Junior doctors’ on call activities: differences in workload and work patterns among grades

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Abstract

Objective—To examine the workload and work patterns of junior doctors of all grades while on call.

Design—Pilot study of activity data self recorded by junior doctors, with the help of students during busy periods.

Setting—A general surgical firm and a general medical firm based at University Hospital, Nottingham.

Subjects—Four registrars, three senior house officers, and five preregistration house officers.

Results—Senior house officers and preregistration house officers spent nearly half of all on call duty time working, but less than half of that time was spent in direct contact with patients. Registrars were on call more often than the house officers but spent less than one fifth of their on call duty time working, and almost two thirds of that time was spent in direct contact with patients.

Conclusions—Workload while on duty is excessive for both senior and preregistration house officers. Changes in some administrative procedures and employment of more non-medical staff on call periods might reduce the time spent on non-clinical activities, thereby reducing the overall workload and allowing more time for patient contact.

Introduction

Recent evidence indicates that some junior doctors may be working in stressful conditions over long periods without sleep. To identify when, where, and why junior doctors locally were working excessively the district general manager of the Nottingham Health Authority, supported by the then director of public health, commissioned this study.

Subjects and methods

The study was confined initially to two acute specialty firms, one general surgical and one general medical, which together comprised 12 junior doctors. Both firms were based at University Hospital, Nottingham, a large teaching hospital of roughly 1400 beds. Data were collected only during on call periods—that is, outside the normal 9 am to 5 pm working week. The surgical firm was studied for 34 days and the medical firm for 27 days, and the study was conducted mainly in December 1989.

There was full cooperation of the participating doctors, who helped design the study. The collection of data relied mainly on self recording on detailed, pocket book size (11 x 15 cm) forms. Participants recorded in detail all activities, including work, leisure, and sleep. In addition, they completed a separate form about each bleeper call received. During periods when participants did not have time to record their own information because they were too busy students shadowed them, asking questions and recording answers.


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Results and discussion

Of the 2493 hours of on call duty during the study, information was recorded for 2145 (86%). Table I shows the workload of the three grades of participants while on call. Time on call was taken from the rota. All other figures were based on data recorded by the participants.

Table II shows the patterns of work and refers only to time spent in work related activities. From the records kept by participants time spent working while on call was allocated to one of four categories. “Patient contact” summed all the time spent in direct patient care, including examining, reviewing, or clerking a patient; performing any procedure; and ward rounds. “Communication” was defined as time spent reading or writing records, liaising with colleagues, or speaking to relatives. “Waiting and administration” included time spent using the telephone; waiting on the ward for results, drugs, or patients; waiting for theatre or searching for results; or tasks which the researchers regarded as ineffective use of doctors’ time. “Other” included travel, personal study, and unspecified work.

Registrars were on call for a greater number of hours a week than other grades but spent less time working. They spent a high proportion of their working time in direct patient care which required their special skills. Registrars were contacted by bleepers less frequently than other grades but when so summoned were more likely to spend a longer time with the patient. It is questionable whether a reduction in rotas in this grade would lead to less stress or greater job satisfaction, and it might lead to a reduction in the educational potential for the doctor and continuity of care for the patient. It is of concern, however, that about once a month registrars had inadequate sleep and yet were expected to carry a full clinical workload the following day.

Senior house officers were on call less often than other grades but had a heavier workload with little sleep and frequent interruptions. Although there were only three participating senior house officers, there were substantial differences in work patterns between the specialties. The one surgical senior house officer spent 43% of time working on call in theatre and received less than a third of the number of bleeper calls of a medical senior house officer. Despite a heavy clinical responsibility, the two medical senior house officers spent over half of their working time on non-clinical duties. Interestingly, the medical senior house officers reported spending 12% of their working time on call on the telephone. In contrast, the surgical

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<th>Table I—Workload of junior doctors on call</th>
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<tr>
<td>Mean time on call per person weekly (h)</td>
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<tr>
<td>Registrar (n=4)</td>
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<td>Senior house officer (n=3)</td>
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<td>Pre-registration house officer (n=5)</td>
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<th>Table II—Patterns of work of junior doctors on call. Figures are percentages of total time recorded as work while on call</th>
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<tr>
<td>Registrars (n=4)</td>
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<td>Communication</td>
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<td>Waiting and administration</td>
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<td>Patient contact</td>
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<td>Other</td>
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<td>Total</td>
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Conclusion

The evidence from this small study carried out in a particularly busy period confirms that house officers continue to have a very heavy workload while on call.1,3 This workload could be reduced and job satisfaction improved by relieving house officers of some of their non-clinical responsibilities by employing more non-medical staff during the on call period. If use of bleepers was restricted to emergencies with the institution of a non-urgent messaging system the number of interruptions to work and rest, and thus the workload, could be reduced considerably.

The study has generated a great deal of information of considerable interest locally, only a small portion of which is reported here. As a result consultants have met to examine some current practices. In addition, the preregistration committee of the University of Nottingham is setting up a working party to look in more detail at the results relating to preregistration house officers.

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