



**AMA**

**AMA SAFE HOURS PROJECT**

**SYSTEMS OF WORK FOR JUNIOR DOCTORS  
IN PUBLIC HOSPITALS: AN OVERVIEW OF  
SEVEN CASE STUDIES**

**August 1998  
Federal Secretariat  
Australian Medical Association  
PO Box E115  
KINGSTON ACT 2604**

# CONTENTS

<b>INTRODUCTION.....</b>	<b>1</b>
<b>BACKGROUND .....</b>	<b>1</b>
Junior Doctors .....	1
Objectives.....	1
Case Study Hospitals.....	2
Defining Excessive Hours for Junior Doctors.....	3
<b>PAYROLL, ROSTER AND DIARY ANALYSIS .....</b>	<b>3</b>
Hours Worked by Junior Doctors .....	3
Medical Specialities and Hours Rostered.....	4
Hours Worked Varied by Hospital Type .....	5
Reasons for Hours Worked .....	5
Breaks During Working Hours.....	6
Non-Work Breaks .....	7
Professional Development.....	8
Access to Supervision .....	8
Reasons for Long Hours .....	8
Attitudes of Junior Doctors to Hours of Work.....	9
Beneficiaries of the Long Hours of Work .....	10
Long Hours and Impact on Social Life.....	10
<b>FOCUS GROUP OUTCOMES .....</b>	<b>10</b>
Factors That Cause Long Hours.....	10
Acceptance of Long Hours .....	11
Identifying Solutions .....	11
Developing Options for Change.....	11
Recommended Changes .....	12
<b>A VIEW FROM THE TOP - THE DIRECTORS OF MEDICAL SERVICES .....</b>	<b>12</b>

# SYSTEMS OF WORK FOR JUNIOR DOCTORS IN PUBLIC HOSPITALS: AN OVERVIEW OF SEVEN CASE STUDIES

## INTRODUCTION

Coopers and Lybrand were engaged by the AMA to conduct case studies in a number of public hospitals to identify the underlying cultural and organisational systems that contribute to junior doctors' work practices, current rostering practices and hours of work. The case studies were carried out in October and November 1997 with the findings contained in two volumes:

- Volume One: Study Findings
- Volume Two: Project Methodology, Data Collection Instruments and Detailed Findings

This overview paper summarises the major findings of the case studies contained in the above Coopers and Lybrand reports. A full copy of Volume One: Study Findings is available upon request from the AMA on Ph: (02) 6270 5400.

## BACKGROUND

### Junior Doctors

For the purpose of the case studies junior doctors were defined as the following:

- *residents and interns*: doctors completing their residency or internship;
- *registrars*: doctors who have completed their residency or internship and are in a training position for a medical speciality;
- *career medical officers*: doctors who have completed their training and are employed in the public hospital system, but not as specialists, and
- *overseas trained doctors*: doctors who have completed their training overseas and are employed in a public hospital and who do not have access to a medicare provider number.

### Objectives

The objectives of the case studies were to identify the major factors that contributed to the system of work of junior doctors. In particular, information was sought on:

- the hours worked;
- patterns of shifts;
- breaks taken during working hours;
- non-work breaks within shifts and between shifts, and
- reasons for long hours.

In addition, information on professional training activities, access to supervision and the attitudes of the junior doctors to the hours worked was also collected.

### **Case Study Hospitals**

The case studies were conducted in seven public hospitals in four states including:

- Queensland - a large regional hospital
- New South Wales - a metropolitan teaching hospital and two large regional hospitals
- Victoria - a metropolitan teaching hospital and an outer metropolitan hospital; and
- South Australia - a metropolitan teaching hospital

In each hospital information was sought from four separate sources:

- hospital payroll and roster data for 631 junior doctors
- completion of personal diaries
- focus groups conducted with both junior and senior doctors
- interviews with the Directors of Medical Services

## **Defining Excessive Hours for Junior Doctors**

Deciding what constitutes 'long' hours at an individual level is very subjective. For the purpose of data analysis in the case studies a figure of 50 hours per week was adopted as a benchmark. In adopting this figure the following factors were taken into consideration:

- the European Union defines 48 hours as the upper limit of an acceptable standard working week;
- the medical profession in the United Kingdom has established an average of 56 hours as the upper limit for a working week for hospital employed junior doctors, and
- community standards, expressed through Federal and State industrial awards, have consistently adopted a standard working week considerably less than 50 hours.

## **PAYROLL, ROSTER AND DIARY ANALYSIS**

### **Hours Worked by Junior Doctors**

Data from the hospital administrations and personal diaries clearly indicated the long hours worked by junior doctors. Around 70 per cent of junior doctors were found to have worked at least 50 hours for the survey period.

According to the personal diaries:

- approximately 40 per cent of junior doctors worked in excess of 60 hours;
- just over 15 per cent worked more than 70 hours, and
- approximately 5 per cent worked more than 80 hours.

The personal diary entries highlighted that official hospital rosters for junior doctors may not, in all cases, be a true record of the hours which the doctors actually work. According to the payroll data less than 50 per cent of junior doctors worked more than 50 hours. The study clearly identified that many junior doctors worked more hours than they were rostered or paid for. There did not appear to be a single reason for working beyond the rostered time. However, it would be anticipated that professional motivation and commitment to patient care is a major factor. There are also a number of other factors operating that

combined to remove the element of voluntarism for the individual doctors. These factors are considered in more detail later in the overview.

**The case studies highlight that junior doctors are expected to work, on average, considerably more hours each week than that expected of the general workforce. Whereas, on average, less than 20 per cent of the general workforce work in excess of 50 hours<sup>1</sup> per week, for junior doctors the equivalent figure is around 70 per cent.**

### Medical Specialities and Hours Rostered

Roster and payroll information provided details on the variation of hours worked by junior doctors working in particular medical speciality areas. Set out below is the percentage of junior doctors by speciality area who were rostered to work greater than 50 hours per week.

#### All Junior Doctors

Speciality Area	Percentage who worked greater than 50 hours - %
Vascular surgery	66
Paediatric medicine	55
Renal medicine	45
Neurology	40
Gastro-surgery	33
Thoracic surgery	32
Neuro surgery	30
Plastic surgery	25
Intensive care	20
Ear, nose and throat	17
Ophthalmology	17
Psychiatric services	13
Emergency medicine	10
Haematology	8

Among registrars in particular disciplines average hours were considerably higher than 50 per week, with registrars in a number of disciplines found to be working in excess of an average of 70 hours per week.

<sup>1</sup> Employed Persons Hours Worked, ABS Catalogue, No.6203.0, Table 17, November 1997

### Registrars

Registrar Speciality	Average Weekly Hours
Obstetrics	70.4
Orthopaedic Surgery	78.4
Thoracic Surgery	78.5
Vascular Surgery	80.8

The use of average hours per week masks the extremes in hours of work found among junior doctors. Some junior doctors worked actual hours well in excess of 80 per week.

### Hours Worked Varied by Hospital Type

The total hours that junior doctors were rostered on varied according to the type of hospital. Data from the rosters indicated junior doctors in outer metropolitan and provincial hospitals (52.3 hours average per week) were rostered for longer working periods than their colleagues in the inner-city teaching hospitals (47.7 hours per week).

Also revealed in the roster data was the extent to which junior doctors in the outer metropolitan and provincial hospitals (7.2 hours/week average) were on call for longer periods than their inner-city colleagues (2.7 hours/week average). However, there is evidence from the personal diaries that the official hospital roster may underestimate the actual hours worked by junior doctors in the inner-city teaching hospitals.

### Reasons for Hours Worked

Personal diary information was analysed to identify the major factors contributing to long hours of work. Junior doctors were asked to identify the time devoted to the following tasks:

- direct patient care;
- indirect patient care;
- education 'in hours';
- research/quality assurance, and
- administration.

The pattern of work activity for junior doctors who work more than 50 hours was compared to junior doctors who worked less than 50 hours. An analysis of the information clearly demonstrated that the major difference was in the time devoted to direct patient care. In absolute terms doctors working more than 50 hours per week spent up to 20 hours more per week in direct patient care than the group who worked less than 50 hours per week. With regard to time

spent on research, quality assurance and indirect patient care there were very slight variations between the two groups.

In the case of education in-hours very little time for this activity was identified and the length of the working week was not a determining factor. The case study data clearly identifies that the provision of medical services, in the form of direct patient care, accounts for the long hours worked by all the categories of junior doctors.

### **Breaks During Working Hours**

Adequate work breaks are an important contribution to a safe system of work. Determining what is adequate for a particular workplace is dependent upon a number of factors such as frequency and duration of breaks, type of work and the need to comply with requirements in an industrial award or other regulations. The information on work breaks was analysed from the personal diaries.

Junior doctors were divided into two groups namely, those who worked in excess of 50 hours and those who worked less than 50 hours. It was found that junior doctors working more than 50 hours had, on average, a total of 6.4 hours break per week during their work periods. Junior doctors working less than 50 hours per week had an average total for breaks of 3.6 hours per week.

Given the number of hours worked, the total duration of work breaks for both groups was very low. For example, the community minimum standard for work breaks in an average 38 hour week would be in the region of 6.0 - 7.5 hours depending on the specific award provisions. There appeared to be considerable variations with regard to breaks within the categories of junior doctors. Set out below are the average number and duration of work breaks for junior doctors who worked in excess of 50 hours per week.

#### **Junior Doctors Working Over 50 Hours Per Week: Breaks**

<b>Category</b>	<b>Average Number of Work Breaks Per Week</b>	<b>Average Duration of Breaks (Minutes)</b>
Intern & Resident	3	56
Registrar	4	38
Career Medical Officer	2	20
OTD	5	102

The data revealed career medical officers took fewer and shorter breaks than their other colleagues, while registrars took more breaks on average which were of shorter duration. Interns and residents tended not to take many breaks though they were of a longer duration. The category of junior doctors which had both the greater number and longest duration of breaks was the OTDs.

**Junior doctors had considerably fewer and shorter work breaks than would normally be expected under minimum community standards.**

Given the low number of breaks the personal diary information was analysed to identify the extent to which there was a pattern of working more than 5 hours without a break. A large number of doctors frequently worked beyond 5 hours before taking a break. Twenty-five per cent of junior doctors worked an average continuous period in excess of 6 hours with approximately half of them exceeding 10 hours without a break. According to the diary information for this group of junior doctors, on average, they worked 8.5 hours before they had a work break. Continuous work periods in excess of 16 hours without a work break were reported by some respondents.

### **Non-Work Breaks**

The personal diaries were analysed to determine if there were different patterns of non-work breaks for junior doctors who worked in excess of 50 hours per week compared to their colleagues who worked less than 50 hours per week. Junior doctors who worked in excess of 50 hours per week were found to indicate slightly more time 'at sleep' and significantly less time in non-sleep related out of work activity. The details for the two groups is set out below.

	<b>All Junior Doctors</b>	
	<b>Average Hours Per Week</b>	
	<b>Sleep out of hours</b>	<b>Non-work breaks not at sleep</b>
Working more than 50 hours per week	47.5	30.1
Working less than 50 hours per week	45.5	44.9

Information from the personal diaries indicated junior doctors who worked the longer hours spent considerably less time (33 per cent) in non sleep related activities though on average more time "at sleep". The relationship of longer hours of work coupled with the longer periods of sleep was clearly evident from the diary information..

**It would appear the long hours for junior doctors are at the cost of the opportunity to access recreational time.**

## **Professional Development**

The junior doctors were asked to identify the periods of time devoted to professional development activities. Professional development referred to:

- formal education in-hours;
- periods of independent study;
- research activity, and
- quality assurance related activities.

Two factors emerged from an analysis of the professional development diary information. There was, overall, relatively little time devoted to these activities. The category of doctor and length of the working week did not appear to be a determinant factor. Irrespective of the duration of the working week all the junior doctors indicated an average of six hours per week devoted to these activities.

## **Access to Supervision**

The case studies examined the extent to which junior doctors considered they had reasonable access to clinician support. There was a noticeable variation in responses with the category of junior doctor emerging as the determining factor.

The OTDs indicated a very high level of reasonable access (98 per cent of patient care time) whereas interns and residents reported a lower rate of access (72 per cent of patient care time). Career medical officers and registrars reported a higher level of access at 83 and 91 per cent of patient care time respectively. Overall, reasonable access to clinician support was not identified as a major issue of concern.

## **Reasons for Long Hours**

An opportunity was provided for junior doctors to identify in their diaries the reasons for overtime hours worked. Two reasons were clearly singled out:

- required by supervisor or consultant (29 per cent of respondents);
- personal work overload (26 per cent of respondents).

<p><b>Information from the diaries indicated the reasons for long hours are related to workload management issues rather than the requirements of emergency medical intervention.</b></p>
---

In order of significance, the following were also identified as reasons for overtime:

- administrative work (14 per cent of respondents);
- emergency occurred (12 per cent of respondents);
- personal choice (11 per cent of respondents), and
- shortage of staff (8 per cent of respondents).

### **Attitudes of Junior Doctors to Hours of Work**

The attitudes of junior doctors to the hours they worked were surveyed. Approximately 90 per cent of junior doctors who worked in excess of 50 hours per week were of the view they worked excessive hours. The comparable figure for junior doctors working less than 50 hours per week was 77 per cent. Junior doctors from both groups were invited to select from four possible responses how they felt about medical staff being required to work excessive work periods. The responses are set out below:

- strongly object and feel it is an unnecessary part of medical training (43 per cent);
- object but feel it is a necessary part of medical training (41 per cent);
- indifferent to the practice (6 per cent), and
- feel it is a positive experience for the profession and a necessary part of medical training (9 per cent).

While it is clear the majority of junior doctors objected to the long hours of work, there was almost an even split between those who thought it was a necessary part of medical training as opposed to those who felt it was unnecessary. An analysis of the data indicated that type of hospital and medical speciality were important factors with regard to attitudes. Junior doctors working more than 50 hours per week in the inner-city hospitals were more likely to accept excessive hours as a necessary part of medical training than their colleagues in the outer metropolitan/provincial hospitals.

**The group of junior doctors that worked less than 50 hours per week objected more strongly to the long hours and felt it was an unnecessary part of medical training compared to the group of junior doctors who worked more than 50 hours per week.**

### **Beneficiaries of the Long Hours of Work**

Junior doctors were asked for their views on who benefits from the practice of medical staff working excessive hours. Overall, a clear majority of junior doctors felt that the hospital administration benefits most from the long hours worked by junior doctors. Junior doctors who worked in excess of 50 hours per week were more likely to indicate patients and consultants as beneficiaries than their colleagues who worked less than 50 hours per week.

### **Long Hours and Impact on Social Life**

Views on the impact of long hours of work on the social life of junior doctors were surveyed through the personal diaries. While the majority of junior doctors were of the view that long hours impacted on their social life there was a degree of variation dependent upon the hours worked. Sixty-seven per cent of junior doctors who worked in excess of 50 hours per week considered long hours impacted a great deal. The comparable figure for junior doctors who worked less than 50 hours was 50 per cent.

### **FOCUS GROUP OUTCOMES**

In each of the participating hospitals, a series of structured focus groups was conducted. The objectives of the focus groups were to:

- identify any common themes as to why junior doctors worked for such long hours;
- perceptions as to the work practices of junior doctors, and
- possible options for reforming the system.

The focus groups included senior medical staff as well as junior doctors. Overall, the focus group process provided an opportunity for medical staff to freely explore the issues in an inter-active forum. From the process a number of key issues were identified as contributing to the current work practices. In addition, a number of options to introduce change were identified.

### **Factors That Cause Long Hours**

The following common themes across the groups were identified:

- inadequate numbers of medical staff
- rosters schedule long hours;

- inadequate coverage for known times of increased workload eg winter;
- financial incentive to do overtime
- difficulties in coordinating workflow eg ward rounds rostered late; problems in organising ancillary staff;
- ensuring continuity of patient care.

### **Acceptance of Long Hours**

With regard to the reason for the acceptance of long hours four common themes emerged:

- expected/accepted as part of role
- patient care
- need the hours for education and develop skills
- competition with peers.

### **Identifying Solutions**

An opportunity was provided to the focus groups to identify changes which hospitals had already introduced to deal with the long hours junior doctors work. Four common themes were identified:

- increased number of junior doctor positions;
- more communication about roster and checking for accuracy;
- ceasing less reasonable practices eg 36 hour shifts;
- additional staffing at nights.

### **Developing Options for Change**

The changes that hospital management could introduce in the future to manage junior doctors hours were also addressed and the following common themes were identified:

- increase staffing
- improve rostering practices eg make more 'doctor friendly'; quarantined breaks;
- improved use of technology to increase efficiency of communication eg email, voicemail;

- restructure management of workload eg increased use of ward clerks;
- improve the workplace environment, eg food after hours, lounges.

### **Recommended Changes**

At a more general level the focus groups considered other changes that could be introduced to manage junior doctor hours and the following themes emerged:

- develop a team approach to patient management
- reduce the maximum number of allowable hours;
- redefine roles and responsibilities between nursing staff and junior doctors;
- increase remuneration relative to GPs to increase the attractiveness of continuing to work in hospitals. These are explored below.

### **A VIEW FROM THE TOP - THE DIRECTORS OF MEDICAL SERVICES**

The views of Directors of Medical Services (DMS) in the participating hospitals were canvassed on the hours of work undertaken by junior doctors. There were also questions regarding changes they may have introduced to reduce the hours of work of junior doctors or any initiatives the hospitals may have introduced to lessen the workload. In general the DMS recognised that hours were an issue in some areas though they considered this was not necessarily the case for all hospitals and medical specialities. The DMS considered there were a number of determining factors that contributed to the work hours of junior doctors, including:

- the hospital had a responsibility to provide an appropriate level of patient care;
- excess hours were more prevalent with registrars than other categories of junior doctor, and
- the motivation to develop skill levels by some registrars.

It was recognised by one DMS that safe hours for junior doctors had not been perceived as an occupational health and safety issue in the past but that was now changing. Several DMS raised the issue of budget constraints.

The DMS reported that initiatives had been introduced in a number of hospitals to reduce the workload of junior doctors. These included:

- increase in the number of junior doctor positions;
- creation of new accredited and un-accredited registrar positions;
- introduction of permanent night registrar positions;
- interns no longer rostered for night shifts;
- policy of enforcing an adequate break after a long shift;
- rostering consultants to cover call backs in medical specialities where registrars were in short supply, and
- looking at the possibility of better role definition for improved rationalising of administrative roles.

A number of DMS also identified changes that could be made to workplace organisational arrangements and the duties for junior doctors that would make better use of them. These changes include:

- more effective use of communication technology;
- ratio of registrars to residents/interns needs consideration;
- a more systematic approach to performance monitoring, and
- role of career medical officers, midwives and nursing staff be reviewed to permit wider ranges of responsibilities.

Overall, the views of the DMS, while recognising the issue of long hours of work, varied over the extent to which it was considered to be a problem for their particular hospital. Their perceptions of the issues appeared to reflect local experience and an appreciation of their own managerial responsibilities.