Middle Articles

Hospital Junior Doctors: Survey at Northampton General Hospital

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British Medical Journal, 1969, 3, 522-525

Summary: A survey of hospital junior doctors made in 1967-8 showed that there were many features of their work with which they were not content. These included career prospects, hours of work, and salaries. It is suggested that reorganization of the career structure and the provision of better-organized ancillary help would do much to improve the lives of hospital junior doctors.

Introduction

Although the working day of a hospital junior doctor often forms the basis for a documentary in the popular press or on television, there have been few studies in depth of the actual working conditions among junior staff. Hutton *et al.*¹ circularized 920 graduates occupying preregistration posts in 1961, and the replies (54%) gave some information on the nature of preregistration jobs at that time. Nightingale and Taylor² studied the working hours of junior anaesthetic staff at one London hospital.

In 1967, following an approach made by the Junior Hospital Doctors' Association, the Oxford Regional Hospital Board decided to investigate the working conditions of junior medical staff at Northampton General Hospital. A survey team was set up comprising three work-study officers of the board, two administrative medical officers, and three junior hospital doctors.‡ From the beginning it was clear that a full organization and methods study was not practicable because of the work-load and the nature of the work.

The study was therefore split into two parts. A preliminary survey was made in which doctors were asked to make detailed returns of hours worked, time on call, and the type of tasks performed. After these returns had been studied a detailed questionnaire was compiled and completed by the junior doctors. The result has been published,³ and this article is a summary of the most important topics dealt with in that report.

Aims

We set out to discover the most important causes of discontent among junior hospital doctors and to study them in a constructive way. Our means limited this to what was largely a survey of attitudes, but in addition we made an objective assessment of the hours of work of junior staff in order to test the validity of some of the complaints and to suggest lines of further investigation.

Preliminary Survey

The purpose of the preliminary survey was (a) to ascertain total working hours of junior medical staff and total hours "on call" over a period of one week, and (b) produce a breakdown of the time spent on each major activity.

All junior medical officers of grades up to and including senior registrars were asked to complete a questionnaire indicating

broadly what work they were doing during every 15-minute period of the day for up to seven days. A total of 172 questionnaires were returned by 30 doctors out of a maximum of 40. All of the days affected were "normal" days—that is, none were affected by leave or sickness. A test check was made to find whether the doctors who completed the largest number of forms had caused bias in the results. The following figures were obtained:

	Average hours per week	Average hours on call
Doctors who completed a full week of recordings ...	59.7	107.2
All doctors taking part in the survey ...	57.5	107.5

It would therefore appear that bias of a significant degree did not occur.

The numbers of doctors and forms are broken down into grade and specialty in Table I.

TABLE I.—Number of Doctors, by Grade and Specialty. Number of Daily Returns Shown in Parentheses

	S.R.	R.	S.H.O.	H.O.	Total
Surgery		3 (16)		2 (12)	5 (28)
Medicine	1 (7)	2 (13)		3 (17)	6 (37)
Orthopaedics and casualty	1 (7)	1 (6)	2 (14)		4 (27)
Paediatrics		1 (7)		2 (10)	3 (17)
Obstetrics and gynaecology	1 (7)	2 (14)	1 (7)		4 (28)
Anaesthetics		2 (7)	3 (16)		5 (23)
Ophthalmic		1 (2)	1 (5)		2 (7)
E.N.T.		1 (5)			1 (5)
	3 (21)	13 (70)	7 (42)	7 (39)	30 (172)

S.R. = Senior registrar. R. = Registrar. S.H.O. = Senior house officer. H.O. = House officer.

Hours Worked

The hours actually worked (as opposed to the hours "on call") are shown in Table II. As expected there was a wide variation in the length of the working day so that a "typical" working day does not exist. There was, however, also a marked variation between average working hours in different specialties. Thus the departments of medicine (average hours worked 73.5 hours weekly) and obstetrics and gynaecology (67.4 hours) were under greater pressure than anaesthetics (40 hours) and surgery (41 hours). An average working week (56.5 hours) for the hospital as a whole therefore has little meaning by itself, but our findings suggest that a quarter of all doctors worked more than 70 hours weekly.

On Call

There was less wide variation in the number of hours "on call," though certain individuals were on call for considerably

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TABLE II.—Number of Hours Worked Per Day. Each Cross Represents One of the 172 Days in the Survey. The Columns Show the Pattern of Work in Different Specialties: Each Cross is Placed According to the Number of Hours at a Place of Work During a 24-hour Period

Hours Worked	Surgery	Medicine	Anaest.	O. & G.	Orthopaedic Accident and Emergency	Paeds.	Others
20							
19							
18		x					
17		xx					
16		xx					
15	x	xx		xx			
14		xx		x	x		
13		xxx		xx		x	
12	x	xxx					
11	x	x		x	xx		
10	x			x		x	
9	x		xxx	x	xxxx		
8	x	xxxx	x	x	xx		
7	x	xxx	xx	x	x		
6	xx	x	x	x	x		
5	x		x	x			
4	xx		x	x			
3	x		xx	x			
2	x	x	x				
1	x		x				
0	xx	xxxx	x		xx	xx	

longer than the average. The average hours on call were 107.5 a week. Table III shows the hours at work and on call of the 16 doctors who completed returns for seven days. Of the 16 week-ends shown, 2 were completely free from duty, 3 allowed one day free of duty, and 11 involved duties on both days.

TABLE III.—Analysis of Hours Worked and "On Call" Over a Seven-Day Period

Specialty	Grade	Hours at Work				Hours on Call			
		Mon-Fri.	Sat.	Sun.	Total	Mon-Fri.	Sat.	Sun.	Total
Surgery ..	R.	40½	3½	1½	45½	44½	3½	1½	49½
Surgery ..	H.O.	31½	3½	2	36½	72½	14½	2	89
Medicine ..	S.R.	69	15½	15	99½	120	24	24	168
Medicine ..	R.	68	0	0	68	106	0	0	106
Medicine ..	H.O.	61	2½	2	65½	120	16	23	159
Anaesthetics	S.H.O.	31½	5½	2½	39½	55½	15	24	94½*
Anaesthetics	S.H.O.	38½	1	0	40	67½	6	0	73½
O. & G. ..	S.R.	42½	4½	3½	50½	64½	5	3½	73
O. & G. ..	R.	46½	6½	3½	56	65½	24	24	113½
O. & G. ..	R.	56½	10½	16	83½	82	24	24	130½
O. & G. ..	S.H.O.	55½	9½	14½	80	78	15	24	117
Orthopaedics	S.R.	46	1½	0	47½	97½	1½	0	99
Orthopaedics	S.H.O.	52½	13	10	75½	79	24	24	127½
Casualty	S.H.O.	54½	3	0	57½	69	3	0	72
Paediatrics	R.	44½	4½	7½	56½	100	24	24	148½
Paediatrics	H.O.	55	0	0	55	93	0	0	93½

* Week affected by examinations.

The above figures are based on the returns of the 16 doctors who completed questionnaires for a period of seven days.

Main Activities

The breakdown of working hours into activities is shown in Table IV. As might be expected, the time spent attending patients in the ward varies considerably between surgical and non-surgical specialties, but the time spent on ward rounds was similar. A total of 40 hours per week was spent in blood-collecting, mainly in medicine (2.7 hours per doctor per week) and paediatrics (1.8 hours per doctor per week).

TABLE IV.—Average Hours Per Week—At Work and On Call

	Surgery	Medicine	Anaest.	Orth. & Cas.	O. & G.	Paeds.	Others	Total
No. of days in survey	28	37	23	27	28	17	12	172
Ward work:								
Ward rounds ..	9.9	10.6		4.2	12.2	11.9	5.2	8.1
Attending patients ..	8.5	26.3	3.6	1.9	18.3	15.5	2.6	12.4
Blood-collecting ..	1.1	2.7		0.3		1.8		1.0
Other non-clerical ..	0.9	2.3		0.4		2.6		0.9
Total ..	20.4	41.9	3.6	6.8	30.5	31.8	7.8	22.4
Clerical work:								
Admission procedures ..	1.1	3.9		0.6	0.7	6.9	1.2	2.0
Medical records ..		0.3		0.2	1.2	0.4	0.2	0.3
Letters, dictation ..	3.2	7.3		1.3	6.3	5.8	0.8	4.0
Telephone ..	2.0	4.1		3.1	2.1	1.9	0.1	2.2
Total ..	6.3	15.6		5.2	10.3	15.0	2.3	8.5
Clinics ..	2.4	6.4		7.2	5.8	4.1	7.7	4.7
Accident and emergency ..		0.9		21.1			10.2	4.5
Theatres ..	13.5		2.0	7.1	13.0		14.8	10.3
Other departments ..	1.9	3.9	0.3	1.7	1.8	2.7		2.0
Training:								
Given ..		0.6		0.3	0.4			0.3
Received ..		1.8	2.1	0.4	1.0			0.9
Travel ..	1.1	0.8	1.2	4.6	1.6	3.6	0.6	1.9
Miscellaneous ..	0.8	1.6	5.0	1.2	3.0	0.4	1.9	2.0
Total hours at a place of work ..	46.4	73.5	43.7	55.6	67.4	57.6	45.3	57.5
Total hours on call ..	84.2	129.8	89.3	103.6	108.4	126.1	108.5	107.5

N.B.—In order to allow comparisons all of the above figures have been reduced to hours per week.

Overall 15% of medical staff time (more than one working day per week) was spent on clerical work. The amount was distinctly higher among those doctors whose work lay in the wards rather than in the theatre or the accident and emergency department. Time spent on clerical duties was not only greater in those specialties with the longest working time, but it was also proportionately greater:

Medicine, average 15.6 hours per week=21% of total time.
Paediatrics, average 15.0 hours per week=26% of total time.
Obstetrics and Gynaecology, average 10.3 hours per week=15% of total time.

Training given by doctors averaged 0.3 hour per week. Training received averaged 0.9 hour per week. Obviously these figures do not include teaching given on ward rounds or in the theatres.

Main Survey

The main part of the survey was in the form of a questionnaire covering attitudes on a great number of subjects relating to the working and living conditions of junior hospital staff. Most of the questions were answered by indicating alternatives provided to facilitate completion of the very large questionnaire and also for convenient analysis of the answers. Other questions were in the form requiring simple "yes" or "no" replies, but after each question space was provided for comment, which was encouraged throughout. Questionnaires were completed and returned by 42 out of a possible 48 doctors (87%).

Organization

Twenty-six per cent. of doctors regarded the way in which their work was supervised to be unsatisfactory, and nearly half thought that their responsibilities were not clearly enough

defined. Thirty per cent. thought that written instructions should be used to specify duties and responsibilities. Thirty-nine per cent. said that "sometimes" or "frequently" a known consultant was not available for consultation when needed. Thirty-three per cent. felt that the lack of clear instructions often led to confusion. On the other hand, the vast majority considered their working relationships with senior medical staff to be satisfactory. Seventy-one per cent. felt that they were given the correct degree of responsibility, 12% felt that they had too much, and 17% felt that they had insufficient responsibility.

Only 15% of doctors thought that their post should be upgraded and none thought that it should be down-graded. Thirty-one per cent. thought that their duties and responsibilities were different in important respects from what they had expected when they accepted the post. Seventy-five per cent. felt that there were important variations between hospitals in respect of posts of equal grade and specialty.

Duties

Duties were found to differ widely between doctors working in the same grade, and in some cases this caused considerable variation in the work-load. For example, of three preregistration house officers in a single specialty only one assisted at clinics as a matter of routine; the others assisted only when another doctor was absent. The doctor who assisted regularly thus worked some six hours more per week than his colleagues. Most of the other differences were in respect of duties which should properly be done by more junior doctors or ancillary staff. The surgical registrars, however, noted variations in the amount of operating done and, therefore, the experience to be gained from a post.

Off-duty Time

Doctors were asked to answer a series of questions on their off-duty time. Of those replying, 62% thought that the hours expected by the hospital service were unreasonable. Suggested "ideal" working hours varied from 38 to 61 per week, with an average of 48. Satisfactory "on call" hours suggested averaged 79 per week.

Only 31% of doctors were able to plan off-duty activities for more than 21 days ahead and 38% were unable to plan them for more than seven days ahead. The majority (67%), however, were satisfied with this arrangement.

The recommended minimum off-duty time⁴ was outlined and doctors were asked how their off-duty times compared. The replies were: time off more than recommended, 12%; time off about the same, 24%; time off slightly less, 35%; time off much less, 29%.

Sixty per cent. of doctors thought that four weeks' annual leave was unsatisfactory, the majority being in favour of six weeks' annual leave.

During the year nine doctors (21%) had been asked to rearrange, postpone, or cancel annual leave to meet service requirements.

Career

The ultimate objective of the doctors questioned is illustrated in Table V. The vast majority (95%) felt that career guidance and assistance was valuable, but 45% thought that the right kind of guidance and assistance was not available to them. A surprising finding was that most of these were British nationals

in relatively senior grades. Twenty-one per cent. regarded their duties as not providing the kind of experience required for their career. All of these were in the larger specialties. Doctors were asked about planned hospital careers, a figure of five years being suggested for the length of a training course. Of those who intended to stay in the hospital service, 61% strongly approved of such a scheme while a smaller number gave qualified approval or were undecided. Only one doctor disapproved of such a scheme.

TABLE V.—Ultimate Objective of Career, by Grade

	Total	British	Overseas	S.R. or R.	S.H.O.	H.O.
Hospital, U.K. ..	18	13	5	12	6	—
Post abroad ..	9	2	7	7	1	1
General practice ..	5	5	—	—	2	3
Undecided ..	10	5	5	3	5	2

Grading and Salaries

Most doctors (80%) were satisfied with the present grading structure of H.O., S.H.O., and registrar. As might be expected, almost all doctors felt that their salaries were unreasonably low. When asked to suggest a reasonable salary increase the average increase suggested was 25%. Since this survey there has been an increase of 8 to 14% in salaries, but at the same time the cost of living has increased by about 10%. Only 36% were satisfied that the Review Body gave fair consideration to their interests. The majority of doctors suggested that basic salary scales should be augmented with payments related to the number of hours "on call," additional duties caused by the absence of other staff, and additional qualifications.

Expenses payable in respect of cars, particularly when a low mileage is involved, were considered to be unsatisfactory, but answers to other questions in this category suggested that doctors are unaware of existing regulations.

The salaries received according to age and to years since qualification are shown in Table VI. No doctors were earning £2,000 per annum until they were aged over 30 or had been qualified for more than seven years.

TABLE VI.—Existing Salary According to Age and to Years Since Initial Qualification

£	Age						
	23 +	25 +	27 +	29 +	31 +	33 +	36 +
1,100–1,200–1,300–	1 1			1			
1,400–1,500–1,600–		4 1 1	3 2 4	1		2	
1,700–1,800–1,900–				1	1 1	1 1	1 3
2,000–2,200 +					1	1	3 2

£	Years Since Initial Qualification										
	0-	1-	2-	3-	4-	5-	7-	9-	12-	15+	
1,100- 1,200- 1,300-	3 1	1									
1,400- 1,500- 1,600-		3	3 2 1	3 4	2	1		1			
1,700- 1,800- 1,900-					1	1	1 1	3		1 1	
2,000- 2,200 +							2 1		2 1	1 1	

N.B.—The above salaries refer to the period of the survey and do not therefore take account of the most recent salary award.

Consultation

The following questions were asked:

	Yes	No	Don't Know
Is the local system of consultation and negotiation satisfactory? ...	45%	14%	41%
Do you think that the opinions of junior doctors are given adequate consideration on matters directly affecting them? ...	12%	76%	12%
Is the existing system of committees satisfactory? ...	36%	17%	47%
Do you think that the Minister of Health is sufficiently aware of working conditions of junior hospital doctors? ...	21%	69%	10%
Is the national system of joint consultation and negotiation satisfactory? ...	28%	45%	27%

The high proportion of "don't knows" and unanswered questions in this section suggested apathy and resentment against the "system" without many alternatives being offered. The views of those showing keen interest did not always coincide, but the main theme was the need for a separate negotiating body for junior hospital doctors and for greater representation on committees.

Training

Forty-seven per cent. of those replying thought that the type of tuition they received was satisfactory, but most felt that the amount was insufficient. Only 12% of doctors were taking the full amount of study leave to which they were entitled.⁵ Of the 19 doctors taking less than the total days' study leave, eight gave as their reason the fact that study leave would increase their own work-load or that of other doctors.

Ancillary Services

Thirty-three per cent. thought that their work-load could be substantially reduced if greater secretarial assistance was available, and a further 44% felt that there could be some reduction. The typing of case notes, attendance on ward rounds, making and receiving of official telephone calls, and attendance at clinics were among the duties which it was suggested might be undertaken by secretaries. As might be expected from the preliminary report, the departments where help was most needed were medicine, paediatrics, and obstetrics and gynaecology.

The other main duty which could be delegated to ancillary staff was the taking of blood samples. Seventeen doctors in seven departments suggested that blood samples could be taken by technical staff.

Discussion

Some remedies for the complaints voiced in this survey are immediately apparent. Career prospects stood out as the most important single source of dissatisfaction, and there was a strong feeling that training posts should be controlled in number to allow for real prospects of promotion. It was also suggested that specialist training should be planned for longer periods with progression through a number of posts.

The planned career structure might allow an optional system of staff reporting as used in the Civil Service. This would

place more emphasis on the overall record of the doctor when an appointment is being considered and would reduce the influence of a single consultant which is so strong under the present system.

A recurring feature of this report is that most of the grievances arising from overwork and poor facilities are experienced in the major, older specialties. Difficulties arise from the existence of separate working units within such a specialty as medicine or surgery. The function of these units in isolation leads to excessive working hours, and the absence of one doctor from such a small unit is sufficient to create disruption. Any lack of co-ordination or planning in respect of annual or study leave, or sickness, can only create a situation where it is considered normal to work in a continuous state of disruption.

We suggest that the traditional concept of the "firm" be replaced by the "department." The provision of adequate secretarial facilities on a departmental basis would seem to be of great importance. Such a department would reduce the isolation of individual units. It would still be possible for one secretary to work for one doctor or for a group of doctors, but there would be greater flexibility to allow for holidays and other absences. A departmental office could act as a centrally staffed location for the sending and receiving of messages and for arranging departmental activities, organization of holidays, etc.

The concept of the department rather than the firm could with advantage be applied to medical staff also. If a departmental arrangement is followed it is possible to make adjustments in staff that are impossible at present with a number of firms. Thus a department having six junior staff could reasonably assimilate one extra doctor, whereas if they were rigidly divided into three firms the balance between the firms would be disturbed by this addition.

The difficulties in assessing the present levels of work are caused by the lack of accepted standards of what is reasonable. On the basis of this report we suggest that at the present time reasonable working hours are 96 hours per fortnight, within an "on call" time of 200 hours per fortnight. If these hours are accepted as reasonable then any time worked appreciably in excess of these hours could be justification for assessment of duties with a view to increasing the number of staff.

Should any system of overtime payment to hospital staff be adopted these hours could form a basis for assessment. In addition to payments related to the number of hours on call extra payments for additional qualifications akin to those made to honours graduates in the teaching profession were thought to be desirable.

While it is apparent that most of the doctors questioned regarded increases in salary and numbers of medical staff as being essential, the survey suggests a number of ways in which, without much increase in expenditure, the lives of hospital doctors could be made more acceptable. The reorganization of the career structure and the provision of better-organized ancillary help are measures to which high priority should be given, and which should not entail a great deal of extra expenditure.

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