

Registrar working hours in Cape Town

S. VADIA, M.B. CH.B.

D. KAHN, CH.M., F.C.S. (S.A.)

Department of Surgery, University of Cape Town

Summary

The number of hours worked by general surgical registrars in Europe and the USA has been reduced so as to reduce fatigue and the possibility of errors. The impact of these restrictions on surgical training remains unresolved. To date there are no officially reported data on the number of hours worked by registrars in South Africa. The aim of this study was to document the hours worked by registrars in general surgery in Cape Town.

Thirty-three general surgical registrars at the University of Cape Town were asked to complete a time sheet over a 2-week period, indicating hours spent in hospital as part of a normal working day, hours spent in hospital outside of a normal day, hours at home on 'cold call' and hours off duty. Of the 33 registrars, 25 completed the time sheet.

Registrars at Groote Schuur Hospital worked an average of 105 hours per week (68 hours in hospital and 37 hours on call at home). Registrars at New Somerset Hospital worked 79 hours per week (70 hours on site), while registrars at Red Cross Children's Hospital, G. F. Jooste Hospital and the Trauma Unit worked 60 - 69 hours per week. In the Surgical Intensive Care Unit (SICU) registrars worked 75 hours per week.

In conclusion, general surgical registrars at the University of Cape Town work hours in excess of European and American work-hour restrictions.

In the past surgical registrars were expected to work unusually long hours. This was thought to provide better patient care, and to result in better registrar training. Junior doctors in the USA worked between 95 and 136 hours per week.¹ The paradigm changed in 1984 after the death of Libby Zion in a New York hospital when resident exhaustion was implicated. The New York State Health Code 405 limited junior doctors' working hours to 80 hours per week.² In July 2003 the mandated work-hour restrictions were adopted by the Accreditation Council for Graduate Medical Education (ACGME), the body that approves resident training programmes in the USA.

Junior doctors in Europe and the UK have experienced a similar reduction in working hours, from 72 hours per week in 1991 to 58 hours per week in 2004.³ These reductions were implemented in August 2004 under the regulations of the European Work Time Directive which applies to all European Union countries. The rationale was to improve patient care by reducing registrar fatigue. The impact of this reduction on training remains unresolved and is currently being researched.

To date there are no published data on the number of hours worked by registrars in South Africa. The aim of this study was to document the number of hours worked by registrars in general surgery in Cape Town.

Methods

All registrars in the Division of General Surgery at the University of Cape Town (UCT) were asked to complete a time sheet over a 2-week period to document the following: (i) hours spent in the hospital as part of the normal working day; (ii) hours spent in the hospital outside of the normal working day; (iii) hours spent at home on 'cold call'; and (iv) hours 'off-duty'.

Registrar rotation

At UCT registrars rotate for 3 months each through the various firms at Groote Schuur Hospital (GSH), Red Cross Children's Hospital, New Somerset and G. F. Jooste hospitals (Table I). There are four specialist firms at GSH (hepatobiliary, colorectal, surgical oncology and vascular). Registrars in these firms do a 1 in 8 'hot call' for non-trauma emergencies and a 1 in 2 'cold call' for their individual firms. The hot calls are done 'on site' in the hospital and the cold calls can be done from home (Table I). In the Surgical Intensive Care Unit (SICU) registrars do a 1 in 4 on site in-hospital call. During the trauma rotation, registrars work either in trauma theatre or the Front Room doing a 1 in 3 call or a fixed 12 - 14-hour shift respectively in-hospital. Registrars at Red Cross Children's Hospital and New Somerset Hospital do a 1 in 4 call which can be done from home. Registrars at G. F. Jooste Hospital do a 1 in 5 call in

TABLE I. WORK SCHEDULE OF THE REGISTRARS IN THE VARIOUS FIRMS

Unit	Call	
	On site	Home
GSH firms		
Hot call	1 in 8	
Cold call		1 in 2
Red Cross Hospital		1 in 4
New Somerset Hospital		1 in 4
G. F. Jooste Hospital	1 in 5	
Surgical ICU	1 in 4	
Trauma theatre	1 in 3	
Trauma Front Room	Fixed shift	
	12 - 14 hours	

the hospital. Registrars in trauma theatre, at G. F. Jooste Hospital and in the SICU leave before the end of the 'post-call' working day. All others work a full day post-call.

Results

Of the 33 registrars in the Division of General Surgery, 25 completed the time-sheet. Four were on leave and 4 did not complete the time sheet.

The number of hours worked is shown in Figs 1 and 2. The average number of hours worked by registrars in the surgical firms at GSH was 105 hours per week, of which 68 hours per week were spent in hospital and 37 hours per week on call from home. The longest hours were in the hepatobiliary unit (118 hours per week – 84 hours in hospital and 34 hours on cold call at home); these registrars had only 50 hours off-duty per week. At New Somerset Hospital registrars worked 79 hours per week (70 hours in hospital). Registrars in the SICU worked 75 hours per week, all in hospital. Registrars at Red Cross Children's Hospital, G. F. Jooste Hospital and the Trauma Unit worked 60 - 69 hours per week. The registrars in the SICU and Trauma Unit at GSH, and at G. F. Jooste Hospital spent all their working hours on site in hospital. Averaged out, this would equate to around 85 hours per week over the whole of the rotation.

Discussion

Traditionally, working hours for surgical registrars were determined by a programme demanding complete dedica-

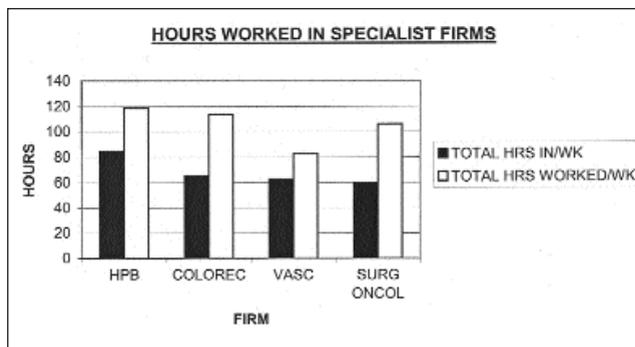


Fig. 1. Total number of hours worked and number of hours spent in hospital in the surgical firms at Groote Schuur Hospital.

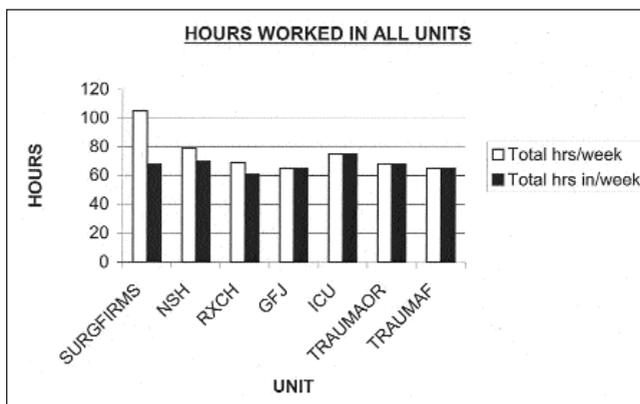


Fig. 2. Total number of hours worked and number of hours spent in hospital in various satellite units.

TABLE II. REGULATIONS OF THE EUROPEAN WORK TIME DIRECTIVE

- Not more than 58 hours of actual work per week
- Maximum on-call period of 24 hours and no more than once every third night
- Minimum of 11 hours continuous rest every 24 hours.
- Minimum of 24 hours of continuous rest in each 7-day period.
- Minimum rest break of 20 minutes every 6 hours.
- Failure to comply results in penalty to be paid by institution.

TABLE III. REGULATIONS OF THE ACCREDITATION COUNCIL FOR GRADUATE MEDICAL EDUCATION

- Not more than 80 hours per week averaged over a 4-week period
- Maximum on-site duty including in-house call of 24 hours with 6 additional hours to participate in didactic activities, transfer of care of patients, conduct outpatient clinics and continuity of care
- In-house call no more than once every third night
- At-home call can be more frequent than once every third night but not so frequent as to preclude rest and reasonable personal time for each resident
- Ten hours of continuous rest between daily duties and in house call.
- 24 hours' continuous rest in every week.

tion and altruism with little regard for the clock or individual quality of life. Political pressure, pressure from patient health organisations and medical student organisations has seen a shift in the USA and UK, resulting in new regulations by the ACGME and the European Work Time Directive (Tables II and III). These regulations are intended to improve patient safety and care and registrar quality of life. The result – fewer working hours available for training – has been challenged by some academics, clinicians and registrars. Although there is no published evidence of dissatisfaction with working hours among South African registrars, the hallways of most hospitals in this country echo with disillusioned, disgruntled, frustrated and fatigued voices overwhelmed by the demands of service delivery.

As far as patient care is concerned it is obvious that reduced work hours will have a negative impact on continuity of care. In the UK, the 58-hour week has left more time for study and research, but less time for practical hands-on experience. Most British surgical trainees were not in favour of the shortened hours and were prepared to work the previously stipulated 72 hours per week.⁴ After the implementation of the ACGME regulations, American residents spent less time in formal educational activities without any significant reduction in operative time or time doing ward work.⁵

Registrars in the surgical firms at GSH work far longer hours (105) than would be permitted in the USA or Europe. Although no study has been done in South Africa of registrars' perceptions, we have the impression that many feel that a reduction in work hours may be necessary nationally, to relieve frustration and improve quality of life and quality

of training. This perception needs full investigation since local conditions are unique, with resource and financial constraints that have led to poorer working conditions, which may themselves be the source of frustration. This survey suggests that time in our training programmes is spent predominantly in service delivery rather than on formal educational activities and research. Change is clearly necessary; input is required from all role players, including national and provincial government, the Medical Research Council (MRC), the universities, the Colleges of Medicine of South Africa (CMSA) Education Committee, the Health Professions Council (HPCSA) and registrar organisations.

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