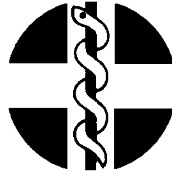

AMA

Overview of Overseas Experience in Regulating Hours of Work of Doctors in Training

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INTRODUCTION

The need for regulation of the the hours of work of doctors in training has been identified by a number of countries. The methods utilised for such regulation varies between countries as do the specfic provisions applied. The issues that have emerged in countries during the process of introducing regulation of doctors hours have parallels in the Australian context and efforts to introduce broad national standards on hours of work and workloads for Australian doctors can be informed by careful analysis of overseas experience in this regard.

This paper reviews the experiences of a number of western industrialised countries in the regulation of the hours of work for doctors in training as well as documenting the provisions that apply. While the Australian health system can benefit from this information, the applicability to Australia of the approaches taken and the provisions introduced in relation to doctors hours of work must be assessed having regard to the very different health systems in which they operate.

SUMMARY

- Table 1, 'Summary of Current Arrangements to Regulate Hours Worked by Junior Doctors Around the World' compares the hours worked and rest breaks taken in six different countries.
- In-hospital care is provided around the clock by medical staff working a combination of day duty, on call and shift rosters. On call work practices lead to long hours of work per week, whereas shift rosters lead to comparatively reduced hours of work per week.
- Working excessive hours results in fatigue which can be a significant contributor to mistakes that are made.
- Implementing flexible working patterns, such as shift work, have served to reduce doctors' average hours and periods of continuous duty.
- The demands placed upon medical staff vary according to the type of care undertaken in the clinical unit.
- Changes in hours worked by junior doctors in Denmark and the Netherlands were initiated by doctors demands. In England the BMA urges junior doctors 'to take their fate in their own hands.'
- The changes to concentrate and reduce the total period of junior doctors' training caused concern to specialists and consultants. They needed to be convinced that training could be effected in a shorter period of time than it had previously.
- Junior doctors were found to perform non-medical duties such as electrocardiography and portering duties. Transferring non-medical duties to

nurses and clinical support staff allowed junior doctors to focus on medical duties.

- Consultants and specialists required assurance that excessive hours of work previously worked by junior doctors would not be transferred to them when regulations reducing the hours of work by junior doctors were implemented.

- In countries where the rest period between periods of duty is regulated to a minimum of 8 hours or more, the maximum number of hours worked per week is significantly lower than in countries where the rest periods between shifts are not regulated.

- Prior to changes in the hours worked by doctors in training in a number of countries, many of the hours were worked on on call duty at night and over the weekend, where the young doctor received little supervision by older, more experienced doctors.

- The weekly hours worked by doctors in training vary from country to country and routinely exceed 55 hours per week.

- National negotiations and legislation, especially in the Nordic countries, have lead to general reductions in junior doctors' working hours. In other countries, despite considerable efforts, no significant reductions in hours have occurred.

- In the United Kingdom and the Netherlands, Government funding was needed to employ additional medical staff required to perform the duties and work the hours formerly undertaken by doctors in training.

- In the United Kingdom and the Netherlands the introduction of reduced working hours necessitated the employment of more senior doctors in order to provide coverage for the hours formerly worked by their younger colleagues. Thus the ratio of senior doctors to junior doctors increased.

- The employment of additional doctors reduced medical unemployment in the Netherlands.

- More hours worked by senior doctors gave scope for greater supervision of junior doctors.

- In the Netherlands the additional costs resulting from the adoption of regulations to reduce the number of hours worked by junior doctors proved less drastic than expected.

- In countries where the number of hours worked by junior doctors were very high, rates of pay for over time were low.

- In France, hours worked beyond the maximum pay limit were unpaid, and in Ireland, when hours in excess of 49 were worked they were paid at 50% the standard hourly rate.

- The economic impact of a reduction in the number of hours worked on a country's health budget was expected to be high in countries whose rate of pay for over time was less than that for normal hours.

- In France and Ireland, it was expected that a reduction in the number of hours worked by junior doctors would lead to increased health care costs.

Table 1: Summary of Current Arrangements to Regulate Hours Worked by Junior Doctors Around the World

	United Kingdom		Netherlands		Denmark	France	Germany	Ireland	New York
	On call	Shifts	On call	Shifts	On call & shifts	On call & shifts	On call & shifts	On call & shifts	On call & shifts
How hrs are regulated	Ministerial agreement		National legislation		Legislation & collective agreement	N/A	Collective agreement	N/A	Legislation
Max. no. of hrs of work	N/A	14-16[1] hrs per shift	13 working hrs per day[4]	15 hrs per day shift 9.5 hrs per night shift[5]	N/A	No restriction on hrs - pay limitations	7.5-10 hrs day + 12 hrs on call or 24 hrs on call when off duty	N/A	N/A
Min. rest breaks (uninterrupted where possible)	8 hrs during 32 hr duty period	4 hrs during 16 hr duty period	N/A	30 mins within duty period of 6 hrs	N/A	N/A	30 mins within duty period of 6-9 hrs or 45 mins where duty period > 9 hrs	N/A	N/A
Min. rest between shifts (hrs)	12 hrs	8 hrs	10 hrs	10 hrs	8-11 hrs	No restrictions	Guaranteed 10 consecutive hrs after day>7.5 hrs[6]	N/A	N/A

Table 1: Summary of Current Arrangements to Regulate Hours Worked by Junior Doctors Around the World (cont.)

	United Kingdom		Netherlands		Denmark	France	Germany	Ireland	New York
	On call	Shifts	On call	Shifts	On call & shifts	On call & shifts	On call & shifts	On call & shifts	On call & shifts
Max. continuous duty / consecutive shift duty period (hrs)	32 hrs week days + 56 hrs at weekend	16-24[2] hrs	24 hrs	24 hrs	N/A	N/A	24 hrs	72 hrs	24 hrs
Min. continuous off duty breaks (hrs)	48 hrs rest + 62 hrs rest in every 21 days	48 hrs rest + 62 hrs rest in every 28 days	1 off duty Sunday in every 13	9 hrs rest after shift <15 hrs or 24 hrs rest after shift > 15hrs + 1 off duty Sunday in every 13	55-64 per wk	No restrictions	12 consecutive on call duty periods	N/A	24 hrs in every 7 days
Max. no. consecutive shifts	N/A	12 shifts worked in a row	5 on call periods per wk for max. 13 wks in 26	5 shifts per wk for max. 13 wks in 26	N/A	N/A	12 consecutive on call duty periods	N/A	1 night on call in every 3rd night

Table 1: Summary of Current Arrangements to Regulate Hours Worked by Junior Doctors Around the World (cont.)

	United Kingdom		Netherlands		Denmark	France	Germany	Ireland	New York
Rest to be taken at night	8 hrs rest during 32 hr duty period taken preferably at night	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max. hrs per week	72 hrs	56-64[3] hrs	60 hrs	60 hrs	N/A	N/A	N/A	N/A	N/A
Max. averaged hrs per wk	56 hrs (cycle time not specified)	56 hrs (cycle time not specified)	48 hrs over cycle period of 13 wks	48 hrs over cycle period of 13 wks	Not regulated, however av. = 45	Not regulated, however av. = 50 + On call hrs	56 hrs over cycle time of 24 wks	65 hrs, however, exceeded up to 129 hrs per wk in some cases	80 hrs (cycle period not specified)

Notes:

1 Max. hrs of duty per partial shift must not exceed 16 hrs; max. hrs of duty of full shift must not exceed 14 hrs.
2 To facilitate the change from one shift to another, two shifts may be worked consecutively; in such cases partial shifts may not exceed 24 hrs continuos duty & full shifts may bot exceed 16 hrs continuous duty.
3 Max. hrs per week must not exceed 64 hrs when working a partial shift & 56 hrs when working a full shift.
4 Working hrs mean the time that one is at work in the hospital.
5 On duty hrs mean that one is on duty, which means on call, attending lectures or courses.
6 If a rest period of 10 hrs is indicated it is not permitted in any situation to continue work the day following the on call service if the sum of the activities rendered in this service amounts to 5.5 hrs or more.

DISCUSSION

General observations on the variables which influence the hours of work of junior doctors can be made across a number of countries. These variables include the intensity of work, the patterns of work, the rest periods taken and the economic implications for the doctor and the health budget. Following are relevant findings of the COSHAPE Report on the working conditions of 'doctors in training[1]' in the European Union (EU) as reported in the 'Executive Summary, Working Conditions for Doctors in Training Consequences for Doctors and Patient Care in the EU':

- *'In the majority of the countries studied doctors in training seem to bear the brunt of weekend cover and night duty.'*

- '*Although the weekly hours worked by doctors in training are highly variable, it is reasonable to conclude that these routinely exceeded 55 hours a week in at least 10 out of the 18 countries that replied*' (PWG, 1995).

The COSHAPE report also outlined that in some countries, national negotiations and legislation had lead to general reductions of junior doctors' working hours, especially in the Nordic countries, whereas despite efforts in other countries, this issue has not been resolved.

In all countries it is necessary that in-hospital patients have access to doctors at any time during a twenty-four hour period of care. The demands placed upon medical staff vary according to the type of care undertaken in the clinical unit. Radiologists, for example, are only occasionally called upon to perform their activities out side the normal day duty hours and may, at such times, provide care by working on call. Doctors working in '*Hard-pressed posts ... those in which the emergency workload outside normal working hours is high and are generally but not exclusively found in posts in general professional training in the main acute specialties of general medicine, general surgery, accident and emergency medicine, obstetrics and gynaecology, trauma and orthopaedic surgery, paediatrics and anaesthetics'* (Heads of Agreement on Junior Doctors' Hours, December 1990), normally work actively throughout any twenty-four hour period. To ensure that doctors are available, they work a combination of day duty, on call[2] and shift rosters.

[1] **Doctor in training** - a doctor in postgraduate specialised or specific (vocational) training who simultaneously, as part of the training, is working in a department in which employment in accordance with national regulations is needed to achieve recognition or authorisation as a specialist or some other postgraduate vocational category (Permanent Working Group, PWG).

[2] **On call** - the doctor is either at home or in a designated space of the hospital, mainly at night or during weekends, available for immediate recall to work.

Partial shifts[3] are the predominant working pattern in Australia, New Zealand and the US. In the New Deal, which regulates the hours of work of junior doctors in United Kingdom, partial shifts are included as a preferable work practice.
Jesper Poulsen, President of the Permanent Working Group of European Junior Hospital Doctors (PWG) predicted that the overall cost of reducing the hours worked by junior doctors *'would be a minuscule percentage of the total health care budget'*.

Rasmussen (1995) stated, *'It is not possible to give an accurate figure on the economic consequences of coverage for doctors in training under directive 93/104 ... economic consequences are dependent on how the health care system adapts to the change'* in regulation of working time for doctors in training. The consequences could be an increase or decrease in total costs.

The extent of observance of regulations that apply to doctors hours of work varies between countries. In the United Kingdom the "New Deal" on doctors hours is still being implemented while in New York the minimal restrictions that apply through training program accreditation criteria are not universally adhered to.

In countries that have regulated doctors hours, the introduction of such regulation has not been accompanied by substantive changes to medical training arrangements, with the balance between training and service time apparently providing sufficient flexibility to accommodate reduced hours. In the United Kingdom, Medical Royal Colleges have been involved in establishing guidelines on how reduced hours were to be applied and educational institutions, such as the University of London, have required non medical duties to be shed from positions intended for interns.

Work practice changes, an increased focus on training and the utilisation of other employment categories to pick up duties shed by doctors have accompanied the introduction of regulation over doctors hours in a number of countries.

[3] **Partial shifts** - working arrangements under which practitioners normally work weekdays most of the time but at intervals work a different duty, for instance a week of nights every fourth week (BMA, Shift Work Practices, A Guide to Partial Shifts).

DETAILED COUNTRY PROFILES

Information regarding hours of work for doctors in training was largely extracted from papers published in the Permanent Working Group of European Junior Hospital Doctors, December 1995, PWG, Proceedings, PWG Conference on Working Conditions for Doctors in Training - Consequences for the Doctor and Patient Care in the European Union (See Appendix 1 for more details).

EUROPE

Arrangements for Regulating Hours

In November 1993, the Council of Ministers adopted a directive on the regulation of certain aspects of the organisation of working time (93/104/European Commission).

The provisions of the European Union Directive on Safe Hours - The Working Time Directive (93/104/European Commission) are:

- The minimum daily rest period in the Directive is 11 consecutive hours.
- A right to a rest break when the working day is longer than 6 hours.
- A minimum rest period of one day per week.
- A maximum working week of 48 hours on average, including overtime.
- A right to an annual paid holiday of 4 weeks and
- Night work must not exceed 8 hours per night on average.

Excluded were transport, sea fishing, inland waterways, civil aviation, sea transport, doctors in training and other work at sea.

Salient points of the Executive Summary of the PWG Conference were as follows. Although the Directive excluded ‘doctors in training’, the Council of Ministers saw no reason to exclude doctors who are not in training. However, the European Commission took action to ensure the application of the principles for doctors in training.

The Commission’s first initiative was to invite all relevant parties to two meetings in Brussels. Representatives of all the ‘doctors in training’ in Europe and some of the national authorities were present at both meetings, while no representatives from the employers’ side on a European level were in attendance.

The Commission’s second initiative was to contract with COSHAPE Limited to compile a report on the issue. The hours worked while on on call duty were found by COSHAPE to be the main problem and the most difficult to tackle both culturally and technically. Hours of continuous duty emerged as a problem to be addressed. Managerial slackness was seen to be largely to blame. It was intended that monitoring would be implemented. Doctors in training were seen to be totally integrated as practitioners in the provision of medical services.

The study found no substantial differences between doctors in training and senior colleagues. Therefore there was no logical arguments for excluding ‘doctors in training’ from the same protection as provided by Directive 93/104/EC to the rest of the medical workforce. Ultimately the real authority rested with national governments. The numerical strength of doctors in training within the medical workforce was high: around 38% for hospitals and clinics (Allman, 1995). In most countries, allocating time for study was secondary to that of scheduling hours of duty in hospital. The Advisory Committee on Medical Training set up by Council legislation to advise on minimum length of medical training were to be asked for their estimation of sensible maximum lengths of specialist training (Allmann, 1995).

The Commission’s White Paper on Social Policy and Social Action Program for 1995/96 expressed its preference that a solution be found for the excluded sectors through non-legislative means. If this fails to produce a solution the Commission intends to resort to legislative measures. It wished to complete an agreement by 1996/97.

As a third initiative, the Commission issued a grant to the European organisation representing junior doctors (PWG) to organise a preliminary meeting in preparation for the main conference, held in December 1995, on the working conditions for doctors in training with special reference to working hours. The European Trade Union Confederation supported the PWG. There was a disappointing representation by employers at the October meeting and an absence of the European employer organisations at the December 1995 meeting. The clear conclusion drawn was that a European regulation was needed.

Economics

Jesper Poulsen, PWG President, stated that ‘*doctors in training were excluded from the 93/104/EC Directive ‘Because of money!”* (1995). In the European Union member states, the total costs for ‘doctors in training’ amount to 1-4 percent of health care budgets. Thus there seemed to be no justification to maintain that there would be serious consequences for the total health care budget to include ‘doctors in training’ under the coverage of the Directive.

White Paper

In July 1997 the Commission issued a further “White Paper on Sectors and Activities Excluded from the Working Time Directive”. The paper concluded that there would appear:

“....to be no practical legal problem in extending the provisions of the Directive to doctors in training, just as they already apply to other employed doctors.....”

The Commission expressed the preliminary view that the most practical approach would be to initiate legislative processes that would extend the Directive to work not currently protected. The Commission invited management and labour to consult on the proposal and to provide views to the Commission by 31 October 1997. Following that date the Commission would draft its final proposals on the matter.

The British Medical Association (BMA), in its response to the White Paper, supported the extension of the Working Time Directive to doctors in training, subject to clear definitions of “working time”. The BMA response also called for an increase in the proportion of junior doctors working time which is spent in supervised clinical practice to ensure that doctors are given training of sufficient quality. The BMA also stated that implementing an average weekly limit of 48 hours of actual work would be a significant undertaking and might require consideration of the working patterns of all grades of staff.

NETHERLANDS

Arrangements for Regulating Doctors Hours

In the Netherlands the problem of excessive working hours for doctors is regulated by national legislation.

In 1975 the National Association of Salaried Doctors drew attention to the extreme working hours of junior doctors. In 1985 the Secretary of State promised in Parliament that an arrangement would be made to reduce the excess of workload. After ten years of discussion, 1983 - 1993, the Dutch Ministry of Social Affairs and Employment drew up a proposal regarding limits on working hours, which left room for a flexible interpretation of the timetable for reform and, at the same time, kept excessive working hours within bounds. This year, 1997, new regulations will be implemented.

The proposal was the result of close consultation between the Government and the doctors. In 1993 the proposed arrangements to limit working hours for junior doctors were introduced by legislation.

The legislation provided that:

- On average, an employee must not work more than 9 hours a day and 48 hours a week. If necessary working hours can be extended to 11 hours a day, at most 3 times in 2 weeks.
- The working week may not exceed 60 working hours and over a period of 13 weeks an average of 48 hours of work must not be exceeded.
- A shift duty in a hospital must not exceed 24 hours.
- The number of hours worked per day shift should not exceed 12 hours, however, it maybe extended by up to 3 hours.
- A night shift cannot exceed 9.5 hours
- No more than 5 shifts can be worked consecutively per week for 13 weeks in 26.
- After working a maximum of 5.5 hours, a break of at least 30 minutes must be taken.
- Off duty periods have to be at least 10 consecutive hours.

When the 1993 legislation was enacted it was agreed it would be reassessed after 2 years. The review found that few problems occurred with compliance to the maximum allowed working hours. However, some problems in complying with the maximum working times during night shifts did occur. The additional costs resulting from the adoption of the regulations proved to be less drastic than expected.

Issues

Three arguments were raised against the implementation of regulations to reduce the excess hours worked by junior doctors:

- Financial:

No funds were available to employ additional doctors required to work the excessive hours worked by junior doctors.

This was overcome in 1991 by the Government providing funds to employ 760 additional doctors in training. The number of additional doctors in training was calculated on the basis that there were 1700 doctors in training, working an average of 60 hours a week and their hours needed to be reduced to 38 hours of fruitful work plus 10 hours of training. The maximum working week amounted to 48 hours, equalling the number of hours laid down by the Directive 93/104/EC.

- Quality of Training:

Many trainers and specialists were of the opinion that at least 60 hours a week had to be worked in order to safeguard the quality of training.

- Workforce:

There were not enough doctors to take up the additional work, if doctors in training hours were cut.

The PWG conducted a workforce study and found that in the Netherlands in the 1980's, the number of unemployed doctors had increased to more than 1800. The introduction of reduced working hours necessitated the employment of more doctors and this solved part of the medical unemployment problem (Boleren, 1995).

- It took a long time to convince the specialists that good training could be effected in 48 hours.

DENMARK

Arrangements for Regulating Doctors Hours

The working hours of doctors in training have been regulated by collective agreements since 1937. The agreements, rules and regulations are very similar to the ones stipulated in the European Union Directive 93/104.

The agreements, rules and regulations provide that:

- Daily rest periods should be 11 hours (Working Environment Act and collective agreement), however, under certain circumstances the period can be reduced to 8 hours.
- A weekly continuous off duty rest period of 55-64 hours should normally apply (collective agreement).
- Doctors should not have most of their working time at night. Night work should be distributed evenly among all doctors including senior as well as junior doctors

The Danish model for organising working time demonstrated that it was possible to live with the rules and regulations stipulated in the EU Directive.

Systems of Work

Since 1987 changes in collective agreements have aimed at concentrating and reducing the total period of post graduate education. As a consequence, the number of doctors in training was expected to reduce gradually from two thirds of the total number of doctors in the hospital workforce to about one third. This meant senior doctors had to take part in on call duty work which was formally carried out by their younger colleagues.

Data on Hours

During the period 1981 to 1995, the hours worked by doctors in training reduced from approximately 70 hours per week to 42-43 hours per week. The reduction was initiated by doctors' demands for a 40 hour week, in line with the rest of the labour market, compared to the 70 hours or more a week worked, many of which were worked at night or on call and were regarded as unfavourable to the vocational training of junior doctors. By 1995 doctors in training worked an average of 45 hours a week.

FRANCE

Arrangements for Regulating Doctors Hours

The working time of doctors in training in France, i.e. of interns and residents, was regulated by Ministerial Decree 83-785 of 2 September 1983, modified in 1985, 1988, 1989, 1991, 1992, 1994 and 1995.

Systems of Work

The number of hours worked on call (time spent at the hospital in addition to the minimum monthly time of 173 hours) was defined by ministerial decree as 12 hours above and beyond the normal obligations of working time. At the time of writing, there was nothing in the Statute restricting the number of monthly hours worked on call. Dr Rouer-Saporta states that doctors in training '... *cannot refuse to do the jobs which are assigned to them as this will be reflected in the assessment of their training course'* (1995). No provision existed for the weekly minimum break and rest periods after on call duty.

In reality French, '*doctors in training are working far too hard with very little legal protection and the regulations which do apply are not put into practice by the hospitals ... French doctors would like to see European legislation introduced to try to correct the situation...*' (Rouer-Saporta, 1995).

Economics

The pay for on call time is laid down by ministerial degree. On call hours are paid less than normal hours. A limit on the additional pay that can be earned on call is defined as a percentage of the normal pay. All hours worked beyond this limit are unpaid.

Data on Hours

'*Generally an average working week'*, for French junior doctors, *'would be at about 50 hours, not including on call time'*. (Rouer-Saporta, 1995).

GERMANY

Arrangements for Regulating Doctors Hours

Dr Otmar Kloiber from Bundesarztekammer (German Medical Association) and Dr Joachim Grifka (1995) outlined the situation concerning hours of work of junior doctors in Germany.

In 1982 the German Federal Labour Court reviewed the collective agreements regulating work-load during on call duty. This lead to new collective agreement regulations concerning 'on call at hospital' being passed. In addition, on 1 January 1996, the Standard Working Time Act came into force concerning rest periods. The collective agreements and legislation provide that:

- A maximum of 24 hours work per duty period is allowed.

- Doctors performing on call duty at the hospital for a minimum of 12 hours after a working day of at least 7.5 hours, providing the patients' care is guaranteed, are granted a rest period of 11 consecutive hours the following day.

- Doctors working 'on call at the hospital' lasting 24 hours during an off-duty day are granted a rest period of 11 consecutive hours after completing the period of on call duty.

- In hospitals, the uninterrupted rest period can be reduced to 10 hours if each reduction of the rest period within 4 weeks is compensated by an extension of another rest period up to at least 12 hours.

- If a rest period of 11 hours is indicated, it is not permitted in any situation to continue work the day following the on call service if the number of hours worked on call amount to 5.5 hours or more.

- A maximum of 12 consecutive on call periods can be scheduled, however, work during on call commitment should occur only occasionally.

- The daily working time (the period from the beginning to the end of work without breaks) must not exceed 8 hours. An extension up to 10 hours is only admissible when the average working time of 8 hours is not exceeded within a period of 6 calender months or 24 weeks.

The provisions concerning rest breaks have been uniformly fixed by legislation. An employee must not work longer than 6 consecutive hours without a break. A break of 30 minutes determined in advance must be taken when the period of work ranges from 6 to 9 hours. A break of 45 minutes must be taken when the period of work exceeds 9 hours. The breaks can be split into several periods which must last for a minimum of 15 minutes.

IRELAND

Arrangements for Regulating Doctors Hours

Prior to 1980 there was no limit to the number of hours that a junior doctor might be expected to work. In 1980, the *'140 hours fortnight'* was negotiated. Since then, hours worked in excess of 140 were considered as overtime. '*In 1988 ... the '65 hour' week, a contract which was supposed to limit the hours of junior doctors to an average of no more than 65 hours,*' was negotiated (O'Brannagain, 1995).

Conal Devine(1997), Director of Industrial Relations, Irish Medical Organisation (IMO), the representative organisation of junior doctors in Ireland, has reported:

- The Standard work week is 39 hours plus overtime and on call duties. In theory, the average working week is up to a maximum of 65 hours. However, in practice many Non-Consultant Hospital Doctors[4] (NCHD's) work in excess of 65 hours and in some cases up to 129 working hours per week.

- There are no defined rest breaks within a duty period.

- There are no defined rest periods between shifts/duty periods/after on call duty. Overtime and on call duty cannot be meaningfully differentiated.

- NCHD's can be rostered for periods of 72 hours continuous duty, however a new contract being considered by the IMO outlaws this practice.

- Shift work, in general, would be rare, occurring for the most part in accident and emergency departments in larger hospitals. Rosters can range from 1:2 i.e. on call every second night to 1:4 or even less. The abolition of 1:2 rosters is being considered.

- 21 days leave apply for every 6 months worked.

Systems of Work

In September 1994 the Report of the Joint Pilot Study on Unrostered Hours of Non-Consultant Hospital Doctors was published. This was a joint report by the Department of Health, the Local Government Services Negotiation Board, Irish Business and Employers Confederation (I.B.E.C.) and the IMO. The study examined the formal rosters which had been agreed in the contract review of 1988 and the hours claimed to have been worked for payment purposes. Thus, it was possible to examine the extent of 'unrostered overtime'.

It was found that the performance of non-medical duties such as routine phlebotomy, electrocardiography, portering duties etc. had a considerable impact on the duties of house officers[5], especially during times of minimal cover such as

[4] The definition of a Junior Doctor in Ireland is a Non-Consultant Hospital Doctor, NCHD (IMO, 1997).
[5] **House Officer** -The first (lowest) training grade (Simpson, 1997).

weekends. In addition, the increased number of day case procedures and the general reduction in the length of hospital admissions resulted in increased intensity of patient care.

Conal Devine (1997) reported that an agreed mechanism to address persistent unrostered hours was implemented in hospitals in July 1995. It was to be implemented in stages;

- Stage 1 - A record of all hours worked (rostered and unrostered) was to be taken;
- Stage 2 - Unrostered hours were expected to be reported to the supervisor and the hospital management;
- Stage 3 - rosters not adhered to were expected to be reviewed at a meeting between the consultant, NCHD and a member of the management team of the hospital responsible for hours of work;
- Stage 4 - If no solution was found to the working of unrostered hours, hospital management was expected to issue an instruction to the NCHD to confine his/her hours to the approved roster.

Economics

The COSHAPE Report indicated that the standard working week of 39 hours was paid at the normal hourly rate. Half of the hours over 39 to a maximum of 10 hours were paid at 150% the normal hourly rate, the remainder being payed half the normal rate.

USA - NEW YORK

Arrangements for Regulating Doctors Hours

Steve Ellwing, Director Resident Physician Services, American Medical Association (1997) reported that, '*There is no governmental body (except in the state of New York) that exercises jurisdiction over resident work hours*'.

The legislation in New York arose from the civil lawsuit Zion vs. New York Hospital. In 1984, Libby Zion was admitted to a New York hospital. She was cared for by two junior hospital doctors who had both been on duty for a period of 18 hours consecutively at the time of her admission. The doctors failed to note her full drug history and administered a drug which interacted fatally with an anti-depression compound that she was taking.

Libby Zion's father, a lawyer, arranged that the case to be brought before a grand jury in New York State which reported in 1986. '*One of the principle recommendations* (of the grand jury) *at the time was that the hours of junior physicians in New York State be limited to a maximum of 80 per week, with not more than 24 hours of continuous duty...'* (Carney, 1995). The grand jury issued a report critical of the incident, citing one of the principle causes for the mistakes that had been made as fatigue secondary to the sleep deprivation that the doctors had suffered. The report led to the establishment of the Ad Hoc Committee on Emergency Services, the Bell Commission in 1987, whose recommendations led to legislative reform of residents' work hours in New York State.

Since 1988, the Accreditation Council for Graduate Medical Education (ACGME), formed to accredit the quality of residency programs in the U.S., has required that accredited internal medicine residencies comply with the following guideline; '*Residents must not be required regularly to perform excessively difficult or prolonged duties. When averaged over 4 weeks, residents should spend no more than 80 hours per week of patient care duties in the residency program. Residents at all levels should be on call no more often than every third night, and on average, have the opportunity to spend at least 1 day out of 7 free of patient care duties in the residency program'* (Green, 1995).

Carrie Waller from the American Medical Association (1997) reported that the, '*ACGME's current standards include* (in addition to the above) *... 24 hour maximum shift length ... anecdotal evidence shows that many programs, if not most, do not abide by the work-hour regulations'.*

UNITED KINGDOM

Much of the information regarding changes to the hours of work of junior doctors was published prior to the date it was proposed for implementation. If the proposed changes occurred as anticipated, they would all have been implemented by the time of writing.

Regulation Of Doctors Hours

The Ministerial Group on Junior Doctors Hours, consisting of representatives of the Departments of Health (of England, Wales, Scotland and Northern Ireland), the medical profession and the medical education authorities (Medical Royal Colleges and their Faculties) reached an agreement to limit the hours of duty of doctors in training in 1990 (The Heads of Agreement on Junior Doctors Hours).

A document published by NHS Management entitled, 'Hours of Work of Doctors in Training, Working Arrangements of Doctors and Dentists in Training' (1991), outlined a number of mechanisms designed to implement the agreed reduction in hours. These were explained to junior doctors in a further document, 'Junior Doctors - The New Deal', prepared by the Junior Doctors' Committee of the British Medical Association (BMA).

The Standards/Regulations

The key principle on which the agreement was based was that education and training could be delivered within an average of 72 hours of duty per week. The detailed regulations arising from the agreement subsequently limited the number of contracted hours of work to no more than 72 hours per week and actual hours of work to an average of 56 hours per week.

On Call Rosters

'On call rosters are appropriate for those posts where the workload is of such a nature that doctors on call, whether in hospital or at home, are not required to work for a substantial proportion of their contracted hours above the standard working week for full-time posts of 40 hours.' (Hours of Work of Doctors in Training, Working Arrangements of Doctors and Dentists in Training).

It was intended that as soon as practicable after the issue of the Heads of Agreement (December 1990):

- The maximum average contracted hours of duty of doctors in training did not exceed 83 hours per week for doctors working on call rosters.

The New Deal specified that by 31 December, 1994:

- The maximum average contracted hours of duty of doctors in training in hard-pressed posts working on on call rosters, including handover periods at the start and finish of duty periods, were expected to be 72 hours per week.

- Doctors in training working on on call rosters were not expected to have periods of continuous duty longer than 32 hours during the week and 56 hours during the weekend.

- A minimum period of 12 hours off duty between periods of duty was expected.

- One minimum continuous period off duty of 62 hours, and one minimum continuous period off duty of 48 hours, was expected in every period of 21 days.

- Doctors in training working on on call rosters were to have a reasonable expectation of 8 hours rest during a period of 32 hours on duty, principally within the on call period. Where possible the greater part of this rest period was to be continuous.

By 31 December 1996:

- The maximum average contracted hours for all doctors working on on call rosters was not to exceed 72 hours per week.

Partial Shifts

In the report entitled, 'Hours of Work of Doctors in Training, Working Arrangements of Doctors and Dentists in Training' the regulations regarding partial shifts were outlined (NHS Management Executive). It was intended that as soon as practicable after the issue of the Heads of Agreement (December 1990) and at the latest by 1st April 1993:

- The maximum average contracted hours of duty of doctors in training were expected to be 72 hours per week for doctors working on partial shifts.

The New Deal outlined that by 31 December 1994:

- the maximum average contracted hours of duty of doctors in training in hard-pressed posts, including handover periods at the start and finish of duty periods, were expected to be 64 hours per week for doctors working on partial shifts.

- Authorities, Boards and Trusts were expected to ensure that doctors in training working partial shifts did not have periods of continuous duty longer than 16 hours, including the time required for handovers.

- Doctors in training working partial shifts should have adequate rest during a period of duty. As a guide, they should have a reasonable expectation of a period of 4 hours rest during a duty period of 16 hours.

- However, in order to facilitate the change from one shift to another, two shifts were expected to be worked consecutively, In these cases the total period of continuous duty was not to exceed 24 hours.

- Except when two shifts were worked consecutively doctors in training working partial shifts were expected to have a minimum period of 8 hours off duty between shifts.

- They were not able to work more than 13 days without a minimum period of 48 hours continuous off duty time.

- Doctors in training working partial shifts were to have one minimum continuous period off duty of 62 hours, and one minimum continuous period off duty of 48 hours, in every period of 28 days and irrespective of the working pattern the hours of actual work was not to exceed 56 hours on average.

It was intended that by 31 December 1996:

- The maximum average contracted hours for all doctors was not to exceed 64 hours per week for doctors working on partial shifts.

Full Shifts

The 'Junior Doctors the New Deal' published by the Junior Doctors Committee of the BMA outlined the recommendations as follows:

As soon as practicable after the issue of the Heads of Agreement (December 1990):

- The maximum average contracted hours of duty of doctors in training was to be reduced to 60 hours per week for doctors working on full shifts.

By 31 December 1994:

- The maximum average contracted hours of duty of doctors in training in hard-pressed posts, including handover periods at the start and finish of duty periods, was 56 hours per week for doctors working on full shifts.

By 31 December 1996:

- The maximum average contracted hours for all doctors must not exceed 56 hours per week for doctors working on full shifts.

The following pattern of work was outlined:

- In every period of 28 days it was possible to arrange many variations of a full shift such that the longest period of continuous duty was 10 hours during the week and 13 over the weekend.

- A maximum of 12 shifts would be worked in a row and two of the weekends would be free and on average, weekly contracted hours for weeks actually worked (excluding leave) would be just under 55 hours (BMA).

Authorities, Boards and Trusts were expected to ensure that, by 31 December 1994:

- Doctors in training working on full shifts do not have periods of continuous duty exceeding 14 hours, including the time required for handovers. However, in order to facilitate the change from one shift to another, two shifts could be worked consecutively. In such cases the total period of continuous duty was not to exceed 16 hours.

- Except when two shifts were worked consecutively doctors in training working full shifts were expected to have a minimum period of 8 hours continuous off duty time. Doctors in training working on full shifts were to have one minimum continuous period off duty of 62 hours and one minimum continuous period off duty of 48 hours, in every period of 28 days.

Issues

The Central Consultants and Specialists Committee (CCSC) of the BMA set guidelines for consultants regarding the effects on them of the agreement to reduce juniors' hours of work. The CCSC signed the original Heads of Agreement in December 1990 with three provisos, which were:

- that it would be inappropriate and wasteful to transfer tasks to consultants which could be easily within the competence of other doctors;

- that consultants should not be required to reside in hospital; and

- that the problem of excessive hours should not be transferred from trainees to consultants.

The CCSC guidance, which formed part of 'The New Deal', covered two areas; the need to move from firm[6] based to team based working; and the role of consultants in providing emergency cover. The number of intermediate level staff[7] supporting consultants in the major acute specialties was not to be reduced below a minimum safe level for 24 hour emergency cover. As the number of consultants increased, consultants were expected to find themselves supported by fewer, and possibly less experienced, tiers of training grade staff[8] (NHS, Hours of Work of Doctors in Training, Guidance from the Central Consultants and Specialists Committee).

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[6] **Firm** - one or more junior doctors usually being responsible to one or two consultants.

[7] **Intermediate grade/level staff** - experienced SHOs, registrars and Srs (Hours of Work of Doctors in Training, Working Arrangements of Doctors and Dentists in Training);

- '*Normally, an SHO should have one year's experience in the general discipline (e.g. Medicine, Paediatrics) before undertaking intermediate cover (i.e. SHO 3). Individuals may however be regarded as having sufficient experience in the context of a particular team after a short time'* (NHS Management Executive, 'Hours of Work of Doctors in Training, Guidance from the conference of Medical Royal Colleges and their Faculties in the UK').

[8] **Training grade staff** - Doctors in the grades of House Officer, Senior House Officer, Registrar and Senior Registrar (Registrar and Senior Registrar, at the time of writing, being merged to form the Specialist Registrar Grade), (Simpson, 1997).

Process of Implementation

In December 1990, as a cornerstone to achieving the agreed reductions in hours set out in the Heads of Agreement, the Health Authorities, Boards and Trusts took action to implement the mechanisms for change. They worked in conjunction with the Ministerial Group on Junior Doctors Hours Agreement to establish groups known as Regional Task Forces in each administrative region within the Health Service.

The Health Authorities appointed Regional Task Force members, who were accountable to the Ministerial Group, for the implementation of all aspects of the agreement in their regions.

The Task Forces were small bodies whose members were the Regional Director of Public Health/Regional Medical Officer (chairman); the chairman of the Regional Manpower Committee; the Regional Postgraduate Dean; a representative of the Conference of Medical Royal Colleges nominated by the Conference; and a doctor in training. The Task Forces could co-opt other members, such as, College regional advisers when their specialty was being reviewed, or other people such as Regional Nursing Officers.

The junior doctor representatives were appointed through the Junior Doctors Committee of the BMA, which represented doctors in training, and was the negotiating body for all junior doctors within the UK. Managers were told to ensure that junior doctors serving on the Task Forces were given time to do so.

The main function of Regional Task Forces was to assist Regional, District and Special Health Authorities and NHS Trusts in ensuring that the contracted hours of duty of doctors in training were reduced to the agreed limits as soon as was practicable; to monitor progress in achieving the required reductions in hours; to improve living and working conditions; to stimulate changes in working practices at local level and to propose practical solutions, such as shifts, in areas where there were particular difficulties. Task Forces were to help facilitate change, especially when solutions were not implemented due to local disagreements. Where appropriate, they were also to advise Health Authorities on the redistribution of posts.
Authorities, Boards and Trusts were to keep the working and contractual arrangements of all posts under review, calling on Task Forces and Local Implementation Groups where necessary, to ensure that they remained in line with the demands of the post.

The Task Forces were required to supervise the collection of data from all hospitals. A database covering all training posts in the region was set up to ascertain the working practice of each training post and identify those in which the doctor was contracted for hours in excess of the agreed limits. As data collation experience was gained, the data became more refined, producing a comprehensive picture of the situation.

The Secretary of State publicly promised that the resources would be made available to achieve a reduction in contracted hours of duty of doctors in training in all posts, to a maximum of 72 hours per week. In accordance with this, the

Government provided funding for 200 consultant and 50 staff grade[9] posts in 1991/92. They were divided equally between regions and the Task Forces advised the Regional Health Authorities where they were to be established.

Funding was also made available in Scotland, Wales and Northern Ireland for additional, predominantly career grade[10] medical staff to help reduce hours worked by junior doctors.

The Regional Task Forces, and their equivalents in Scotland, Wales and Northern Ireland, were responsible to the Ministerial Group for ensuring that these posts were used to reduce juniors' hours. These posts and the money to pay for them comprised the first stage in the rolling program. Future funding depended upon the progress made in reducing juniors' hours and on the strength of the case the Department of Health was able to make to the Treasury for additional funding each year. The reports from Regional Task Forces to the Technical Group on Junior Doctors' Hours were to identify problems that could not be resolved without additional staff. These were vital in the Department's case to the Treasury for funding. In these cases Regional Health Authorities would contract with hospitals for specific reductions in hours to be achieved in return for new posts. If hours were not reduced, the central funding was to be withdrawn, with the regions to bear future costs themselves.

Task Forces in England, Wales and Northern Ireland, and Health Boards and/or Task Forces in Scotland, were asked to report to the Ministerial Group on Junior Doctors' Hours by 31 December 1993 on the practical implications, including the financial consequences, of reaching maximum average contracted hours of 72 per week for all doctors in training by 31 December 1996.

In addition, Task Forces were to report on progress to the Ministerial Group at six monthly intervals and finally, in April 1994, the whole agreement was to be formally reviewed in the light of the progress made in reducing contracted hours.

In the British Medical Journal (BMJ) of 4 January 1997, Linda Beecham reported that, '*At least 8000 junior hospital doctors in Britain-nearly a quarter of the total - are still working longer hours than they should despite an agreement to implement the new deal by the end of last month*'.

Systems of Work

The Heads of Agreement on Junior Doctors' Hours (December 1990) asked local managers to review urgently the work environment of doctors in training and called

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[9] Staff Grade - suitable for those who do not wish to undertake higher specialist training. It should be distinguished form the grade of Associate Specialist or Consultant (NHS, Hours of Work of Doctors in Training, Guidance from the Conference of Medical Royal Colleges & their Faculties in the UK).

[10] **Career grade** - Any non-training grade - in hospital service these are consultant; associate specialist; staff grade. Technically it would also include staff who hold a part-time appointment known as clinical assistants (Simpson, 1997).

for guidance on good practice in the provision of job descriptions, residential accommodation, catering and other facilities for doctors in training.

Each Medical Royal College was responsible for issuing guidance on how the Heads of Agreement were to be applied by their own specialty. The new agreement on working arrangements for doctors set controls on the hours they were expected to work but the most radical change introduced by the agreement "Junior Doctors - the New Deal" was the introduction of the more flexible shift systems which encouraged movement away from the traditional 'on call' arrangements (JDC, Junior Doctors, the New Deal; Seel, 1991).

Prior to the agreement, out of hours emergency cover, primarily provided by junior doctors, was achieved by an on call roster system which had not been changed since the start of the health service.

'Doctors in training working on on call rosters work a normal day from Monday to Friday and are 'on call' in rotation for the rest of the 24 hour period (ie for emergencies overnight) *and for weekends* (after which they worked normally the next day). *The frequency of on call duty depends on the number of doctors providing cover and is normally expressed as 1:3, 1:4 etc. '* (Hours of Work of Doctors in Training, Working Arrangements of Doctors and Dentists in Training).

The traditional on call work pattern gave rise to very long average contracted hours of duty per week. Doctors had to be available for work during contracted on call duty periods, but the hours they actually worked differed depending upon the workload of the unit. One way in which the average weekly contracted hours of duty were reduced was by recruiting more doctors to work on the roster e.g. improving a ratio of one weekend on call in every three weeks (1:3) to 1:4 or 1:5. This reduced the frequency with which long periods of continuous duty were worked. However, it did nothing to shorten the periods of duty themselves to an acceptable length in situations where the volume and/or intensity of medical work were high.

Shift systems were identified as a means of organising work patterns that did not meet the rest requirements for on call roster intensity. Since shift systems rotated around the clock over a specified period, junior doctors were expected to spend proportionately less of their time at work during normal weekdays. Emergency work was therefore a relatively greater proportion of their work experience. The arrangement of cover was designed to suit the specialty and the different individual solutions adopted for the reduction of hours depended on local circumstances. These would have included the size and design of the hospital, the number of staff available, the specialised or more general type of case mix and above all, the intensity and volume of work.

Shift systems enabled a reduction in the average contracted hours, limited periods of duty and guaranteed adequate time off for rest and recuperation after a period on duty. All this was identified as possible without necessarily increasing the number of doctors in the training grades - a key objective of the Junior Doctors Committee. When any shortfall in the provision of cover occurred it was met by the appointment of additional career grade staff or part time doctors (both in the training and career grades).

Doctors in training working on full shifts[11] (24 hour shift cycles) were to work a pattern of shifts in rotation. An example of the hours worked on a full shift would be from Monday to Friday, 7.00 to 15.00, for the first week; from Monday to Friday, 14.00 to 23.00 and at weekends from 19.00 to 8.00 the following morning for the second week; from Monday to Friday, 22.00 to 8.00, for the third week and from Tuesday to Friday, 9.00 to 17.00 and weekends from 7.00 to 20.00 the fourth week. A full shift was felt to be appropriate for providing medical cover where the work was intensive and potentially continuous throughout the 24 hours, for instance in neonatal or other intensive care units, or Accident and Emergency Departments. Doctors in training working on a full shift system would be working effectively for the whole time they were on duty but were to be allowed reasonable time for natural breaks during their working time. A minimum of four people was normally required to run a full shift. A full hour's overlap was to be allowed for handover at the beginning and end of each shift.

The national terms and conditions of service defined a partial shift as: '*working arrangements under which practitioners normally work weekdays most of the time but at intervals work a different duty, for instance a week of nights every fourth week*.'(BMA, Shift Work Practices, A Guide to Partial Shifts). Periods of duty were able to be longer than for full shifts because the work involved was expected to be less intensive. Doctors, in addition to natural breaks, were entitled to take short rests during the period of duty (at least four hours of rest during every duty period of 16 hours). Only two people were required to provide 24 hour emergency cover meaning that two of the shifts were able to be used flexibly to meet service or training needs.

Partial shifts were felt to be appropriate where there was a significant non-emergency workload during the day such as outpatient clinics and same day services. The concept of the partial shift was first introduced as part of the New Deal and has since been incorporated into the national terms and conditions of service. It was regarded as important when setting up a partial shift that the way the entire unit worked was looked at and junior doctors were not looked at in isolation. The BMA's 'A Guide to Partial Shifts' recognised that partial shifts '*do not detract from and can enhance training'*.

'A Guide to Partial Shifts' recognised that it was, '... *essential to build in handover time. Not only will this ensure greater continuity of care, but if handovers are conducted under the supervision of a more senior member of the team they can be useful training opportunities* (BMA)' The UK Regional Task Force found that there was a minimum number of doctors required to staff a partial shift successfully. In a hard pressed specialty the minimum was usually five doctors.

In some specialties the medical staff were organised in 'firms', one or more junior doctors usually being responsible to one or two consultants. A more effective team based working system was developed known as a specialty team, which was a

[11] **Full shifts** - doctors work a shift on a regular basis, rotating around the shift pattern. They will work effectively for the whole time they are on duty but should be allowed reasonable time for natural breaks during their working time (NHS Management Executive, Hours of Work of Doctors in Training, Working Arrangements of Doctors and Dentists in Training).

group of consultants who worked together to provide a service and shared resources including junior doctors. This method of organising work was reported by NHS Management Executive to be more flexible and more suited to shift patterns of working than traditional systems (NHS, Hours of Work, Doctors In Training, Working Arrangements of Doctors and Dentists in Training).

Systems Monitoring

One of the main functions of the Regional Task Forces was to assist Regional, District and Special Health Authorities and NHS Trusts by monitoring the progress in achieving the required reductions in hours.

Evaluation And Feed Back Mechanisms

The 1993 Task Forces' reports were expected to specify additional medical workforce required, both for patient care and educational needs, after maximum use of available flexible
patterns of working and, where appropriate, redistribution of training grade posts had been made.

Unless the Ministerial Group considered that there were, in the light of these reports, compelling reasons to the contrary, Authorities, Boards and Trusts were expected to ensure that, by 31 December 1996, the maximum average contracted hours of duty of doctors in training in posts identified by Task Forces and Local Implementation Groups as not being hard-pressed, did not exceed 72 hours per week.

Impact On Workforce Numbers

Dr Reid (1995) reported an extra 1053 Consultants and 4119 doctors in training had been employed since the initiative to reduce doctors in training hours was launched in 1991.

Change In Structure Of Workforce

Using more flexible working patterns, such as new forms of shift work, it was found to be '...*possible to reduce doctors' average contracted hours and long periods of continuous duty-without necessarily increasing the number of doctors in the training grades* (NHS, Hours of Work of Doctors in Training, Working Arrangements of Doctors and Dentists in Training)'. Any requirement for increases in the medical workforce was primarily for doctors to work during normal weekdays and was able to be met by the appointment of additional career grade staff. Increases in the number of consultants was expected to lead to more direct supervision of junior doctors. Each of the medical Royal Colleges issued guidance as to the circumstances in their specialty in which an intermediate grade doctor could provide cover without the assistance of a more junior doctor.

An arrangement considered by at least one hospital in the UK was the provision of all basic grade[12] night cover for the whole hospital by a team of doctors based in an admissions unit or alternatively the accident and emergency department. The doctors were to provide the initial assessment and treatment of all patients requiring emergency admission, most of whom were expected to be cared for in the unit overnight. The same team was also to answer any emergency calls from the rest of the hospital. Intermediate cover for each specialty should have been provided by staff on call.

Some types of work were transferred from medical to other staff to allow junior doctors to concentrate on appropriate clinical tasks and thus assist in the reduction of hours of work. In–1991/92 £(UK) 500,000 was spent establishing 32 'Advanced Nursing Roles' in 18 hospitals, 16 different specialties and involved 60 individual nurses. Nurses and midwives took on medical and non-medical tasks traditionally performed by doctors in accident and emergency departments, maternity departments and other specialised wards and departments. Responsibilities ranged from pre-operative assessment of some types of surgical patient, management of chronic conditions and acute care, to routine non-medical work. Tasks included administration of intravenous therapy, topping-up of epidurals, simple suturing, phlebotomy, recording electrocardiograms and administrative duties (NHS, Hours of Work of Doctors in Training, Making the Best Use of the Skills of Nurses and Midwives; Reid,1995).

Plans for sharing care in a particular care setting and specialty was supposed to be agreed by local managers, in consultation with medical and nursing professions. A review of the use of nursing/midwifery colleagues and technical, clerical, administrative and other support staff and systems was to be carried out to ensure that the best and most cost effective use was made of them. Where appropriate, the scope for extending existing local policies and procedures relating to duties conventionally undertaken by medical staff had to be considered. Using such staff and systems was felt to benefit both patient care and doctors in training by reducing the work which they often inappropriately carried out.

The University of London indicated that it was considering the withdrawal of educational approval from Pre-Registration House Officer (PRHO) posts which featured some or all of the following duties: '*locating empty beds for both emergency and non-urgent admissions; routinely completing and delivering requests for, and obtaining results of, laboratory and other investigations; undertaking portering duties; providing a routine phlebotomy service'* (routine, as opposed to complicated); '*administration of cytotoxic agents, intravenous drugs, and contrast media; undertaking duties more appropriately carried out by ward clerks, e.g. filing results in case notes; clerking large number of day cases and outpatients; routinely supervising ECG tests; providing a routine service in anticoagulant clinics* (JDC, Junior Doctors, The New Deal)*'.* When circumstances warranted it, for example in situations where there was high out of hours workload in specialist units, it was also considered important that suitably qualified clinical support staff were available out of normal working hours.

[12] **Basic grade** - PRHOs (Pre-Registration House Officers) and inexperienced SHOs (Hours of Work of Doctors in Training, Working Arrangements of Doctors and Dentists in Training).

Workforce Shortages and Solutions

On 17 December 1990, the Government provided funding for 200 consultant and 50 staff grade posts in England as part of a rolling program to help authorities and Trusts to introduce new working arrangements which were intended to reduce the contracted hours of duty of doctors in training. Resources were also made available in Scotland, Wales and Northern Ireland for additional, predominantly career grade, medical staff to help to reduce hours.

Gary Maxwell (1996)reported that, '*While there is pressure to reduce the hours of work for the house officers, there is a shortage of people to fill such positions, especially in the peripheral district hospitals'*.

Caroline White (1996) reported that, '*Many junior doctors believe that they should be included in the* EU *directive, but the BMA's Junior Doctors Committee conceded at its last meeting that a maximum of 48 hour working week would be impractical for all doctors. Committee chairman, Dr Peter Bennie, said: 'Forty eight hours is ... not possible in Britain because there are simply not enough doctors at junior level to achieve it'. But he believes that the directive will put extra pressure on the government to apply the new deal target'.*

Workforce Monitoring

To ensure the safety for patients and staff the advanced nursing role was audited. The first audit revealed that the restructuring of responsibilities of doctors and nurses through the creation of Advanced Nursing Roles and Support Worker schemes had little direct effect on junior doctors' hours of work, but doctors were less fatigued. There was, however, improved job satisfaction. It arose from the change in nature of work undertaken, not a reduction in the amount of work. Doctors were able to do more medical work, were better supported by nurse specialists and were better trained as a result of their working with nurse specialists. Junior doctors used the time freed by the transfer of work to the nursing staff to undertake other types of medical work and in some cases supervision of the nurses. The extent of the nurses' role and hence of their effectiveness, was limited by legal constraints on e.g. prescribing; ordering x-rays, blood tests and other investigations.

The support worker was trained to perform non-medical, non-nursing tasks. Non-medical tasks were successfully transferred from doctor to support worker. Doctors performed more complex tasks in the freed-up time.

Impact On Hospital Costs, Salaries, Overtime

Jesper Poulsen in his paper entitled 'How should Junior Doctors' Working Conditions be Updated?' stated that, *'junior doctors are being paid half the amount for one overtime hour that they are paid for a regular hour* (1995).' As such, hospitals make considerable savings by scheduling junior doctors that work overtime hours rather than those that work normal hours.

Common Hours Of Work Prior To And Post The Agreement

The main function of Regional Task Forces was to assist Health Authorities, Health Boards and NHS Trusts in ensuring that the contracted hours of duty of doctors in training were reduced to the agreed limits. Immediate action was expected to be taken following the issue of the Heads of Agreement on Junior Doctors' Hours (December 1990). Controls on contracted hours included limits on the length of duty periods for the most arduous posts and minimum periods off-duty limiting the 'intensity' of work.

'*Before the New Deal many junior doctors worked over 100 hours a week. In September 1996, 236 on call posts in hard pressed specialties and 792 on call posts in non-hard pressed specialties were contracted for more than 72 hours a week. One full shift post and 48 partial shift posts were contracted for more than 56 hours a week. The number of on call, partial shifts, and full shifts not meeting the new deal targets for contracted hours for December 1996 totalled 1077 - 3.8% of junior doctors- where as over 21% of posts did not comply with the targets of actual hours of work'* (Beecham, Linda. 'British junior doctors still work too long'. BMJ, Volume 314, 4 January 1997).

'A consensus statement regarding the PRHO *year was prepared by the Committee of Post-Graduate Deans and published in 1993. This report makes specific*

recommendations for improvement, including no more than 30 admissions per PRHO per week, each PRHO must have an average of 4 hours of protected educational time per week... Professor Richard West, postgraduate dean at Bristol University and chairman of the working party that formulated the paper, considers it extremely important that this New Deal clearly lays the responsibility for implementing change on the hospital managers, consultants, and clinical tutors' (Maxwell, 1996).

Compliance with the New Deal targets appears to have increased since Dr Reid's report in 1995. He stated that from the commencement of the initiative to reduce doctors in training hours in 1991, 19104 out of 27,994 (68%) doctors were estimated to comply with the regulations in 1995. He also reported, there had only been a 6% move towards working a shift pattern and a 7.2% move toward working a flexible working pattern.

'*In hard pressed posts, whether doctors in training work full shifts, partial shifts or on call rosters, doctors in full time posts should not expect to work for more than 56 hours per week from 31 December 1994, prior to this not more than 60 hours per week should have been worked, irrespective of their contracted hours. For doctors in part-time training the relation between contracted hours and hours of work should be similar to that for full time trainees'* (BMA, Junior Doctors Committee, Junior Doctors the New Deal.)

'In certain situations higher specialist trainees may continue to contract for duties in excess of a 72 hour maximum average per week (though not for more than a maximum average of 83 hours per week) when it would be to the benefit of their training and they wish to do so, providing proper support staffing exists and providing the duties are not harmful either to the trainees or to patients ... The relevant Joint Higher Training Committee should satisfy itself of the need for average contracted hours in excess of 72 per week each time the post is reviewed Those in higher specialist training[13] should have the equivalent of one whole day per week for research or personal study' (NHS Management Executive, 'Hours of Work of Doctors in Training, Working Arrangements of Doctors and Dentists in Training').

By September 1997 the BMA estimated that out of 29,572 posts the total number of posts outside the "New Deal" was 5,764. This put compliance with "New Deal" targets at 80.5 percent. The BMA observed that, while the compliance situation appeared to be improving, careful monitoring would need to be continued.

[13] **Higher Specialist Training** - involves special procedures; independent but appropriately supervised assessment, investigation and treatment of patients; teaching and supervision of junior doctors and medical students; and time to acquire knowledge from many consultants or departments within the hospital (e.g. radiology, pathology meetings, joint special clinics, conferences, etc.) (NHS Management Executive, Hours of Work Of Doctors in Training, Guidance from the Conference of Medical Royal Colleges and their Faculties in the UK, 1991).

CONCLUSION

The situation in relation to doctors hours in the countries reviewed in the preparation of this paper is by no means common. In France, little regulation of doctors hours currently exists, and the proposal by the European Commission to extend the Working Time Directive to all workers is likely to have a significant impact. In the United Kingdom a complex process of change involving a move to specific targets on doctors hours is still underway, while in New York, even the minimal regulations that do exist are not universally applied.

Nowithstanding these variable experiences, the move to regulation of the hours of work of doctors is well advanced in Europe and is unlikely to be reversed. These developments and experiences offer useful insights and opportunities in the processes of reform that have commenced in Australia.

Definitions

Basic grade: PRHOs (Pre-Registration House Officers) and inexperienced SHOs (Senior House Officers) (Hours of Work of Doctors in Training, Working Arrangements of Doctors and Dentists in Training).

Career grade: Any non-training grade - in hospital service these are consultant; associate specialist; staff grade. Technically it would also include staff who hold a part-time appointment, known as clinical assistant (Simpson, 1997).

Daily working time: The time period from the beginning to the end of work without breaks.

Doctors in training: Includes interns and residents.

Doctor in training: A doctor in postgraduate specialised or specific (vocational) training who simultaneously, as part of the training, is working in a department in which employment in accordance with national regulations is needed to achieve recognition or authorisation as a specialist or some other postgraduate vocational category. (Permanent Working Group, PWG).

Firm: One or more junior doctors usually being responsible to one or two consultants.

Full shifts: Doctors work a shift on a regular basis, rotating around the shift pattern. They will work effectively for the whole time they are on duty but should be allowed reasonable time for natural breaks during their working time (NHS Management Executive, Hours of Work of Doctors in Training, Working Arrangements of Doctors and Dentists in Training).

Hard pressed posts: Those in which the emergency workload outside normal working hours is high and are generally but not exclusively found in posts in general professional training in the main acute specialties of general medicine, general surgery, accident and emergency medicine, obstetrics and gynaecology, trauma and orthopaedic surgery, paediatrics and anaesthetics (Heads of Agreement on Junior Doctors' Hours, December 1990).

Higher Specialist Training: Involves special procedures; independent but appropriately supervised assessment, investigation and treatment of patients; teaching and supervision of junior doctors and medical students; and time to acquire knowledge from many consultants or departments within the hospital (e.g.

radiology, pathology meetings, joint special clinics, conferences, etc.) (NHS Management Executive, Hours of Work Of Doctors in Training, Guidance from the Conference of Medical Royal Colleges and their Faculties in the UK, 1991).

House Officer: The first (lowest) training grade (Simpson, 1997).

Intermediate grade/level staff: Experienced SHOs, registrars and SRs. 'Normally, an SHO should have one year's experience in the general discipline (e.g. Medicine, Paediatrics) before undertaking intermediate cover (i.e. SHO 3). Individuals may however be regarded as having sufficient experience in the context of a particular team after a short time' (NHS Management Executive, 'Hours of Work of Doctors in Training, Guidance from the conference of Medical Royal Colleges and their Faculties in the UK').

Non-Consultant Hospital Doctor (NCHD): Junior Doctor in Ireland

Partial shifts: Working arrangements under which practitioners normally work weekdays most of the time but at intervals work a different duty, for instance a week of nights every fourth week (UK national terms and conditions of service).

On call: The doctor is either at home or in a designated space of the hospital, mainly at night or during weekends, available for immediate recall to work.

On duty hours: Doctors are on duty, which means on call, attending lectures or courses.

Staff Grade: Staff Grade is suitable for those who do not wish to undertake higher specialist training. It should be distinguished from the grade of Associate Specialist or Consultant' (NHS Management Executive, 'Hours of Work of Doctors in Training, Guidance from the conference of Medical Royal Colleges and their Faculties in the UK').

Working hours: The time that one is at work in the hospital.

Training grade staff: Doctors in the grades of House Officer, Senior House Officer, Registrar and Senior Registrar (Registrar and Senior Registrar, at the time of writing, are being merged to form the specialist registrar grade), (Simpson, 1997).

Appendix 1

Following is the list of papers, published in the Permanent Working Group of European Junior Hospital Doctors, December 1995, PWG, Proceedings, PWG Conference on Working Conditions for Doctors in Training - Consequences for the Doctor and Patient Care in the European Union, from which information regarding hours of work of junior doctors in different countries was extracted:

Netherlands: Executive Summary, Working Conditions for Doctors in Training - Consequences for the Doctor and Patient Care in the EU, Brussels, 11 and 12 December 1995 and Report from the Netherlands, A W J M van Bolderen, BL, Managing Director National Association of Salaried Doctors (Landelijke vereniging van Artsen in Eienstverbans), Utrecht.

Europe: Presentation of the Working Time Directive (93/104/EC), Mr Herbert van Zonneveld, European Commission, Directorate General V.

France: The Working Hour Situation for Doctors in Training in France, Dr Sylie A Rouer-Saporta.

Germany: What is the situation like in our country? Dr Joachim, PD and View of the German Department of Health, Peter Roggendorf, German Federal Ministry of Health.

Ireland: Report from Ireland, Dr Doiminic O Brannagain, MB and View of the Irish Department of Health on Junior Doctors' Working Hour Situation, Brenden Phelan, Department of Health, Dublin.

New York: Short and Long Term Consequences for Patient Care of Junior Doctors' Current Working Hour Situation, Andrew Carney, Chairperson, Junior Doctors Committee, British Medical Association.

UK: Short and Long Term Consequences for Patient Care of the Reduction of Hours of Work of Doctors in Training, Dr Keith Reid, Deputy Chairperson (Hours of Work and Medical Staffing) Junior Doctors Committee, British Medical Association and How should Junior Doctors' Working Condition be Updated? Jesper Poulsen, PWG President, Summary Statement, Jesper Poulsen, PWG President.

Denmark: EU Directive on working time in relation to doctors in training, Thorkild Rotenberg, Danish Association of County Councils.

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NHS Management Executive, Hours of Work of Doctors in Training, Guidance on Regional Task Forces.

NHS Executive, Human Resources Directorate, Summary of New Deal Task Force Returns at September 1997.

NHS Management Executive, Hours of Work of Doctors in Training, Making the Best Use of the Skills of Nurses and Midwives.

NHS Management Executive, Hours of Work of Doctors in Training, Working Arrangements of Doctors and Dentists in Training.

O'Brannagain, D. Report from Ireland. Permanent Working Group of European Junior Hospital Doctors, PWG, Proceedings, PWG Conference on Working Conditions for Doctors in Training - Consequences for the Doctor and Patient Care in the European Union, December 1995.

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