length of a long shift, because there were too many demands.

> *"When I'm hungry my fuse is shorter and I think my compassion towards others is not what it should be, I get grumpy, sometimes I get to the point that all I can think of is I'm hungry and there'll be a patient wanting to speak to me and I'll be just like I really don't want to talk to you because all I want to do is get a sandwich down my neck because it just kind of takes over your whole thinking when you're hungry and I think when you're tired your problem solving gets worse…your efficiency massively deteriorates, yeah my cannulation ability is indirectly proportioned to my hunger."* (Tel. Int. 2, Foundation)

Long shifts were considered by many junior trainees to be too long at 12 hours, and detrimental to learning: *"you just can't function after twelve hours, the last few hours your brain is shutting down…and it's very poor quality of life…and I think it leads to much worse patient care"* (Tel. Int. 4, Foundation)

Demoralising effects

That trainees were spread more thinly across rotas was also felt to be isolating in some cases, with the lack of an available peer group and a reduction in camaraderie, particularly at night and in some smaller hospitals.

> *"The best thing about being a junior doctor…the camaraderie, we were all in it together, we were all looking out for each other."* (Focus group 10, Specialty)

> *"Nights can be quite lonely…because you don't see anyone socially at all and you're working mainly on your own as opposed to mainly in a team which you do during the day, so it does get a bit lonely after a week."* (Tel. Int. 10, Foundation)

> *"When you're working long days you don't see much daylight either, it's sort of almost more of a social thing in that I don't see anybody else when I'm working seven nights in a row, I only see other doctors because I'm going to bed when everybody else is awake at home so it can get very lonely."* (Tel. Int. 15, Foundation)

For many respondents though the main negative consequence of the WTR was a feeling that their work was not being recognised, in deference to maintaining an illusion of compliant rotas: "The

dream world of EWTD" (Focus group 9, Foundation) as one put it. One issue was their working longer hours than they were paid for, but there was also a feeling that this was common knowledge and that their excess hours were ignored and unappreciated, which left some trainees feeling undervalued. Clinical leadership was seen as the key factor in dictating the working culture, but difficult for junior trainees to influence. There were particular concerns over trainees not being replaced when they finished their rotations or completed their training, meaning that rotas could go from, for example, having weekend shifts of 1-in-10 to 1-in-8 or 1-in-9.

The lack of flexibility and short notice of rotas in some places were felt to be demoralising, as well as undermining to professional autonomy. There were fears that this loss of autonomy and professional status would extend beyond training.

> *[On fears of a 'junior consultant' grade…] "You'll have to do it because you need to pay the bills but you'll have no autonomy as a consultant and no autonomy to make consultant decisions about patients, the managers will drive what you do."* (Focus group 10, Specialty)

Some spoke of adverse effects on personal relationships. The lack of certainty of getting away on time lead some to say they would not make plans for the end of a shift. Some work patterns were seen to be disruptive and not very compatible with family lifestyle, although some employers were felt to be better and more engaged than others. Receiving a rota in advance (even just by a couple of weeks) provided more time to work around it, and arrange a personal life, rather than receiving it on the first day in the post.

> *"It does affect your personal life more than you realise, certainly relationships outside of work, those have broken down because I haven't had the time and you just come home and you're so exhausted and all you want to do is sleep but I guess everybody who works has those experiences, it's just getting the experience and learning how to cope and deal with it."* (Tel. Int. 28, Foundation)

While benefits to work-life balance were perceived, many took work home with them, and a lot of the educational activity including portfolio completion and reading that may have been done in the workplace during slack times on-call, was now being taken home.

4.10   Summary of trainee views

Trainee views portrayed a complex picture of the reality of working to the WTR. There was a feeling that while WTR may have reduced working hours, the amount of work to be carried out had not reduced, meaning that the perceived intensity, and pressure to get work done, were felt to have increased. There was some conflation between New Deal and WTR restrictions, with many people referring to New Deal bandings when asked about WTR.

Trainees worked a variety of shift and on-call patterns and, although averaging meant their hours were ultimately compliant, some working patterns were considered particularly intense and also detrimental to their education and personal wellbeing. In addition, they were often working beyond their rostered hours in order to complete tasks that they felt could not be left, for a number of

reasons. Rota gaps due to staff shortages, exacerbated by under-recruitment and absences, placed additional pressure on the system. Long runs of days without a day off were tiring, and there were concerns about the effects on their functioning when tired.

Educational opportunities varied with time of day, and with specialty. While Foundation Programme doctors felt out-of-hours work provided useful experience, most learning for all groups was felt to take place during the day, or at least when consultants and other seniors were available to directly teach and supervise. Overall, most felt that they received sufficient balance of supervised and autonomous learning experiences, but time pressures to deliver service meant that more educational activity took place in the trainees' own time.

There was some scepticism regarding monitoring processes, with many feeling it did not accurately reflect hours actually worked, and that the system placed obstacles in the way of recording hours accurately. While there was little pressure to record incorrect hours, there was in some cases pressure to work rostered hours during monitoring, even if that was not an accurate representation of normal working. Some felt demoralised by the process, and that their professionalism was undermined. Frustration was expressed that there was little acknowledgement of actual hours worked.

There was general agreement that restricting working hours was a positive thing, but that there are still problems with acute workload being tiring. Most felt that a 48 hour limit was appropriate, although some would like more flexibility to exceed it when necessary, and a few would prefer a longer limit. Some questioned the utility of restrictions that allow people to still work 70 hours or more in a week while remaining compliant because of averaging over a reference period.

5 Synthesis

This section draws together the findings from case studies and trainee viewpoints, focusing on the cross-cutting and comparative issues, and as such draws on information collected during case study development which was not specific to the particular locations but rather of more general relevance. Some issues raised in this section therefore have not been introduced in Section 3, or in Appendix B. Examples drawn from the case studies and trainee data are presented in boxes throughout this section.

The common thread through all the evidence collected is the complexity around the introduction of the WTR. It is not simply a question of cause and effect, whereby an intervention (implementation of the regulations) had consequences for training. Rather the antecedents of implementation, as well as the consequences for trainee experiences, are complex and multi-factorial. This means that the WTR, and the efforts to achieve compliance with them directly or indirectly, have had unintended consequences, and this synthesis will also address some of these.

5.1 The context of working time regulation

5.1.1 Awareness of the WTR

The lack of awareness and understanding of the WTR among trainees was notable. While some had received information during induction, and members of the British Medical Association had received literature about the introduction of the WTR, recall of the specifics was limited. More attention was focused on the New Deal restrictions, and their relationship to banding.

The extent to which the idea of the 'EWTD' persists was interesting. Even at organisational level, many people referred to the EWTD, rather than WTR (some combining the two as EWTR). In part this is simply familiarity, as the EWTD was in place before the regulations. But fourteen years on from the passing of the regulations into British law it is perhaps telling that they are still placed outside, as European legislation. Some respondents indicated that the European origin of the regulations was a problem for some, and a root of some of the professional resistance, and it may be that this is one of the reasons for the continuation of this form of reference.

5.1.2 Concurrent and confounding policy changes

The first point to note in considering the effects of the Working Time Regulations is that they do not represent an isolated change to medical education, but rather they constitute a relatively small component of a series of changes which date back many years.

Substantive changes from which consequences are still being felt may be traced at least to the introduction of the 'New Deal for Junior Doctors' in 1991. The New Deal was introduced in 1991, and set limits for junior doctors' hours, of between 56 and 72 hours per week depending on working pattern, to be met by 31 December 1996. The New Deal was revised in 2003 to a system of bandings, which related pay to the hours worked and the extent of antisocial hours, with hours limited to an average of 56 hours per week. This initial restriction led to the introduction of shift systems in many

areas, and was a radical change to postgraduate medical education. The New Deal contract is still in place, and sets out requirements for trainees' working hours which do not completely accord with the WTR in their detail. The consequences of this are returned to in later sections.

A second major change to postgraduate medical education was the Modernising Medical Careers (MMC) programme, although the changes it instituted could be traced back to the Calman Report (Calman 1993), which applied some formal structure to the specialty training career path for the first time. The lack of structure of post-registration training had led to fears of a 'lost tribe' of trainees in SHO grades who had no direction and no career plan (Dillner 1993). The unintended consequences of these changes were felt by many of our respondents to compound problems raised by the WTR.

The first step of MMC was the introduction of the Foundation Programme in 2005, and with it the first moves to competency-based assessment and progression. However, the main impact according to many of the respondents in this project (both organisational and trainee) came with the changes to specialty training in 2007. Whereas previously trainees would spend up to several years working in SHO posts of 6 to 12 months, gaining experience in a number of specialties, the 2007 changes implemented 'run-through' training which meant that following the two-year Foundation Programme, trainees would have to apply to a specialty training programme. Effectively this meant trainees having to decide on a training programme within two years of graduation. (While training for some specialties has been 'uncoupled' into Core and Specialty training, meaning trainees do not have to commit to a sub-specialty straight away, they are expected to apply for specialty training while in Core training.)

While there may have been sound workforce planning imperatives for this, the effects relating to working time were two-fold. Firstly, the loss of senior SHOs, who moved between specialties as well as geographically, is felt to have removed a key component of the service delivery workforce, meaning that time for training during working hours is more limited. Secondly, the move to run-through training was felt by many to have reduced the general experience of trainees, meaning they have more limited experience when they take up specialty training posts. This has general consequences in terms of their development as 'rounded' practitioners, but also has direct consequences for their capability when faced with increasing demands to provide cross-cover within WTR-compliant rotas. At its most extreme, it means a surgical trainee could be covering a medical ward having only experienced one Foundation Programme placement in medicine.

Further pressure on filling rotas arose with changes to immigration policy in 2008 which restricted the number of doctors who qualified outside Europe entering the workforce. These doctors would take on Trust-grade (non-training) posts, providing more flexibility for trainees to be placed optimally in rotas. The supply has not entirely dried up, with the Medical Training Initiative (http://www. healthcareworkforce.nhs.uk/mti/) filling some of these posts, with a stated aim of achieving WTR compliance. At least one trust involved in this study was sponsoring doctors from outside the UK for immigration purposes, but the overall pool of overseas-qualified doctors is much reduced.

In some areas, centrally-funded initiatives to meet WTR compliance included the creation of core training posts. However, in the longer term this glut of junior posts, coupled with a contraction of higher specialty training posts, and the consequences of MMC, may mean many trainees are left

adrift, unable to find a training post. There is a risk that a new 'lost tribe' may be falling between the gaps of the many changes in the last ten years (Oxtoby 2010).

Finally, the SiMAP and Jaeger rulings on the EWTD (that any time spent on work premises counts as work, and that interrupted rest effectively resets the necessary rest period) have been particularly problematic in terms of on-call rotas. On-calls were felt to be more effective in some low intensity areas of work, but were made non-resident to circumvent these rulings, even if a resident rota would be more useful and more palatable for the trainees.

> **Strategic funding for new staff roles**
>
> *Trust 1A applied for funding from its local strategic health authority, to support a number of initiatives ahead of implementation of the WTR. Specifically, the money was used to fund the creation of new clinical roles including nurse practitioners, surgery assistants and phlebotomists, as well as new medical posts (junior doctors and consultants). The funding was provided for a finite period to bridge the introduction of the WTR, and with the requirement that a long-term sustainable solution be identified.*

There was a strong feeling from organisations and trainees that restricted hours would not be a problem – at least in terms of achieving compliance and working to those hours – with sufficient staffing. While some rotas were felt to be insufficiently staffed even with a full complement, problems were greatly exacerbated by rota gaps.

5.1.3   Changing clinical practice

In some areas changing clinical practice may be a further confounding factor in changing the workload of trainees, which is not always, or at least immediately, recognised in workforce planning. Most notable of these changes was the example of changing protocols for treatment of stroke. Neurological assessment for thrombolysis is now part of the standard plan, which has meant a large additional acute workload in some centres. Pressures on shifts were therefore different. Other changes which may affect the development of the clinical workforce include an ageing population, and changing technologies in diagnosis and therapy.

Sufficiently staffed rotas may be able to adapt quickly to such changes, but workforce planning should be aware of any such changes which may lead to additional pressures on trainees.

> **The importance of strategic leadership**
>
> *The importance of high level leadership in enabling compliance was illustrated in Deanery 8, where one particular clinical director was described as pivotal in moving the organisation towards changes in service delivery and organisation in order to achieve compliance. This role included influencing rota design processes, and negotiations with other senior clinicians over the consolidation of services between two sites. The key point was that fundamental changes within organisations can be necessary to enable such moves, and that to effect them requires the seniority and authority to enforce them, but also diplomacy and the ability to influence others.*

5.2   Facilitators of success

Engaged and positive leadership emerged as an important factor for the successful implementation and management of WTR. This was at all levels, from the strategic implementation of the regulations at a high level, to the management of changes to specific rotas. At a national level,

the well-publicised antipathy of some Royal Colleges to the regulations was felt to translate itself to at best a reluctance to plan, at worst a denial that changes were required, leading to less effective implementation in some areas. A common organisational response was that those geographical and clinical areas that engaged with the regulations at an early stage were those that faced fewest problems with compliance and with trainee response once the regulations were implemented. At the other end of the scale, engagement and interest on the part of individual trainees involved in rota design were felt to be important for the design and implementation of successful rotas.

Organisations throughout our study had implemented changes of the types identified in the literature review (Morrow et al. 2012): service reconfiguration and consolidation to allow larger rotas, new clinical roles, and extensive changes to rotas. In some cases, the WTR were a primary driver for changes, either organisational or educational, but in others they were incidental to changes that were happening anyway.

Rationalisation of services

Service rationalisation or consolidation was taking place in several locations, although with different motivations and enablers. In Trust 1A this was enabled following the construction of new PFI-funded hospital premises. Drivers for this were improvement in service delivery in particular specialties, and the availability of PFI funding for the replacement of ageing premises. Compliance with WTR was an incidental benefit, rather than a direct driver. In Trust 1B on the other hand, in one service area at least, WTR was a driver for rationalisation, with consolidation of services from two sites to one found to be necessary because it was not sustainable to maintain two compliant rotas at separate sites.

5.2.1   Reconfiguration

All areas reported some degree of service reconfiguration. In some cases this was enabled by large-scale capital projects such as new hospitals and consolidation of services in trusts through co-location of previously separate rotas. Physical movement to new premises was said by some to be a useful catalyst for changes to work, and the development of new working practices. New-build hospitals were not always possible though – for straightforward financial reasons, because of political ramifications, or because geography would mitigate against co-location. In some cases services were consolidated through confederation across sites – for example, a non-resident out-of-hours on-call being shared between doctors in different hospitals (usually within the same Trust/Board, but not always).

All regions considered in this study had some rotas derogated between 2010 and 2011 (meaning a maximum of 52 hours per week was allowed). However, many of these were not eventually used. Some had been applied for in

Changes to rotas or service

There were several examples of clinicians and trainees initiating changes to rotas or service design (rather than changes initiated by quality processes or external drivers). For example in Deanery 4 some rotas were rationalised by the reduction of on-call tiers. Where there had been a three-tier on-call (Foundation doctor, specialty trainee, consultant), it was established that in particular specialties (e.g. plastic surgery), trainees could contribute little to out-of-hours care as where specialty opinion was required the case would always be referred on to a consultant. Removal of trainees from these out-of-hours rotas meant they could be deployed in the daytime.

Other changes are explicitly linked to potential educational benefits (see box on p.65).

order to bridge reconfiguration of services and development of new hospitals, and were not used as the problems and delays they were to mitigate against did not arise.

5.2.2 Rota change and shifts

Trainees worked a range of shift and on-call patterns. While most involved some degree of working beyond rostered hours (discussed below), the extent to which working patterns were felt to be 'sensible' varied – this view came from organisations as well as trainees. Many places had used some form of work analysis before changing rotas (using a model from Skills for Health), in order to identify where staff would be ideally placed at peak times, and to ensure service needs were met while fulfilling educational requirements. However, the resources were not always available to staff an ideal rota, meaning compromises were made.

Variability was felt to stem in part from the differing engagement and leadership of clinicians (senior and junior), but there were also service pressures that made the implementation of even apparently simple changes for trainees' benefit more complex. For example, moving a shift an hour later in order for trainees to attend a post-theatre ward round could have knock-on effects and unintended consequences for other staff groups and rotas. The implication was that often rota changes could take a 'Procrustean' approach, meaning that time was simply chopped off the beginning or end of a rota in order to make the hours compliant, with insufficient attention to the actual work being done, or its educational value.

Rotas sometimes include a mix of grades, which may be problematic. For example, a 'senior' rota in one location included all grades from ST1 to ST6, meaning the ability of that tier to respond would vary, and someone bleeping that rota may not know until the doctor arrived what they would be able to do. In many areas both organisations and trainees still talk of 'SHO' and 'registrar' rotas, which may indicate that the functional difference between junior and senior trainees has not changed, or may indicate a degree of cultural inertia, with the current training grades not fully recognised in the system.

> **Trainee involvement in rota design**
>
> *While all areas included trainees in rota design to some extent, Deanery 2 has a unique, proactive, structured involvement of junior doctors in rota design across the region. A liaison team comprised of trainees on secondment provides support to other trainees on training issues, as well as ensuring that new rotas are compliant and solutions remain embedded. Part of their remit also involves Improving Junior Doctors' Working Lives and addresses issues of accommodation and pay.*
>
> *While its role has changed over a period of years, the liaison team is still responsible for approval of new working patterns and rotas, confirming once a rota has been agreed by the trainees affected that it is New Deal (and by proxy WTR) compliant, before finally being signed off by the DME (as proxy for the PGD). Trusts, particularly those that may have less specialised medical staffing expertise in HR, contact the team if they wish to devise new working patterns.*

> **Senior clinician involvement in rota design**
>
> *Clinician involvement in rota development was described by many trusts. For example, Trust 1A reported a process of development involving clinicians at several stages. Initially middle grade clinicians (for example specialty trainees) are involved in initial discussions of overall requirements for a new rota, after which the initial rota developed by HR will be reviewed with senior clinicians, and then returned to junior doctors for any further refinements before being signed off.*

Changes in working hours were not limited to those of trainees. Some areas had made good progress towards a consultant-delivered service out of hours (as recommended in the Temple Review). This could take the form of longer consultant shifts, or new consultant roles specifically to bridge day and night – for example 4pm to 10pm shifts. This was felt to improve the quality of patient care, but also improves the educational value of those hours for trainees, meaning it is educationally more viable to place trainees in those slots. Some areas do already have 24-hour consultant presences. However, it was noted that further change to consultants' working practices is a politically sensitive issue, particularly for older consultants, and may lead to obstruction or accelerated attrition of the senior workforce.

5.2.3   New roles

All areas had created or expanded non-medical posts, from phlebotomists to advanced nurse practitioners (ANPs). The specific job titles and responsibilities for some nursing roles varied between locations. These were used in different clinical areas, although ANPs were used particularly as co-ordinators in Hospital at Night systems, and as members of acute psychiatric response teams. These roles were found to contribute positively to the workload of junior trainees in particular, but some respondents did identify the risk that trainee exposure to key experiences was reduced. There appears to be a line between over-burdening junior doctors with 'routine' tasks, and their gaining sufficient experience of those tasks for them to actually be seen as routine. These range from venepuncture and cannulation, through writing up prescriptions and letters, to in some cases initial assessment of acute patients (particularly in psychiatry).

The cost efficiencies presented by extended nursing roles in particular were also questioned by some. There was reportedly low retention of staff in these groups because the posts are often linked to full-time out-of-hours services, which hold less long-term attraction for highly qualified staff.

> ***Mixed impact of new non-medical roles***
>
> *While non-medical roles are intended to alleviate pressure on medical staff, a senior trainee in psychiatry identified the mixed effects of an acute psychiatric crisis response team on the educational experience of junior and senior trainees. They said that junior trainees "complain that they're not actually able to see enough acute assessments or emergency assessments because they are being filtered off by somebody else a lot of the time", whereas at a more senior position "you do have actually an extra bit of time to be doing all the things for your portfolio".*

5.2.4   Technology

Technological solutions were identified in the literature review (Morrow et al. 2012) as one approach to achieving reduced working hours. In the NHS, electronic rostering has long been used, and systems are designed to achieve New Deal and WTR compliance in templates. However, the effectiveness of these purely algorithmic approaches is limited if the templates do not match service or educational need. Significant clinician involvement was felt to be important whatever the system. Most systems are also not responsive to actual hours worked, although there are moves towards dynamic e-rostering systems which will track working hours in real time and flag imminent breaches of individual staff members' compliance.

The iBleep system – an IT-based approach to managing workload by providing doctors with more information about calls and so aid their prioritisation of work and optimise their travel around the hospital – has been implemented at least in part in some hospitals in our case studies, although it was not widespread. Issues with wireless network coverage were identified in some cases. The use of intelligent work allocation was perceived positively where discussed though, particularly allied with a human co-ordinator such as with a Hospital at Night system.

5.3   Compliance with regulations

The majority of rotas in the regions studied were felt to be compliant 'on paper', although there were some that were known to be non-compliant. However, most trainee respondents reported working beyond the hours on their rota, and this was recognised as an issue across the organisations. The extent of exceeding the rota varied, but many respondents reported regularly working up to an hour beyond the scheduled end of their shift, and occasionally much longer.

> **Rotas need to allow flexibility**
>
> *Where rotas are designed for 46 hours per week there is up to 52 hours 'spare' to still be 48-hour compliant across the 26-week reference period. Trainees in several locations commented that building time into the rota for handover was important in terms of WTR compliance, educational benefit and patient safety.*
>
> *Trust 1A reported that they ensure flexibility to allow trainees to move compensatory rest periods, enabling them to attend activities such as teaching sessions or ward rounds.*

It is important to note though that exceeding rostered working hours on occasion does not necessarily mean non-compliance with either WTR or ND restrictions, because rotas usually contain enough 'slack' for trainees to work additional hours without approaching the 48-hour average. This point was raised in several of the case studies as a weakness in the GMC National Trainee Survey questions, which are not expressed explicitly in terms of hours worked, or the reference period. It is also important to emphasise the observation from many trainees that compliant rotas could still be very intense and stressful.

> **Supernumerary specialty trainees may improve educational opportunities**
>
> *In Deanery 1 senior trainees in some subspecialties have requested that they be supernumerary to general rotas, as cross-covering demands keep them from the specialised training opportunities required for their particular curricula. This is possible with support from the specialty school, and planning was underway for the implementation of such rotas in 2012.*

The extent of non-compliance with WTR is effectively unknown. Many organisational respondents stressed that monitoring is for New Deal compliance, not WTR. New Deal compliance requires that a rota is compliant – meaning that the total number of hours worked by *all* doctors on the rota does not exceed n x 48 hours, where n is the number of doctors on the rota. While software for New Deal monitoring does extrapolate from the two week monitoring window to the 26 week WTR reference period, this can only be estimated at an individual level. Breaks in particular are variable and not always recorded.

5.3.1   Monitoring of compliance

The effectiveness and validity of New Deal monitoring were a concern for both trainees and organisations, with a general lack of trust in the process.

Organisations complained of low response rates to monitoring exercises, often below the 75% required for action to be taken if hours were found to be non-compliant (action in the form of re-banding if the out-of-hours proportion was greater than rostered, or rota redesign if seriously non-compliant). They attributed this to a lack of engagement on the part of trainees.

Trainees, on the other hand, felt that the system placed obstacles in the way of accurate reporting, and that undesirable results would be ignored or 'lost'. This may indeed erode trust further, creating a vicious circle leading to a further lack of engagement. This may be corroborated by one organisation's observation that repeated monitoring exercises often achieved lower response rates.

There was little reported direct pressure to record false hours, but there were frequent comments from trainees about pressure to work compliant hours, even if those were not representative of normal working days. There was however substantial constructive or circumstantial pressure to record falsely compliant hours through what were perceived as obstacles to recording potentially non-compliant hours. Trainees though would sometimes leave monitoring forms until the last minute, completing them at the end of the two-week period. There was some confusion (and implicitly a lack of guidance) as to what should be included, and whether activity not related to patient care (e.g. responding to emails) should be included.

Particular obstacles for recording of accurate hours related to the need for excessive hours to be justified, approved and/or signed off by a senior clinician or designated manager. In some cases this led to falsely compliant hours being recorded simply because the 'hassle' of gaining approval would be too great. In others there was a feeling that professional autonomy was undermined by needing to gain others' approval – particularly when the approval was from a non-clinician. A particular example was in the definition of 'emergency', in which circumstances staying beyond rostered hours is allowed. While only acute clinical emergencies would qualify from an organisational point of view, trainees saw many more elements of patient care as effectively emergencies, if they felt work would not otherwise be covered .

> ***Using technology to improve monitoring accuracy***
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> *The reliance of monitoring processes on recall and completion of monitoring forms at the end of a placement was identified as a weakness in several places. Potential technological solutions to this were identified, and one Trust has introduced an electronic system (Kelio time and attendance software) which uses real-time logging of workplace attendance (using a biometric clocking-in system) to replace retrospective paper diaries. Hours are reviewed against rotas to identify any exceeding WTR limits. Some comments from trainees in this Trust however indicated it may still not be reliable as clocking in and out was not always possible, especially when on call.*

There were examples of successful appeals against banding, and some rota changes following monitoring exercises, but these were described in reference to the New Deal, rather than WTR. While there are serious legal consequences for breach of WTR (as health and safety legislation, the Chief Executive of the employing organisation is ultimately liable for failures to enforce the regulations), the New Deal can have serious, and immediate, financial consequences for employers if a rota is re-banded. New Deal is a clearer imperative simply because it can be, and is, monitored. Trust in monitoring, on both sides, is therefore hindered by pecuniary gains and losses.

5.4   Reasons for exceeding hours

With the caveat in mind that exceeding hours does not necessarily mean non-compliance, the reasons given for trainees working late fell into three categories. Firstly, there were pragmatic considerations of whether jobs could be left, due to clinical urgency, or a bottleneck in the rota with fewer doctors being on a following shift. Secondly, there was a degree of collegiality, of not wanting to burden colleagues, and a culture where routine tasks are not handed over. Thirdly, there was an aspect of professionalism, a work ethic which encompassed both these elements, but also reflected an expectation of what a doctor should be; staying late is an expression of professional identity that was expected both by senior doctors, and other professions. There were concerns that not staying late would reflect badly on trainees, and may hinder them in their later careers.

Hospital at Night (H@N)

Facilitating the successful introduction of H@N

H@N has been implemented across Deanery 4, with some centres at the vanguard of its development. Three factors were felt to be crucial to the success of H@N: a medical director reporting to the Board; nurse involvement and engagement, and a dedicated project manager to deal with the rota, reporting system, risk assessment and bleep management. The importance of leadership and corporate responsibility were stressed. The impact of H@N in this region was illustrated by one hospital reducing the number of doctors rostered at night from 38 to six (compared to a constant day roster of 180). Before the introduction of H@N there were three handovers in separate specialties, which was reduced to a single handover for the whole Hospital following the appointment of a Clinical Director for H@N. This was felt to enable better targeting of the whole team and to reduce 'silo' working, as well as helping to control trainees' hours.

Workload analysis prior to change

Many trusts analysed peak workload before embarking on service redesign, particularly when identifying the required workforce to cover a hospital at night. For example, in Trust 2A junior doctors' and senior nurses' activity was analysed to identify the busiest times, mainly in medicine and surgery, prior to the initial introduction of H@N. This allowed more effective rostering of medical staff in the daytime, with an increase in nursing posts for H@N. Trust 2B reported that approximately 45% of the H@N workload was carried out by non-medical staff, and that this helped doctors who are rostered at night to take breaks.

IT facilitation of H@N

Hospital at Night has been in operation in medicine and surgery on both campuses of Trust 3A for several years. One hospital has been working with Cisco systems and Nervecentre workforce management software to create an IT system to co-ordinate hospital care at night, weekends and bank holidays. Out-of-hours co-ordinators use handheld devices to see which patients are waiting to be seen, the status of all outstanding tasks and the workload of each member of the team, enabling them to direct requests to the appropriate doctors or other staff. There is also the potential to assign tasks to a trainee who needs experience of a particular area. For the future it is hoped that it may be possible to marry up the information in this e-system with trainees' e-portfolio, enabling transfer of information on procedures completed.

Extending H@N

One Trust in Deanery 4 implemented an extended Hospital at Night model to encompass the Hospital by Day (24/7). Streamlining and centralising medical cover in this way was felt to improve achievement of compliance for medical trainees.

However these proximal (and post hoc) reasons raised other more fundamental questions, particularly why jobs cannot be completed within hours. A common reason given by trainees, and corroborated by organisations, was that there were simply not enough doctors on the rota. The main cause of this was the existence of unfilled posts across rotas, and the difficulties in filling those posts. Some trainees in particular though felt that even fully staffed rotas would not be effective because clinical workload had expanded but the trainee rota had not grown in line with that workload. In one example it was noted that there had been a substantial increase in the number of consultants in one specialty, and so an increase in the workload, but that the number of trainees had not increased proportionately.

While locums were used to cover gaps and absences, these were often internal locums drawn from the trainee workforce, and so add additional stresses to the management of working hours. Less popular rotations would particularly struggle to fill posts, and may also not be popular among locums, meaning workload would be absorbed by the rostered trainees working late, or working additional shifts. The most extreme example given was of a rota which should have seven trainees but had only had one filled post for the last two years.

There were specialty differences in the stresses on working time. Medical specialties were more consistently intense, even across shorter hours, and so would have more tasks building up through a shift. Surgical specialties on the other hand would find that they worked later because shifts did not coincide with ward rounds. Medicine contained more learning opportunities out of hours than surgery, because more acute care in which the trainees could participate took place. Surgical trainees on the other hand, even senior trainees, were restricted in their involvement because of the CEPOD guidance limiting out-of-hours surgery. The only cases that would be conducted out of hours would be of a severity or complexity that would preclude many training grades from being involved. This limitation on surgical trainees has a knock-on effect on medical trainees, who take on more work out of hours through cross-cover arrangements, and so risk losing more of their own specialty training in the daytime.

Some specialties, such as lab medicine and radiology, were much easier to manage, and trainees in these areas were far more likely to work within their hours. Perhaps surprisingly, some acute medicine placements – accident and emergency, admissions units and critical care were also easier to leave on or near time, according to some trainees. This was for a number of reasons: these units often had a larger workforce, including senior trainees and consultants, than general wards; the throughput of patients in A&E and admissions or assessment units meant it was easier to leave when the last patient of the shift had been admitted, discharged or otherwise stabilised, while in ITU/CCU there was a clear and predicable workload, at least for juniors.

5.5   Indicators, risk assessment and educational governance

Organisations reported there being many triggers for their quality processes, and while there was some variation in the precise governance structures within Trusts/Boards, the overall process was the same.

Working time was not privileged as a trigger for quality management, but was treated as one of many indicators. The GMC National Trainee Survey was the primary indicator used by all regions, supplemented by end of placement surveys. Partly because of the confusion with New Deal, the survey questions were not necessarily directly diagnostic, but would identify areas of concern. Conversely, the investigation of any area of concern may highlight working time, or work intensity, as a problem. For example, problems about bullying were felt in one location to be indicative of a pressurised and stressed workforce.

Errors and complaints arising from fatigue were also indicators in some cases. While these may not be captured routinely, there were examples from organisations of complaints about trainees being traced back to poor rota design. Trainee wellbeing was not necessarily addressed in defined indicators, but would be detected in reflective accounts during the ARCP process.

The ARCP process was not universally felt to be an effective process however, with some organisations feeling that the assessment process focuses too much on restricted elements of practice, rather than the entirety of medical practice.

In one area the idea that competition between providers in a Deanery may serve to improve quality was raised. It was suggested that employers/education providers, and DMEs in particular, will want to attract trainees and be known for providing good placements. While this has some

Approaches to educational governance and risk analysis

Different deaneries followed the same overall approach to educational governance, but there were some differences in the specifics of approaches, sometimes between different Trusts. Trust 1B has implemented more stringent governance systems in recent years. Educational governance is through a series of committees structured as a Business Unit within the Trust, with equal status to other directorates. This allows the quality of teaching and training to be given equal priority to service delivery. Oversight of quality is by an Education and Training Board and Foundation and Specialty Training Board (F&STB), which maintains a risk register for different programmes. If a concern is raised, for example by a trainee who feels their rota does not allow them to get to a training day, this is taken to these boards, to review and liaise with the Education Team. If a standard training requirement cannot be fulfilled in the Trust, an individual training programme may be developed through consultation with the Head of School. Changes to shifts or rotas developed by HR are reviewed by the F&STB, which will review whether changes will affect attendance at training or time on wards.

Deanery 3 collects monitoring information and analyses compliance on behalf of the SHA Workforce Directorate, producing an action plan if necessary. The Deanery also analyses vacancies (in staff grades as well as training posts) that could affect training rotas. This is done three times a year, in line with the three foundation rotations. One month after each rotation it also monitors the number of doctors opting out of the WTR by grade/specialty and ensures that this is voluntary. Information is also gathered on how rota gaps are filled by collecting information from all trusts and flagging up issues to the employer.

In Deanery 8, quality risk evaluation is undertaken across all GMC domains if a Quality issue is identified through any means – national trainee survey, complaints, ARCP or otherwise. The risk evaluation is used as a tool to prioritise work and liaise with Trusts, and is sent to Trusts every three months together with information from surveys and evaluations to enable them to feed back. Trainees would not be withdrawn if the only issue was working occasional additional shifts, rather WTR would only be considered alongside other issues such as inadequate supervision or patient safety issues.

One deanery described the use of Serious Untoward Incidents (SUIs) as a potential indicator of problems arising from working hours related issues. SUIs were considered against hours worked, in case non-compliance may have been a contributing factor.

appeal as a means of improving quality, it does assume equal access to resources, facilities and clinical opportunities, which may vary with geography and patient demographics.

Risk assessment of rotas from an educational perspective was conducted at Deanery level in all areas, with the programme director, DME and associate dean or postgraduate dean involvement. However, trainee views confirmed that their involvement is necessary for an approved rota to be fully successful. The power relationship between educational and service requirements was an issue in some places, with the imperative to deliver service exerting more influence than may be beneficial for training. The management of this tension varied in part with the way in which service and education were represented within organisations, and the equality of that representation.

5.6   Educational experience

There were mixed messages regarding the effects of WTR on the content of training. Some felt that restricted hours unavoidably reduced the number of available learning opportunities, and that new generations of trainees were being deskilled – a view that came most strongly from senior trainees. However, many trainees felt that they did get sufficient experience, and that with a mixture of out-of-hours and daytime working they were exposed to an adequate mix of direct learning from consultants and other seniors, alongside independent working and having to exercise clinical judgement in acute settings. There were some concerns that the loss of continuity of care – of having to leave a patient at the end of a shift and not necessarily see the consequences of their own decisions, or those of a consultant – was detrimental. These perceptions echoed findings from the literature review (conducted as an earlier part of this study, Morrow et al. 2012). Opinions of supervision were overwhelmingly positive.

The introduction of new roles was felt to be of mixed benefit educationally. While trainees' time was freed from some tasks, and advanced nurse practitioners (ANPs) acted to take on F1 workload particularly (being seen as interchangeable with F1s in terms of skills), there were concerns that some learning experiences were lost because those ANPs were 'cherry picking' the more interesting cases.

One of the most fundamental changes, not directly linked to the WTR, but resultant from the pattern of changes of which they are a part, was the loss of the personal educational relationship that was enabled by the 'firm' system. Consultants and trainees in that system – when it was successful at least – would develop an interpersonal educational relationship and rapport, rather than one purely based on structural roles. The development of an interpersonal relationship of a trainee over a long period of time meant that consultants would get to know 'their' trainees' strengths and weaknesses,

> **GMC National Trainee Survey questions are perceived as problematic**
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> Several deaneries referred to weaknesses of the 2011 GMC National Trainee Survey questions on working time. These related to a lack of specificity in the wording that may conflate New Deal and WTR compliance in the trainees' minds. Responses could therefore be misleading if they are interpreted in relation to only one of the restrictions.
>
> Other issues reported with the survey included its anonymity, meaning that localised problems were harder to specify, the delay before receiving results meaning that data was out of date by the time it was received, and a lack of specificity meaning that many red flags were identified as false positives when triangulated against other data.

and their particular learning needs. As a consequence, and because they worked closely with their trainees, they could make sure individual trainees were able to attend learning opportunities. They would understand trainees' limits more and be aware of when they were competent to be trusted performing procedures. Conversely trainees, through working consistently with consultants, would see more of their individual practice in different clinical situations, and get more comprehensive role-modelling. Role modelling was felt to be an element of learning that is hard to measure or quantify, and that it is hard to act as role model to someone you do not know personally.

Educational supervision today, on the other hand, was felt by some to be very formulaic, based on a prescriptive meeting schedule rather than personal involvement, with formal feedback overtaking informal feedback and the awareness of the trainee as an individual. Limited contact also has consequences for what can be assessed.

Recruitment into higher specialty training was felt to be affected as well, with senior clinicians feeling they have less knowledge, and less of a stake, in trainees' progression, whereas before they would have been actively looking at their trainees as potential future colleagues. (Some trainees did still see the relationship in this way, expressing concerns about affecting their career prospects if they complained about rotas or workload). While from one perspective this loss of sponsorship may be seen as a progressive move, it was also framed as a loss of a mentoring relationship. There were also implications for doctors in difficulty, as trainees as individuals are less visible, and seniors are able to take less of an active interest in them. Remedial action may therefore not be initiated as quickly.

> **Rota changes to promote educational benefit**
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> *Some changes to rotas were explicitly driven by an identified potential benefit to learning. One Foundation trainee reported a rota change involving the introduction of a 3pm-midnight shift. They had felt they were not learning when patients were asleep and wanted to be present when there was more activity on ward. Following discussion with a consultant and subsequently HR, a new rota was developed.*
>
> *Another Foundation trainee reported positive educational benefits from an orthopaedics rota where trainees had half a day built in when their routine ward duties would be covered by another trainee to enable them to attend theatre or a clinic, in addition to a weekly orthopaedic teaching session. In this way the trainee was provided with more educational autonomy in these periods.*
>
> *Particular concerns were identified around the timing of shifts in surgery, and their alignment with pre- and post-operative ward rounds. Surgical trainees in one Trust felt it would be beneficial for shifts to finish between 60 and 90 minutes after the end of a theatre list to enable them to see post-operative patients on the ward. Several trainees reported that a shift that started at the same time as a theatre list (usually 9.00am) did not allow for attendance at the pre-op ward round, which was of educational and patient benefit and thus often undertaken voluntarily. A surgical rota in Deanery 9 was changed from 9.00am-5.00pm to 8.00am-6.00pm as the theatre list ran until 5.00pm and doctors then went onto the ward at 5.30pm. Handover is built into rotas, with larger sites having a 30-minute overlap.*
>
> *In Deanery 4 the start of physicians' post-take period was moved to 9.00pm, coinciding with the start of a 9.00pm shift for junior doctors, who were thus able to attend the post take for patients admitted during the day and receive immediate feedback.*

Working time was an issue running through all of these points, as it was felt that registrar grades in the past, particularly senior registrars, had less direct service pressure and work was less intense as

they were supported by SHOs, and so could spend more time purely on educational activities and 'grow into' the role of doctor.

Some people felt that the move to competency assessment in training means that some elements of practice are not explicitly reviewed, and that with the loss of training relationships, some knowledge of trainees is lost within the system. Making the previously informal progression formal has strengths that are acknowledged, but there are also weaknesses because not everything translates to data.

Some respondents did concede that comparisons with the past may draw on an idealised picture of that past, and that some trainees may not have had an optimum educational experience, but the feeling came from many respondents – trainees as well as organisations – that some benefits had certainly been lost. While some trainees felt that their educational supervisors did know them, and were there for personal support, educational supervisors are not usually in a position to have direct influence on the trainees' exposure or experience.

5.7   Professionalism

A strong feeling expressed by some contributors was that restricted working time is changing aspects of the professionalism of junior doctors.

The compulsion of the WTR to leave on time, and the lack of flexibility, were felt to undermine their professional autonomy, and their motivations to stay because of feelings of professional responsibility. These perceptions were also reported in the literature review (Morrow et al. 2012). This was compounded by a feeling that those motivations were not recognised, and that for junior trainees at least, staying late would be attributed to their own inefficiency. Some organisational responses implied that financial motivation was also a factor. Some trainees did feel that not being paid for their time was a symptom of this lack of recognition, but many explicitly stated that payment was not the issue, but rather that they simply wanted their work to be recognised by the system. They generally felt that their work was recognised by their immediate superiors, but not by the organisation, or culturally.

Overall, it seemed that senior clinicians (among organisational respondents, but also senior trainees) felt that junior trainees were becoming de-professionalised by the imposition of restricted hours. 'Clockwatching' was a recurrent charge against junior trainees (from senior trainees as well as management), along with accusations of 'militancy' from some managers, particularly with regard to the banding of rotas. The trainees on the other hand felt their own professionalism, personal commitment and professional integrity were no different from those of previous generations, but that the changes to the system, and processes such as monitoring as described above, challenged this professionalism.

Professionalism may also be threatened by the feeling that doctors are subject to the demands of other staff groups, being expected to drop everything, to not take breaks, etc, if for example a nurse asked them to do something. While this in itself may not be new, being subject to organisational pressures in a way they were not previously may contribute to the feeling of being undermined.

5.8   Trainee wellbeing

There was a general feeling that the intended benefits of the WTR, in terms of less trainee fatigue and improved work-life balance, had been achieved to some extent. It was recognised at an organisational level, and by trainees, that working hours today were much improved on their predecessors'. However, there are still long shifts, and long weeks, with many indicating they could still work up to 100 hours in a single week, and runs of 12 days at work (including some 13 hour shifts) not being unusual. It was hard to take eat or drink properly, or even take toilet breaks, during many shifts.

While the WTR may reduce long term fatigue and burnout by reducing the numbers of such long periods of work, they have not eliminated tiredness arising from acute periods of long and/or intense work, and the perceived risk of inefficiency and/or error arising from that tiredness. Some trainees had concerns about possible threats to patient safety. Their value was therefore not entirely accepted. As many respondents said, the work for an individual doctor had not necessarily reduced, but now needed to be done in a shorter period of time. A shorter, more intense period was felt to be as fatiguing as a longer, less intense one. This point should be considered in light of the findings in the literature review that fatigue has consequences for cognitive and psychomotor skills, and so for personal and patient safety, and for doctors' health (Morrow et al. 2012).

> **Trainee experiences of different working patterns**
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> *Different working patterns – the length of shifts and number of consecutive days worked – were experienced differently. Foundation Programme doctors in one Deanery compared the experience of working a short sequence of long shifts with longer sequences of long and short days.*
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> *This group described working up to thirteen days in a row, a mixture of long and short days. "When you go from days to nights with only that week's day off so within those thirteen days you'll do three nights, you finish on the Monday morning, your night shift, you'll sleep all day Monday, you'll sleep all Monday night and then you go day time on Tuesday." The long weeks were felt to be particularly tiring: "I don't mind doing thirteen hour days, but I think is it maybe that length of time doing thirteen hour days, in some ways I think I prefer doing three thirteen hour days and then having an extra day off in a week"*
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> *Rest periods following nights were not always felt to be sufficient: "When you finish 8 am Friday morning and then you're back in 11 am Saturday morning."*

Working in a shift system was considered to have potential detrimental effects for young doctors, such as feelings of isolation from friends and from the organisation. It was suggested that there could be more training on how to work at night (which young doctors could find stressful, particularly as they are only at the hospital for a year and could be joining a team who had been working together for a long time) and on how to recognise personal stress and its potential effects on performance. Working in an exposed position, where there was little control over workload, was considered to be an important issue to consider as well as actual hours worked. Shift working and higher intensity shifts may be more suitable to some personality types – disadvantaging some who may be interested in pursuing particular specialties which do not involve such intensity (the example was given of a dermatologist who has to do core medical training, including acute medicine).

Limiting working hours was felt to have improved work-life balance, but there were still examples of long hours affecting personal relationships. There was increasing separation of some educational

activity from the working day, with reading, studying for exams and completion of e-portfolios being done outside work, where previously they may have been integrated into longer periods at work.

5.9 Purpose and objective of training

Finally, some discussion which brought together elements of education, professionalism, and governance, raised the question of what the aims of medical training are, with some feeling that these are changing. A perceived reduction in experience may not necessarily diminish clinical expertise (although many feel it will), but a reduction in opportunities to learn means that many trainees accept they will not complete their training with as broad or deep a knowledge as previous generations did. In at least one specialty it was felt that the technical knowledge of trainees was far ahead of previous generations, but that they had not gained experience of the strategic and managerial thinking necessary in a consultant post.

The perception is that the consultant role is changing, with further changes to consultant workload anticipated. Some feared a two-tier consultant grade, as a downgrading of the status following completion of specialty training. This has potential consequences for the standing of the medical profession, and how trainees perceive a future in clinical leadership.

These fears ostensibly seem far beyond the impact of the WTR, but it was clear in many respondents' minds that there is a clear link between restricted working hours and the eventual outcome of training. This link is not linear though, and is subject to complex interactions.

> **Consultant-led culture**
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> *The importance of leadership within clinical teams was illustrated by one trainee who described how individual consultants' different approaches could change the culture and experience of a placement. They contrasted a system under one consultant which they felt was isolating, with no team cohesion or solidarity – "it was utterly demoralising and upsetting and gruelling" – with another in the same hospital in which they felt they were part of a team working together, where they "were there for each other". They likened this latter experience to working in a traditional 'firm'. The experience of working time, and the effectiveness of learning during the placement, was felt to be driven by this team culture.*

6   Discussion

This work has highlighted a number of issues relating to the implementation of the Working Time Regulations (1998; the WTR), and their impact on medical education and training. Firstly, it may be significant that the WTR are not universally and unambiguously recognised as a distinct set of regulations. While trainees are aware of a 48 hour limit, few are aware of further details. Many referred to the 'EWTD' (the European Working Time Directive, which the WTR implement), but did not indicate awareness of specific UK legislation. The WTR are also conflated, in people's perceptions and in processes, with the New Deal, which must also be adhered to in terms of employment law.

The findings also highlight questions about the process and purpose of training. Experience is seen as a direct analogue for training much of the time, a perception that has been the basis of many criticisms of the WTR, but it was clear that not all experience is educational. The demands of service delivery mean that fitting training curricula into working time is challenging. The balance of service and training has long been problematic, and as funding becomes more constrained within the health service, there is a risk that it will be training that suffers because service delivery is, and must be, the sine qua non of clinical practice. This is not a new concern, dating back to at least the 1980s (BMJ 1986), and is probably a perennial concern where service and education must co-exist in the same environment. It may though become a more acute concern as the consequences of the Health and Social Care Act (2012) for medical education and training become apparent.

The Temple Review (Temple 2010) highlighted that the challenge for medical education is to ensure that 'every moment counts', educationally speaking, in the workplace, meaning that medical education should be embedded in medical practice, and that service delivery should be aware of its educational component. This is not yet the case for many trainees, and there is an increasing separation between work and education that may be adding new stressors to the trainee population. It was clear that for this to take place, there needs to be senior presence on wards and in units, and for craft specialties, trainees need to be able to work alongside their seniors in theatre to learn and develop. While simulation has a role, it is not seen as a replacement for practice.

In some of our case study sites there were clear indications of an organisational tension between service delivery and educational responsibilities. This tension needs to be addressed specifically. Many comments from our participants echoed the conclusions of Temple, explicitly and implicitly, and further moves towards consultant-delivered service coupled with concerted faculty development have the potential to address many of the problems identified in this research.

In a related point, there is some implied uncertainty about what is defined as 'work', for the purposes of the WTR (and indeed New Deal monitoring). Under the EWTD, 'autonomous workers' are exempt from regulation (implemented as Regulation 20(a) of the WTR), and doctors in the Netherlands are reportedly exempted on this basis (Jaques 2012). A 2004 report to the House of Lords stated that legal opinion found the term unclear (House of Lords 2004). However, it does appear that any rota requiring a doctor to work a particular shift would not be able to claim such exemption. The relevance to the findings of this research is in the extent to which education is part of service delivery, and is defined as work. If a trainee stays behind from her own choice in order to take part in or observe an educational opportunity, should that be classified as 'work', i.e. service

delivery, or education? As adult learners, trainees require autonomy in order to develop, but this is not always possible when they are the core of service delivery. One solution may be to have entirely supernumerary educational components to rotas, but this would be potentially resource intensive, and a hard separation to maintain in practice.

The medical profession is very aware of its history and heritage, and changes in training and practice are seen as elements of a process, rather than isolated interventions. Consequently, changes in training that predated the WTR are still perceived as having adverse consequences for education and service delivery. The 2007 implementation of specialty training reform, and the introduction of run-through training, was still spoken of with some bitterness by trainees. While there is a degree of nostalgia for the earlier, less structured system, and perhaps a vision of professional freedom that would not be as workable today, moves which may limit doctors' freedom to develop at their own rate may lead to lower retention of the medical workforce. This may have consequences both locally, as trainees have to move to different deaneries to pursue specialty programmes, and nationally, as they seek to work abroad where there is greater perceived flexibility and opportunity. Workforce planning should perhaps not see medical training as mechanistically as has perhaps become the case in recent years.

With uncoupling of core and higher specialty training in some specialties, it is possible that more trainees may apply for non-training posts such as clinical research or teaching fellowships. These doctors are not included on training rotas, but are able to cover out-of-hours working without being at risk of WTR breach. However, areas with large numbers of fellows are likely to be urban areas with more prestigious teaching hospitals, which are already likely to be more popular for applicants, and so experience fewer gaps in rotas arising due to unfilled posts.

There are roles which allow doctors to practise and gain experience (including training experience) before committing to a training programme: fixed term specialty training appointments (FTSTAs), and two types of locum post (Locum Appointment for Service or LAS, and Locum Appointment for Training or LAT). However, these are not available everywhere, and may be seen by doctors as marginal compared with the previous SHO posts, and the 'locum' designation may make LAS and LAT posts less appealing to many.

A number of issues were raised for the future. It is important that it is acknowledged that hours alone are not the problem. While restricted working hours do present problems, they coincide with other changes. Solutions and further changes should therefore look at those other issues as well.

Reconciling the tensions between WTR and New Deal may simplify some processes, and may allow more trainee-friendly WTR-compliant rotas to be developed. Some trainees felt that some increase in their working hours would be of benefit to educational opportunity, although there was also awareness of the risk that service demands would expand to fit that time. Many trainees were happy with the 48 hour limit. It was suggested that dedicated educational time be included on a rota, during which trainees would be supernumerary to service delivery, but still be recognised as doing work.

Reconfiguration and consolidation of services is clearly one way of making rotas more efficient in terms of staffing levels, but this is not always an option for geographical reasons, and even where patients' journey times would not be too adversely affected, the wider implications of such changes for patients, doctors and others should be considered.

Deaneries felt that overall, quality management processes were sensitive to issues arising from working time. However, this seemed to contradict the feeling from trainees, which was also implicit at an organisational level, that there is at least a gap in knowledge of working hours, and at worst there are severe problems faced by trainees in some rotas. This suggests that while quality processes may capture some concerns, they are not sensitive to all issues, and should be reviewed.

As a large part of this, the role of processes for monitoring working hours needs to be considered. At present, there is no direct monitoring of hours with direct reference to the WTR, and the New Deal monitoring that does take place is not part of the quality management processes in Deaneries. There is considerable feeling that the current New Deal monitoring processes are not valid, robust or transparent. Generally, educational review only occurs if a new rota arises from New Deal monitoring. The elements of quality management that do relate to working hours, particularly the GMC's National Trainee Survey, also need to be reconsidered. The survey items relating to working time need to be explicitly linked to WTR or New Deal, and to be sensitive to trainees' possible lack of discrimination between the two.

There is also perhaps a more fundamental question that needs to be addressed – what is the end point of medical training? The recently launched Independent Review of the Shape of Medical Training (http://www.shapeoftraining.co.uk/) may address this. The role of the new consultant in the clinical workforce may be changing, in part because of a perception of their having less experience, but also because of other changes in clinical practice and in the health service. At the moment this is creating uncertainty for senior trainees, and while limitations on their working hours are part of the context in which they are working, there are wider concerns that should be addressed.

7   Conclusion

This research set out with the aim of identifying effects of the Working Time Regulations (WTR) on medical education and training. The over-arching finding from the research is that this aim was perhaps over-simplistic, and that there is not a simple causal relationship between the introduction of the WTR and the experience or outcomes of medical education. The WTR were not a simple intervention, but a change to an already complex system. Any solutions to on-going concerns will need to be similarly systematic. The key findings are summarised below:

- Working within the WTR has brought benefits to many trainees, with consistent agreement that the long working hours of the past were counter-productive, and presented risks for trainees and for patient care.

- The 48-hour limit was felt to be appropriate by many, and many trainees felt that they were able to gain sufficient training experience within the current limit, although they were frustrated by a perceived lack of flexibility.

- Nonetheless, attempts to achieve compliance with the WTR have not universally resolved problems of long hours and fatigue, and long, tiring and potentially dangerous working patterns are still in place.

- The WTR are not, however, the sole or primary cause of ongoing problems of fatigue. Other changes in medical training, and the composition of the medical workforce, have led to strains on medical rotas.

  - A lack of supernumerary posts may place pressure on trainees, as well as limiting the amount of rounded experience they receive, suggesting the structure of specialty training should be reviewed.

  - It was suggested that dedicated educational time be included on a rota, during which trainees would be supernumerary to service delivery, but still be recognised as doing work.

- These ongoing issues could be addressed, while maintaining WTR compliance, by addressing other questions of policy, work organisation, and rota design.

- Reconciling the tensions between WTR and New Deal may simplify some processes in the management of working time and the design of rotas.

- Successful implementation of the WTR requires effective leadership, a preparedness to make changes to working practices, and the engagement of trainees.

- Appropriate rota design requires sufficient resources to be targeted appropriately, on the working environment, supporting technology, and staffing.

- Quality management processes do not specifically address issues relating to working time. While processes are felt to be sensitive to extreme cases, the extent to which issues are not identified is unknown. This suggests that while QM process may capture some concerns, they are not sensitive to all issues, and should be reviewed.

- Monitoring of hours is not part of education quality processes. There is no direct link between the New Deal monitoring and educational management. However, even if such a link were made explicit, there is a lack of trust, and likely procedural problems, in the monitoring of hours that mean a more fundamental overhaul of monitoring may be necessary.

- The GMC has power as the regulator of medical education, and may be able to redress the balance of education and service through its role in quality assurance. Education and training should be placed at the heart of service delivery. Education is not seen as at the expense of patient care, but as a means of maintaining it.

8   Limitations

There are unavoidable limitations to any research, which should be considered in the evaluation of its findings. In this case, due to the way in which case study informants were identified, the case studies may be variable in the detail and depth they present. However the structured approach to collecting and collating this information should have minimised this variability. In some cases though key personnel had moved on, and detailed information was not always available.

The trainee viewpoints required volunteer participants, and as such may be open to self-selection bias. However, this risk is mitigated against by the instance of one group run as part of Foundation Programme teaching, where all but four of a cohort of F1s were able to attend. That group raised the same issues in the same themes, suggesting the prevalence of the concerns identified is not limited to a particularly engaged sample.

9   Further research

This project has indicated avenues for further research. These include:

- Investigation of work intensity and its effects on doctors' education, performance and wellbeing, and its impact on patient care. Such research should consider the clinical demands of different specialties and the working environment.

- Examination of how the design of rotas may be improved to address the conflicting demands of education, service delivery and patient care.

Individual specialties should also consider how their working practices may be adapted to ensure the maximum educational value can be obtained in all settings, and all areas of work.

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Appendix A – Specific Circumstances of the UK Nations

Scotland

Scotland has taken a particular national approach to working time management. Initially the Scottish Cabinet Secretary for Health set up a New Deal Review Board, including representatives from the BMA, Scottish Government Health Directorates and NHS Employers, and chaired by a Postgraduate Dean. This board initially took on oversight of the introduction of WTR, its function later being transferred to an Implementation Support Group (ISG). This function persists in a single WTR advisor. An NHS employee, this advisor has a liaison function with the Department of Health, briefs Civil Servants and Ministers and answers parliamentary questions related to both WTR and New Deal. The role does not involve budget responsibility.

The WTR advisor is responsible for approving doctors' rotas, ensuring New Deal and WTR compliance. This involves input into banding disputes, and assisting Health Boards in designing rotas and work patterns. The advisor is able to act as a national focus for advice and guidance regarding maximising hours and training opportunities, and to share examples of best practice, enabling consistency of approach across Health Boards. Rotas are required to demonstrate 100% compliance before being approved from a contractual and legal perspective by the advisor and from an educational perspective by Postgraduate Deans.

The Scottish Government issued guidance to NHS Scotland Health Boards in 2009 on how they might calculate WTR compliance, and asked for monthly reports to be made to the Scottish Government Health Department from March 2009. Health Boards were asked to report compliance and projected compliance levels by numbers of doctors by speciality and to report information on rotas unlikely to comply with the limits of the WTR by 1 August 2009. Prior to 2009, 60% of rotas were already compliant and some had been so for some time. This monthly reporting has now ended and WTR compliance figures are collected through various pieces of information including New Deal monitoring returns and template rotas.

Rotas are not to be planned on any assumption of opt-out by trainees, and some of the Health Boards have a no opt-out policy although, as elsewhere in the UK, trainees do volunteer to cover for absence on a locum basis.

NHS Education for Scotland had a short life working group which met to review WTR issues raised in the annual National Trainee Survey. This group was due to report in April 2012, and supports a move towards live electronic rostering. This is an on-going national project for the majority of NHS Scotland staff, and would prevent additional duties leading to breach of WTR. It would thus identify who is free to provide cover. It would include awareness of internal locum shifts, but not locum work undertaken through external agencies. Increasing efficiency of internal workforce management could though reduce reliance on agencies.

Scotland has different workforce objectives to England, with a strategic move to reduce or remove the reliance of service delivery on trainees (with a move to trained doctor delivered service supported). Eventually this will mean that workforce management is less vulnerable to changes in funding to training, and that trainees may benefit by becoming effectively supernumerary in some specialties at least.

Scotland, like Wales, Northern Ireland and areas of England, also has geographical issues, with some areas being particularly remote. Some of the most remote areas (such as the Orkneys) have a minimum of training posts, providing service through trained doctors. These areas were less affected by WTR as they had dealt with staffing issues from a purely practical necessity earlier on.

The MMC move to annual recruitment in Scotland may have impacted on the filling of vacant posts and training opportunities. Furthermore, Scotland has very rural areas where posts can be difficult to fill, which has been a long-term problem, but combined with the WTR has had implications for rota design and the need to have capacity to cover 24/7 without reliance on trainees in some areas.

Wales

Wales does not have SHAs, and NHS organisations report directly to the Welsh Department of Health. A 2009 reorganisation of the NHS in Wales created seven local Health Boards which deliver primary, secondary and tertiary care, replacing 22 health boards and seven trusts. (Three trusts – Public Health, Ambulance and the Valindre specialist cancer care trust – still exist in the new structure).

Health Boards' ability to plan services across the spectrum of health and social care may be a strength in the greater community perspective due to come into play in the near future. However, the possibility that posts may become hybrid across community and secondary care may lead to complications in training, and a shared trainee job market with other parts of the UK. Potential implications for trainees were raised in terms of attaining a trainee identity and an identity within a structure, and questions regarding ownership and accountability.

The Welsh Government has a closer relationship with healthcare, although while Wales maintained a ministerial return for monitoring data longer than England, this ceased in 2011. The closeness of the government and the health service may make some decisions – for example around service reconfiguration – more political than in England, although all nations identified that such decisions, particularly when closing or merging units may be an option, are always political. Also for political reasons, the NHS in Wales did not have any PFI-built hospitals, although new hospitals have been built.

In 2006, the Welsh Government (Assembly at the time) issued an evaluation report of compliance for junior doctors with the requirements of the EWTD, from data collected by the Government's Junior Doctor Co-ordinator team. The report recommended three areas to assist NHS employers in Wales to achieve compliance: rota management, Hospital at Night and reconfiguration of services. Extensive work has been carried out by the Wales Audit Office, which has published reports in 2009 (covering the whole of Wales) and 2011 (a separate report for each Health Board), highlighting approaches to achieving WTR compliance, problems faced across the country, and the attitudes of consultants to the changes.

Contextual issues were highlighted for this Deanery in terms of physical geography, for example with some remote rural areas, and in terms of political influence and Government involvement in reconfiguration decisions, adding an extra layer of complexity. Some parts of the country have high proportions of first-language Welsh speakers, and this can also present problems for recruitment. The health service is the government's biggest budget, and any reduction in spending may impact on reconfiguration. There are also staffing problems, for example having insufficient staff grades caused difficulty achieving compliance, and there have been recruitment difficulties in some specialties, particularly paediatrics.

Northern Ireland

The introduction of New Deal and WTR in Northern Ireland was under the authority of the Department of Health, Social Services and Public Safety (DHSSPS), which provided significant funding for initiatives to achieve compliance, including Hospital at Night.

An Implementation Support Group (ISG) was established in August 2001 under the DHSSPS with the intent of assisting Trusts in implementing the New Deal for Junior Doctors, and in 2004 to consider the implications of the EWTD for junior doctors. The ISG worked in an advisory capacity with Trusts, Boards and Departments. There was a smaller subgroup, the Department Liaison Group (DLG), whose role was mainly to oversee the day-to-day business of the ISG, engaging with local Trusts and advising on compliance issues.

In 2008 responsibility for ensuring that doctors and dentists in training work within the legislative requirements of WTR and the regulatory requirements of the New Deal moved from the DHSSPS to the Health and Social Care Board (the Board). The Board worked with Trusts on applying for any necessary derogation, and on achieving and monitoring compliance.

The ISG was renamed the Board Liaison Group (BLG) at this time, undertaking the ISG's advisory functions but also with a refocusing on the aim to 'improve junior doctors' working lives'. It includes representatives of the Board, the DHSSPS, employing Trusts (e.g. Medical Directors or Medical HR), the Northern Ireland Medical and Dental Training Agency (NIMDTA), the BMA and nursing representatives, and a junior doctor representative as Medical Projects Officer. Its objective is 'That doctors and dentists in training throughout Northern Ireland work within the limits set by the European Working Time Directive and the New Deal, while maintaining working lives that promote their wellbeing and professional development'. There are quarterly meetings of the full BLG, with delegated business conducted by a sub-group that meets monthly. Standing agenda items include accommodation, monitoring, education and rota design.

An HR advisor works for both the DHSSPS and the BLG, with a role in connecting the two. This Advisor and a Medical Project Officer carry out site visits and meetings as required by the work programme. The BLG role is not to directly performance manage trusts in relation to training, a role which is carried by the Deanery through quality management and assurance processes. The BLG role is one of partnership, holding influence rather than direct authority. However it is involved in re-banding decisions and can ensure that new rotas are developed with appropriate consultation to be compliant with both New Deal and WTR.

The BLG tries to ensure a standardised structured approach to monitoring, and acts as a conduit between trusts and trainees. It can become involved in banding/re-banding processes and appeals, grievances, and how trainees can become involved in rota design. It is also conducting an audit of posts such as nurse practitioners which were created through ISG input, to ensure resources are still going towards the intended aim of supporting junior doctors. Accommodation and catering also come within its remit in relation to improving working lives and the New Deal. The BLG representatives stressed the importance of maintaining a focus on junior doctors' wellbeing, in addition to New Deal banding issues.

In Northern Ireland, there is still a ministerial return of monitoring data, regarding both New Deal and WTR compliance (with reasons given for cases of non-compliance). The HR Advisor reports to the Minister and to the BLG and flags up any issues for BLG performance management, and, in some cases, the Trust Chief Executive.

Health and social care in Northern Ireland is likely to undergo further change in the future following the publication of the Compton Review (2011) which urges a managed change in an integrated system of health and social care. The implications of this, through service reconfiguration and workforce planning, will have consequences for junior doctors' education and training.

Appendix B – Case study narratives

Case studies are drawn from meetings and conversations with staff in Deaneries, SHAs and NHS Trusts/Health Boards. Staff were in different roles, with different perspectives on the questions, and so while statements are ascribed to the organisation (e.g. 'Trust X felt that…'), this may disguise a partial viewpoint. This format is used to maintain anonymity of individual respondents.

Case studies have been reviewed by all respondents from each region, with the aim of capturing any partial or unrepresentative viewpoints. Some views which were obviously respondents' opinions are presented in the overview section, and are not attributed to a Trust/Board, to further maintain anonymity, while other opinions which related to wider policy have informed the Synthesis in the main text, rather than being included in the case studies.

Finally, to further protect anonymity, the term 'regional' has been used to include the terms 'regional' and 'national', and 'Trusts' to include 'Trusts' and 'Health Boards'.

Deanery 1

Introduction of WTR

Implementation strategy and leadership

The introduction of the WTR was a top-down process regionally, led by the SHA which regarded it as a patient safety imperative. A project team was convened, including the Director for Patient Safety, a representative from the Workforce Directorate, medical directors from most Trusts, medical staffing, a BMA representative and a dedicated EWTD lead who had worked on the introduction of New Deal contracts, and so had a wealth of experience in developing rotas with clinical involvement. This New Deal expertise was a key element of developing the regional approach.

While the SHA led, its role was to provide advice and guidance, and each Trust had the autonomy to develop and implement WTR compliant rotas in ways they saw fit. One feeling from an SHA informant was that those Trusts which had been involved earlier on were more successful in making the transition to WTR compliance.

From Trust perspectives, the main driver was the legal imperative to achieve compliance before August 2009.

Trust A set up an EWTD steering group chaired by the Assistant Medical Director for Education to bridge the introduction (so operational between November 2008 and March 2010), with an EWTD project manager from HR. Responsibility then transferred to HR. The Trust received early stage support from another SHA which assessed its readiness for compliance including exercises such as interviews with consultants and junior doctors, and helped devise an action plan.

A 'traffic light' system was used to prioritise concerns for particular rotas. A minority of cases were 'green', meaning that they were already compliant with the 48 hour limit. These were mainly 'ology' specialties, where juniors worked predominantly in the day, in clinic-type settings with few or no non-intensive on-calls.

'Amber' areas were those which were currently in excess of 48 hours, but where it was felt that minor changes could achieve compliance. These were areas where there were larger numbers of trainees (e.g.10-14 doctors in one area), or where different specialties could enable cross-cover together (e.g. general surgeons and liver surgeons), to meet the desired minimum number of doctors for a rota (at least 8 doctors, preferably 10).

The most challenging 'red' rotas were typically in specialties with fewer staff and significant out-of-hours (OOH) service demands, so called '24/7 specialties' (for example neurosurgery and transplant). These tended to already be problematic in terms of meeting the New Deal's 56 hour limit, and so were of particular concern regarding 48 hour compliance. Solutions here required different approaches.

Trust A felt that perceived urgency reduced a little once the WTR were implemented, and rotas were either technically compliant, or in a few cases derogated. However challenges arose at this point as issues related to the feasibility of compliant rotas emerged.

Trust B had experienced more changes in the years preceding WTR, and had introduced service redesign solutions before WTR became a pressing concern. It felt that the WTR and other changes presented opportunities for solving some pre-existing issues with some specialties and grades. These are described in the following sections.

Service redesign strategies, drivers and enablers

The overall SHA focus was to look at skill mix and multi-professional solutions with new roles to take on tasks, and at how services could be rationalised and improved from an organisational perspective. At the same time, WTR was one of several drivers for change in service redesign.

Trust A reported changes being as much to do with costs, capital investment and clinical progression as WTR. Rationalisation of services was taking place at the same time with services going from three to two sites, the timing of which necessitated a bid for derogation for paediatrics, anaesthetics and neural services.

Trust A made a successful bid to the SHA for additional funding to support implementation, from nationally provided resources. The money was used to fund nurse practitioners, surgery assistants, junior doctors, phlebotomists and consultants and was provided for one year initially, extended to a second year with the requirement for a long-term solution. Service rationalisation is taking place following construction of new PFI-funded hospital premises, and consolidation of some services (particularly paediatrics) on a single site. Drivers were service delivery and the availability of PFI funding for the replacement of ageing premises, with WTR an incidental benefit, rather than a direct driver.

In Trust B WTR compliance was a driver, and part of a long-term strategy, involving the construction of a new hospital, and one driver for consolidation of services, with a review stating the need for services to be centralised. The specialty of obstetrics and gynaecology had consultant led units at three existing hospitals, all needing to be run 24 hours a day and with a high locum requirement. Centralising three acute rotas into one meant gaining additional FTE consultants, with teams led by consultants working in acute settings and being able to run extended working days. The new hospital transformed the way in which the Trust could teach (see 'Changes to training' section below).

Trust B described a number of other factors which enabled or motivated service redesign. Changes in the NHS, particularly the introduction of Foundation Trusts and the payment by results tariff for consultants drove service configuration. The introduction of Foundation Programme meant that more junior doctors were available, while Teaching and Research Fellows provided a pool of known and reliable doctors who were available to provide cover without recourse to agency doctors. Trust A also has a large number of academic trainees available for on-call cover.

Both Trusts have implemented Hospital at Night. In Trust A this is being developed for particular specialties – paediatrics and urology. In Trust B this was first established to support the smallest district general hospital which was too small to sustain trainees, and the larger hospitals followed. Night nurse practitioners play a key role; these are all senior nurses within the Trust who were trained in house by a senior lecturer in medicine based in the Trust, using their own locally designed syllabus.

Changes to training

Trust A observed that the 48 hour limit had an effect on the delivery of teaching, with a 20% reduction to the already borderline 56 hour limit meaning time on wards, in theatre and clinics was greatly limited. Out-of-hours duty – evenings, nights and weekends – was seen as predominantly service delivery, with limited educational opportunity as consultants were generally not resident, even if they are on-call. 'Sit down' teaching has reduced, and is still not always available to all trainees if required rest periods keep them off-site.

Mitigation strategies were developed, including an increase in lunchtime teaching, and substantial investment in simulation technology.

Senior trainees in some subspecialties have requested that they be supernumerary to general rotas, as cross-covering demands keep them from specialised training opportunities. This is possible with support from the specialty school, and planning is underway for such rotas in 2012.

Trust B has implemented a radical reorganisation of training rotas in Foundation Programme, with a clear separation of 'front of house' and 'back of house' work. Of the three four-month placements in the Foundation Years, one is front of house, working in emergency care and delivering on-call services, one back of house (on wards, in clinics), and the third in two 'ologies' for two months each, focusing on areas in which trainees may be interested for specialty training (trainees choose their placements). This initiative means that the front of house placement provides emergency and on-call experience in supervised contexts, and that the other placements provide consistent daytime educational experience, including classroom teaching. Trainees are not expected to attend educational sessions while on front of house placements, but because this is planned, more sessions can be planned into the other placements. While primarily a change to the way in which educational placements are structured, this is also a change in service delivery, and effective handover is key to ensuring continuity of care. Pharmacists and nurse practitioners deliver some training, which may otherwise have been delivered by trainees, and multi-disciplinary 'learning sets' are being planned.

The rotas are possibly more rigidly implemented than in other places. Opt-outs are not allowed because the rota is organised such that additional cover is not required. Holidays are booked into the rotas from the outset, and swapping is not encouraged.

Other initiatives include the use of online e-learning, including Trust induction. Simulation is also used for skills and team training. There is also faculty development, and the consultant appraisal programme has a section on education and training. There is an agreed teaching and training tariff for consultants, with time allotted in the job plan – a tipping point in making it a core activity.

As in Trust A, some surgical trainees have arranged support and out of programme experience to gain remedial specialty experience where general cover has limited their learning opportunities. Some have felt there is less support for juniors as seniors are in theatre, resulting in less contact between juniors and seniors.

Management

Rota design and management

The SHA supported the use of a software programme for rota design (DRS) across the region.

In Trust A Directorates had EWTD operational groups to formulate a plan to be agreed by a steering group prior to implementation, although there were sometimes concerns such as impact on the availability of doctors during the working week and opportunity to attend teaching sessions they had previously attended, and concerns of a shift system leading to loss of training opportunities and continuity of care.

Trust A involves clinicians in the development of rotas at two stages, firstly in a discussion of overall requirements and general review of the initial rota with senior clinicians, and secondly with involvement of junior doctors for further refinement. There is in-built flexibility to allow them, for example, to move a

compensatory rest period to allow attendance at activities such as teaching sessions or ward rounds. Some changes to rotas have been requested, for example from surgery, and from concerns in some areas that the shift system reduces attendance at clinics and exposure to aspects of patient care. There is an increasing move towards resident on-call rotas, particularly in areas such as O&G.

In Trust B rota design is carried out centrally for audit purposes, but also involves clinicians if changes to the rota are needed. It was reported that rota design and a move from on-call to full shifts had been more complex in some specialties than others, for example in orthopaedics, and in O&G and paediatrics, where lower numbers of doctors reduce opportunities for rota flexibility.

Some specialties have bigger pools of trainees to draw on, in order to manage rota gaps etc, while differences between specific groups of specialty trainees (possibly related to their specialties, possibly just idiosyncratic) meant than some collaborated on shifts and swap more than others.

Other issues identified concerning WTR compliance related to a potential national reduction in trainees as some specialties are oversubscribed.

Monitoring

Both trusts pointed out that final responsibility for reporting of actual hours lies with the trainees.

The Lead Employer Trust asks Trust medical staffing managers for confirmation that rotas are compliant, and the Postgraduate Dean has the power to withdraw training posts. Medical staffing keep copies of rotas doctors are signed up to do, and payroll and the Lead Employer Trust have a copy of where doctors have worked extra hours. Monitoring of extra duty forms would be a way to capture working in excess of the WTR through formal paperwork.

In Trust A there has been low compliance with monitoring returns (19% first round, 9% second round). While non-compliance with monitoring is technically a contractual breach (related to New Deal), it was felt that using disciplinary procedures to pursue non-compliance would be unlikely.

Uniquely within the Deanery, Trust B has introduced an electronic system (Kelio time and attendance software) to replace paper diaries to ensure compliance, although also with a safety perspective. Foundation and specialty trainees clock in using a biometric (fingerprint) scan and their GMC number. This initially had some resistance from trainees, but has received SHA support and BMA support, particularly in relation to doctors' safety, and been accepted. The clocking of breaks had been discontinued but later re-instated at the request of the BMA for doctors' safety and protection. Hours are reviewed against rotas to identify any exceeding. If insufficient data is available for full analysis (requiring 75% on rota provide 75% of their clocking), the available data is examined, any issues with shifts are discussed with directorates and meetings are held with junior doctors to discuss any areas they are concerned about such as very busy wards or clinics that over-run.

Educational governance and quality management processes

Both trusts described management of concerns around working hours or education (as suggested by any of the indicators described above) as being dealt with locally, through educational supervisors and consultants, before escalating if necessary through Training Programme Directors (TPDs) to Deanery level. Levels of action

may then scale from an enquiry, asking the Trust for more information, through more formal meetings to a full visit. Options to change working hours would be explored with HR departments as well as education.

The primary indicators used to identify concerns about education and trainee wellbeing are the GMC National Trainee Survey and Foundation/Specialty School questionnaires administered at the end of placements. While the WTR specific questions may highlight concerns, these would not be dealt with differently from other questions. Concrete measures which are used in some specialties (and may be reviewed in the Annual Review of Competence Progression [ARCP] process) include log book evidence of core competencies being signed off and numbers of procedures performed, or for medical specialties clinics attended and patients seen. Low frequencies or particular gaps may indicate problems with the exposure trainees are getting in a particular placement.

At a Deanery level indirect indicators include applications for posts within trusts. In some cases a low rate of posts being filled may indicate possible problems. Incidence of WTR opt-outs may also be an indicator that could be monitored at Trust level within HR departments.

Regular Deanery visits conducted as part of GMC quality assurance, including meetings with trainees, can also identify concerns. In some cases specific complaints may be received from trainees, although this is unusual.

Trust A attempted a WTR-focused survey before and after the introduction of the 48 hour limit, but there was little engagement from trainees, and the work was abandoned due to low response rates. However, regular focus groups are run with FP trainees to explore any problems which may highlight any concerns about working hours.

Trust A reported that interactions with schools are not necessarily based on formal interactions though, and that feedback may follow informal routes based on personal relationships – in practice this means that issues raised within specialties may be channelled directly to TPDs, rather than through the Director of Medical Education (DME). Change will be negotiated internally, but should go through the DME, rather than (as often happens) through TPDs. Communication between trusts and Deanery level tends to be through TPDs rather than the DME.

Trust B has implemented more stringent governance systems in recent years. Educational governance is through a series of committees structured as a Business Unit, with equal status to other directorates. This allows the quality of teaching and training to be given equal priority to service delivery. This is overseen by the Education and Training Board and the Foundation and Specialty Training Board (F&STB), which maintains a risk register for different programmes. If, for example, a trainee says their rota doesn't allow them to get to a training day this is taken to these boards, to review and liaise with the Education Team. If a standard training requirement cannot be fulfilled in the Trust, an individual training programme may be developed through consultation with the Head of School. Changes to shift or rotas developed by HR are reviewed by the F&STB, which will review whether changes will affect attendance at training or time on wards.

Royal Colleges can also act. One college withdrew recognition from training posts at one hospital in Trust B because trainees were felt to be performing too much unsupervised acute care. That specialty then had to recruit staff grade doctors to fill the gaps. This sort of issue would now be recognised and addressed by the educational governance structures.

Overview and Additional Comments

As well as descriptions of the introduction, management and educational governance aspects of WTR, respondents made many other comments and observations. These were ad hoc comments and opinions so are not attributed, but do provide context and detail. These issues will be further developed in the synthesis.

It was noted that while rotas may look fine on paper, they may not reflect factors such as out of programme experience, career breaks and sickness. This may mean last-minute effects on specialty trainees in particular who find themselves having to cover an on-call, at the expense of attending clinics. Whereas before they would have been able to do both, under WTR the on-call service delivery takes precedence.

It was also noted that a problem with GMC survey data being retrospective is that it is hard to be responsive – by the time it is analysed and fed back it is several months down the line. Local surveys may be more timely, although they also have time lags.

It was felt that some doctors do not necessarily understand what the WTR actually mean in practice and what flexibility they allow. One trust felt that some trainees did not exercise enough time management, and did not see it as an element of their work. This was perceived as generational change, but it is possible that this sort of educational time management was not important in the past as there was sufficient time available. Conversely the other identified the transition from medical student to F1, with the consequent changes in expectations and the structuring of time as being hard for some trainees in Foundation Year 1. Not being able to plan holidays or weekends took adjustment for some trainees. The impact of these factors may vary between specialties, which may plan their rotas with different advance periods. Some may be as far as a year in advance, with trainees told when their holidays are with no flexibility.

It was noted that medical higher specialty trainees (HSTs) were covering surgeons when surgical registrars were in theatre, limiting their exposure to medical cases, and stretching their service delivery. Particular impact was identified at Deanery level on higher medical trainees - medical registrars - who would have previously been the most experienced group seeing emergencies, out of hours. This group were now stretched, as they were providing cover for other specialties (particularly surgical specialties whose time is refocused on daytime work). This has led to this grade leaving general medicine and training posts becoming harder to fill.

Finally, it was noted that the concurrent changes in training, of which WTR are only part, may be changing medical training at a fundamental level – that the end point of run-through training in limited hours, with new ways of working alongside new professional roles, may be different to the historical consultant role. This issue will be addressed further in the synthesis.

Deanery 2

Introduction of WTR

Implementation strategy and leadership

The merger of three former Strategic Health Authorities into one organisation served as an opportunity to review local provisions for supporting implementation of New Deal and EWTD compliance. A proposal was put forward to create one team, the EWTD Medical Workforce Development Team (EWTD MWDT), to support full implementation of EWTD compliance across all organisations one year early, by August 2008. This would enable time for new working patterns to be embedded and monitored to identify any problems and confirm full compliance before August 2009. In addition, early implementation allowed organisations the opportunity to realise any cost savings as soon as possible, with the potential of reinvesting such savings into the solutions implemented. The MWDT was established in August 2007 and consisted of seven junior doctors covering the two Deaneries within the SHA.

Implementation of WTR was considered difficult to disentangle from financial difficulties, and changes in the supply of doctors between 2007 and 2009, for example recognising they had too many junior surgeons and not enough GP trainees. WTR was however viewed as a positive catalyst, and a mechanism for improving learning.

The process was led by cross-professional working groups in trusts, in partnership with the SHA. The Deanery role was described as more of a 'steering' role, for example supporting trusts in reconfiguring rotas and looking at the best type of working pattern or rota for particular specialties. Some barriers to change were encountered. These were attributed to cultural resistance to change, although there were also concerns about the future financial burden that may have resulted from the new ways of working.

The Director of Medical Education was to sign off rotas as 'educationally sound', and providing a suitable balance of education and service and meeting the (then still rudimentary) curricula. Implementation of WTR was considered to have been greatly helped by the junior doctor team and by the year-early implementation, avoiding hitting the legal regulations without room for manoeuvre. That compliance was a legal necessity was identified as a useful motivation for trusts.

It also helped that other developments, including MMC/MTAS and the start of Foundation Programme were happening at a similar time. It was considered that it would have been more helpful if Trusts had looked further into changes such as moving some of the less educational, more 'mundane' tasks to other grades to enable more time to fulfil Foundation Programme components and enable developmental opportunities such as attendance at theatre and outpatients. There was also adjustment needed to accommodate the introduction of a structured curriculum for all specialties in 2007. A need to look at the whole workforce, for example filling gaps in training posts, an awareness of increased desire for flexible working and out of programme experience, and adjusting workforce plans in recognition of the service shift towards general practice were stressed. An interest in, and commitment to, medical education from the Chief Executive and the Director of Medical Education were considered an important factor in making WTR work.

Specialties for which it was originally difficult to find solutions were those that could not be involved in cross cover arrangements or H@N such as paediatrics, O&G, anaesthetics and some surgical specialties such as ENT, maxillofacial, transplant and neurosurgery. These specialties often had smaller numbers of junior doctors for

the rota and some expansion was required, however this was accompanied by recruitment problems and the need to conform with workforce planning.

Trust A noted that its biggest challenge had been where services were not all on one site, with two separate children's hospitals and a separate paediatrics site. The solution of services coming together, which had been identified prior to 2006, posed its own challenges. Solutions have been implemented including resident consultant posts to support patient care over a 24 hour period. The pooling of rotas from several quieter departments into one more consistently busy one was felt to be beneficial for training. Overall Trust A reported expanding middle grade posts.

Service redesign strategies, drivers and enablers

In Trust A, a reconfiguration of maternity and general children's services was taking place at the same time, with concerns regarding the ability to deliver services on multiple sites originally raised by the obstetrics and gynaecology service in 2004. There were initially political difficulties around 'closing' units, but the reconfiguration has now gone ahead, with a reduction in the number of inpatient units providing overnight paediatric and obstetric care from thirteen to eight units, and an increase from two to three Level 3 Neonatal Intensive Care Units. The WTR were seen as a catalyst for this service change. New hospital buildings had been built in both trusts, and it was noted that moving to new buildings made the redesign of services easier.

Children's and maternity services explored consultant services, however it was considered that to have sufficient consultants to provide 24 hour cover would have been deskilling because there would not be enough to do, therefore they work days and nights at different sites. A number of sites operate a resident consultant model and teach 24/7, which was reported to be popular with both consultants and trainees, despite concerns expressed by the Centre for Workforce Intelligence that the model might give reduced opportunities for trainees. Greater opportunities for senior cover have enabled the provision of better supervised cover.

Confederation of services has also taken place, with groups of Trusts getting together to deliver out of hours (OOH) services across Trust, and even SHA, borders in vascular and maxillofacial surgery, ENT and urology, with consequences for training and OOH cover.

Another service delivery change has been the use of non-medical staff (e.g. nurse practitioners) to deliver parts of the service. For example, nurses work the deep vein thrombosis and pulmonary embolism clinic, thus avoiding admissions and junior doctors being embedded in too much mundane work. Both trusts reported that the employment of advanced nurse practitioners, nurse practitioners, specialist cardiology nurses (who are able to undertake some assessments and procedures), and also medical support workers enabled some routine tasks (e.g. cannulas, venflons, taking blood, ECGs) to be removed from junior doctors' workload, although it was important that these were not removed completely, to avoid de-skilling. WTR was a big driver in implementing these new roles. Resident consultant posts were also created to cover evening shifts in medical specialties – while primarily geared towards service delivery, these also opened up educational opportunities later than a traditional day shift.

Trust B also received funding from the Deanery to improve and extend the hours of the phlebotomy service as part of the overall programme of initiatives to enable the Trust to meet WTR targets, and the project was initiated in December 2007. Seventeen mobile tablets and label printers were purchased to enable blood collections to take place morning and afternoon and pick up on some that would previously have been done by junior doctors. Another initiative was the placing of 120 tablet devices (two on each ward) to reduce time spent

by junior doctors queuing to access equipment or staying behind, for example to type up discharge letters. Initial concerns such as the time needed to charge the equipment have largely been addressed. The use of tablet devices for ward rounds was suggested, but it was felt that it was quicker to handwrite notes and that they might interfere with the teaching environment. The use of digital dictation on ward rounds was also considered but felt to be intrusive. In Trust B handover is now electronic and there are fully electronic patient records.

One hospital in Trust A operates H@N, usually in acute hospital specialties of medicine and surgery. O&G and paediatrics operate their own internal handover. Handover brings everybody into one room and is managed on paper, however software is being developed whereby the patient and their results will be seen centrally, but handover will still take place in one room. In Trust B H@N co-ordinators triage jobs, carry out first line assessment and manage the site and beds.

In Trust A junior doctors' and senior nurses' activity was analysed to identify the busiest times, mainly in medicine and surgery, prior to the initial introduction of H@N. Rotas were then designed around periods of high activity, for example with more junior doctors rostered between evenings and early morning. There was also an increase in nursing posts for H@N. Trust B reported that approximately 45% of the H@N workload was carried out by non-medical staff, and that this had contributed to doctors being able to take breaks.

Both trusts had attempted to introduce the iBleep system, although both found the full implementation using Wi-Fi enabled smartphones or personal digital assistants was hampered by Wi-Fi blackspots rendering the system unreliable (despite one of the hospitals in question being a new building). Trust B however uses the iBleep software for task allocation, supplemented by a traditional pager system – when a doctor receives a page from a particular number, they can log on from a fixed terminal, or mobile device if they have network access. Work is still being carried out on implementing the Wi-Fi system across the Trust.

Trust B initially operated a rapid response system as a forerunner to the iBleep system. Funding was received for 12 months initially to upgrade this system, and the more sophisticated version now in use gives much greater ability to look at the category of jobs being triaged out to members of the team. Trust B is currently exploring the introduction of iBleep into daytime working, the next priority being the 5.00-9.00pm busy time. An effect on EWTD compliance for junior doctors has been a reduction in the number of medical staff needed at night, thus directing them into more daytime working.

In one hospital in Trust A it had not been possible to implement an electronic system due to poor Wi-Fi access, although bleeps could still be sent via a central point.

Changes to training

There has been an increase in the use of simulation for training, and more concentrated blocks of training have been introduced. 'Hot and cold' rostering has been introduced, with separation of 'hot' rotas, being the acute take and receiving and assessing patients, and 'cold' rotas with less acute work where more planned educational activity can take place.

Management

Rota design and management

The EWTD MWTD worked on implementing the DRS software system across the region, which is used to confirm theoretical and actual compliance of all new working practices with New Deal (which is used as a proxy for WTR compliance). The possible solutions vary from site to site and each hospital initially had its own dedicated junior doctor Medical Adviser, making it possible to create individual solutions. Regular meetings of all Trust EWTD leads allowed sharing of good practice and the seven Medical Advisers themselves also met weekly to share ideas and discuss any challenges within their own patches. All resident on-call rotas were made into non-resident on-call because of the SiMAP and Jaeger rulings concerning sleep in hospital counting as work.

After implementation the remit of a reduced MWDT, referred to hereafter as the liaison team, became broader, providing support on training issues as well as ensuring rotas are compliant and solutions remain embedded. Part of their remit also involves Improving Junior Doctors' Working Lives. They are still responsible for approval of new working patterns and rotas, confirming once a rota has been signed off by trainees that it is New Deal (and by proxy WTR) compliant, before it is signed off by the DME (as proxy for the PGD). Trusts, particularly those that may have less specialised medical staffing expertise in HR, contact the Team if they wish to devise new working patterns. Trusts are advised that some leeway of time needs to be incorporated into a 48 hour per week rota to ensure time to hand over is built in. If a rota is at risk of being non-compliant in practice, this will be flagged by the team, but the Trust may still proceed. The majority of rotas are full shift, or non resident on-call (NROC) and Trusts are advised to operate a 4:3 night shift system (following guidance from Royal Colleges). However the seven night system is still in operation in some Trusts.

In Trust A rotas are designed by the medical staffing team with consultant input and as much trainee involvement as possible to ensure compliance with working hours and manageable rotas. Full shifts were introduced in ITU, for example, where the work was constant, however there was some resistance to full shifts in paediatric surgery where the aim was to carry out fewer operations at night. It was commented that more doctors have been required to staff shift rotas even though there may have been sufficient from a service point of view. In some areas, hybrid rotas – combining elements of shifts and on-calls at different times – were introduced.

Some rotas were initially considered to be at risk due to an insufficient number of doctors to fill rota gaps. Trust doctors were put into posts in some full shift rotas and others transferred to advanced nurse practitioners. Trust doctor posts were difficult to fill and some were redesigned to make them more attractive by providing more varied experience. Overseas qualified doctors were also recruited, including for A&E, or via the Medical Training Initiative (MTI) which offers two-year training posts, and through increasing independent overseas links, for example with Sri Lanka. Advanced nurse practitioners were either existing nurses trained up, or recruited via advertisement. Some difficulties had been encountered, for example with some highly trained practitioners then moving on from H@N posts as they did not wish to work permanently at night.

Trust A reported now being able to take a more proactive approach to rota design following initial implementation, with on-going review at Trust level to go beyond monitoring of hours to monitoring the best use of doctors. Prospective cover arrangements are made for annual leave; short-term illness is covered internally if possible, longer term illness by external agency locums, and maternity leave by recruitment if possible. Co-ordination of short-term cover is carried out centrally, with some departments contacting junior

doctors themselves. Rotas are designed for around 46 hours to allow some leeway. In Trust B it was reported that a consultant will approach the designated individual in the HR Department regarding rota design, and ideas developed with the DRS software until a suitable outcome is established. This rota will then be analysed by the liaison team to ensure the rota is compliant with New Deal and that trainees have signed off the rota, at which point the DME ensures the rota meets training requirements. There is also a set of sign off documentation that has to be completed at each stage of rota re-implementation.

Monitoring

Medical Staffing departments are mainly responsible for local monitoring of all junior doctors in training as per the requirements of the UK Junior Doctors Contract. Results from monitoring were reviewed twice yearly as part of the Ministerial Return, by both local medical staffing teams but also centrally by the SHA/Deanery via the EWTD MWDT and later liaison team. Queries from Trusts to the liaison team usually concern monitoring, if a rota comes back as non-compliant, or if there are banding appeals. The liaison team provide an independent view and can sit on banding appeals. Trusts also contact the liaison team regarding contractual issues for less than full time (LTFT) trainees, maternity leave, sick leave, internal locums and interpretation of zero days.

Diary cards, or in some cases an electronic system, completed by trainees in real time over a two-week period, twice a year are used to monitor actual hours and this information remains within trusts. Again this monitoring is in compliance with the requirements of the UK Junior Doctors Contract and the supporting monitoring guidance; however there was reported to be a poor response rate. It was also suggested that there may be some apathy regarding monitoring since removal of the requirement to report monitoring data to the Department of Health. Monitoring is for New Deal contractual purposes, and is not conducted over the 26-week WTR reference period. Trust A commented that there was some misunderstanding among trainees regarding WTR and the New Deal, and a lack of understanding of the 26-week averaging of hours worked.

The biggest problem regarding rota gaps was reported to be middle grade rota gaps due to, for example, the grade becoming 70% female, maternity leave and out of programme activities, first introduced under in 2007. It was reported that this can result in other grades, particularly consultants, acting into these roles, trainees getting 'sucked into' service delivery, or in the worst case scenario, unsafe practice. Gaps in rotas also occurred in more rural areas – as the sites are less popular with trainees. Rota gaps, where unavoidable, are managed by a combination of solutions including other trainees, Trust doctors and external locums.

However, the issue was also raised that it may be unknowable how well hours are being monitored as there is no mechanism for knowing where else junior doctors might be working. The Postgraduate Dean undertook some work with the Lead Employer to look at extra payments to see if they were paid in addition to their salary and wrote to doctors working over 56 hours – this has now been addressed; however it is not possible to see if they are also working for a locum agency.

Educational governance and quality management processes

Impact on education is monitored through Quality Management processes and good practice is shared between Trusts, with the Deanery offering Trusts suggestions for improvement

The liaison team undertake two-yearly pre-Deanery visits to each site to make sure that the rotas are New Deal and WTR compliant and the trust is meeting the Improving Working Lives agenda. Trainees are also asked about induction, access to training days/teaching sessions, study/annual leave and any concerns about their

working pattern, including ensuring rest requirements are not breached. This involves interviewing junior doctors regarding New Deal/WTR and other issues, following which a report is written and sent to the Postgraduate Dean, DME at the Trust, the Trust Chief Executive, and the individual in charge of organising Deanery visits. If necessary an action plan is produced and medical staffing will be involved if there are rota issues. The Deanery visit takes place a few weeks later. Where serious concerns are identified the liaison team accompanies the Postgraduate Dean at the focus group of trainees so that specific WTR issues can be explored.

Logbooks, portfolios and ARCP data are also examined and if there are persistently insufficient data from any one site TPDs approach this at consultant level; if they are still not satisfied the issue is taken to the Postgraduate Dean. Exceptional cases may be flagged directly to the PGD.

In addition, there is feedback on every Foundation Programme placement, and Trusts are required to report to Foundation Training Programme Directors (FTPDs). Most issues were reported to be dealt with at Trust level by the FTPD and DME. It was also reported that the Chief Executive undertook 'walkabouts' in the Trust. The Deanery could apply indirect pressure for remedial action in a programme, without necessarily having direct involvement.

Trust A reported that educational concerns may arise during the rota design process, in which there is engagement with tutors who sign to say they will not adversely affect training. Problems with rotas could be raised with an educational supervisor, the postgraduate education department within the Trust, or with the Deanery, and medical staffing are represented on the Foundation Programme board. It was reported that any problems tended to arise when there were vacancies and trainees reported having to focus more on patients on the ward rather than attend theatre for example. Advanced nurse practitioners were seen as part of a solution. There were also training implications when complex cases, for example in maxillofacial surgery, extended into the evening and there was no requirement by the Trust for the doctor to remain, however they may wish to do so for training. Hybrid rotas than were a potential solution. Trainees are also permitted to swap days off for training purposes except after a night shift.

Overview and Additional Comments

There were still considered to be some unresolved issues, such as a heavy workload and large numbers of patients in the specialty of Medicine and perceptions of insufficient theatre experience for surgical trainees, however it was noted that logbooks appeared to show that surgical units were doing well in this respect. There were perceived to be unresolved questions within the specialty of Surgery generally regarding the minimum amount of experience required to achieve and maintain competence, and the possibilities of individual variation, and greater resistance within this specialty towards restricting working hours for trainees. A question was raised as to what extent individual training needs could be looked at through the rota design process, for example whether a particular junior doctor wished to enter general practice.

It was noted that the majority of rotas are full shift or non-resident on-call. There was reported to be a feeling amongst some doctors that there had been a loss of the 'firm' structure in that all grades were no longer necessarily on a ward round together which led to a more disjointed experience and less continuity of care, and potentially less available higher grade support for junior trainees, and less junior support for consultants.

There was reported to be an increase in sickness and stress with a lot of unplanned absence and trainees calling in sick. It was suggested that this was possibly due to a reduction in camaraderie and that it can be very lonely at night. In addition it was felt that factors such as the increasing complexity of medicine, higher

expectations, and shorter hospital stays all put stress on young doctors. It was suggested that it may be better to keep Foundation Programme trainees in one locality for two years so that they can engage with each other as a group. Trainees are allowed some flexibility in their rota, and swaps and flexibility are allowed within clinical divisions, although the compensatory rest period must be adhered to. The liaison team can advise trainees on concerns about rotas, but such concerns are usually about banding, rather than hours per se.

Deanery 3

Introduction of WTR

Implementation strategy and leadership

A working group of the SHA workforce director, Postgraduate Dean and Quality Manager was set up, which took a 'hands on' approach to implementation. Group members visited each Trust chief executive and medical director and worked with Trusts on how they were approaching implementation, and the Quality Manager shared what had and had not worked. Quarterly meetings were held with Medical Staffing Leads. At the same time there was a national workforce pilot project in one trust which involved increasing the number of doctors working out of hours, and service changes incidental to WTR.

There were two main concerns at the time: firstly, the overall message coming from different Royal Colleges having implications for attitudes of clinical leaders within Trusts and, secondly, a relatively large number of derogations arising from concurrent PFI builds and consolidation of services. There were also issues regarding funding per capita and a perceived uneven distribution of trainees across the country (e.g. in ophthalmology) leading to a shortage of trainees in some specialties. Trust A reported some resistance amongst trainees, particularly in surgery and other craft specialties where there was concern over gaining sufficient experience and completing training in the given time. There was also reported to be some concern from consultants over undertaking additional work in the absence of additional staff provision. Trust B reported that it had been very proactive in holding meetings, and discussions with trainees, but lack of time and lack of increase in training numbers were inhibiting factors.

Service redesign strategies, drivers and enablers

A particular example of service redesign was in the Emergency department of Trust A with an increasingly consultant-led frontline service. Emergency nurse practitioners have also been employed; they work their own rota and have different guidelines to follow. The surgical service is currently being reorganised with a move to one campus from multiple sites. WTR has led, on consultant initiative, to the introduction of region wide ophthalmology and ENT services (requiring negotiation between SHAs). This 'virtual consolidation' meant that patients seen by registrars on-call are then transferred to their own hospital. Four rotas had been challenging regarding staffing and compliance, with staffing being difficult at registrar level in neonatal services which operate in two wings and at registrar and senior registrar level in neurosurgery and general surgery. Neurosurgery has changed from an on-call to a full shift system with no more than four consecutive nights (extra nights would be picked up by Medical staffing and addressed with the department).

There has been an increase in the employment of physician assistants (with a similar role to phlebotomists but with additional duties). There are also advanced nursing roles and nurse practitioners; however the number of surgical assistants has been reduced. Trust A reported an increase in consultant cover and advanced nurse practitioners over the last two years, suggesting increased support from seniors and from other experienced staff. Trust B additionally reported that venous access teams had been developed to help cover workload, and also commented on the contribution of ward based pharmacists.

In mental health, crisis teams operate 24/7 and the intention is that they work alongside higher specialty trainees and that trainees achieve a balance in the number of assessments they carry out. Many emergency

assessments take place either at A&E or at police stations and some trusts have a separate rota for police stations.

Hospital at Night has been in operation in medicine and surgery on both campuses of Trust A for several years. This hospital has been working with Cisco systems and Nervecentre workforce management software to create an IT system to co-ordinate hospital care at night, weekends and bank holidays. Out-of-hours co-ordinators use handheld devices to see which patients are waiting to be seen, the status of all outstanding tasks and the workload of each member of the team, enabling them to direct requests to the appropriate doctors or other staff. There is also the potential to assign tasks to a trainee who needs experience of a particular area. For the future it is hoped that it may be possible to marry up the information in this e-system with trainees' e-portfolio, enabling transfer of information on procedures completed. Trust B also operates H@N, and has had a fairly major reorganisation of Front and Back of House services and some rationalisation of departments.

Changes to training

Trust B noted that there had been a move towards regional training and an acceptance that training needed to be held on different days of the week and to rotate around different sites to accommodate different shift patterns. Some milestone Foundation Programme training, such as careers counselling, has to be repeated several times.

Management

Rota design and management

The Deanery initially funded Zircadian MRM Live software as part of their WTR implementation support. Trusts now fund software themselves and different packages are used in different trusts (Trust A now used DRS). The Quality Manager signs off all working patterns to check compliance. The majority of rotas are planned for 46-47½ hours to build in time for working beyond rostered hours, as monitoring data had shown this to be taking place.

Both Trusts reported that rotas were designed and amended in discussion and with agreement of clinicians, including trainees, although the balance between whether clinicians or administrators managed the process tended to vary between specialties and sites. Two major considerations were work life balance and training (such as missing training sessions or clinics held on days when they were rostered to be off work). MMC was a confounding factor, as there were now more generic tiers of cover and specialties that may previously have had seven SHOs motivated to work in that specialty (e.g. orthopaedics) may now have a cohort of F2s and GP STs who are looking for more general experience. Trust B reported a gradual move towards full-shift working in surgery.

Trainees are given information about opt-out by the Trust in their induction pack and information is collected from each rotation. An increase in opt-outs can be seen at particular times, for example about 10% more opted out during the occurrence of swine flu; however the Deanery would raise concerns if over 50% of trainees opt out. Some trusts were reported to be stricter than others about opt-out because of payment for locum hours. Numbers of opt-outs may be reviewed across the region by the local HR network which liaises with the Deanery.

Trust A reported that the majority of posts required to fill rota gaps are recruited via the Deanery; if the Deanery is unable to appoint, it becomes a Trust responsibility and posts tend to be filled through Locum for Service (LAS) or Trust grade doctors (although there was reported to be a poor response for the latter, putting increased pressure on departments). Changes in immigration and visa regulations were also inhibiting the recruitment of overseas qualified doctors. H@N posts are often filled through agencies and some can be more difficult to recruit into as they are more specialised posts. Full shift rotas tended to be harder to fill as specialty trainees need to be present at night, whilst twilight sessions tended to be easy to fill internally. Trainees are required to sign an opt-out form (allowing them to work up to 56 hours) if they wish to locum within the Trust. Trust A reported noticing an increased tendency for trainees to phone in sick prior to an on-call, or sometimes swapping on-calls and subsequently forgetting. The Trust has therefore taken a more prescriptive approach to swapping, with notification to a central point, and has attempted to gain greater engagement in, and responsibility for, rotas amongst trainees.

Trust B reported attempting to fill rota gaps initially through LAT posts, then through LAS posts (which could be hard to fill as these doctors receive the same pay but no training recognition) and then, if necessary, through local advertisement. If none of these routes was successful, locum doctors were brought in. This in itself presented difficulties due to the drive to cut down locum expenditure which was being experienced across the NHS, and difficulties filling four-month posts unless doctors were just coming to the end of another post. Employment of existing trainees as locums was not always appropriate for their training, particularly for those training in smaller subspecialties. Internal trust trainees sign an opt-out form and their hours can be monitored, however trusts do not monitor the hours of locums from another Trust or an agency. It was also pointed out that unlike larger teaching hospitals, small district general hospitals do not have a cohort of doctors on research contracts available to undertake locum work.

Monitoring

The Deanery collects monitoring information and analyses compliance on behalf of the SHA Workforce Directorate, producing an action plan if necessary. The Deanery also analyses vacancies and opt-outs, which was thought not to be carried out in all deaneries.

Trainees complete online diaries for the specified monitoring period. There was a suggestion that hours may not always be recorded accurately, particularly by surgical trainees, as they sometimes wished to work longer hours, for example if they were told of an interesting case. It was also noted that some operations can take longer than 13 hours, the maximum time for which a trainee can be on duty.

Trust B reported that it was rare to gain sufficient monitoring data for analysis. There was a suggestion that monitoring had 'lost its teeth' since the requirement to send in ministerial returns had been removed, and that there could be less engagement from locum doctors in the process. Monitoring results were reported back to Medical Directors and shared with doctors, and issues were managed locally, however such issues would normally be heard about before any monitoring took place. There was felt to be a 'moral dilemma' between junior doctors' desire to learn and do their best for patients, and potentially causing anxiety by insisting on strict adherence to hours. There was also a dilemma between the need to fill rota gaps and keeping this to a minimum to protect trainees' wellbeing.

Educational governance and quality management processes

The Deanery reported three main quality management processes. It operates a cycle of educational visits, aiming to visit every specialty in every trust on a three-year cycle; some are re-visited after 12 months. Quality Managers and Associate Postgraduate Deans go to trusts to meet trainees and ask whether they are compliant with WTR. Secondly, it monitors any vacancies that could affect training rotas (in staff grades as well as training posts), three times a year in line with the three rotations. Thirdly, it monitors the number of doctors opting out by grade/specialty and ensures that this is voluntary. This has taken place every four months since 2009, one month after each rotation. Deanery visits can operate at three levels: Investigation – in which the Deanery meets with all levels of trainees, the executive team, HR directors and the senior team from the directorate; Education accreditation reviews involving a cycle of visits; and a targeted visit with the GMC as the ultimate sanction and precursor to potential removal of training posts.

The Deanery uses GMC National Trainee Survey data from the questions regarding WTR. It was commented that rota patterns could raise questions but could also throw up false reports of non-compliance if, for example, a trainee was on a rota of five long days with 12 hour shifts (i.e. 60 hours in a week), but had the following week off, they may feel they were non-compliant, but the average would mean their rota is compliant. Trust A reported that the anonymity of the survey and the time delay prior to receiving results could cause difficulties and mean that data was three or four months out of date by the time it was received and had to be back-tracked.

Low attendance at educational sessions (<70%) could also trigger attention to a trainee. Insufficient completion of procedures would also be picked up at ARCP and a visit instigated.

Serious Untoward Incidents (SUIs) are examined in relation to hours worked, so may identify cases of non-compliance.

Information is also gathered on how rota gaps are filled. About 60% of gaps are filled with trainees already or previously in the trust, and about 40% from external locum agencies. If two trusts use the same agency and the doctor has opt-out forms with both trusts this suggests they are working extra hours and the Deanery asks both Trusts for information on the number of hours the doctor has been working. The Quality Manager collects information from all trusts and flags up issues to the employer. It is possible to trace information on an agency locum as they will have an honorary contract with the Trust.

The Deanery also conducts local specialty specific questionnaires on educational issues, with WTR in the core bank of questions.

Trust Education centres monitor attendance at education sessions (F1s have to attend 70% to progress) and the Deanery examines this data to see if any particular specialty or Trust stands out, in which case a visit is carried out. Education centres also log issues and concerns (often, but not only, related to working hours) and update this information regularly.

Trust B reported that there was a junior doctor forum in each discipline. It conducted its own surveys and took note of the GMC survey, as well as responding to any complaints. Trainees also had the opportunity to talk to the Deanery for the accreditation review.

Overview and Additional Comments

A view was expressed that whilst the e-portfolio was seen as useful in providing a thread through training and assessment of competencies, it was felt that the loss of SHO posts, which could be held for longer periods, had removed the opportunity for consolidation of learning and experience.

It was noted that untoward incidents could often be traced back to handover. There was discussion around the importance and need for efficiency of handover in light of a shift system; a tension was acknowledged between frequent handovers with the potential for information to be lost and less frequent handover with extended periods of time on call. There was a comment that an NHS-wide accepted platform of electronic handover would be helpful.

A view was expressed that the use of new or up-skilled non-medical teams designed to support junior doctors and decrease workload as a result of WTR should be evaluated.

There was a suggestion that it would be helpful for NHS Employers to re-establish the national working group to reduce feelings of isolation and enable the sharing of ideas at quality management level.

It was stressed that the trainee has responsibility to meet the requirements of their contract and the WTR, in terms of not working too many hours.

The Deanery reported receiving very good feedback from trainees on work-life balance, although their biggest concern was service delivery. Hospital at Night was reported to help trainees gain confidence. Trust A reported anecdotal evidence of concern over the loss of the ward team structure, difficulty gaining feedback on performance, reduced continuity of care for patients and reduced continuity of experience for trainees, as well as reduced camaraderie. The themes of reduced continuity of care and reduced continuity of trainees were also raised by Trust B. An increase in consultant delivered care and increased daytime consultant presence were seen to be increasing the amount of senior support and feedback being received by trainees. However, changes in the nature of patient care and patient throughput also had implications for training, irrespective of WTR.

Trust A reported an increase in long-term sickness, particularly due to stress, depression and anxiety issues, although this had never to their knowledge been due to working hours or volume of work as such. Trust B also reported an increase in instances of obvious fatigue and stress since WTR, although it was also felt that opportunities to raise such issues had increased. The main impact on many trainees though was felt to be the loss of pay with rotas moving to lower New Deal bands, or being un-banded. The concurrent loss of free hospital accommodation was also felt to be a more significant change than working hours.

Deanery 4

Introduction of WTR

Implementation strategy and leadership

Implementation was run through the SHA reporting framework set up by the Department of Health, under which SHAs were mandated to report on every rota in all specialties. Rotas were reported as red, amber or green in August 2009. It was felt that organisations that did well were those that had plans in place at least one year in advance of the August 2009 deadline. The Deanery successfully bid for funds available from Skills for Health for pilot work in October/November 2006; these funds were mainly used for administrative support to work through rotas. One trust decided to pursue compliant rotas beginning in 2007 with the introduction of run-through training, feeling that implementing two changes at the same time would lead to less upheaval overall than doing so consecutively. It was felt that WTR implementation and management need constant scrutiny and very senior leadership, and that there was variation in the amount of WTR knowledge held by medical directors.

A small SHA/Deanery team was mandated to collect data through Trust HR departments. The team scrutinised individual rotas, flagging red any where it was indicated as unlikely to achieve compliance, and going back to Trusts. One Postgraduate Dean provided senior support and leadership to Trusts to help minimise red rotas and develop innovative solutions around Hospital at Night, and at a more local level Trust Liaison Deans (TLDs) also helped and advised. The requirement to change came from a high level and support ranged from informal 'phone a friend' contact to formal support through the SHA/Deanery team and TLDs. TLDs and/or groups of trainees in each School reported back to the Deanery or the SHA (more commonly to the Deanery as the relationship was closer). The Postgraduate Dean made a number of visits to hospitals with difficulties. The Deanery trains a large number of doctors, but these are unevenly spread across a number of trusts, meaning gaps in-out-of hours cover can still arise.

Hospitals were close enough to allow easy confederation of select services, for example within haematology where a confederated service may allow two smaller rotas to be effectively combined, although local negotiation is necessary. Where previously the distribution of admissions between hospitals across an area may have been managed informally, the tightness of rotas means such decisions need to be more extensively planned. Changes in service configuration take time and often public consultation hence this was not a significant solution at the time of WTR implementation.

All rotas were reported for four months in the run-up to implementation (March-June 2009), following which, only red rotas were reported nationally and within the SHA. Less than 5% of rotas were red by that time, largely within the transplant service, which has been a national problem due to the time taken by retrieval teams travelling to obtain and return organs for donation.

Leadership from Colleges was also considered very valuable at these early stages, for example from the RCP regarding changing ways of working at consultant level and the RCPCH aspirational document 'Facing the Future' with its plans to deliver a consultant-delivered model. The development of consultant-delivered care in Obstetrics & Gynaecology (O&G) was felt to provide much-needed examples of different, better ways of delivering out-of-hours care.

Other drivers for change included the changing workforce profile. Some specialties (O&G and paediatrics) had a 'bulge' in the numbers of trainees emerging. Central government funding for consultant posts was allocated to 'pump-prime' the consultant-delivered service recognising that in these two specialties there were available, fully trained doctors emerging from the training programmes. These monies were more transparently used in other deaneries but consultant expansion in Paediatrics and O&G has occurred in this Deanery over and above the annual average. Although this funding was insufficient to significantly alter the delivery of care it did raise the profile of consultant-delivered care across all acute-care specialties and this became one of the recommendations within the Temple report, Time to Train (June 2010).

Changes in the delivery of services were a concurrent factor. For example, orthopaedic middle-grade juniors are not on duty in some trusts after 10.00pm in line with the CEPOD guidance stating that all but life- and limb-threatening surgery should be stopped by midnight. There has also been a national move towards having fewer surgical units. There have been other changes in different specialties, for example with gynaecology becoming increasingly medical, and now increasingly moving into the community, and oncology and urology facing technological challenges and changing populations. These changes are only just beginning to be reflected in training programmes.

This region has a strategy for implementing the recommendations of the Temple Review, with individuals responsible for its implementation. One key aim is the reconfiguration of service with consolidated rotas for specialties in fewer sites, although this was recognised to present some political as well as practical difficulties. However, well established elements such as Hospital at Night and the increasing use of simulation as other pillars of the Temple report are being extended across all trusts as part of the QA for training.

The loss of SHO grades with the introduction of MMC was felt to have had at least as much of an impact as WTR on putting pressure on rotas, as there was loss of a pool of doctors who were happy to work in different specialties for periods of time. The vast majority of doctors went into training posts after MMC, rather than spending time gaining experience in non-training posts.

Service redesign strategies, drivers and enablers

Hospital at Night (H@N) has been implemented across this region, with some centres at the vanguard of its development. It was considered that three factors were crucial to the success of H@N: a medical director reporting to the Board; nurse involvement and engagement, and a project manager to deal with the rota, reporting system, risk assessment and bleep. The importance of leadership and corporate responsibility were stressed. The impact of H@N is illustrated in the case of one hospital by a reduction in the number of doctors at night from 38 to six (compared to a constant day roster of 180).

One Trust implemented an extended Hospital at Night model to encompass the Hospital by Day (24/7), in part in order to achieve compliance for medical trainees. Objectives included the preservation of emergency and elective daytime training, particularly in the surgical and anaesthetic specialties, maximising the time spent being directly supervised by a consultant; and improving the process of care for acutely ill patients within the hospital by separation of emergency from elective care and streaming all emergency admissions (medical, surgical and orthopaedic) through a new Acute Care Unit (ACU) with a dedicated team providing continuity of care. The team of junior doctors responsible for the ACU undertake this duty two to three times per year for a period of six to eight weeks depending on their seniority. During these times the ACU doctors have no elective responsibility and only look after ward patients when scheduled to do so as part of night cover. Non-ACU doctors (the 'Cold Team') treat only elective patients and emergency patients only when transferred from ACU

with an expected stay of greater than 48 hours. Junior doctors spend approximately two-thirds of their time on the Cold Team, working neither nights nor weekends. All trusts are monitored and quality assured annually in terms of Hospital at Night implementation.

From being typically organised as 9.00am to 5.00pm, Monday to Friday, there was a change to 12 hour a day consultant presence in acute, intensive, anaesthetic and emergency services. Consultants were present in the emergency admission area as patients came in, and able to supervise trainees. In addition, the start of physicians' post-take period was moved to 9.00pm, coinciding with the start of a 9.00pm shift for junior doctors, who were thus able to attend the post take for patients admitted during the day and receive immediate feedback (this was rather than having one post take at 9.00am at the end of their shift and with a larger number of patients requiring additional time).

It was considered that in the most successful sites significant changes in consultant working were seen to be taking place; in others strategies such as weekend ward rounds, H@N and the employment of more junior doctor were seen. The less successful sites were described as seeing WTR in terms of 'somebody else will fix it' or 'it will go away'. Organisations that planned less for the WTR saw an increase in non-training posts e.g. Trust doctors who were often difficult to recruit, and those doctors accepting such posts felt to be of lower quality than those in training posts. Such organisations were re-visited after the August 2009 implementation. Some consultants were felt to not necessarily understand the role they could take, thinking they were providing a consultant-delivered service when in fact it was consultant-led (so the consultant is not actually present – a distinction important in the Temple Review).

Issues related to rota gaps were considered to have increased. In the past there were pools of doctors between stages of training, waiting to get into training posts or carrying out research, but following MMC the majority of such doctors were drawn into training posts. Following this, desire for out of programme experience has increased rota gaps. Some of the more specialist hospitals were more successful at filling these as they tend to have a pool of overseas doctors wanting to experience the specialism. This Deanery has many clinical research fellows, including from overseas, attracted to the particular hospitals and units to gain academic experience. These doctors provide a resource of locums allowing the out-of-hours service to be maintained with non-training posts. Changing legislation regarding overseas doctors had however made it more difficult. It was considered that adding junior doctors into the rota with no intention of staying was inappropriate and taking training opportunities from others. Six months after WTR implementation it was requested that such doctors be taken off these rotas or put into training posts, and this was monitored by TLDs.

Changes to training

There has been a large Deanery investment in simulation (in line with the Temple report), including large simulation centres. Every Trust has access to simulation on site and regional training is offered through Deanery and School-led courses and local activity. All F1s are guaranteed one day a year for simulation.

Management

Rota design and management

Rotas were reported to be designed based on patient needs, by HR managers with clinician involvement including significant trainee input with consultant overview. The approach to rota design needs to differ

between different specialties in order to ensure clinician buy-in, although this may have the disadvantage of reinforcing silo thinking in some specialties. DRS is used and a contract held with CRS to support Trusts.

Gaps in rotas were attributed to an increasingly 'feminised' workforce, particularly in some specialties (O&G and paediatrics), and greater requirements for out of programme experience – although this was also attributed to MMC. Best practice is followed and rotas of seven nights in a row are unacceptable (following College and COPMeD guidance) due to their impact on fatigue, stress and performance with risks to patient and staff safety, even though some trainees reportedly prefer it because they get time off afterwards. Despite this guidance, seven-night rotas did sometimes arise and TLDs are mandated to assist trusts to re-arrange rotas urgently.

Some rotas have been rationalised with tiers of on-call reduced, particularly where F1s or F2s could contribute little to out-of-hours care, merely being a stepping stone to senior referral; for example in plastic surgery where a three-tier on-call was reduced to a single tier (direct to consultant) because in cases where specialty opinion was required, consultant input was required.

Monitoring

Monitoring is paper-based in this Deanery. All trainees are known to be on 48 hour-compliant rotas and, although opt-outs are supported, they are down to individual doctors who take it to HR within their Trust. The Deanery does not record any information about opt-outs, but if it became aware of a large number through the Deanery Schools, it would investigate.

Educational governance and quality management processes

The results of the GMC National Trainee Survey report are examined. There is also local feedback through Schools and their quality management processes. ARCP forms which are signed off each year and include any opt-out information are examined and discussions would be held if, for example, all trainees in a particular hospital were opting out. The routing of ARCP data through the Deanery enables the Deanery to cross-reference and identify whether any issues are related to the specialty, to training or to the individual trainee.

Concerns were considered to be related to poorly organised departments and organisations which rely on trainees to deliver OOH and emergency care, and to consultant attitude towards training and service delivery. Issues tended to be flagged up to the Deanery and were cross checked through the clinical tutor role and Training Programme Directors (TPDs).

The Deanery also reported that they would take seriously and follow up an individual trainee complaint. Persistent breach of hours was regarded as a training issue and would be dealt with through the usual Deanery routes, including the School, and would trigger a local or, ultimately, GMC visit. Trusts provide an annual report to the Deanery for the report to the GMC. The importance of a risk-aware environment in Trusts was stressed, with rotas reviewed for patient safety concerns.

Hospital at Night is being mapped, and all trusts in the second year of data collection except one have improved performance. Consultant presence and the ratios of consultants to non-consultant and consultants to staff grade doctors are being examined. Trust benchmarks are being tested and will be developed into a performance framework for Trusts.

Overview and Additional Comments

It was considered that there were wider debates to be held around issues of working hours, beyond workforce issues, such as a definition of the role of the junior doctor and what we are training doctors for in the future, for example with specialties such as oncology facing technological challenges and changing populations.

There was a suggestion that regulations on working hours were seen as a challenge to doctors' professional sense of status and that there were culturally embedded sensitivities around the way people work and the core sense of what it means to be a doctor. The job itself was changing as well as patient treatment, for example with increasing night work for consultants.

It was commented that the BMA had reported an increase in sick leave nationally, but it was unknown whether working time regulations were a factor due to lack of comparison data.

It was suggested that fatigue could potentially be monitored through Foundation Programme reflective diaries, and that reflection on performance as well as the use of diaries could be further developed. It was noted that alongside the debate on metrics such as the number of procedures performed there also needs to be a consideration of individual differences (e.g. dexterity, spatial awareness), intuition, and professionalism which are harder to measure.

New Deal was seen as the driver for shift working and many of the problems faced in WTR compliance. WTR constituted a piece of complex legislation dropped on top of existing and not entirely compatible legislation, into a system undergoing massive concurrent changes including changing training routes and changing consultant contracts. The flexibilities being pursued by the UK government in terms of reversing the SiMAP and Jaeger amendments to WTR would considerably improve both rota planning and access to training in certain specialties. The length of shift is limited by New Deal legislation and is also a significant limiting factor on developing sensible, flexible working rotas.

It was suggested that there was greater impact on senior trainees as they tend to cover middle level gaps and miss out on more specialised, elective training. This is an area of concern in Paediatrics particularly.

Deanery 5

Introduction of WTR

Implementation strategy and leadership

The Deanery reported that implementation was very much SHA led, although the Deanery did deliver information on good practice or any known breaches of compliance. There were a small number of derogations e.g. in anaesthetics, but fewer than anticipated. There was some feeling that there was a lack of preparation in some aspects, meaning that educational value may have been compromised in some rotas.

The SHA provided information and support to Trusts including training events throughout the implementation process. Following the EWTD implementation deadline, the SHA also worked with NHS Trusts within the region on completion of ministerial returns to gather compliance data and details of any rota derogations.

Trust A reported that, following Executive Board approval in December 2008, an EWTD Planning Group, chaired by the Clinical Director for Performance Improvement, was set up to ensure that EWTD compliance was achieved by the required deadline of August 2009. Group members included clinical leads, directors of operations for each division, operational service managers and a senior medical staffing representative.

A questionnaire was sent to all clinical leads within Trust A in March 2009 asking for information on rotas and any potential compliance issues - the returned information was then collated by medical staffing and any problem areas were highlighted and fed into the EWTD planning group meetings to discuss and offer suggested solutions. Bids were put forward by the EWTD planning group to the SHA for additional posts to make rotas compliant. Trust A reported that, anecdotally, the biggest challenge at the time was sustaining clinical services whilst at the same time ensuring rotas were compliant.

Service redesign strategies, drivers and enablers

Hospital at Night has been introduced across the region, but was described as an on-going programme, possibly behind other areas. There was felt to be Trust and clinical resistance to the introduction of such changes.

Trust A reported that Hospital at Night strategies were introduced in 2009 to include cross-specialties at two hospitals to provide a greater level of cover for rotas out of hours. Acute general medicine (AGM) also introduced a new rota providing EWTD compliance and enhanced medicine cover across sites.

Changes to training

Attempts were made to make training more flexible and elastic, to allow more trainees to attend. Compensatory rest and zero days may limit attendance at regular teaching. It was noted that flexible trainees are accustomed to sporadic hours and training, and so fitting training into different hours may be easier than previously. Emergency medicine was felt to have a good weekly compulsory teaching session that the whole team knows is happening and respects. There were concerns about negative consequences for one-off teaching events – for example trainees on nights or recovering from nights were unable to attend a lecture from an external speaker. Any changes to training were felt to be best managed at School level, as the curriculum requirements and approaches to integrating learning into practice are particular to specialties.

An increased use of simulation across the Deanery was reported.

Management

Rota design and management

Trusts design rotas and the Postgraduate Dean has asked for the DME in each Trust to be involved in any service or rota redesign. The Deanery takes an overview, for example to check adherence to a Deanery directive to avoid seven consecutive nights.

In some specialties where out-of-hours work is particularly intense (including emergency medicine, anaesthetics and paediatrics), the necessity to be compliant was felt to be particularly important. Compliant rotas designed by software may be educationally of no value, so the educational review is seen as very important. It is also important to try and make training available during peak periods of service activity.

It was reported that in one trust the large number of academics taking time out of training and being available to work some shifts meant that rotas were more likely to be compliant. On the other hand the pool of reliable internal locums has reduced as trainees cannot work many hours beyond their rota. Where possible internal locums are used, as external locums are not always as reliable

The Deanery reported encountering situations where trainees have felt pressurised to cover gaps, including covering a more junior post. In such cases the Deanery has raised this as part of their visit.

Monitoring

Trust A reported that diary card exercises are now undertaken using Skills for Health DRS3. Doctors enter their hours worked online as opposed to the old system of paper based diary cards. The online system allows the doctors to complete the diary cards in their own time and was reported to be more efficient because HR do not have to manually input data into the software. Monitoring exercises within the Trust are now undertaken annually as well as 'when needed' in the case of changes or problems with rotas.

Trust A reported not having an automatic mechanism for opting out, and that opt-outs would usually be requested by the trainee, although one HR advisor reported never experiencing a junior doctor requesting to opt out of WTR.

The Deanery commented that compliance was more difficult to maintain in some specialties, for example, one specialty running a regional service with heavy demands on their time, and transplant services where more than one major case could arise during a weekend on-call, placing extraordinary demands on an on-call rota.

Educational governance and quality management processes

With its responsibility for educational quality, the Deanery receives returns from GMC review and then questions those returns, and also conducts its own surveys.

The Deanery undertakes Quality Management visits and may pick up complaints about possible breaches directly from trainees, although these were reported to be a complex issue and the Deanery will ask to see actual evidence through monitoring of hours, using their safety remit, when questions are raised. There were felt to be a number of allegations of breaches, but they were hard to demonstrate as actually involving a

breach of the regulations. A conflict of cultures may be a problem, with juniors complying with their seniors' requirements, but raising problems regarding working hours after the fact.

The Deanery reported that fatigue and stress were not routinely measured, however it was suggested that sickness records may reveal information on this.

Overview and Additional Comments

The complexity of WTR was highlighted, particularly in its relationship to the New Deal, and due to consideration of the SiMAP and Jaeger rulings, service reconfiguration, variation between specialties and trainee expectations. Maintaining existing programmes in more limited hours was also an issue.

It was felt that conflicting issues could arise. For example in small district general hospitals the smaller number of patients may mean insufficient work for trainees within reduced hours, making the continuation of a training post less viable. However the service provision still needs to be maintained, and a more flexible approach to hours would provide sufficient educational experience.

There was a view that attendance at regular tutorials and sessions with visiting speakers had reduced due to time spent working at night or on recovery from night shifts.

There were felt to be complex cultural and other issues at play, for example trainees will often work beyond their rostered hours, either because they are expected to, or because they choose to, in order to observe a particular procedure. It may be hard to argue with such conscientiousness, but it would appear as non-compliance if actual hours are recorded. Furthermore, there may also be a 'hidden curriculum', suggesting to trainees that they may not be as well trained as their predecessors, and that they may need additional training as a newly appointed consultant, which was potentially de-motivating.

There was a feeling that there is an absence of an evidence base to direct good practice in achieving compliance.

It was suggested that there were some negative attitudes towards the WTR generally, and some resistance to change despite research evidence regarding the benefits for health, safety and wellbeing. Adaptation of practice was viewed as vital despite any disruptiveness brought about by change. There was a degree of resistance to change identified following on from a denial that the WTR would affect medicine - 'They can't do this, it will never happen' – or a feeling that it is temporary, and will be repealed at some point.

There was a view that not only had the 'firm' structure been demolished, but there was a reduced collegiality across specialties. For example in neonatal care where paediatric trainees may have been involved by the obstetrician, a team ethos and continuity of care may have been damaged by shift working. There was also a perception of feelings of isolation for some trainees, mainly within Foundation Programme and early specialty training, due to their working with a number of different people on different shifts and potentially having less contact with individual consultants. This could mean less of a sense of belonging than previously, and possibly raise issues for trainees over who would be able to write a reference for them.

Deanery 6

Introduction of WTR

Implementation strategy and leadership

WTR implementation was seen as primarily a workforce, rather than an educational, issue and as such was owned and led at Trust level, with very little Deanery input. It was felt to be a re-visitation or continuation of the process followed for the introduction of the New Deal contracts, with implementation strategies established at Trust level. Guidance was available from an implementation support group at regional level.

Service redesign strategies and drivers/enablers (WTR and others)

A number of initiatives were identified across the Deanery area. Hospital at Night had been introduced in hospitals across the area, in both hospital wide and specialty-specific implementations. Service reconfiguration had been carried out in some specialties, for example the rationalisation of urology, dermatology and ENT, with services being combined on single sites having formerly been split. This level of reconfiguration was planned and developed at Trust level. Changes do need to be sensitive to training needs though, so for example where possible higher specialty trainees would not be on a H@N rota to ensure they do not miss educational opportunities not available at night. (This is particularly true of surgical specialties).

Psychiatric services had been reconfigured with the introduction of a nurse-led Psychiatric Assessment Team (PAT) to deal with out-of-hours acute psychiatric assessment which consequently freed trainee time. Other changes were enabled with the introduction of other non-medical professional roles, such as nurse specialists in paediatrics, anaesthetic assistants and physician's assistants. Development of these roles, and funding, came from higher level regional strategic initiatives, but the decision to implement them would be taken at Trust level.

Other changes included the extension of and changes to consultants' working days in some specialties, for example with extended or later-starting shifts that finish at 10.00pm, so their presence on wards or in emergency departments would be more matched to busy times out of hours. This would maximise training time. However, it was noted that this had begun before the introduction of the WTR, as a response to shift-working patterns introduced to comply with New Deal requirements. Increasing the available number of consultants at busy times, and so reducing the intensity of their work, may improve training quality as they will have more time to spend with trainees, and be less tempted to deal with a case themselves for the sake of expediency.

It was noted that changing even the most basic elements of service, such as starting and finishing a trainee's shift an hour later so it can include a ward round, is a complex process as there are knock-on effects on other elements of service delivery, including other professions, and administration. The response of clinicians in different specialties to changes was felt to vary at an individual, rather than specialty, level, but there was a general acceptance from consultants that issues need to be examined.

Changes to training

It was felt that changes to training were not due to WTR per se, but rather that the regulations are but one element of on-going changes in trainees' work, and so training, over a period of years. The process has been one of incremental change over a long period, but the main step-change in trainees' work and education was

felt to be the move to shift working from traditional on-calls, introduced with the New Deal. Shifts were felt to have a potentially detrimental effect on education if they do not reflect the way the service runs. Subsequent changes such as MMC (both the changes to the structure of training programme and to recruitment), Hospital at Night and service rationalisation within and between trusts were also identified as contributing to the change in the experience and content of training.

The growth of formal feedback and educational supervision was felt to be at the expense of informal feedback, accelerated by a discontinuity in training experience and loss of the interpersonal training relationship between consultant and trainee. This reduces the informal learning and role-modelling, and the ability for consultants to effectively personalise trainees' learning, through familiarity with trainees' strengths and weaknesses. However, it was recognised that the lack of structure in earlier training may not have been to the benefit of all.

Reduced working time was an element of the detrimental changes, but the changes in working patterns, intensity of work and consultant contracts were felt to be more significant. Effective training could be managed within a reduced working week, as long as sufficient staffing and appropriate rotas were in place. It was felt that trainees could benefit from being supernumerary at some stage, as senior registrars once were, to allow them to develop their skills. Some of the skills and expertise developed in such roles were not assessed, and were not considered in current assessment regimes, and so would not be identified by ARCP for example.

Rotas were felt to be very sensitive to potential changes in the workforce, particularly trainee numbers. One example was given of a Trust which contained two currently compliant rotas across two sites. A small reduction in training post numbers in that specialty would put pressure on the compliance of those rotas, and the educational value of the placements, meaning that other solutions – service reconfiguration or redeployment of the consultant workforce – would need to be considered.

Management

Rota design and management

All Trusts across the region use DRS software for rota design, and include trainee and senior clinician input to the rota design and approval process, but the specific processes reported varied. In Trust A senior clinicians were principally responsible for designing service rotas, in consultation with trainees. Both would sign off the draft, followed by review and approval for educational coverage by the programme director, before final sign off confirming WTR and New Deal compliance. In Trust B, with a larger number of rotas, initial rota design was done by HR, and a draft put to senior clinicians. After that initial step the process was the same. Within each trust the same approach would be used across hospitals and specialties. Differences in particular departments would only be in the fine detail. All rotas are reviewed for educational content and signed off by the Deanery.

Trainees may raise concerns about rotas, or suggest improvements, either regarding the hours worked, patient care, banding, or educational quality, through supervisors or programme directors who can flag concerns with the director of medical education (DME), and a rota can be reviewed and revised. While there were examples of this happening, there was not a formal process in place.

Rota gaps are common across the Deanery, but where possible are dealt with locally in advance by moving trainees from relatively well-staffed rotas to those where there are gaps, meaning any extra work is spread between more people. Trainees are actively discouraged from rearranging or swapping shifts between themselves, as this could easily mean they breach WTR limits, or make the rota non-compliant with New Deal.

While opt-outs are not generally permitted through a regional directive, they may be triggered in exceptional circumstances to allow trainees to cover rota gaps arising from unfilled posts. In such circumstances pay is monitored and capped at the maximum of 56 hours – trainees are contractually proscribed from working elsewhere (although there is no mechanism to prevent this).

While there is a risk of non-compliance in these circumstances, the greater risk was perceived to be to training, for example if gaps mean that trainees must cover more ward work of less perceived educational value, rather than attending theatre or clinics.

Monitoring

Paper diaries are used for New Deal monitoring across the Deanery. In Trust A trainee representatives attend an awareness session ahead of each monitoring exercise in order to cascade information to other trainees. In Trust B the HR department also meets directly with trainees before monitoring begins. However there was continual difficulty getting adequate response rates, which were estimated to be between 38-70% on average, below the 75% required, and it is not unusual to have three incomplete exercises. However, there was a feeling that if one exercise had failed to get sufficient responses, there would be less motivation to engage with repeat exercises. If sufficient data is not returned, the system assumes compliance. Where monitoring identified non-compliance, a repeat exercise would be carried out to confirm the non-compliance before further action was taken. If a monitoring exercise resulted in a rota being re-banded upwards, that banding would be paid, but action would be taken within the trust to review the rota and move it back to the lower band.

The problem of accurate perceptions of working hours was raised, and a need to find a more robust way of achieving response rates – possibly including email reminders, or direct reminders from consultants – was identified.

It was felt by some that the monitoring of New Deal added to the confusion about WTR compliance (although WTR compliance is inferred by extrapolation, this may not be entirely reliable), and that direct WTR monitoring would be preferable. Low engagement with monitoring by trainees is felt to be because it is not an issue to them unless banding is in question. Monitoring returns are a contractual obligation, and pay could be stopped, but Trusts feel enforcing this may be a disproportionate response and would lead to unrest.

Educational governance and quality management processes

The GMC National Trainee Survey is the primary indicator of potential need for quality improvement at a Deanery level. All red flags in the survey data are reviewed and prioritised as to whether they indicate potential threats to patient safety, threats to trainee wellbeing, or indicate a failure of processes. A structured decision making process leads to an action plan which may be to close the issue, to 'wait and see', to mount a formal structured enquiry through liaison with the TPD or DME, or escalate to a Deanery visit. TPDs will be debriefed about the flagged concerns, to corroborate or explain the circumstances of the problem (if any), and present any action already taken. If the concerns are particularly serious, a Royal College or GMC visit could be triggered. If no action is taken following a flag in one year's survey, it will be carried forward for checking against the next round of data.

Investigation of concerns will include triangulation against local placement evaluation questionnaire data, reports requested from TPDs or DMEs, and meetings with trainees and supervisors. Historical survey data for

all grades within a department will be considered, and clusters of amber flags as well as red flags considered to be an indicator of a potential cause for concern in a placement rather than a one-off.

There had been an increase in the number of working time-linked flags in recent years. However, many red flags from the National Trainee Survey are felt to be false positives when triangulating data is reviewed, in part because of a lack of specificity of the GMC questions which may conflate New Deal and WTR compliance in the trainees' minds. Local questionnaires were felt to provide more detailed information about actual hours worked.

TPDs will also review ARCP data, log books and other documentation of trainees' activity. For craft specialties log books provide an easy quantification of activity, and while some evidence was reported that numbers of procedures completed had reduced in one sub-specialty, the lower number was still in excess of the minimum required by the curriculum. Numbers performed by individual trainees had always varied substantially, so year-on-year changes could not necessarily be attributed to changes in working practices. Changes in other areas of the workforce – for example extended consultant working hours, and the introduction of advanced nurse practitioners – were felt to provide more theatre opportunities for surgical trainees.

An example was given in one Trust where a trainee-led revision to an already compliant surgical rota led to a 30% increase in case volume. The Inter-Collegiate Surgical Curriculum Project (ISCP) website was referred to as providing a source of data for longer term tracking of activity (this was migrated to elogbook.org in 2011).

Overview and Additional Comments

The key point made was that the WTR changes have coincided with others, and that changes in workload and intensity are part of an overall cultural change in medical training. Hours are not the key change, shift *patterns* are – the structure of work and the relationships at work. Risks were perceived in relation to continuity of care and contact with seniors where it is needed, but these risks were not an unavoidable consequence of restricted hours.

The overall view was that the system is not designed optimally, and that while it is recognised that service delivery is the ultimate essential component of trainees' work, the effective squeeze on education is disproportionate, and problematic. Teaching is now an almost entirely consultant-delivered activity, whereas previously it was also delivered to a greater extent by higher trainees. Those trainees now though do not have the required expertise early enough, or the time available, to do large amounts of teaching.

Education has to change, it was felt, with teaching time embedded into consultants' job plans, and education embedded in service delivery. However it was felt that to do this effectively across the workforce would necessitate expansion of staff numbers, which may be prohibitively expensive.

Deanery 7

Introduction of WTR

Implementation strategy and leadership

The Trust established a H@N/EWTD steering group in 2005, chaired by the Medical Director, with representatives from the Deanery and various specialties. The steering group met regularly to address WTR compliance issues and service issues to determine what to put in place to meet the 2009 requirement. The introduction of MMC meant that some initiatives being designed in preparation for WTR were brought forward to 2007. It was reported that the new consultant contract (2004) enabled conversations to be held regarding changes in consultant-delivered service and education.

A regional implementation support group provided advice and support on approaches to achieving compliance.

Service redesign strategies, drivers and enablers

Drivers for change were attributed to a combination of WTR and a reduction in trainee numbers in some areas, coupled with increased post vacancies. It was noted that there was overlap between these two factors and hence difficulty separating them. In general medicine, however, WTR was considered a principal driver as there had not been a great reduction in numbers of registrars in this specialty, however there were numerous vacant posts that were difficult to fill.

A H@N team was established at one site in Trust A with an out-of-hours (OOH) rota incorporating trainees who worked across medicine, surgery, orthopaedics and emergency specialties. A rota for junior grades was then introduced at a second site, with seven trainees working out of hours for the specialist surgical block including O&G, medicine and surgery. The model evolved over time and nurse practitioners and co-ordinators were introduced to manage the system. Anaesthetics and the emergency medicine department, O&G and paediatrics have their own arrangements for OOH and are not part of H@N.

While most specialties were supportive of the changes, challenges included resistance to changes in practice and working hours in some areas, and a concern over whether training needs would be met. One example of a particular challenge was trying to design an SpR level rota for medicine that would have sufficient numbers to cover the emergency unit and emergency at night. This required some negotiation, particularly in relation to ensuring satisfaction with the amount of training for those in subspecialties – either because they may not have enough expertise of acute care, or that they wouldn't be getting sufficient subspecialty experience.

Prior to the introduction of H@N there were three handovers in separate specialties. A Clinical Director for H@N was appointed with specific responsibility to manage development of H@N, and there was a subsequent move to single handover for the whole Hospital, enabling better targeting of the whole team and reduced 'silo' working, and also helping control trainees' hours. There is now also daytime consultant presence in medicine until 10.00pm, and three ward rounds are conducted daily in the medical receiving ward. There has been a significant reduction of out-of-hours registrar input and greater consultant input.

More 'imaginative' rotas helped achieve compliance, for example through extended consultant cover out of hours (until 10.00pm), where Foundation Programme doctors may refer directly to the consultant, rather than to a middle grade – this frees the middle grade hours to work in the day time. This is as much a response to having fewer trainees in total, and/or fewer filled posts, as it is to WTR itself.

Other changes included a move in Haematology from 24 hours to an extended day, stopping at 11.00pm, with consultants picking up work. Anaesthetics introduced a pre-operative assessment clinic which saw all patients prior to surgery across the region, and raised this as a valuable potential experience for trainees, resulting in the Deanery providing placements for two Foundation Programme trainees. WTR was cited as a specific driver for a change to a nurse practitioner-supported crisis team service in psychiatry, which was operating across three sites with a large square mileage and three different middle grade rotas for OOH. An activity monitoring exercise was carried out in light of WTR, resulting in having one trainee on at night to cover the three sites as there was insufficient activity to support three trainees, and there could be increased trainee involvement in daytime activity. Loss of working at night has a dichotomous effect. It allows more direct training opportunities during the day time, but some working at night is useful for training as it fosters independent decision making and self-sufficiency.

There had also been changes in nursing roles. For example, colposcopy and endoscopy services, previously run by medical trainees, were now run by nurses and doctors, and nurses in plastic surgery handled minor 'lumps and bumps'. A small number of advanced neonatal nurse practitioners were being trained to work at middle grade. There has also been an increase in consultant numbers in emergency medicine and in paediatrics at night. It was envisaged that the middle grade rota will virtually disappear and there will be a consultant-delivered service.

Changes to training

There has been an increase in the use of simulation, partly in order to accelerate training in procedures and experiences that may be missed due to the need to cover at night. There were concerns that in O&G, for example, trainees were not achieving surgical competencies and becoming obstetricians by default as that reflects the exposure they are getting out of hours.

It was reported that greater attention was being paid by different specialties to optimising the learning environment itself, rather than the actual delivery of training.

Management

Rota design and management

A New Deal monitoring team in the HR department develops rotas in conjunction with interested members of the clinical team affected, which could include consultants, trainees and TPDs. DRS is used to produce candidate rotas which are reviewed by the clinicians. Their feedback may be in relation to, for example, the start time of the night shift; maximising the amount of daytime hours; asking specialties to share rotas, and cross-cover. Rota design was reported to be an iterative process, taking place over a period of time and responsive to other changes (for example the introduction of H@N, then again for the 48 hour restriction), and regularly reviewed to ensure sustainability. Any change in training numbers also impacted on rota design. Every rota is signed off by the Dean in terms of educational acceptability, with input from TPDs at departmental level and trainees. Where objections are raised around educational impact, evidence may be requested or a six-month pilot conducted.

It was noted that rotas are run at the limit of compliance in terms of posts, and are vulnerable to failure with small changes in numbers (such as sickness, maternity leave or out of programme experience). It was reported that this was becoming more visible because of a lack of availability of locums, partly due to the government

reaction to MTAS and associated media publicity and also to changes to immigration law in 2008. There were therefore reported to be gaps in rotas and pressure, either to cover these gaps with juniors or middle grades, or on consultants to back-fill and work extra hours. This was reported to be an on-going crisis, particularly in medicine, paediatrics, surgery and emergency medicine, and most particularly in O&G. There was considered to be less flexibility within the current system, compared to a situation where trainees could stay in SHO posts for longer, posts were advertised more frequently, and career decisions did not have to be made so early in the training period.

Individual rotas are designed with some slack though, meaning that individual trainees could work five days beyond their rota in the reference period, and still be WTR compliant.

Monitoring

It was noted that there was some confusion between New Deal and WTR requirements. As in all areas, New Deal monitoring is carried out every six months. If junior doctors work beyond the end of their shift time during monitoring they are expected to ask a consultant to sign off their monitoring return. The Deanery only becomes involved if analysis of monitoring data indicates that a rota needs to be redesigned.

It was reported that pre-monitoring conversations took place with Departments and that some departments were better at managing it than others, although it was also noted that some were also more complex than others, with some specialties working across sites with different shift patterns, while others were based on one site. Results are analysed and fed back to the department, the trainees and the Deanery.

Paper diaries may be kept at all times outside the two-week monitoring period, and a monitoring exercise may be triggered by trainee concern over hours. Neither the Trust nor the Deanery was aware of whether trainees monitored the 26-week averaging period themselves.

Doctors are required to give a justification for working outside their rota. There could be requests for clarification over monitoring data submitted, for example whether a half hour earlier start had been due to being asked to come in early, or for practical or personal reasons such as the availability of parking (which should not be included in monitoring data). There was an awareness that trainees may work longer hours than stated, and it was important to know whether this was through personal choice or whether, for example, specialty trainees had to complete an operation in the absence of a consultant, meaning that trainees were being asked to deliver the service which would be of concern.

There were reported to be no opt-outs locally, and there was a no opt-out policy at organisational level, however this was reported to be difficult to control or enforce, and it was possible for individual trainees to take up internal locum shifts. Rotas are generally designed for 44-46 hours, rarely for 48 hours, to allow a 'cushion of comfort', which was reported to help with, but not solve, rota gaps. The Trust reported that trainees were regularly asked to do extra shifts and it was important to watch the frequency with which this occurs.

Educational governance and quality management processes

Trust A is represented on the Foundation and specialty committees and the Quality Management group, and the Deanery on Trust committees. The Deanery have to sign off a post being dis-established, and to date the

Deanery has dis-established four posts with the possibility of more to follow as some trainees gaining their CCT may not be replaced - such decisions being made nationally, outwith the control of the Deanery.

The Deanery reported using the results of the GMC survey, and also has its own post assessment questionnaires which include questions about compliance and monitoring and a specific question about how many times in the last four weeks trainees have worked over 48 hours.

However, it was felt that the GMC survey questions on working time did not clarify the difference between WTR and New Deal, and that responses could be misleading if they are interpreted in relation to only one of these. If a potential problem is identified following compilation of results, the Deanery visits the department in question. It was noted, however, that responsibility for monitoring lay with the Trust, and that they would not pursue the matter if one or two trainees were found to work over 48 hours. Deanery visits to programmes are undertaken every three years, with additional triggered visits if issues arise from the GMC survey. Deanery visits may highlight educational issues, for example a trainee being taken out of training sessions to go to the labour ward, and fundamental curriculum issues will be addressed. It can also be possible to detect consequences of rota gaps and the Deanery can make recommendations, although staffing could be a difficult issue to address. It was also reported that through having a very experienced small team on site it was possible to 'pick up signals' that could be fed back to the Associate Dean and then through the Quality Management team.

ARCP data was a potential metric, however it was felt that there can be many reasons for poor ARCP outcomes, and it would be difficult to isolate WTR as a contributing factor. It was also pointed out that WTR had not been found to enter ARCP discussions, whilst issues such as exam failure or time out of programme were discussed as contributing factors. There was also a comment that ARCP outcomes were not corrected for the quality of doctors recruited, with some parts of the UK being harder to recruit into than others. Furthermore, it was questioned how far counting numbers of procedures was relevant, as this did not necessarily equate to being a good doctor, and the importance of experiential learning (or deliberate practice in simulation) was stressed. ARCP and CCT completion was felt to be a minimum standard, rather than an assessment of how good a trainee or new consultant is, as they only sample from practice. The GMC's coding of reasons for unsatisfactory ARCP outcomes were felt to be too vague to be useful, and not reflecting the value-added element of training as intakes (across the country) may be of different abilities.

Deanery visits, involving speaking to trainees, were felt to be the best way of assessing the educational quality of a rota and placement.

It was suggested that HR would know about cases of fatigue and stress, but that this would be very variable between individual trainees. Management would involve Occupational Health, although it was considered that it would be difficult to isolate any impact of working time as other workplace and domestic factors can lead to stress. Only those doctors who were referred to Occupation Health would be known about. It was suggested that investigation of Adverse Incidents could find out whether they were related to fatigue. However, it was also pointed out that guidance on shifts and working patterns related to time in work and, no matter how safe the systems are, neither the Deanery nor Trusts could have control over what trainees do outside work. Nevertheless, if issues were described as being due to shift patterns, there were systems in place to take any necessary action. It was also suggested that fatigue or stress might be mentioned in post assessment survey free text, in which case this would be married up with other data to decide when to speak to the trainee about this matter.

Overview and Additional Comments

The restructuring of medical training has been an additional stressor on rotas – the loss of SHO posts (particularly senior SHOs with two or more years experience in SHO posts), and fixed recruitment to foundation and specialty posts means there is a less flexible workforce to fill rota gaps over a short period of time. If a trainee moves Deanery for their F2 year, there can be a gap as F2 posts elsewhere are filled. Posts are also generally harder to fill, or fill appropriately, as people apply because they need a job, rather than because they are wanting to gain experience in a specialty. (This is also reflected in how posts are advertised, with generic adverts used rather than adverts specific to a particular hospital or unit).

The point was made that there were a large number of confounding factors impacting on whether and in what ways WTR was impacting on training, with other changes such as the reduction of trainee numbers, and other factors having an influence. Increases in consultant numbers have helped support training, but changes to Consultant contracts (driven by WTR) have nevertheless often compounded the problem, with an increased focus on service delivery and often a decrease in quality time spent with the trainee. There was a comment that the real impact may be on experiential learning which the Deanery do not measure. WTR may be disproportionately blamed for limitations and problems when there are a number of contributing factors:

- WTR / New Deal - while these are almost impossible to assess independently, reduced hours are felt to have certainly affected training opportunities in all specialties and not just 'skills' specialties

- The appointments process (formerly MMC) is more rigid, and there is less trainee commitment to the appointed post, coupled with less consultant commitment to trainees (who they no longer directly appoint). Increased job vacancies have an adverse impact on remaining trainees.

- Consultant contracts: Increased consultant service delivery leading to less time with trainees. Loss of team work and continuity of care

- New training curricula: Although there are many benefits, there are some detriments which are exaggerated by the issues above. There is less flexibility for trainees wishing to change specialty or sub-specialty. Workplace-based assessments do not in themselves contribute to training, and can end up replacing time for training. There is a risk of getting drawn into measuring what is easy rather than what is important.

- Increased part-time working may lead to reduced opportunity to train, especially in dual specialty training (e.g. GIM and sub-Specialty). Less team working and continuity of care.

Extended training to address lower frequencies of procedures was not seen as realistic because of funding required. Incremental experiential learning has been lost, but it was felt that an adequate measure of expertise does not exist. An intermediate role below consultant was felt to be a logical consequence of this perceived loss of experience.

It was felt that there was a generational issue in terms of attitude towards working hour restrictions, and that attitudes may be changing as the first cohort of consultants were coming through who had trained under New Deal and were therefore used to a 56-hour working week, and possibly to counting hours worked. There was also an increase in numbers of part-time trainees and feminisation of the workforce, and trainees wanting to work specific hours and therefore being less flexible in terms of being able to cover absences.

There was a suggestion that the new, time-tested consultant contract and the increase in multi-disciplinary team rather than individual consultant cover e.g. on the Medical Admissions Unit may impact on continuity of care and mean it can be very rare for a trainee to see a disease right through. This was perceived to be a bigger problem in medicine where it was suggested that trainees get 'snapshots' of the medical pathway. For example, if patients are under different trainees over two days, then on a new ward the next day, trainees will not see the patient through and on into outpatients. An impact of New Deal and WTR was also seen to be that the 'continuing thread' of consultant presence was being lost through the requirement for resident consultants. One of the main adverse effects of using resident consultants is the loss of continuity of care. There is a real need to look at the relative merits of these two issues. It was suggested that the larger number of handovers operating due to the shift system could create inefficiency in the ward, and look inefficient to the patient and prolong the stay (and therefore cost) of in-patients.

Deanery 8

Introduction of WTR

Implementation strategy and leadership

Trusts reported that implementation was led largely at Trust level with some guidance from the Department of Health. The Deanery reported using communication processes with Trusts to highlight the change and the deadline, and made visits to discuss rotas when Trusts declared they would not be compliant. One of the Trusts involved had been formed from a merger of three Trusts shortly before WTR implementation, presenting particular challenges in standardising approaches across a large geographical area. Preparedness and commitment were felt to vary across the pre-existing Trusts, with one particularly benefiting from a committed Medical Staffing Manager who undertook much of the 'groundwork'.

In 2005 the Deanery used government funding to put in a large number of new SHO permanent training posts as Trusts were experiencing difficulty filling rotas; this has led to a current excess of approximately 60 Core Training posts in some specialties such as surgery and some now need to be withdrawn.

The Deanery is working in partnership with Trusts to look at models to ensure safe implementation of changes through, for example, using nurse practitioners or trust grade doctors or possibly consolidating some rotas.

Both Trusts involved had undergone some organisational changes concurrent with the WTR implementation. Trust B in particular had undergone extensive restructuring across three sites. Clinician engagement and leadership were identified in both Trusts as a key element of successful implementation and rota design.

Service redesign strategies, drivers and enablers

It was reported that there had been no major service reconfiguration or consolidation, but this is now underway, driven largely by the requirements of high quality service delivery, as well as by WTR and under-recruitment. It is being pursued in partnership between the Deanery and Trusts, with educational reconfiguration and service reconfiguration seen to go hand-in-hand. The Temple Review was cited as providing clear goals and leverage for change. Clinical leads for reconfiguration and quality are being appointed with responsibility for ensuring educational quality is maintained and evaluated in reconfiguration. The Deanery can advise on potential changes, but decisions are made within Trusts.

WTR was a driver for implementation of H@N, which now operates at most sites in the region, although it has been less widely implemented in surgical subspecialties that prefer to have their own on-call rotas.

Trust A reported implementing H@N on two sites, starting in January 2009, with a medical and surgical team at one site (neurosurgery being part of H@N but with its own strand) and a single team in a smaller hospital. The successful implementation of H@N was considered to have been influenced by weekly project discussions between the project lead and clinical champions, immediate follow-up by and engagement of the clinical champions, and involvement of junior doctors throughout the process. Specialist nurse practitioners were introduced as part of the H@N system, and act as co-ordinators and bed managers at night.

The design of the H@N system was informed by an activity audit during the hours to be covered by H@N, which provided a helpful information base on junior doctor activity, including what they were being asked to do, the appropriateness of the level of requests, and whether some activity could be carried out by other staff.

Crucially, the time at which tasks were initiated or requested, as well as the time at which they were performed by the junior doctors, was also recorded.

Initial challenges included the engagement of some specialties. Successful implementation and continuing success were attributed to strong and competent project management, and very good team specification regarding facilities and handovers, which are managed by the bed management team, enabling consistency of approach through junior doctor rotations. H@N has since been extended across the Deanery. Future challenges to its continuing success were considered to relate to any potential reconfiguration or re-siting of services and potential reduction in trainee numbers, which could have a destabilising effect as well as wider implications.

In one specialty area there had been consolidation of services from two sites to one as one unit had been unable to sustain compliance operating two rotas at separate sites.

The availability of clinical research fellows as an effective locum bank was identified as an advantage in Trust A. These doctors are able to provide service cover out of hours in place of training grades, meaning rota gaps out of hours could be filled with reduced negative impact on daytime educational contact. Clinical nurse specialists can also reduce the strain on junior doctor rotas, but are also a volatile workforce who can leave and exacerbate rota gaps.

Trust B reported putting in an acute 24/7 core team similar to H@N due to difficulties they had experienced recruiting into CT medicine. This had received positive feedback from junior doctors regarding the robustness of the system and their feelings of being part of a team. The posts had since been filled. Trust B commented on the contribution of extended role practitioners but also referred to difficulties of retention after development through the additional training received. Cost pressures also meant that advanced nurse practitioners were now mainly back working on the wards undertaking routine nursing duties as they had been funded through vacant posts.

Changes to training

Reconfiguration leads will aim to ensure that new rotations will enable curriculum requirements to be met (for example, placing anaesthetics trainees at a site where they will be able to gain the required experience of O&G anaesthetics). Local faculty leads for Quality are also being appointed and will join local reconfiguration groups to help ensure training requirements are met. The recommendations of the Temple report are being built into reconfiguration plans, although it was commented that a certain amount of flexibility was needed (for example, neonatology is a consultant-delivered service and does not require 11 on the rota).

Management

Rota design and management

Ahead of planned reconfiguration, some specialties are very fragmented, with large numbers of separate rotas spread across multiple sites (for example 17 different rotas for one Specialty). This makes any Deanery overview harder to achieve. Rotas are designed internally by Trust HR using Zircadian Rotaworks, and do not go to the Deanery for approval until signed off by the assistant DME.

In Trust A a dedicated full-time member of staff in the medical workforce department works on rota design. A lead clinician within a department, often a consultant and most successfully a senior registrar, is also involved.

Rota models are used for design purposes; rotas are tracked and debated in an on-going manner and any changes or re-designs are sent to the DME to be signed off before implementation. The contact between trainees and seniors within a rota is among the factors reviewed for approval.

In Trust B Clinical Programme Groups (CPGs), with their own Boards, chief of staff and internal structures, have staff tasked for rota design, with variable clinician involvement, and rotas are signed off by the chief of staff. This Trust, in a more rural and remote area, reported difficulties in maintaining compliance due to staff shortages and difficulty recruiting locums, who did not always stay long, and varying degrees of willingness amongst trainees to work extra shifts. It was reported that in some specialties nearly 30% of their middle tier was running with locums. Potential withdrawal of some core trainee posts would have further impact on rotas. CPGs report on short notice cover required, but there is a policy of no individual opt-out.

Monitoring

The same system (Zircadian MRM) is used across the Deanery for New Deal monitoring, to which the Deanery has central access, enabling them to provide reports as needed. This is an online system, with trainees asked to enter their actual hours worked through a web-form. Trust A reviews compliance in a workforce advisory committee. Non-compliance with New Deal guidelines would automatically trigger an examination of WTR compliance.

The Deanery monitors by proxy, through surveys and self-reporting, and does not record whether rotas were compliant in reality as well as in principle. It was considered unfeasible to monitor temporary covering of rota gaps by junior doctors, although a strategic approach would be taken if this was part of a broader failure to deliver training. The Deanery approach is that a strategic solution, in partnership with Trusts, is necessary for staffing multiple rotas and to account for rota gaps due to e.g. maternity leave, annual leave and sickness (e.g. rotas of 11).

Workforce intelligence is also used to alert to problems. For example, awareness of a 20% gap in recruitment in one specialty highlighted the likelihood that it would not be compliant in practice. Derogation provided some leeway in the first two years, and locums may be used to cover this in the short term, but the longer term aim is service reconfiguration.

Educational governance and quality management processes

As part of their annual commissioning the Deanery meets Trusts to discuss quality concerns. There are Deanery funded representatives in Trusts, and Trusts self report against whether they are meeting standards. Where concerns are known in advance (such as the example of severe under-recruitment), closer attention may be paid.

The Deanery operates an escalated quality management process. Local enquiry is conducted initially to ascertain whether there is a problem. If so, it is either dealt with at that stage or escalated. Stages 1 and 2 are usually dealt with locally (e.g. through FP Directors, Programme Directors, local faculty leads for Quality); more serious problems or those unable to be dealt with locally are escalated to Stages 3 and 4 and are taken to the Deanery Quality unit. The Deanery monitors handover and clinical supervision through Quality processes.

These processes form part of the Deanery's role in meeting GMC Standards for Deaneries and their Quality Management strategy. Issues concerning working hours are monitored indirectly through survey tools, such as

the GMC survey, and end of placement evaluation forms. An ultimate sanction would be for the Deanery to not place trainees in a particular post on the basis that it would be unacceptable to the Regulator. With regard to risk assessment, a Quality risk evaluation is undertaken across all GMC domains if a Quality issue presents. This is used as a tool to prioritise work and liaise with Trusts, and is sent to Trusts every three months together with information from surveys and evaluations to enable them to feed back. Trainees would not be withdrawn if the only issue was working occasional additional shifts, rather WTR would only be considered alongside other issues such as inadequate supervision or patient safety issues.

It was felt that issues around fatigue or stress should come out through end of placement evaluations. Foundation and Specialty programme directors hold four-monthly trainee feedback sessions, and face-to-face meetings are also held as part of the ARCP process. Evaluations feed into standard and targeted quality processes.

Trust A reported a number of means of identifying issues, including direct feedback from trainees, end of rotation face to face feedback in some areas, and comments on posts in e-portfolios. The GMC questionnaire was felt to be embedded in processes now, with workload a key domain studied in the risk report generated by the Deanery from the data. Amber issues are dealt with locally, while red high risk issues are dealt with by a formal Action Planning Group.

Trust B reported that mechanisms within the Trust or CPGs would identify issues or risks before reaching Deanery level. Education and training issues would be a standard agenda item in any reconfiguration plans. There was a degree of junior doctor input at the medical education board through representatives from undergraduate and postgraduate training, although this was not a forum for individual feedback. Programme surveys were undertaken in postgraduate education and feedback could also be given through clinical or educational supervisors. One of the three merged Trusts in what was now Trust B had been running weekly drop-in sessions with Foundation Programme Directors, and this has since been adopted as best practice across the three sites, and the feasibility of introducing this system into specialty training is being explored. The triangulation of survey and direct sources of information was felt to be important in identifying problems.

However, it was noted that while the educational opportunities in posts may vary, trainees' perceptions of education may also vary, meaning they do not necessarily recognise educational experiences at work.

Overview and Additional Comments

Contextual issues were highlighted for this Deanery in terms of physical geography, with multiple sites and some of small size. There was considered to be an interrelated issue regarding small sites and needs for services. Consolidating rotas was considered to carry a risk of driving service configuration. The potential, and universal, tension between service and training was highlighted by both Deanery and trusts. A large physical distance from the Deanery base could mean difficulties accessing Deanery support, but holding one of the twice-yearly Deanery events in a region further away from the Deanery was seen as a positive initiative.

The Deanery faces issues regarding recruitment in some areas, with some areas more remote from the main centre of the Deanery being less popular and making it difficult to spread specialty trainees across the Deanery area for risk of losing them to other deaneries. Specialties particularly affected by recruitment difficulties included psychiatry, paediatrics and emergency medicine (as in other areas of the UK). There was a comment from one Trust that the changes in immigration law were having a bigger impact than WTR as about half of

their non-training staff posts were occupied by doctors from the Indian sub-continent and it would be difficult to top up this pool of doctors.

The Deanery reported clinicians' commenting on a loss of the 'firm' structure and a feeling that this has diminished teaching and training experience – clinicians feeling that they do not have the same continuity with more frequently-rotating trainees, and trainees who have experienced the change feeling that they no longer have the same continuity with patients. It was also suggested that there were implications for ways of working and for training in reduction of opportunities for time spent by a trainee with a consultant in terms of observing decision-making and enabling mature judgements to take place. There was a comment that some shift patterns, whilst successful in achieving compliance, could be very disruptive and stressful at an individual level, due to constant variation and working for different time periods.

Where there are problems in a post, word may spread through the trainee 'grapevine', compounding problems in future rotations.

A wider impact of decreasing junior doctors' hours was identified as greater intensity and pressure of work, particularly in general medicine and at times when trainees were taken off wards to cover elsewhere.

Trust B reported a very slight rise in sickness absence among trainee and SAS doctors, although it was hard to know whether this was significant or a temporary issue.

A reliance on locums was identified as possibly leading to further stresses, not only through additional costs but through greater volatility and frequency of having to fill posts, and the variable quality of locums themselves. It was noted that locums can be harder to attract to busy posts. Some rotas in this region were very small, making compliant working patterns harder to achieve.

Deanery 9

Introduction of WTR

Implementation strategy and leadership

Initially the approach to implementation was managed at a Trust level, but from around 2002 the introduction of an implementation support group (ISG) at regional level led to some consistency, although the engagement of different Trusts may have varied. The ISG's role was to guide and assist, with decision-making resting with Trust steering groups. Its function continues in a successor body.

The approach to implementation varied between Trusts, with two Trusts reporting having steering groups led by the Chief Executive and involving senior staff such as Assistant Medical Directors, which met monthly to achieve compliance, and also having project teams and managers.

Challenges for Trusts included getting consultant 'buy-in' to working time restrictions. Some consultants, it was felt, did not realise the WTR involves a legal responsibility on the part of the employer. A strategic aim was to develop partnership with Trusts, to ensure that education is seen as a core aim of employers, and a core part of senior clinicians' job plans.

Service redesign strategies, drivers and enablers

There are plans for Trusts to reduce the number of acute hospitals, which will result in fewer rotas being needed, and it is hoped that this will improve compliance. There has been some service redesign, such as moving some services from two sites to one. Some changes were described as proactive, but most reactive. The rate and feasibility of change may be limited, particularly for smaller specialties, by geographical and political concerns.

WTR was not felt to be a major driver of changes at a regional level, although there was a dedicated group to approach responses in a strategic way. Educational concerns may not always be represented fully within Trusts where service reorganisation is being considered.

Hospital at Night had been introduced across the region – some in particular specialties, some across the whole hospital, depending on the size of site. WTR was seen as the primary driver for H@N.

There was a risk identified that where service changes had been made, service demands may exert pressure to revert to a status quo. For example, where extended nursing roles have been introduced, service demands or financial pressures elsewhere in the organisation may lead to a nurse practitioner moving back to a general nursing role.

Changes to training

It was reported that the WTR had impacted on the formal education provided by the Deanery, with a reduction in the attendance possible at individual educational sessions. PowerPoint presentations are now uploaded onto the internet to allow trainees to access them in their own time, and there has been an increase in the provision of online modules, for example in O&G and paediatrics. Live streaming was attempted, but found not to be effective. It was also felt that working fewer hours impacted on practical experience.

Management

Rota design and management

Rota design was reported to work best with clinician involvement. Rotas are initially designed around a template by HR (most of the Trusts in this Deanery using Zircadian), which is then reviewed by doctors working on that rota. It is required that all rotas are signed off by an Educational Supervisor and the Director of Medical Education or their nominee. Rotas also have to be approved by a majority of trainees. This was seen to be important in allowing for educational considerations, such as half-day teaching sessions and list timings. For example, a surgical rota was changed from 9.00am-5.00pm to 8.00am-6.00pm as the theatre list ran until 5.00pm and doctors then went onto the ward at 5.30pm. A preference for full days rather than half days was also implemented.

The importance of handover was stressed, and this is built into rotas, with larger sites having a 30-minute overlap. Handover is led by medical registrars, with details photocopied and retained.

Trusts reported a shortage of doctors to be the main reason for rota gaps; in some specialties and geographical areas it was a struggle to attract and retain trainee doctors, and they were being supplemented by staff grades. However staff grades could not always be recruited and rotas would have to be filled by long term locums, and in some cases by specialty trainees continuing in training posts for the six month grace period beyond completion of their CCT.

This was compounded by doctors wanting to work in close geographical proximity to the main city within the Deanery, and changes in the workforce leading to increased desires to work part-time or have reduced travel time to work. Emergency medicine was reported to be an unpopular specialty, partly due to the unsocial hours, busy nights and weekends and a full shift pattern (already in existence prior to WTR). The nature of A&E requires a full rolling rota as out-of-hours intensity is significantly higher than in some other specialties and some shift times coinciding with highest workload were seen as not family friendly (e.g. 6.00pm-2.00am, 10.00pm-4.00am). Additional funds were provided to employ more trainees to help achieve compliance, particularly as there are a large number of small hospitals in the Deanery, and this has resulted in a surplus of posts in Core Surgery and Core Medicine. Recruitment was also more difficult following changes to immigration and visa rules restricting the number of overseas doctors entering the country. Proactive overseas recruitment was taking place in countries such as India and Romania.

Domestically, MMC was seen as a reason posts remained unfilled. Previously people may have done SHO posts for six months at a time, filling rotas and gaining experience in different specialties, while taking on service delivery. Run through training however means that those doctors are now taken out of a flexible workforce, and many are leaving the region to get on their preferred specialty training programmes. One-year FTSTA posts were reported to be unpopular in O&G and paediatrics, which has led to some doctors preferring to train in another specialty or leave the Deanery. The possibility that training posts were seen as a simple solution by some, without due regard for longer-term workforce implications, was raised. Decoupling of core and specialty run through posts was felt to be a negative move by some, as it leaves some trainees unable to find a higher training posting following completion of core training.

It was reported that rotas could easily become destabilised and show as non-compliant on monitoring returns, and there could be a number of reasons for this, including redesign or expansion of services and a lower than anticipated number of trainees due to workforce planning. Compliance was harder to achieve in smaller

specialties at ST4 and above, for example in neurosurgery. It was noted that the service demands had increased while the number of trainees in some clinical areas had grown by a smaller amount, or even reduced.

Monitoring

Letters are sent to trainees in advance of the monitoring period. Systems are purchased by Trusts, with four currently using Zircadian and one using a manual system. Trainees complete diary cards. Monitoring returns varied, with some areas as low as 50%.There was no '26-week average' monitoring, however rotas were reported to be compliant on paper. Three examples of reasons given for working beyond rostered hours were: shifts over-running, not getting required breaks (due to, for example, operations lasting over four hours e.g. in cardiothoracic surgery, and calls not being screened at night), and unfilled posts.

It was felt by some that the New Deal banding structure provided a 'perverse incentive' not to be compliant, and that some trainees may be resistant to monitoring that may result in reduced banding. Consultants may also benefit from junior doctors being present on the wards longer, and may not see it as their responsibility to reinforce compliant hours. Trainees meanwhile may not want posts to be re-banded, and refuse to sign off a changed rota.

There was a comment that policies can 'slip' and email reminders were sometimes issued, for example to nurses regarding filtering of calls and not bleeping trainees during an educational session. Shifts could sometimes over-run if doctors were waiting for a locum to arrive, or if tasks were not completed, and monitoring data showed that these could often be tasks of less educational value such as, for Foundation Programme trainees, taking requests, blood tests, and writing discharge letters. Staff vacancies in areas such as phlebotomy could mean junior doctors taking on this work.

Educational governance and quality management processes

Quality management works at Deanery level on ensuring that the training and education of trainees operates up to the standard set by the GMC. Quality control operates at trust level. Quality management standards cover recruitment and selection, allocation to posts, what formal education is provided and to what standard. There is also a role in support for trainees' health, care and career; preparation for assessments and sign off, working lives and workload (including hours worked and rotas).

Information is gathered from a variety of sources including Deanery/Trust surveys, the GMC survey and Deanery visits. The Deanery also requires an annual report from trusts through the Director of Medical Education on how they are managing education and training and this includes a specific question on working time compliance; however there can be variability in the amount of information provided in each report. Quality control is the Trust's responsibility. Concerns about education may be contained and managed within a service group, and only be escalated to the Deanery in exceptional circumstances, although the Director of Medical Education within a Trust should be aware and able to escalate. Service groups monitor and keep information on rotas. Rotas are signed off in the trust and sent to the liaison group for re-banding if necessary. It was noted that there can be variability over time and that rotas could easily become de-stabilised. There was an implied disconnect between the educational and service delivery elements, with large budget-holding service groups being very powerful, and exerting more influence with regard to service redesign, for example. Concerns raised through monitoring would be channelled from service groups through DMEs, but the influence of DMEs may be less.

As well as the GMC survey, information gained in ARCP data and interviews was used to identify any potential issues. It was reported that most specialty trainees have a face-to-face end of year interview, in which it is possible to gain an idea of workload and compliance in particular units. There was also some paper-based feedback, and some schools conduct an end of attachment survey.

Visits are made to each educational unit including all specialties and trusts. If issues identified are not resolved, there may be a need for repeated visits, following which the Deanery may enter a position of having to withdraw trainees from a unit, and concerns would be referred up to the GMC, potentially triggering a GMC visit.

Overview and Additional Comments

The tension between service provision and training was highlighted. Changes such as an increasing elderly population were creating demands on services, with Trusts wanting more trainees and deaneries' concern to ensure optimal training opportunities. The multi-factorial nature of changes in the design and delivery of healthcare meant that WTR was one of several challenges. Trusts were seen to be facing dual pressures of being performance managed in relation to the achievement of targets, and of their commitment to training and responsibility to the Deanery and GMC as well as trainees themselves.

It was felt that the WTR had led to an increased proportion of hours being worked at night, as out of hours service cover was a priority over educational opportunities – meaning that trainees work more hours away from the greater daytime presence of consultants. There was reported to be a perception amongst surgical trainees that the NCEPOD guidance regarding night-time operating had led to night-time working being less beneficial for training and meaning that a large proportion of time was being spent assessing patients and carrying out investigations rather than operating.

There could be a conflict between the demands of trainees and service in designing rotas. Consultants may have different priorities to the trainees, but some may prioritise education.

H@N was considered to have been of benefit for Foundation Programme trainees as duties of limited educational value could be directed away from them, enabling them to have greater experience, with checking by seniors, of clerking and presenting patients, decision-making and carrying out procedures.

It was commented that, due to shift systems, there were decreased opportunities for trainees to be involved in the continuity of patient care – 'seeing a patient right through'.

Some reported a perceived issue of 'homelessness' due to the transient nature of junior doctors' experience as a result of the system of rotation between placements. Being in a placement for a short period of time could also mean that trainees 'put up with things' rather than speaking out about concerns over working hours.

It was also felt that issues concerning contracts and monitoring, and 'work practice' including 'being a good employee' were generally not made sufficiently explicit at medical school, although it was reported that there were now greater links with the University.

There was a suggestion that the GMC could provide publicity regarding the positive impacts of WTR (such as figures from research on numbers of car accidents).

A vicious circle was described by one informant, where rotas become stretched due to increased service demands, meaning they become less popular and harder to fill, meaning work becomes more intense and the rota even more stretched. The consultant workforce was not felt to yet be in place to provide a consultant-delivered service.

Appendix C – Analysis of ARCP data from one Deanery

One Deanery has explored the use of Annual Review of Competence Progress (ARCP) outcomes as a method of assessing the impact of WTR on training. If WTR had a negative effect on training outcomes, an increase in unsatisfactory outcomes (ARCP 2, 3 and 4) may be anticipated following the reduction to a 48 hour working week for trainee doctors in August 2009.

Table A1 shows the percentage of ARCP assessments awarded each outcome, by year and across all specialties. Data were available for four years (2007-08, 2008-09, 2009-10, and 2010-11), each period running from the beginning of August to the end of July. While the WTR became a legal requirement on 1 August 2009, some rotas may have been compliant before this date.

There appeared to be a small increase in the number of ARCP 2 and 3 outcomes from August 2007-08 to August 2008-09, and the trend was maintained into 2009-10. However, this trend did not continue into the 2010-11 year of assessments, when unsatisfactory outcomes were at their lowest levels (of the studied years), suggesting that this cannot necessarily be attributed to the introduction of WTR. Further analysis at the specialty level revealed considerable variation, with some specialties showing an increase in ARCP outcome 2 in 2009-10 (although this did not typically continue into 2010-11), and others showing a slight decrease.

Table A1: ARCP outcomes by year (all specialties)

ARCP Outcome	2007-08 (%)	2008-09 (%)	2009-10 (%)	2010-11 (%)
1	70.2	67.8	62.8	79.4
2	2.0	3.9	7.2	0.2
3	1.6	2.6	4.1	0.1
4	0.0	0.0	0.1	0.0
5	17.0	13.7	15.0	11.6
6	1.6	6.3	5.7	1.8
7	7.3	5.2	3.8	3.9
8	0.3	0.5	1.3	3.1
Total no. of ARCP assessments	932	1345	1694	1206

Note: Includes same individuals multiple times (i.e. multiple ARCP assessments)

It is important to highlight that the use of ARCP outcomes to assess the impact of WTR on training is problematic and is complicated by several confounds.

Firstly, information available to the Deanery does not provide individual level data on WTR compliance, which is known to vary in practice. Without this, it is impossible to correlate actual hours worked with ARCP outcomes.

Secondly, there was local variation in WTR compliance at the Trust level. As noted above, some rotas implemented WTR early in order to manage any issues before WTR became a legal requirement, whereas others did not. Therefore, comparing ARCP outcomes from before and after August 2009 is likely to be an inaccurate reflection of the impact of WTR.

Thirdly, ARCP itself was a relatively new process when WTR was implemented, replacing the use of Record of In-Training Assessments (RITA) in 2007. As a result, some of the fluctuation in outcomes may be due to early issues with the new assessment system.

Fourthly, organisational changes are frequent in the NHS, and it is difficult to isolate the effect of one change (i.e. WTR) on an outcome that is likely to be affected by numerous other factors (e.g. quality of training, relationship with seniors, staffing levels in the department). Finally, using ARCP outcomes does not capture qualitative differences in training delivery. For example, some departments may have restructured training opportunities to accommodate the reduction in working hours, whereas others may have continued with old systems of training delivery.