The modernisation of the surgical house officer

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ABSTRACT

INTRODUCTION There have been considerable changes in the junior doctors' hours and working patterns over the last 4 years. The aim of this study was to assess the effect of these changes on the house officers' surgical experience and to obtain their opinions on the 'Hospital at Night' system, which has recently been introduced at our large teaching hospital.

METHODS A questionnaire was filled out by surgical house officers at the end of their surgical posts in 2001. The same questionnaire was then repeated for house officers completing the same posts in 2005.

RESULTS Pre-registration house officers now see less acute surgical admissions (mean 5 patients in 3 months in 2005 compared with 35 in 2001; $P < 0.0001$) and spend less time attending theatre than four years ago (mean 12 sessions in 3 months in 2001 compared with 6 in 2005). Despite the reduction in hours, they are still managing to attend educational sessions. Nine out of ten house officers felt that the 'Hospital at Night' system was unsatisfactory. They were unable to see and clerk acute surgical admissions or go to theatre because they were providing cross cover for other specialties.

CONCLUSIONS The full shift system and the introduction of the 'Hospital at Night' team have led to a reduction in acute surgical experience for surgical house officers. The General Medical Council recommendations for reducing non-educational tasks have not been fulfilled despite the evolving role of nurse practitioners.

KEYWORDS

House officer – Hospital at Night – Training

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In 1997, the General Medical Council (GMC) recommended that proper use was made of the pre-registration house officer's time and that he/she should not be expected to routinely undertake tasks of no educational value, or to work in excess of the limits set by the New Deal.¹ Since then, the requirements of the European Working time Directive (EWTD) have led to a substantial change in the junior doctors' hours and working patterns. This has largely been achieved by the introduction of shift systems and by increasing the numbers of pre-registration appointments.

The introduction of the 'Hospital at Night' team was developed to mitigate the effects of full-shift working brought about by the implementation of the EWTD. This reduction in junior doctors' hours has also led to a fall in their salary scale, reducing hospital expenditure. The 'Hospital at Night' model consists of a multidisciplinary team, which is designed to be competent in a wide range of interventions, but has the capacity to call in specialist expertise when necessary. This model was instituted to

remove some of the work traditionally carried out by junior doctors that is considered by the GMC and others to have little educational value.

This study aimed to assess the effects of the EWTD on house officer surgical training compared to four years ago, and to assess the current junior doctors' opinion of the 'Hospital at Night' system at one large teaching hospital.

Materials and Methods

An anonymised questionnaire was issued to 10 general surgical house officers in 2001 to assess the surgical exposure they gained during their post. This questionnaire was repeated 4 years later, in 2005, with additional questions being added to assess the effects of the 'Hospital at Night' system on training.

St Thomas' Hospital is divided into two main sites from 8 pm to 8 am. The night team for the main wing of the hospital consists of one surgical house officer and one site practitioner,

covering approximately 300 beds. The medical house officers are not on-call at night as it is suggested they gain most experience by admitting acute medical patients during the day. The night team cross covers general, vascular, orthopaedic, plastic and gynaecological surgery and geriatric, general and HIV medicine. Senior advice is available overnight in each of the specialties from senior house officer grade and upwards.

Results

Six out of ten surgical house officers questioned in 2005 wished to pursue a career in surgery compared with seven in 2001. Nine surgical house officers considered themselves vital for the function of the surgical firm compared to eight in 2001. In 2001, nurse practitioners were not carrying out catheterisation, arterial puncture for blood gas analysis and venflon insertion, which they are performing regularly in 2005. Despite the reduction in hours, the house officers are still managing to attend the time-tabled educational sessions, but fewer are attending the multidisciplinary and X-ray meetings (Table 1). The number of emergency admissions seen by the surgical officers over 3 months in 2005 has fallen significantly compared to the number seen in 2001, with a mean of 35 patients being clerked in 2001 compared with only 5 patients in 2005 (Fig. 1; $P < 0.0001$).

The 'Hospital at Night' questionnaire showed that nine out of ten house officers were being called to insert venflons and obtain blood tests during the night shift, which could have been done by the nursing staff (Fig. 2A). All surgical house officers were seeing an average of at least 1–3 surgical patients every night on call who were admitted after hours for elective surgery the next day (Fig. 2B). Some of these patients were not pre-clerked for logistical reasons and all were being admitted after 8 pm.

Table 1 Average number of attendances of surgical house officers during the surgical post in 2001 and 2005.

Activity	2001	2005
Out-patients	0 ($\pm$ 1)	1 ($\pm$ 1)
Theatre list	12 ($\pm$ 3)	6 ($\pm$ 4)
Teaching	11 ($\pm$ 4)	11 ($\pm$ 4)
Histology meeting	1 ($\pm$ 3)	2 ($\pm$ 3)
X-ray meeting*	10 ($\pm$ 2)	3 ($\pm$ 4)
Audit meeting	1 ($\pm$ 1)	1 ($\pm$ 1)
Teaching students	5 ($\pm$ 3)	4 ($\pm$ 3)

* P value = 0.0002.

Nine out of ten house officers had been requested to attend more than one urgent call at any one time because of the cross specialty cover (Fig. 2C), and all felt that the current shift pattern was an unsatisfactory way of covering the wards at night (Fig. 2D). Eight of the house officers felt that the cross cover they provided influenced their exposure to surgical patients (Fig. 2E). This could have been improved by employing more junior doctors on the 'Hospital at Night' team (Fig. 2F). Eight of the house officers stated that the wards were an unsafe place at night because of the paucity of available medical and surgical staff (Fig. 2G). Six felt that the senior medical cover was adequate, but four expressed reservations (Fig. 2H). The house officers rarely went to theatre during their nights on duty with three never attending an emergency operation (Fig. 2I). One house officer saw up to half the acute surgical admissions per night, but the majority saw less than 10% and two saw almost no acute surgical admissions (Fig. 2J).

Discussion

The number of surgical house officers wishing to pursue a career in surgery has not changed significantly since 2001, despite the implementation of the new training programme. The house officers still perceive themselves as a vital part of the surgical team and are managing to make time to attend the majority of the educational sessions.

The house officers are spending a large proportion of their time on-call carrying out non-educational tasks, despite the employment of more nurse practitioners. The extent of the cross-specialty cover has led to house officers being called to deal with simultaneous urgent calls leading to difficulties in providing care for their surgical patients. The large volume of patients covered on-call may also compromise patient care. The current house surgeons felt that the presence of more junior doctors on the 'Hospital at

Figure 2 'Hospital at Night' questionnaire results. [HO = Surgical House Officer (pre-registration); SHO = Senior House Officer]

Night' team would help to improve this and make the nights less onerous. The senior medical cover was adequate, but was usually telephone advice, as the medical team were often too busy seeing emergency admissions to attend to the patient themselves. Surgical house officers saw very few acute surgical admissions – some seeing as few as five during their entire surgical post – and rarely assisted in the operating theatre during their nights on-call. This limited exposure to acute surgery is mainly the result of the increased ward work during the night because of the cross cover required for other specialties.

This study was based in one large institution giving only one example of a current 'Hospital at Night' system and questioned a limited number of surgical house officers. Previous studies looking at junior doctors' working patterns have used similar numbers of house officers,^{2,5} but no study has carried out a direct comparison between two time periods as far apart as 4 years. Studies have suggested that it is possible to implement the shift system successfully with improved quality of life for doctors,⁴ better education,⁵ and more opportunities for flexible training. The detrimental effect on training is, however, well documented⁶⁻⁸ with some of the studies reporting increased job dissatisfaction⁸ and a reduction in quality of life.⁹ Little is reported on the effects of cross-specialty cover on patient care and training. The large numbers of patients and diverse specialties covered by the 'Hospital at Night' team means that the house officers are mainly occupied by non-educational tasks leaving little time for training. In many hospitals, this has already resulted in the removal of house surgeons from the on-call rota after 10 pm at night, further reducing their exposure to acute surgical problems. In the current system, the training will not equip these young surgeons for a further career in surgery.

From August 2005, the traditional 1-year house officer training programme will be replaced by a 2-year 'foundation' training scheme. In the new scheme, the house officer will be on a shift system and on the 'Hospital at Night' team, which will result in even less exposure to surgical training and acute surgical cases.

The results of this study suggest that new working patterns are having a considerable influence on the clinical training of young surgeons. The statutory bodies must ensure adequate clinical exposure and may need to produce novel solutions in order to achieve this.

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