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The value of the post-take ward round: are new working patterns compromising junior doctor education?

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ABSTRACT – This prospective observational study assessed the impact of the changes in junior doctors' working hours and waiting-time initiatives on teaching and learning opportunities for junior doctors in acute medicine. An audit cycle of post-take ward rounds including all medical admissions to an urban teaching hospital was conducted. During two seven-day periods in July 2006 and 2008, 317 and 354 patients were admitted respectively. In the two-year interval a number of changes were implemented resulting in a significant increase in patients reviewed by a consultant within 24 hours of admission. Target waiting times were being met but there were many missed learning opportunities for junior staff. Senior doctors continue to perform the majority of post-take reviews in the absence of the doctors who had admitted the patient. Similar patterns are likely to be found in other hospitals attempting to balance training with government targets for waiting times and junior doctors' working hours.

KEY WORDS: acute medicine, emergency medicine, junior doctors, post-take ward rounds, training, European Working Time Directive

Background

Recent changes in the NHS since the advent of the European Working Time Directive and the introduction of Modernising Medical Careers, have reduced junior doctors' working hours and altered working patterns.[1–4] Alongside these initiatives, there has been concern about the impact of reducing hours on the training of junior doctors in surgery and anaesthetics, and physicians have responded with the development of the acute medicine model.[5–8] A recent editorial in this journal raised concerns over the impact of the anticipated further reduction in working hours to 48 in August 2009.[9]

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The Royal College of Physicians (RCP) recommend that a consultant should review patients within 24 hours of admission and that they should provide formal teaching in acute medicine.[10,11] The traditional role of the post-take ward round (PTWR) is to provide both the teaching and review of patients.[12] Patients are formally presented to the consultants by junior staff with a brief clinical summary of the history and salient features on examination. This often provides a springboard for further discussion and learning, and the admitting clinicians receive immediate feedback on their diagnostic and management abilities.

This paper presents the results of an audit of the impact of shift working on the continuity of patient care and on the training and learning opportunities for junior doctors in acute medicine.

Methods

The current practice at the Royal Liverpool University Hospital (915-bed urban teaching hospital) is a full-shift system with no integration to maintain 'firm' or unit links between the trainee and consultant on-call rotas.[13,14] General practitioners refer patients directly to the acute medical unit (AMU) and heart emergency centre (HEC) for assessment.[15] The accident and emergency department (A&E) refers medical admissions to HEC, AMU, medical wards and the intensive care unit (ITU) via the on-call medical specialist registrar (Spr). SpRs perform senior reviews of patients overnight and between consultant ward rounds in the day. In 2006, patients seen by SpRs could be transferred directly to the medical wards during busy periods. There are two formal consultant-led post-take ward rounds per day in the AMU and the HEC, designed to ensure prompt consultant review of all admissions within 24 hours. In addition, AMU consultant physicians review patients in the unit on a daily basis and provide some initial assessments termed 'see and treat'. Senior nurses assign 12 patients for review by each consultant, allowing 15 minutes per patient in the allocated three-hour consultant PTWR session.[10]

A prospective audit of ward rounds was conducted in real time using bed managers' lists. This included all medical admissions through the AMU, A&E and HEC to the Royal Liverpool University Hospital during a seven-day period in July 2006 and an equivalent period in July 2008. Medical observers attended each ward round in acute receiving areas and data on time of review, attendance at the ward rounds of junior and senior clinicians and

diagnostic and management alterations resulting from senior review were collected. Details concerning senior reviews of patients transferred to other areas were obtained the same day. Planned admissions to the wards from home or outpatient clinics, and those transferred between wards were excluded, as these do not form part of the post-take system. Potential learning opportunities were identified as attendance of admitting junior doctors on the PTWR, changes in diagnoses sufficient to alter management, and the documentation of review of investigation results by the admitting doctor.

Data were entered and analysed in Microsoft Access, using simple descriptive statistics. The audit was registered with the Trust Audit Committee. Ethical approval was not deemed necessary; patient-related data were recorded anonymously, and were stored and analysed in accordance with national guidelines.[16]

Results

In the 2006 audit there were 317 medical patients admitted via the bed managers over a one-week period, with an average waiting time from arrival to clerking of 2.3 hours. In 2008, using the same selection criteria, a total of 354 patients were seen with an average waiting time of 2.1 hours. There were two PTWRs daily in the AMU on all weekdays as well as AMU consultant rounds. In response to the findings of the first audit, we have enhanced the AMU ward rounds. No patient is sent to the medical wards from the AMU prior to consultant review unless clinically unavoidable (eg destined for CCU or ITU) and the PTWR now visits the patients moved to wards. The daytime AMU rounds have been re-focused towards newly arrived patients, so that more consultant reviews occur in real time rather than the next day. Theoretically this should enable more reviews to be done with the clerking doctors present.

Table 1 summarises the main findings for the two periods. The majority of acute admissions (97% in 2006 and 100% in 2008) were reviewed by either a consultant or a SpR, or both, within 24 hours. Between the two time periods there was a significant increase in consultant reviews but a concomitant decrease in patients being seen by a registrar prior to the consultant review. In 2006, 47 (52%) patients had been transferred to a ward. Such transfers occurred more frequently on weekends than on weekdays (odds ratio (OR) 0.37, confidence interval (CI) 0.2 to 0.68, $p<0.001$).

In 2006, only 3% of PTWRs were undertaken in the presence of the juniors who had admitted the patient. By 2008 this had only improved slightly to 8%. Attendance by the clerking team was improved if morning rounds were held earlier ie

Table 1. Patient care and junior doctor involvement in post-take ward round (PTWR).

		2006 (n=317)	%	2008 (n=354)	%	OR*	CI	p value
Targets								
Consultant and SpR review	No	164		192			–	–
	Yes	153	**48.2**	153	**44.3**	0.85	0.62–1.17	0.31
Consultant review only	No	235		191			–	–
	Yes	77	**24.7**	159	**45.4**	2.54	1.80–3.58	<0.001
SpR review only	No	274		327			–	–
	Yes	43	**26.2**	24	**6.8**	0.47	0.27–0.81	0.004
No review	No	217		351			–	–
	Yes	10	**3.2**	0	**0**	–	–	<0.001*
Education								
Results recorded as being reviewed	No	173		200			–	–
	Yes	134	**43.6**	149	**57.3**	0.96	0.70–1.33	0.81
Diagnosis recorded	No	54		39			–	–
	Yes	259	**82.7**	315	**88.9**	1.68	1.06–2.69	0.02
SpR diagnosis different from clerking	No	165		268			–	–
	Yes	92	**35.8**	86	**24.3**	0.58	0.40–0.83	0.002
Consultant diagnosis different from SpR or junior	No	164		264			–	–
	Yes	50	**23.4**	90	**25.4**	1.12	0.74–1.70	0.58
Clerking team present at PTWR	No	298		322			–	–
	Yes	9	**2.9**	29	**8**	2.98	1.33–6.90	0.003

*Fisher's exact test

CI = confidence interval; OR = odds ratio; SpR = specialist registrar.

when the consultants came before 9 am (OR 6.3, C.I 1.3 to 31, p=0.003). In around half of cases in both time periods, no results were documented as having been seen by the admitting clinician. The benefits of the results and of hindsight meant that diagnoses were altered from the initial impression in around one in four admissions. There was no significant improvement in learning opportunities in 2008.

Discussion

Our findings indicate that NHS targets are being met. Patients are not waiting for extended periods, are being reviewed by consultants within 24 hours and are not being transferred out of acute areas until this has taken place. However, the training of junior doctors has suffered. Learning opportunities from patient review are negligible and, since 2008, the shift away from registrars reviewing patients has further exacerbated this.

Waiting times in A&E and early assessments by acute care physicians have improved after reforms in the hospital and elsewhere.[15,17] The average wait to first assessment in both periods was just over two hours. Our audit did not formally assess the four-hour targets to transfer out of A&E.[10,18] The low rate of review of investigation results (43% in 2006 and 57% in 2008) may have resulted from attempts to meet the four-hour targets. While juniors did not access results in a significant number of cases, the seniors did and this led to changes in diagnosis. This does indicate good quality of patient care but there were inadequate opportunities to alert the admitting junior to the results and their implications. Of the patients, 29% were not seen by a consultant within 24 hours in 2006. While some of these were appropriate discharges, over half had been transferred to wards and other medical areas. As with other specialties, this affects the continuing care of patients, especially at weekends when a patient could potentially remain without a consultant review for more than 48 hours.[19,20]

There were many missed learning opportunities. Restriction of hours prevent the previous day's junior doctors from attending the PTWR and a new team presents their colleagues' clerking.[20,21] The post-take diagnosis differed from the initial diagnosis in at least 45% of cases and, with the current system, there is no mechanism for feedback to the initial assessing team. The night team was the most consistent group at attending PTWR of patients they had seen, but this relied on the PTWR commencing an hour before the official end of their duties. Rounds at 6 am and 6 pm would assure attendance of the clerking team and time for teaching, but may prove unpopular with consultants and be beyond their contractual obligations. For juniors, attendance at the PTWRs may be desirable but is not universal. On-call working in the traditional system was post take and often took place post take, ie in unpaid time. The current system eliminates this, but as in the USA, it puts the onus on individual juniors to maximise their own training opportunities, so training may be less consistent.[22]

There are some limitations of the audit cycle. It was performed in the summer, near the changeover of junior doctors, when they are more experienced and quicker at assessing patients. An audit earlier in the academic calendar might have revealed longer gaps between assessment and review, as well as increased patient waiting times. The number of admissions would have been greater in the winter season. Further biases may have arisen as only one night team was audited (remaining the same for seven days), whereas the daytime team changed daily. Finally, possibly as a result of our audit, we observed informally that the PTWR was more punctually attended as the week progressed.

While traditional PTWRs usually include patients admitted during the previous 24 hours, we had modified our work patterns to allow for 15 minutes with each patient as recommended by the RCP.[10] This required the day's patients to be divided between several consultants in order to enhance quality of care and maximise training opportunities. However, this audit has demonstrated weakness of the current system in both these domains.

Conclusion

The audit has highlighted strengths of the new system for patients, who are assessed and reviewed early by appropriate clinicians. However, the teaching of junior doctors and learning opportunities for them have been compromised in our hospital and there is a need to re-establish the link between the clerking doctors and senior doctors reviewing the patient. Similar patterns of work are likely to be found in other hospitals struggling to balance government targets for waiting times with junior doctors' working hours. However, as voiced by other specialties, standards of training in acute medicine need to be maintained for the consultant physicians of the future.

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References

1 Hellawell GO, Kahn L, Mumtaz F. The European Working Time Directive: implications for subspecialty acute care. *Int J Clin Pract* 2005;59:508–10.
2 Department of Health. *New Deal: working arrangements for doctors and dentists in training*. London: DH, 1991.
3 Department of Health. *Modernising Medical Careers*. London: DH, 2005.
4 McGowan A. Modernising Medical Careers: educational implications for the emergency department. *Emerg Med J* 2006;23:644–6.
5 Benes V. The European Working Time Directive and the effects on training of surgical specialists (doctors in training): a position paper of the surgical disciplines of the countries of the EU. *Acta Neurochir (Wien)* 2006;148:1227–33.
6 Paice E, Reid W. Can training and service survive the European Working Time Directive? *Med Educ* 2004;38:336–8.

7 Leman P. Emergency care in the first 48 hours. *BMJ* 2007;334: 218–9.
8 Joint Royal Colleges of Physicians Training Board. *Acute medicine curriculum for higher medical training*. London: RCP, 2003.
9 Pounder R. Junior doctors' hours: can 56 go into 48? *Clin Med* 2008;8:126–7.
10 Royal College of Physicians. *Acute medicine. A blueprint for organization and training*. Report of a working party. London: RCP, 2004.
11 Royal College of Physicians. *The interface of accident and emergency and acute medicine*. Report of a working party. London: RCP, 2002.
12 O'Hare JA Anatomy of the ward round. *Eur J Intern Med* 2008; 19:309–13.
13 Jones GJ, Vanderpump MP, Easton M *et al*. Achieving compliance with the European Working Time Directive in a large teaching hospital: a strategic approach. *Clin Med* 2004;4:427–30.
14 Horrocks N, Pounder R. Working the night shift: preparation, survival and recovery-a guide for junior doctors. *Clin Med* 2006;6:61–7.
15 Moore S, Gemmell I, Almond S *et al*. Impact of specialist care on clinical outcomes for medical emergencies. *Clin Med* 2006;6:286–93.
16 Department of Health. *Confidentiality. NHS code of practice*. London: DH, 2003.
17 Lammy D. Reforming emergency care: for patients. *Emerg Med J* 2003;20:112.
18 Cooke MW, Lamb SE, Marsh J, Dale J. Use of emergency observation and assessment wards: a systematic literature review. *Emerg Med J* 2003;20:138–42.
19 Seward E, Greig E, Preston S *et al*. A confidential study of death after emergency medical admission: issues relating to quality of care. *Clin Med* 2003;3:425–34.
20 Scott-Coombes D. European Working Time Directive for doctors in training. Reduction in juniors' hours abolishes concept of continuity of care. *BMJ* 2002;324:736.
21 Department of Health. *Unfinished business: proposals for reform of the seniorhouse officer grade*. London: DH, 2002.
22 Iglehart JK. Revisiting duty – hour limits – IOM recommendations for patient safety and resident education. *N Engl J Med* 2008;359:2633–5.

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