

# What is the educational value of ward rounds? A learner and teacher perspective

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**ABSTRACT** – Ward rounds (WRs) have been a valuable resource in medical education for both learners and teachers since first recorded in 1660. Previous studies have shown that over 50% of junior doctor learning occurs on WRs. However, postgraduate medical education in the UK has changed significantly over recent years with the adoption of the foundation programme and the application of the European Working Time Directive (EWTD). Using an anonymous questionnaire and small group discussions, foundation year doctors were surveyed regarding their perceptions of the educational value of WRs. Eighteen per cent of foundation year doctor learning occurs on WRs. Hindrances to learning and teaching include lack of time, increasing patient numbers and an absence of team consistency. The current study is the first to investigate the impact on the educational value of WRs following the introduction of the EWTD and the foundation programme. WRs continue to play a crucial role in postgraduate medical education but increasing pressure of service commitment and lack of teacher training continue to threaten this learning opportunity.

**KEY WORDS:** postgraduate medical education, teaching methods, ward rounds

## Introduction

Since the first recorded teaching ward round (WR) in Leyden in 1660,<sup>1</sup> they have been an integral part of the educational and learning experience of junior doctors. In a survey conducted by Grant *et al*<sup>2</sup> in the late 1980s, senior house officers reported that 58% of their overall learning occurs on rounds. Postgraduate medical education has, however, undergone dramatic reforms over recent years leading to increasing regulation, centralisation, use of modern educational theory and the adoption of new teaching strategies, including clinical skills labs, small group-facilitated sessions and problem-based learning.

The recent implementation of *The foundation programme curriculum June 2007*<sup>3</sup> emphasises the importance of on-the-job education, of which WRs play a major part. Selected phrases from this document include;

*New doctors must be encouraged to learn in, and from, practice in the clinical environment where this service is delivered. (p 3)*

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*Doctors should be continually learning from clinical practice – failure to recognise this calls into question an individual's commitment... (p 3)*

*It builds on undergraduate training to allow foundation doctors to demonstrate performance in the workplace. (p 5)*

*Most learning will take place in the clinical area. (p 30)*

Despite the emphasis on clinical teaching, many WRs remain service driven, their educational value hindered by lack of time, noisy wards, patients not being available, reduced training time and a rising workload.<sup>4,5</sup> The gradual implementation of the European Working Time Directive (EWTD) also has implications for medical education, decreasing the time into which both service and training needs to be squeezed.<sup>6,7</sup>

Despite all the pressures there remains an increasing interest in utilising WRs for educational purposes while still continuing to provide the service that day-to-day work requires. Articles by Ker,<sup>8</sup> Stanley<sup>5</sup> and Rees<sup>9</sup> provide some advice on improving the format and style of WRs to increase their educational value. These, however, were written before the onset of the foundation programme and impact of the EWTD. Dewhurst<sup>10</sup> explored the learning opportunities on modern post-take WRs for a cross section of trainees and repeated that lack of time, preparation and awareness of the learning opportunities combined with a perceived feeling of being uninvolved hindered the learning opportunities available on WRs.

The current study is the first to investigate the impact on the educational value of WRs following the introduction of the EWTD and foundation programme.

## Methods

A questionnaire-based survey was conducted between February and April 2009 at a large teaching hospital on the south coast of England. All foundation year (FY) 1 and 2 doctors that had been in post for more than six months and currently in a medical rotation were included in this study; they were considered to be the learners. Medical specialist registrars (SpRs) were also surveyed to gain a teacher perspective.

A series of preliminary face-to-face discussions with consenting FY doctors were held to optimise questionnaire design.<sup>11</sup> Distribution of the questionnaire was via group email provided by the postgraduate department. Collection was anonymous and return of the questionnaire voluntary. Comments made at

face-to-face discussion were anonymous, and ethical principles were adhered to throughout. Data were collected using a five-level Likert score, and/or free text for descriptive answers. When required to quantify learning, respondents were asked to give a subjective value dependent on their perception of what learning is.

A series of small group sessions were conducted by the author following the questionnaire to clarify deviant responses and gain a deeper understanding. Transcripts were analysed after each group session to detect emerging themes which were then focused on in later sessions.

## Results

### Demographics

Sixty-two per cent (n=33) of the 53 FY doctors on the medical rotation at Southampton General Hospital returned the questionnaire. Forty-five per cent (n=15) and 55% (n=18) of respondents were FY1 and FY2 respectively; all commenced their rotations over six months prior to the study start date. Forty-five per cent (n=15) and 55% (n=18) of respondents were male and female respectively and 66% (n=22) were aged between 24 and 26 years, with a median age of 25 years (range 24–35). The demographics of the non-responders were similar. There are 27 registrars, covering a range of medical specialties on the medical rotation, of whom 52% (n=14) responded.

### Educational value of current ward rounds

FY doctors participate in a median of four (range 2–5) consultant or SpR-led WRs per week. In total, an average of 10.5 hours ( $\pm 5.4$  sd) per week are spent on WRs. The number of WRs conducted per week does not correlate with the cumulative time spent on WRs. As WRs become more frequent, they become shorter; those FY doctors who attend only two WR per week spend on average 5.8 hours ( $\pm 2.8$  sd) per week on WRs. Those that attend three, four and five WRs per week spend on average 10.0 hours ( $\pm 5.0$  sd), 11.3 hours ( $\pm 5.4$  sd) and 11.9 hours ( $\pm 6.3$  sd) respectively on WRs per week. Follow-up discussions confirm that with increasing frequency, WRs feel more rushed and 'squeezed in'. The emphasis tends towards a review of progress and results rather than detailed and holistic review of the

patient. Educational opportunities appear to focus on the interpretation of results and diagnosis management rather than examination findings and symptom management.

The cumulative time spent on WRs correlates only weakly with the percentage of overall learning that occurs on rounds (Pearson's coefficient  $r=0.265$ ,  $p=0.116$ ). Follow-up discussions revealed that as WRs become more prolonged, learning becomes more laboured and less fruitful. Rees<sup>9</sup> suggests the maximum time to spend on a (teaching) WR is 1.5 hours, longer WRs 'leading to physical and mental strain'. A suggestion to overcome this limitation is to break the WR into manageable parts. Coffee breaks have the added advantage of allowing further discussion away from the patient and opportunity to build team cohesion.

FY doctors report that a median of 18% (range 0–50%) of their total learning occurs on WRs but only a median of 9% (range 0–20%) of an average WR is devoted to teaching. In contrast, registrars report that a median of 20% of their WRs are devoted to teaching (range 5–30%). When asked what percentage of FY doctors' learning occurs on WRs, SpRs report a median of 18% (range <5–60%).

According to SpRs, 20% of their WRs are devoted to teaching compared with the 9% reported by FY doctors. There are two explanations: either this variance is a reflection of a phenomenon by which teachers over-rate the value of their teaching,<sup>2</sup> or learners do not consider certain experiences to be a learning opportunity. At the follow-up sessions the discussion concerned 'what is learning?' A common problem is that learning is often not recognised, being thought of only as a measurable product, ie gaining knowledge rather than a process or a change in behaviour. MacLennan<sup>12</sup> in his essay on why the teaching WR is not obsolete suggests, 'The most important aspect of the art of medicine is the attitude of the doctor to his patient'. Part of the problem may be that the teacher does not know they are teaching; lack of attention to this leads to an impoverished learning experience. Learning covers not only knowledge but also the skills and attitudes encompassed in the holistic approach to the patient. WRs are an excellent opportunity to learn skills and attitudes, but this appears unrecognised by the learner or poorly emphasised by the teacher.

Only 36% of FY doctors agreed with the statement, 'Ward rounds are a good learning experience'. When asked if WRs could be made into a better learning experience, 90% either strongly agreed or agreed; no one disagreed (Fig 1).

All SpRs strongly agreed or agreed with the statement, 'Ward rounds could be made into a better teaching experience'. Eighty per cent strongly agreed or agreed with the statement 'you would like to increase the teaching opportunities provided by WRs'.

### Ward rounds as a learning and teaching opportunity

FY perceptions of learning a variety of different skills, attitudes or knowledge on WRs, and the registrar perception of teaching these are shown in Table 1. Ninety-one per cent of FY doctors either strongly agree or agree with the statement 'Ward rounds have been a good opportunity to learn patient management'. It

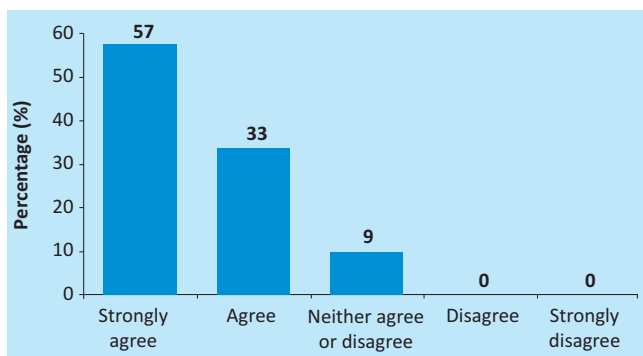


Fig 1. Do you agree that ward rounds could be made into a better learning experience?

**Table 1. Opportunities and obstacles to learning (teaching) on ward rounds (WRs).**

	Strongly agree (%)	Agree (%)	Neither agree nor disagree (%)	Disagree (%)	Strongly disagree (%)	
<b>WRs have been a good opportunity to learn (teach):</b>						
Physical examination	0 (0)	27 (0)	18 (0)	3 (57)	15 (43)	
History taking	0 (0)	36 (57)	30 (43)	7 (0)	12 (0)	
Diagnostic investigations	12 (0)	64 (57)	15 (21)	9 (21)	0 (0)	
Patient management	21 (0)	70 (79)	6 (0)	3 (21)	0 (0)	
Communication skills	9 (0)	48 (64)	24 (14)	12 (21)	6 (0)	
Time management skills	12 (0)	15 (14)	27 (14)	36 (71)	9 (0)	
Record keeping	9 (0)	45 (57)	9 (14)	36 (29)	0 (0)	
Basic sciences	6 (0)	9 (14)	21 (21)	45 (0)	18 (64)	
<b>The following are obstacles to learning (teaching) on WRs:</b>						
Lack of time	75 (57)	24 (21)	0 (21)	0 (0)	0 (0)	
Number of patients	54 (36)	33 (21)	12 (21)	0 (21)	0 (0)	
Ward environment	Too noisy	18 (21)	15 (21)	51 (36)	12 (21)	3 (0)
	Too busy	12 (29)	51 (36)	24 (36)	9 (0)	3 (0)
	Lack of privacy	18 (21)	33 (21)	30 (36)	18 (21)	0 (0)
	Lack of nursing staff	21 (0)	33 (21)	18 (79)	27 (0)	0 (0)
Patient factors	Compliance	3 (0)	6 (0)	27 (36)	45 (64)	18 (0)
	Meal times	3 (0)	9 (21)	36 (21)	48 (57)	3 (0)
	Not available	3 (0)	18 (0)	30 (36)	45 (64)	3 (0)
Team structure changes too often	39 (21)	45 (43)	6 (36)	9 (0)	0 (0)	
I don't know the patients	3 (0)	24 (0)	21 (21)	30 (57)	21 (21)	

came as a surprise that only 27% of FY doctors agree with the statement that WRs are a good opportunity to learn physical examination, and that only 36% agree that WRs are a good opportunity to learn history taking. In contrast, 76% strongly agree or agree that 'WRs are a good opportunity to learn diagnostic investigations'. These findings may reflect a shift in the diagnostic pathway away from using history and examination towards using investigations to gain a diagnosis. There are numerous causes for this shift but it may reflect a lack of time, fear of litigation, the increasing accessibility, safety and accuracy of modern diagnostics or personal insecurity of diagnostic acumen. There is a perception that as WRs become more rushed, decision making becomes more dependent on diagnostic investigations, rather than history and examination, which are seen as more time consuming.

#### *Obstacles to learning and teaching on ward rounds*

Table 1 identifies the factors that are obstacles to learning and teaching on WRs. Seventy-five per cent of FY doctors and 57% of SpRs strongly agree that lack of time is an obstacle to learning and teaching respectively. Fifty-four per cent of FY doctors and 36% of the registrars strongly agree that the number of patients is a challenge. The third most important barrier is the team structure. Lack of time is caused by several factors including the overriding emphasis on getting the work done. This tension is compounded when WRs are performed in the afternoon, are

carried out on a ward where an overwhelming number of patients are being cared for by a senior with poor time management or when there is late attendance from those conducting the round.

In subsequent discussions, two-thirds of the comments revolved around the issue of lack of time. Specific comments include, 'ward rounds just felt slotted in' and 'generally too rushed'. The result of perceived lack of time or too many patients is to change the emphasis of the WR and service provision at the cost of educational opportunities, a particular problem with afternoon and post-take WRs. Often a well-managed WR with a lot of patients can be used more effectively for teaching than one with a smaller number of patients. To achieve an effective WR, FY doctors suggest targeted, limited and quality teaching, avoidance of interruptions and teacher enthusiasm.

#### *The effect of the ward round structure on learning and teaching*

Seventy-two per cent of FY doctors say that educational opportunities are more valuable during morning WRs, when minds are fresh, enthusiasm is at its highest and the afternoon is available to complete ward work. In the afternoon the emphasis of a WR moves towards 'getting the work done' with the focus shifting from an educational one to a 'business model'. The pressure to arrange tests and complete paperwork in a timely fashion mounts and educational opportunities are less exploited.

**Table 2. What makes a good teacher on a ward round?**

	Strongly agree (%)	Agree (%)	Neither agree nor disagree (%)	Disagree (%)	Strongly disagree (%)
Someone you know	12	24	54	9	0
Someone you respect	27	64	9	0	0
Consultant	18	48	30	3	0
Registrar	21	45	27	3	3
Enthusiasm towards teaching	82	18	0	0	0
Someone who is not intimidating	55	33	9	3	0
Someone who is not in a rush	55	39	6	0	0
Someone who can communicate with you	45	55	0	0	0
Someone who can communicate with the patient	27	55	18	0	0
Someone who provides feedback	27	64	9	0	0
<b>Other characteristics</b>					
'Teams rotate so often the seniors never know what the juniors' needs are.'					
'Someone who understands the learning needs.'					
'Someone who knows or finds out your strengths and weaknesses.'					
'Someone who gives the opportunity to ask questions.'					
'Constructive feedback.'					
'Approachable.'					
'Someone who takes their time to explain.'					
'Very few consultants take any real opportunities to teach on ward rounds.'					
'Varies with consultant, some good, some disinterested.'					
'Seem to teach more with medical students.'					
'Slow and steady ward rounds with interested doctors are best.'					

Ninety per cent of FY doctors and 80% of SpRs say it is important to discuss patients away from the bedside, but this step occurs only on 45% of WRs. FY doctors report that questions are left unanswered by the WRs, a median of 30% (range 0–90%) of the time. In contrast, only 10% (range 0–20%) of the SpRs report this concern. FY doctors report some causes for this lack of 'closing the loop' are fear of breaching patient confidentiality at the bedside, being embarrassed to ask questions that they fear they should know and lack of appropriate opportunity.

The structure of the 'team' performing the ward round is also crucial. A product of the EWTD and foundation programme has been a move away from a 'consultant's firm' structure, in which a house officer, senior house officer, registrar and perhaps a number of assigned students would provide continuity for a period of time, usually six months, to one in which these members are continually rotating at short periods. In the study hospital, FY doctors are usually based with a consultant for approximately two months before rotating. This is further reduced by 'on call' commitments and annual leave, which undermine the 'continuity of learning', factors which led to the Tooke Report recommendation of a return to six-month rotations. With reduced teacher/student exposure, there is less time to build a relationship and to learn each other's methods. The teacher does not necessarily know the FY doctors prior to the WR, nor do they know their learning needs. FY doctors are 'more likely to get taught if they are familiar faces and part of the team'. Eighty-four per cent of FY doctors either strongly agree or agree that team structure changes too often.

### *The effect of the teacher and learner on the educational opportunities of ward rounds*

Table 2 shows that over 50% of FY doctors strongly agree that good teachers are enthusiastic, not intimidating, and appear not to be rushed (94%).

Discussion revealed that good teachers allow the opportunities to learn: 'just one opportunity was enough to make you feel you were really gaining something from the WR'. Good teachers allow questioning, give good quality feedback, are not intimidating and allow a rapport among the team to grow. The teacher needs to be punctual and move through the WR in a timely fashion. Defining when and where WRs start allows learners to plan and set their own objectives. Good teachers know and understand the learning needs of their students and can focus the ward rounds to address these. When asked whose responsibility it is to create the time, the universal response was the person leading the WRs.

Registrars report that good students risk asking questions and take steps to provoke discussion. They demonstrate commitment and initiative and together these are more likely to promote better quality feedback (Table 3).

### **Discussion**

Postgraduate medical education and assessment have changed over recent years with the introduction of the foundation programme, the adoption of formalised postgraduate teaching programmes, centralised educational policies and the application of the EWTD. WRs remain an important part of medical

Table 3. What makes a good student on a ward round?

	Strongly agree (%)	Agree (%)	Neither agree nor disagree (%)	Disagree (%)	Strongly disagree (%)
Someone you know	0	21	36	43	0
Enthusiasm towards learning	0	43	57	0	0
Good level of knowledge	0	0	57	43	0
Someone who is not in a rush	21	79	0	0	0
Someone who can communicate with you	43	57	0	0	0
Someone who can communicate with the patient	21	57	21	0	0
<b>Other characteristics</b>					
‘Risks questions and provokes discussion.’					
‘Commitment.’					
‘Initiative.’					
‘More likely to get taught if they are familiar faces and part of the team.’					
‘Not worried about making mistakes.’					
‘Time for teaching will be made if students are enthusiastic.’					

education, linking the knowledge and skills learnt in structured learning environments with real situations on the ward. The WR offers an opportunity to marry the science and the practice of medicine.

Only 18% of the learning of FY doctors occurs on WRs. Lack of time, too many patients and constantly changing teams are the main perceived threats to learning and teaching. The ongoing application of the EWTD, and rapidly increasing patient numbers (10% between 2005 and 2007 inclusive)<sup>13</sup> continue to challenge the educational opportunities that WRs can provide.

To keep pace with changing medical practice and improve the educational value of WRs, factors that obstruct learning and teaching need to be recognised and addressed. This study has identified which factors obstruct the educational value of WRs, and show that a majority of these are either simple organisational factors, such as structuring WRs, or key features of professionalism, such as time management. In a previous study by Grant *et al*,<sup>2</sup> 58% of the learning of senior house officers occurred on WRs, compared with 18% in this study. This reduction may represent a change in emphasis of postgraduate training away from the ward-based apprenticeship model to the ward-based service model, with separate formalised educational opportunities provided by clinical skills labs, lectures and facilitated sessions.

## Conclusion

WRs remain a useful yet underutilised opportunity for foundation learning. Some very simple actions can improve the learning on WRs, including setting the rounds as a high priority in time management, a prompt start, formal introductions to form the team, pre-bedside discussions, scheduling rounds in the morning, reducing interruptions and noise, maintaining a good pace without appearing hurried and above all demonstrating a passion and enthusiasm for the practice of medicine.

It seems timely and desirable to reflect on how the ward round can once again become a pivotal component of medical training and education rather than an ‘add-on’ that has been compromised by the exigencies of the present environment.

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