Implementing the European Working Time Directive: A Position Paper from the Academy of Medical Royal Colleges

Contents

February 2004

1.0: Introduction

The EWTD presents a major challenge that requires innovative approaches to working patterns and service delivery if high quality clinical care and training are to be maintained. Legal judgements (the SiMAP and Jaeger cases), confirming that time spent at the place of work, whether working or not, must count as work, the potential changes to Senior House Officer (SHO) training (as proposed in Modernising Medical Careers), and the desire to shorten Specialist Registrar (SpR) training, have further intensified the consequences of this legislation. Some of the problems inherent in finding a satisfactory solution are:

- The present dependence on doctors in training to deliver service;
- The number of acute hospitals employing resident out-of-hours cover;
- The projected shortfall of consultants to provide a consultant delivered service;
- Increased volume of complex (and emergency) work resulting from increasing expectations of what is possible, especially in the elderly population;
- Uncertainties in the structure of postgraduate training;
- The reduction in training time available to trainees;
- Some current clinical working practices;
- The inflexible design of inherited hospital buildings.
- The geographical spread of most SpR rotations.

It should also be noted that:

- solutions that may be possible in large urban centres are often not feasible in smaller hospitals serving more dispersed populations. This is particularly so in Scotland where geographical circumstances result in their being approximately twice as many hospitals per head of population.
- although many of the measures proposed to minimise the impact of the introduction of the Directive are feasible in principle, it is not realistic to conceive that they can be universally established in the timescale required to meet the deadline of August 2004.

An inevitable consequence is that the proportion of routine service work delivered by doctors in training will have to fall if training targets are to be maintained. Service delivery will inevitably shift over time to being largely provided by career staff working in teams who, whether medical or non-medical, have been trained for the role that they are undertaking. Trainees will of course, still need to undertake service work, but this will increasingly be driven by the needs of their learning objectives rather than service goals. In a mature health service that is fully-staffed, the ratio of trained medical staff to trainees is approximately four to one in contrast to the present ratio of less than one to one.

Also, it must not be forgotten that reducing the proportion of time that doctors in training contribute to service delivery will, in the short term, put an even greater load on existing consultants and other grades of career staff, who already fall within the EWTD.

The three key rules imposed by the EWTD (applicable from August 2004) which have the greatest impact are:

1. A trainee doctor may not work continuously for more than 13h without a minimum period of 11 hours off between duty periods.
2. A trainee doctor may not work more than 58h per week, but in the UK this will be contractually limited to 56 hours actual work per week, averaged over a 26-week reference period.
3. A trainee doctor is considered to be working if he or she is required to be in the hospital, whether awake or asleep.

The provisions of the Working Time (Amendment) Regulations 2003, allow no derogation from the average weekly working limit but do allow derogation from the Directive's rest provisions to allow continuity of patient care. If the rest provisions are varied, an equivalent period of compensatory rest must be provided as soon as possible and, (if the suggestions of the Jaeger judgement are to be upheld), before the next duty period.

Whilst this document has been prepared to explore the solutions to the cover for acute services, it needs to be remembered that obstetrics, paediatrics and anaesthesia have special problems that, on occasions, will make cover for them within the constraints of the EWTD particularly difficult.

2.0: Possible solutions to the consequences of the EWTD

2.1: The greater use of skill-mix

The AoMRC supports the need for each specialty to make a fundamental assessment of what exactly is required when and how this can be best delivered. Already, in some settings, staff other than doctors are being used to carry out tasks traditionally undertaken by doctors and we would support this provided that:

- Tasks are only be undertaken by individuals who are competent to perform them,
- Such individuals are permitted to make decisions within the scope of their professional practice but otherwise need to operate under clear protocols and accountability, and
- Developments take into account the effect on staff shortages in other areas.

The AoMRC recommends that individual Colleges should assist pilot projects and Trusts in developing and testing new roles to ensure that competencies and professional responsibilities are defined in a way which protects patients. It also needs to be made clear to patients and their relatives who is responsible for their care.

2.2: Cross-cover

More flexible cross-cover arrangements out-of-hours is one method of increasing the hours available from a limited number of medical staff. Such a system has the potential to maintain training objectives whilst not catastrophically reducing service delivery.

Cross-cover is acceptable where:

- the safety and management of patients is not put at risk;
- the provision of cross cover does not prevent a trainee from achieving his/her learning objectives;
- it is clearly within the competence of the doctor concerned to provide cover;
- there are clear arrangements to ensure hand-over of information and clinical accountability.

In some situations groups of colleges will need to collaborate if trainees from different parent specialty training programmes share the same on-call duties.

2.3: Service Configuration and Rationalisation

The Department of Health's (DOH) guidance on service configuration[1] provides examples of service models which maintain patients' access to safe services. This is likely to involve much greater differentiation and separation of high and low risk and elective and urgent work, particularly out-of-hours. Colleges are encouraged to work with Postgraduate Deans, the DOH and Trusts to identify those service models which are sustainable under the EWTD. This analysis will need to be supported by clearly defining the competencies, training requirements, and working practices required to make the changes both safe and successful.

Those hospitals with small numbers of trainee staff will be unable to provide 24 hour medical cover on site. This may require hospitals within a locality to work collaboratively, collecting together patients with low out-of-hours dependency so that for them, as in private hospitals, out-of-hours medical cover is provided from home. In many cases rationalisation, as opposed to reconfiguration, of services, would simply involve two hospitals in a split site Trust. A solution might be, for instance, that emergencies were dealt with on both sites until an agreed time in the evening, but then only one site would receive ambulances until 0800 the following morning. This reflects the "major and minor take" arrangements which existed long before Trusts were introduced, which worked very well and allowed appropriate reduction of staffing rotas on the "minor take" site. Again, the feasibility of such solutions depends on many factors and collaborative working may not be possible between sites separated by many miles.

2.4: Reducing tiers of cover

Where properly designed non-medical practitioner roles have been implemented they have been shown to reduce the requirement for a full tier of cover at PRHO or SHO levels. Doctors in training may still need to provide out-of-hours cover at this level to meet their training needs but could do so alongside other practitioners.

The roles and working patterns will vary for different specialties and services: there is no 'one size fits all' so individually tailored solutions will be needed. Such changes will also have an impact on the work of the middle-grade tier of cover provided by SpRs, Staff Grades and others. Clear guidance will need to be developed on the requirements for cover at this level where the lower tiers of cover have been removed. In some instances, with appropriate safeguards and protocols in place, it may on occasions be possible to combine consultant and middle grade working patterns. Greater contributions to out-of-hours work by existing consultants will however inevitably diminish their elective activity during the day.

2.5: Changing the working patterns of senior service staff

NCEPOD reports have repeatedly stressed the need to do as much work as possible during normal working hours. These findings are supported in Scotland by the work of SASM. Many hospitals have responded to this and have spare theatre and admission unit capacity but unfortunately, traditional staffing patterns have not always produced the necessary medical manpower. This has meant that work that could be done during the day has been pushed into the out-of-hours period.

In order to reduce the need for medical staff to be active out-of-hours, there need to be staffing patterns that allow the management of cases as they arrive by senior grade service staff. This implies that such staff should have specific, dedicated, daytime on-call sessions together with an expansion of the 'twilight' or evening session concept. Allocating these

[1] DOH; DOH advisory framework for configuring hospitals; 2002

dedicated sessions will of course need a team of medical staff to work within a rota system that allocates them different duties some weeks from others.

There are some locations in which a number of senior service staff have already shown themselves to be prepared, if the conditions are right, to provide on-site out-of-hours cover. Given the right circumstances, some consultants at certain times in their career (for personal as much as clinical reasons), would like to work an 'anti-social' shift either on a regular or occasional basis. When this happens, it must be a fundamental principle that the EWTD applies to all grades of staff. Solutions must be devised which are equitable and fair to both career grade staff and trainees. Everyone who works a shift has to have time off both before and after it and no-one can work for more than the prescribed time. We must also recognise that not everyone wants the same thing and in addition, an individual may want different things at different stages of their career. The impact of the increased number of female doctors in the medical workforce has yet to become clear.

2.6: Profiling the provision of emergency theatres and staff

Most hospitals provide NCEPOD theatres during normal working hours, but there is good evidence that extending the availability of these and where necessary, increasing their number, between 1700 and 2200 is a very efficient way of dealing with the majority of urgent and emergency work. Current practice in most hospitals is to run the same anaesthetic and surgical on call team from 1700 to 0800, but some have already established additional on-call provision between 1700 and 2200, which then reduces to minimal levels between 2200 and 0800 and only deals with true emergencies.

Such arrangements take account of over-running lists, regular three session days and many of the semi-urgent cases which otherwise "clog up" true emergency theatre provision. Further inefficiencies and delays can occur due to failure to prioritise of cases, particularly when theatre space is shared between a number of specialities. Profiling not only the way in which theatres work, but also how this is broken down by surgical speciality can help greatly in planning the delivery of emergency services. Consideration also needs to be given to the timing and appropriateness of surgery, the duration of surgery and anaesthesia, the availability of critical care input and facilities, including HDU and ITU beds and the availability of surgical and anaesthetic staff who are free from other responsibilities during their on-call duties.

Another important area is matching the competence of the on-call team to the workload. This is particularly important when considering how many sub-speciality rotas are required to support work in specialist medical and surgical areas, (e.g. cardiology, gastroenterology, neurosurgery, plastic surgery), and is key to determining how the services can cope. Questions, which need to be considered, include how many on-call rotas is it reasonable to provide and what is acceptable for clinical management of acceptable quality? How much can "general" on-call rotas cover in the specialist areas and in ITU and critical care? Is more cross cover possible with more senior staff on call?

2.7: 'The Hospital at Night' initiative

Through its membership of the Joint Consultants Committee (JCC), the AoMRC has contributed to the Department of Health's 'Hospital at Night' project, an initiative that aims to redefine how medical cover is provided in hospitals during the out-of-hours period.

The programme entails a move from cover requirements defined by professional demarcation and grade, to cover defined by competency and appropriate to potential demands. It is proposed that such a change in working practices will release significant

amounts of medical staff time and support compliance with the EWTD, while enhancing clinical practice and training. The collaboration between the DoH and the JCC (and hence the AoMRC and BMA) has employed an evidence-based approach to developing innovative clinical practice models. Consequently, this work has demonstrated significant scope for changes that will deliver benefits to both patients and staff.

The JCC has provided informed professional input to advise on best practice and levels of competence in relation to interventions and has overseen the development of proposed out-of-hours models in a number of pilot sites in acute services, paediatrics, maternity and obstetrics. The group is continuing to contribute to the robust evaluation of, and feedback on, the outcomes of these new models. However, those participating in this work stress that to maximise the benefits of the new models evolving through the 'Hospital at Night' project, change is needed "in-hours" as well as "out-of-hours".

3.0: Providing cover for in-patients and referrals outside normal working hours by a generic 'Out-of-Hours Medical Team'.

3.1: Introduction

The concept of out-of-hours provision of medical cover for medical and surgical patients in hospitals caring for acutely ill patients by a generic 'Out-of-Hours Medical Team' (OoHMT) was considered by a number of Colleges[2] and the full report can be found on the AoMRC web site[3]. The objective of the project was to evaluate what arrangements were needed to provide high quality care for patients whilst optimising the efficient use of medical staff. This work specifically excluded provision for paediatric and obstetric patients.

Although local initiatives have made considerable improvements in improving the assessment and admission of patients presenting to hospital with acute clinical conditions, there remain widespread concerns about the quality of care out-of-hours for patients who have been admitted to the wards, and remain sick or have an unexpected clinical deterioration. Problems include:

- admission to inappropriate wards;
- very thinly-spread medical and surgical cover;
- complicated referral pathways between specialties;
- poor handover between teams or shifts.

Outside normal working hours, the time can be divided into three 'time zones', each of which needs cover and has particular characteristics. These are:

5pm - 10pm, Monday-Friday [25h / week]
8am – 10pm Saturday & Sunday [28h / week]
10pm – 8am every night [70h / week]

3.2: Responsibilities and composition of the OoHMT

The role of the OoHMT would be to respond to unexpected clinical needs (including gynaecological and psychiatric emergencies) within the hospital. Surveys have shown that most problems on the wards (and those admitted to the hospital) at night are 'medical'. The main duties of the OoHMTwould be to attend and assess patients with acute deterioration of

[2] RCPLond, RCA, RCR, RCSLond, RCPCH
[3] www.aomrc.org.uk

health; resuscitate patients when required and to stabilise those in need of expert assistance or transfer. True surgical emergencies would be assessed and managed by surgeons and anaesthetists in the usual way. The OoHMT will not provide any cover for paediatrics or obstetrics, but could provide cover for gynaecology when this cannot be provided by an obstetric team.

The members of the OoHMT could be drawn from available medical staff on call for the following specialties:

- Medicine, plus its sub-specialties;
- Surgery, plus its sub-specialties;
- Anaesthesia and critical care;
- Accident and emergency;
- Psychiatry

For the proposal to succeed there clearly needs to be a move to team-working and flexibility across these specialties.

There should be a clearly identified medically qualified leader, who is vested with the authority to delegate and allocate work to all doctors in the OoHMT. Ideally, the medical team leader should be a Consultant, but in some Trusts, it will probably be the team member most experienced in the assessment of clinical priorities. The medical leader would have the authority to call-in junior doctors on-call at home, possibly to provide general assistance, if the need arises. Training will be needed for this important leadership role. The identified OoHMT needs a physical ‘control centre' that would allow a single point of call for all clinical problems and where there would be a co-ordinator manning the ‘control centre', often an experienced nurse practitioner.

Every Trust will have to determine the rules for reasonable cross-cover between specialties or sub-specialties within a major discipline. It may prove impossible to provide 168h / week cover for every specialty but cover may be possible except from 10pm to 8am, which would save 70h / week – essentially the establishment of two SpRs. The expert cover outside those hours could come from the OoHMT using pre-defined protocols, re-calling doctors living outside the hospital (subject to the rules of the junior doctors contract), or consultant intervention. Most importantly, the patients under specialty firms should enter out-of-hours periods fully sorted-out, and with a management plan.

It must however be made clear that members of the OoHMT cannot be expected to perform specialist work outside their competency – for example:

- A surgeon admitting unselected medical emergencies;
- A physician admitting unselected surgical emergencies;
- Physicians or surgeons giving a general anaesthetic, or establishing a patient on a ventilator.

Although solutions will differ because of local circumstances, the OoHMT will need to have strong links with:

- The critical care / high dependency unit;
- The medical admissions unit;
- The Accident & Emergency Department;
- Support services such as radiology and pathology.

3.3: Key principles needed to make the system work

Every effort should be made to bring forward work from the evening into the day, and from the night into the evening, and, if at all possible, emergency work should be separated from elective care; all consultants and their teams should be freed of elective duties when they are on call. Medical staff in the hospital at night should be pro-active rather than reactive – seeking-out problems as well as responding to emergencies. If they are not busy in their own immediate discipline, they should be available to help in other clinical areas that are under pressure.

It is not envisaged that the medical leader will allocate every call or duty, but he or she must have the authority to reallocate medical resources if problems arise. The real benefit of the OoHMT should be appreciated when parts of the clinical service are stressed by excessive activity – by encouraging junior doctors to collaborate and help within their range of clinical competence. The practice of some junior doctors working continuously, whilst their colleagues have a less onerous time, should become a thing of the past.

In order to help develop optimal working relationships and a 'team spirit', shift patterns should be similar for the different disciplines within a Trust – for example, all weekly shifts should start on the same day, so that the same team works every night for one week.

Hand-over arrangements must improve – before the evening, each patient's active clinical problems should have been identified. Many sub-specialist doctors presently on call at home could work their 56h / week at the bedside, and leave the OoHMT at night with in-patients that are under better control with clear management plans. Trusts should consider methods of identifying their patients who are most at risk – for example, each team could hand-over a printed list of its in-patients, graded according to potential risk.

Trusts may wish to consider whether they have sufficient consultant staff to consider contracting for some consultants to stay in the hospital for emergency work during the evenings and also the daytime at weekends, realising that these sessions will need to be paid at appropriate rates and that this will mean that these consultants may not be as freely available during the normal working week. This would allow an extension of the principle already established in A & E medicine to extend formal training into the evening and at weekends.

Support services are often forgotten in acute service planning. It should be noted that rapidly available diagnostic radiology has become central to patient management. Although many departments have implemented extended working days, there are critical shortages in workforce that have limited this development. If radiology services are to support the OoHMT properly there will be a need for a consultant led service until 10.00pm Monday to Friday and 9.00 - 5.00pm at the weekend and on Bank holidays. All diagnostic services should have sufficient spaces available for immediate booking of patients for specific tests on the day after the night of admission. Delivery of such an extended radiology service is however dependent upon increased numbers of radiologists and radiographers, careful implementation of role extension and deployment of picture archiving and communications systems (PACS) including teleradiology with expert advice (e.g. neuroradiologists) available from home.

In the pathology specialties of medical microbiology and chemical pathology, there are many single-handed consultants who effectively are providing a 24/7 (rather than "until 10pm") consultant-led service. This is usually clinical advice from home rather than hands-on work at the hospital.

It must however be remembered that doctors cannot double-task or be in two places at the same time. For example, an anaesthetist giving an anaesthetic would have to drop out of the

OoHMTteam; similarly a surgeon when operating on a patient; and the physician managing acute medical admissions may not be free to attend immediately to a problem on the wards.

Very importantly, as mentioned above, the OoHMT, in association with proactive clinical care out-of-hours, provides a real opportunity for the clinical teaching of both undergraduates and postgraduates.

4.0: The number of resident medical staff (cell size) needed to cover a 24/7 rota when training is part of the job description

4.1: Introduction

The question posed here is 'What is the optimal number of doctors that are required to construct a rota for a post that requires one member of the medical staff to be available 24/7 assuming that each member of the cell is interchangeable?'. The problem has been considered in detail for the acute admitting Specialist Registrar (SpR) in medicine[4], but the same principle and conclusions apply to any situation where one doctor is needed 24/7.

This analysis assumes the need for the doctors involved to have a significant training component to their post, the majority of which will occur in daytime hours when they will be supernumerary[5]. Clearly there are some situations that vary from this and these need to be considered individually. At present a number of EWTD compliant rotas exist that cover the service component at the expense of training time and this is detrimental to reducing the length of training time. This section aspires to the ideal solution in an acute rota with the present ratio of trained to trainee staff. As we shift towards a service delivered by doctors who are not in training posts, so the assumptions of this analysis will change.

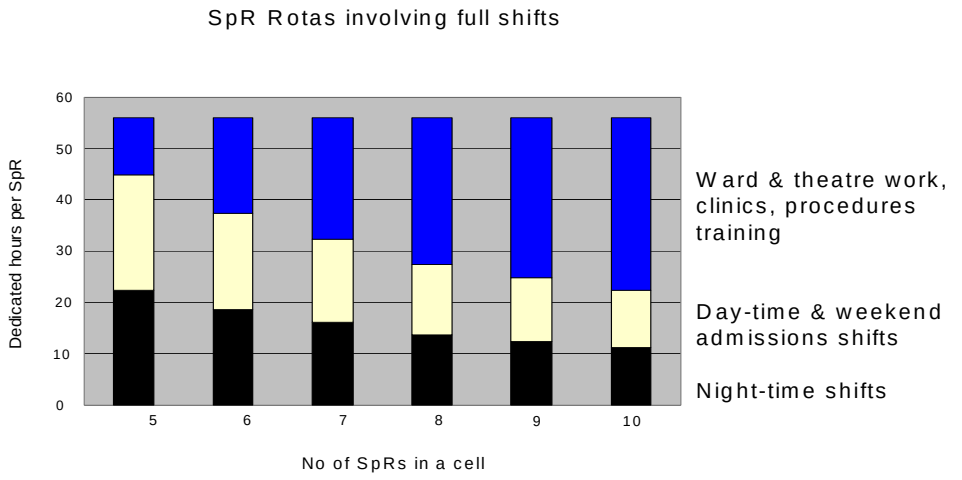
The division of a 24 hour period into normal working hours plus three time periods was described in section 3.1. The absolute minimum is to have one doctor available for each of these shifts, but multiple doctors will be needed in the daytime – to receive training, and to perform ward work, out-patients and procedures. Hence, whilst one doctor is needed the whole time, the discussion is also needed about how many doctors should be available in the daytime to be able to construct a viable training rota.

4.2: Numbers in a cell and availability for work

The distribution of work and opportunities for training depend on the number of doctors in a cell, as shown in the diagram below.

[4] available from RCP(Lond)

[5] By 'supernumerary' we mean that the service is run in such a way as to be sustainable totally by trained doctors, such as consultants, and not be dependent on trainees. This does not mean that trainees do not contribute to the service; indeed, the reduced hours flowing from the EWTD and possible shorter lengths of training mean that their rate of acquisition of skills and experience will become a crucial factor in their training programmes.



The above figure comes from the data published in the original publication. It demonstrates how work patterns change according to the number of doctors in a cell. Each column shows the average work pattern each working week for every doctor in the cell [taking account of prospective cover for leave], assuming them all to be in training.

One can calculate how many doctors in a cell are left for continuity, experience, clinics, training etc by subtracting those who are 'doing other things' – for example, on nights, recovering from nights, on annual and study leave [20% of the time], and scheduled to work in the evenings Monday to Friday, or the 13-h daytime/evening shifts on Saturday and Sunday:

	+10 doctors	+9 doctors	+8 doctors	+7 doctors
On nights	-1	-1	-1	-1
Recovering from nights[6]	-1	-1	-1	-1
On annual and study leave[7]	-2.0	-1.8	-1.6	-1.4
Evening and weekends	-1	-1	-1	-1
Daytime take[8]	-0.7	-0.7	-0.7	-0.7
M-F: training, wards, OPD, procedures	+4.3	+3.5	+2.7	+1.9

The problems that arise when there are small numbers in a cell:

1. A greater proportion of experience is in emergency, out-of-hours work.

[6] A whole week is not really required, but the additional 21h of extra leave can be clawed back in other weeks.
[7] This assumes that full entitlement is taken by each doctor, but one cannot plan that less will be claimed.
[8] The on-call SpR should be dedicated to medical admissions, and not be doing routine work.

2. There are insufficient doctors on the wards, especially for diagnosis, organising treatment, continuity of care and discharge.
3. Juniors can choose, within the contingencies of the Service, when they wish to take leave; it will be highly disruptive when, for example, two wish to take leave simultaneously within a cell of eight, and three on leave will be impossible.
4. With 10 doctors in a cell, it is possible to pair doctors so that one can almost always be present in the daytime when the other is on leave, nights, or recovering from nights. This would be much more difficult with four pairs within a cell of eight.
5. Attempting to organise a cell of eight junior doctors is likely to be very stressful, because there is very little flexibility – it is highly likely that frequent use of locums will be required to fill gaps due to impossible rostering challenges. This is despite staffing for prospective cover for annual and study leave.

4.3: Conclusion

In order to devise a junior doctor rota that covers a responsibility 24/7, a cell of eight to ten doctors is required, and for the practicalities of planning, the optimal number of doctors is ten, if they are working a 56-h week. It may be possible to reduce this to eight in those specialities which do not require significant hand over time between shifts.

It should be noted that these calculations are theoretical and do not take account of current staffing arrangements. While it may not prove practicable to implement the recommendations at present, the Academy regards this pattern of work as a legitimate long-term aspiration, which will become even more critically important as plans are made to implement the 48 hour working week required under European legislation by 2009.

5.0: EWTD compliant posts and approval for training

Application of the rules subsequent to implementation of the EWTD will have a variable effect on the content and quality of postgraduate training posts in medicine and dentistry. This is because:

- different posts have different proportions of training that occur within and outside the normal working day and,
- different specialties have different proportions of urgent and elective presentations of patients.

It is therefore not possible to produce ‘one size fits all’ advice when the EWTD becomes the basis for time spent at work. There will be a requirement for much individual tailoring since, at present, the great majority of trainees are not supernumerary to service needs, particularly outside the working day.

The following is a suggested method of approaching problems which need to be tackled before they arise as crisis issues:

- Look at the training objectives of a particular post;
- Look at the service consequences of the post being supernumerary.

An analysis of these two facets of the post will reveal the degree of conflict.

After this, consider:

- The position and training content of the post in relation to the overall training programme;
- See whether or not any training aspects can be provided in other parts of the rotation or in other ways;
- See whether or not any of the service roles can be covered in other ways or whether services can be reorganised.

From this, lay out what is seen to be the best solution. Then, test the training content of the post against the criteria specified by the STA and/or JCPTGP for that post.

If there remains an educational deficit, contact the local Postgraduate Dean who can review the situation with the relevant Royal College or Faculty Tutor or Regional Adviser (as appropriate for that location).

There are strong reasons for subjecting each training post to such an analysis as soon as possible so that the degree of difficulty can be judged on a national or at least regional basis.