Review Article

Managing the Quality of Ward Based Training in Surgery in UK- A Critical Review

Sajjad M Athar[*], **Neil Aswood, Babis Karagkevekis FRCS(Orth), Victoria Knight**

Queen's Hospital, Belvedere Road, Burton-on-Trent, Staffordshire, UK

[*]**Corresponding author:** Sajjad M Athar, Queen's Hospital, Belvedere Road, Burton-on-Trent, Staffordshire, DE 13 0RB, UK. Tel: +4401283566333; Email: msathar@hotmail.com

Executive Summary

Junior doctors alerted the Director of Medical Education (D.M.E.) to a lack of training by senior colleagues on ward rounds in surgery. At the same time surgical training was rated poorly on the General Medical Council (G.M.C.) Trainees Survey. The West Midlands Deanery threatened to withdraw posts recommending that at least 40% of trainee time be dedicated to training. Trainers reported a lack of time to train and poor engagement by trainees. This review examines the merits of different quality improvement initiatives to patient care through programmed ward round training.

Context of the Problem

Poor feedback from trainees within the trust at the 'Junior Doctors Forum (J.D.F.)' had suggested a lack of ward based training opportunities due to unstructured ward rounds poorly led by the senior doctors within surgery. The Medical Director (M.D.) tasked the Royal College of Surgeons Tutor for the trust with changing the learning environment on ward rounds to improve care and training.

Project Objectives

To identify factors within the educational and management literature that would enable training within the workplace. To consider the values, mind-sets and barriers to managing changes to training within varied clinical environments. To consider the quality improvement strategy that would enable doctors to develop and maintain robust reproducible training on the surgical ward round.

Background Literature

Clinical

There is a growing recognition that the quality of ward round care following surgery accounts for half the adverse outcomes for patients [1] and that this should be led by senior doctors and nurses daily [2]. Clinical skill acquisition by junior doctors are declining because of a lack of time spent training these proficiencies [3]. Trainees spend only 15-30% of their time honing their skills which will then enable them to provide better care [4,5]. Trainers are expected to balance safe effective care with training opportunities with 35-55% of trainee's time anticipated to be in training [6].

Students and trainees recognise the learning opportunity presented by the ward round [7] but find barriers to learning due to a lack of dedicated time for training especially for clinical and ward round skills [8,9]. Models to facilitate bedside training are available for clinical settings to ensure these opportunities are captured effectively [10]. Modifying work patterns to allow more time with each patient and dividing the workload between several consultants improves care and training opportunities [11]. There is an 'institutionalized medical understanding of management' which creates a barrier to clinical engagement [12]. It has long been recognized that doctors have a central role in the success of any quality management initiative in healthcare settings [13].

Opportunistic situated learning [14] stimulates postgraduate trainees to learn through 'participation' as well as knowledge 'acquisition' [15]. This requires specific, constructive, challenging and timely feedback, traditionally sort from more experienced clinicians [16]. However, it remains difficult to provide and receive feedback that is perceived as 'negative' [17,18]. Responding to 'challenge' professionally and 'resiliently' enables clinicians to value diverse opinions from colleagues and the wider multi-professional team [19,20]. This facilitates teamwork improving safety for patients [21,2].

To ensure that the feedback has 'value' for the learner it has to be in context, measured and supported by the wider organization rather than an individual's opinion [23,24]. Recognizing the values of the recipient [25] helps to create the learning environment that nurtures feedback and development [26].

Feedback in clinical practice benefits from educators well-trained in providing feedback and directly observing tasks. Com-

petencies are assessed against an 'explicit standard', on multiple occasions, to provide focused feedback that improves performance [27]. While feedback reflecting on team working and communication is known to be valuable from peers [28], nurses [29] and patients [30] perceived difficulties remain still in providing this consistently and fairly [31]. Feedback in complex clinical environments is often done quickly with little reflection on decisions [32]. Feedback is also influenced by people's cultural beliefs and values [33] and varied approaches taken by senior team members [19].

There are many factors influencing patient care and feedback to learners in the workplace [34,35], foremost among those being the pressure of service delivery versus the educational need of the learner [1]. Some behavior's that affect seeking feedback cannot be altered like 'time in post' and youth but this can be balanced by providing 'frequent positive feedback' and developing high-quality professional relationships [36].

Organisations can improve the culture and opportunities for learning in clinical settings by altering work patterns [11]. Respecting and aligning these is the role of the educator who has to synthesize the available research and theories within these contexts to develop a system of practice [37].

This review explores what will improve the working environment to ensure meaningful feedback is provided in situ [38]. Considering the culture enabling learning within the clinical setting and how an individual clinician's values impact on how feedback is received or delivered [39].

Methods

A critical interpretative synthesis was undertaken by systematically reviewing the literature on 'Challenge during workplace learning' using a narrative approach [32]. Evaluating qualitative research is subjective [40] and so my proposed topics relevance was confirmed by discussion with colleagues [41]. Expert colleague judgement and checklists often come to similar conclusions when determining a papers impact [42]. However, checklists do have more distinguishing ability when evaluating the underlying concepts underpinning a paper and the results of a study [41]. The Evaluation Tool for Qualitative Studies (ETQS 2015) was used to evaluate the first paper of two papers looking at the evidence directing practice for 'in situ' feedback and the Quality Assessment Tool for Quantitative Studies (NCCMT 2008) for the second.

The DME had been interested in 'foundation doctor's reactions to challenge from the multi-professional team'. This proved too focused an area for study, broader search terms were used looking at 'feedback in medical education' to capture more value based papers. Care was required to choose the correct search tools, databases and terms to ensure relevance, inclusivity and ensuring that intuitive relationships were not missed for the field of study

[43]. The final terms used in the search on the MEDLINE database and Education Research included 'doctors and feedback in the workplace'.

Debriefing in simulation settings had initially been excluded as this represented research in relation to a controlled environment [64]. However, educators own valuable skills in delivery and learners in receiving feedback whilst in the simulator transferability is improved by 'in situ simulation' [45] (See Table Below).

Inclusion Criteria	Exclusion Criteria
Empirical study e.g., randomized study, observational, case note analysis, interview or survey.	Studies without educational content.
Involvement of trainee doctors or doctors in general	Experiences within a simulator.
Experiences in hospital or any clinical setting.	Out-of-hospital care.
The main focus of the article related to feedback, learning or teaching effectiveness and behaviors.	Review of literature or commentary (although reference lists were checked).
Values based commentary	No reflection against values based practice filters

Table: Eligibility Criteria for Study Inclusion.

Results of Critical Appraisal

Feedback delivered in clinical settings was explored by qualitative analysis of data obtained in focus groups from nineteen residents in four different specialities from three different teaching institutions in the United States [46]. This study clearly states the area of qualitative research [47] and was selected as it had identified similar key themes and barriers influencing feedback noted earlier.

Four authors recruiting participants electronically by email from teaching hospitals with differing community and urban placements and affiliations to larger teaching institutions [46]. Values are not 'normally distributed' so recruiting diverse and 'rich' views from clinician's is difficult [48].

Two focus groups did not achieve the target size aimed for by the authors of eight to ten participants containing four, seven and eight participants' respectively [46]. There was no description as to where or when the groups were held which can facilitate participation, things may have been made worst by having multiple sites spread apart geographically [49]. However, involving different institutions improves the generalizability of a study's findings.

For Future Research

Feedback remains important for both learners and those aiming to educate [50] and still appears difficult to provide especial-

ly when the content is challenging and the relationship between learner and educator not established [17]. The selected papers both looked at feedback using different methodology and proposed that practice can be improved by improving training design, leadership style, aligning personal attributes and values [46,51]. Some attributes like a person's linguistic skills and cultural background are difficult to change but still impact on the value they place on clinical placements and faculty support received [35]. Others like the confusion learners and teachers still have over feedback for summative and formative assessment and its educational value can be improved with training [52]. A recent review identified thirty variables affecting feedback worthy of further research in clinical settings [53]. Educators and learners value feedback from patients as it helps improve care [4].

Learner participation and involvement in the workplace is a social process [54]. Triangulation with other studies involving patients [55] and other multidisciplinary team members [29] would better determine how to change feedback in the context of clinical practice. The Teunissen and co-authors paper (2009) showed us what variables interest psychologists and what obstetric residents think in relation to feedback on night shifts. It does not show how it would work in the middle of the day or when you are trying to encourage colleagues to teach on ward rounds or in busy clinics or accident and emergency departments [11].

Trainee characteristics like motivation and self efficacy influences responses to questionnaires and feedback but this can be influenced by the organisations and teachers support and values and the strength of influence of leadership style and goal alignment for that learner [51]. Introducing a similar survey to facilitate changes in my organisation though would be a useful first step as a baseline to measure against in order to enact change [46].

For My Clinical Education Practice

Although the design of critical appraisal tools may not have been validated or reliability tested [56] they did facilitate a structured review in both papers and would be useful in any detailed future paper review. While all the strengths and weaknesses of both papers could not be discussed to the level outlined by the critical appraisal tools the structure provided has enabled me to consider how reliable the evidence is, what circumstances it may be useful in and how practical it would be to introduce within my practice.

At a fundamental level the studies approach influences the data captured [32] and up until recently I have concentrated on quantitative data to evaluate preferences whereas a qualitative approach may help me understand what are the barriers to feedback in the context of my institution [46]. It is interesting to consider why as a learner, educator and occasional researcher I thought that there might be a ready-made tools, algorithms or guidance available from previous researchers for immediate use [57,58].

Feedback is social and contextual [54] and to improve it we should adopt multiple approaches to suit the learning styles and values of different learners [59]. The studies have made me reconsider how I view evidence and how I should balance opinion. Weighing evidence is not always analytical or critical and we favor certain researchers for assessment, like we value certain opinions which may be pre-programmed and resist change to our practice [60]. A participative approach involving patients in decisions about their care [61] and learners in their education [62] would be the best way of introducing changes to challenging feedback within clinical environments.

This review confirms that learner's value feedback based on observation [63]. It also shows that the approach would have to vary depending on which learners were being targeted [64]. The focus group study is eminently reproducible in my institution to help me understand local issues between learners and educators [65,66] and in-depth interviews focusing on one area may help educators further understand how to improve feedback [67,68].

A strategy that focusses on the needs of each group of learners designed in conjunction with the participants would facilitate a change in the 'culture of practice' within my trust and other trusts.

References

1. Piquette D, Moulton C-A, Le Blanc VR (2015) Balancing care and teaching during clinical activities: 2 contexts, 2 strategies. Journal of Critical Care 30: 678-684.

2. Academy of Medical Royal Colleges (2012) Seven Day Consultant Present Care. London: AOMRC.

3. Qureshi Z (2014) Back to the bedside: the role of bedside teaching in the modern era. Perspectives in Medical Education 3: 69-72.

4. Block L, Habicht R, Wu AW, Desai SV, Wang K, et al. (2013) In the wake of the 2003 and 2011 duty hours regulations, how do internal medicine interns spend their time? Journal of general internal medicine 28: 1042-1047.

5. Marlais M, Mathews JA, Eardley I (2016) Are doctors in training being trained? The Lancet 387: 1512.

6. Greenway D (2013) Shape of Training. Securing the future of excellent patient care.

7. Nikendei C, Huhn D, Pittius G, Trost Y, Bugaj TJ, et al. (2016) Students' Perceptions on an Interprofessional Ward Round Training-A Qualitative Pilot Study. GMS Journal for Medical Education 29: 33.

8. Laskaratos FM, Parry D, El-Mileik H (2016) The Educational Value of Post-Take Ward Rounds for Senior Trainees. Ulster Medical Journal 85: 2.

9. Tariq M, Motiwala A, Ali SU, Riaz M, Awan S, et al. 2010) The learner's perspective on internal medicine ward rounds: a cross-sectional study. BMC Medical Education BMC series 53: 1-9.

10. Ramani S, Leinster S (2008) AMEE Guide no. 34: Teaching in the clinical environment. Medical Teacher 30: 347-364.

11. Chaponda M, Borra M, Beeching NJ, Almond DS, Williams PS, et al. (2009) The value of the post-take ward round: are new working patterns compromising junior doctor education? Clinical Medicine 9: 323-326.

12. To M (2008) Doctors as managers: moving towards general management? The case of unitary management reform in Norwegian hospitals. Journal of Health Organisations Management 22: 400-415.

13. Berwick DM, Enthoven A, Bunker JP (1992) Quality management in the NHS: the doctor's role-II. British Medical Journal 304: 304-308.

14. Lave J, Wenger E (1991) Situated Learning: Legitimate Peripheral Participation. Cambridge: University of Cambridge Press 7: 3.

15. Swanwick T (2015) Postgraduate medical education: the same but different. Postgraduate Medical Journal 9: 179-181.

16. Algiraigri AH (2014) Ten tips for receiving feedback effectively in clinical practice. Medical Education Online 25141: 1-5.

17. Miller A, Archer J (2010) Impact of workplace based assessment on doctors' education and performance: a systematic review. British Medical Journal 341: c5064.

18. Sargeant JM, Mann KV, van der Vleuten CP, Metsemakers JF (2009) Reflection: a link between receiving and using assessment feedback. Advances in Health Science and Education 14: 399-410.

19. Mansell A, Uttley J, Player P, Nolan O, Jackson S (2012) Is the post-take ward round standardised? The Clinical Teacher 9: 334-337.

20. Wynia MK (2010) The role of professionalism and self-regulation in detecting impaired or incompetent physicians. Journal of American Medical Association 304: 210-212.

21. Gawande AA, Zinner MJ, Studdert DM, Brennan TA (2003) Analysis of errors reported by surgeons at three teaching hospitals. Surgery 133: 614-621.

22. Urquhart LM (2015) Exploring the feedback process with medical students and their educators: listening, watching, understanding.

23. Kline T, Sulsky L (2009) Measurement and assessment issues in Performance appraisal. Can Psychology 50: s161-s171.

24. Wood L, Hassell A, Whitehouse A, Bullock A, Wall D (2006) A literature review of multi-source feedback systems within and without health services, leading to 10 tips for their successful design. Medical Teacher 28: e185-e191.

25. Elicker J, Levy P, Hall R (2006) The role of leader-member exchange in the performance appraisal process. Journal of Management 32: 531-551.

26. Hill JJ, Asprey A, Richards SH, Campbell JL (2012) Multisource feedback questionnaires in appraisal and for revalidation: a qualitative study in UK general practice. British Journal of General Practice 62: e314-21.

27. Van De Ridder JMM, Stokking KM, McGaghie WC, Ten Cate OTJ (2008) What is feedback in clinical education? Medical Education 42: 189-197.

28. van Schaik SM, Regehr G, Eva KW, Irby DM, O'Sullivan PS (2015) Perceptions of Peer-to-Peer Extraprofessional Feedback Among Students in the Health Professions. Academic Medicine: journal of the Association of American Medical Colleges 91: 807-812.

29. Ogunyemi D, Gonzalez G, Fong A, Alexander C, Finke D, et al. (2009) From the eye of the nurses: 360-degree evaluation of residents. Journal of Continuing Education in the Health Professions 29: 105-110.

30. Wood J, Collins J, Burnside ES, Albanese MA, Propeck PA, et al. (2004) Patient, faculty, and self-assessment of radiology resident performance: a 360-degree method of measuring professionalism and interpersonal communication skills. Academic Radiology 11: 931-939.

31. Coleman VH, Power ML, Williams S, Carpentieri A, Schulkin J (2005) Continuing professional development: racial and gender differences in obstetrics and gynecology residents' perceptions of mentoring. Journal of Continuing Education in the Health Professions 25: 268-277.

32. Wellington J (2015) Educational research: Contemporary issues and practical approaches. Bloomsbury Publishing.

33. Montague ML, Lee MSW, Hussain SSM (2004) Staff attitudes to a daily otolaryngology ward rounds. Journal of Laryngology and Otology 118: 963-971.

34. Goldie J, Dowie A, Goldie A, Cotton P, Morrison J (2015) The influence of structural and institutional change on teaching and culture in clinical settings: An exploratory study. Medical teacher 37: 189-195.

35. Rycroft-Malone J, Seers K, Titchen A, Harvey G, Kitson A, Mc Cormack B (2004) What counts as evidence in evidence-based practice? Journal of Advanced Nursing 47: 81-90.

36. Anseel F, Beatty AS, Shen W, Lievens F, Sackett PR (2015) How are we doing after 30 years? A meta-analytic review of the antecedents and outcomes of feedback-seeking behavior. Journal of Management 41: 318-348.

37. Jha V, Mclean M, Gibbs TJ, Sandars J (2015) Medical professionalism across cultures: A challenge for medicine and medical education. Medical Teacher 37: 74-80.

38. Nicol DJ, Debra Macfarlane-Dick D (2007) Formative assessment and self-regulated learning: a model and seven principles of good feedback practice. Studies in Higher Education 31: 199-218.

39. Bourgeois JA, Hategan A, Azzam A (2015) Competency-based medical education and scholarship: creating an active academic culture during residency. Perspectives on medical education 4: 254-258.

40. Sandelowski M (2015) A matter of taste: evaluating the quality of qualitative research. Nursing Inquiry 22: 86-94.

41. Flick U (2008) Managing quality in qualitative research. SAGE.

42. Boeije HR, Van Wesel F, Alisic E (2011) Making a difference: Towards a method for weighing the evidence in a qualitative synthesis. Journal of Evaluation in Clinical Practice 17: 657-663.

43. Huang X, Lin J, Demner-Fushman D (2006) Evaluation of PICO as a knowledge representation for clinical questions. AMIA Annual Symposium Proceedings: 359-63.

44. Voyer S, Hatala R (2015) Debriefing and feedback: two sides of the same coin? Simulation in Healthcare 10: 67-68.

45. Sørensen JL, Navne LE, Martin HM, Ottesen B, Albrechtsen CK, et al. (2015) Clarifying the learning experiences of healthcare professionals with in situ and off-site simulation-based medical education: a qualitative study. BMJ open 5: e008345.

46. Reddy ST, Zegarek MH, Barrett Fromme H, Ryan MS, Schumann S-A,

et al. (2015) Barriers and Facilitators to Effective Feedback: A Qualitative Analysis of Data from Multispecialty Resident Focus Groups. Journal of Graduate Medical Education 7: 214-219.

47. Jeanfreau SG, Jack L (2010) Appraising Qualitative Research in Health Education: Guidelines for Public Health Educators. Health Promotion Practice 11: 612-617.

48. Silverman D (2013) Doing Qualitative Research: A Practical Guide. Fourth Edition. Sage: London.

49. Stewart DW, Shamdasani PN (2014) Focus groups: Theory and practice. SAGE Publications.

50. Veloski J, Boex JR, Grasberger MJ, Evans A, Wolfson D (2006) Systematic review of the literature on assessment, feedback and physicians' clinical performance: BEME Guide No. 7. Medical Teacher 28: 117-128.

51. Teunissen PW, Stapel DA, van der Vleuten C, Scherpbier A, Boor K, Scheele F (2009) Who wants feedback? An investigation of the variables influencing residents' feedback-seeking behavior in relation to night shifts. Academic Medicine 84: 910-917.

52. O'Leary D, Al-Taiar H, Brown N, Bajorek T, Ghazirad M, et al. (2015) Workplace assessment in crisis? The way forward. British Journal of Psychiatry Bulletin 40: 61-63.

53. Ridder JM, McGaghie WC, Stokking KM, Cate O (2015) Variables that affect the process and outcome of feedback, relevant for medical training: a meta-review. Medical Education 49: 658-673.

54. Sheehan D, Wilkinson TJ, Billett S (2005) Interns' participation and learning in clinical environments in a New Zealand hospital. Academic Medicine 80: 302-308.

55. Hammick M, Freeth D, Koppel I, Reeves S, Barr H (2007) A best evidence systematic review of interprofessional education: BEME guide no. 9. Medical Teacher 29: 735-751.

56. Crowe M, Sheppard L (2011) A review of critical appraisal tools show they lack rigor: alternative tool structure is proposed. Journal of Clinical Epidemiology 64: 79-89.

57. Adami HO, Hernán MA (2015) Learning how to improve healthcare delivery: the Swedish Quality Registers. Journal of Internal Medicine 277: 87-89.

58. El Hajji FW, Scullin C, Scott MG, McElnay J (2015) Enhanced clinical pharmacy service targeting tools: risk-predictive algorithms. Journal of Evaluation in Clinical Practice 21: 187-197.

59. Rhode J (2009) Interaction equivalency in self-paced online learning environments: An exploration of learner preferences. The International Review of Research in Open and Distributed Learning.

60. Boiselle PM, Collins J, Dodd JD, Herold CJ, Leung AN (2012) Expert Opinion: what are the greatest challenges and/or barriers to applying evidence-based medicine in the daily practice of cardiopulmonary radiology? Journal of Thoracic Imaging 25: 271.

61. Van der Weijden T, Pieterse AH, Koelewijn-van Loon MS, Knaapen L, Légaré, et al. (2013) How can clinical practice guidelines be adapted to facilitate shared decision making? A qualitative key-informant study. BMJ quality and safety 22: 855-863.

62. Nicholson S, Cleland J (2015) Reframing research on widening participation in medical education: using theory to inform practice. In Researching Medical Education, Wiley Publishing. Ed Cleland J and Durning SJ Chapter 20: 231.

63. Gordon J (2003) 'One to one teaching and feedback' ABC of learning and teaching in medicine. British Medical Journal 326: 542-545.

64. Gurpinar E, Alimoglu MK, Mamakli S, Aktekin M (2010) Can learning style predict student satisfaction with different instruction methods and academic achievement in medical education? Advances in Physiology Education 34: 192-196.

65. Banka G, Edgington S, Kyulo N, Padilla T, Mosley V, et al. (2015) Improving patient satisfaction through physician education, feedback, and incentives. Journal of Hospital Medicine 10: 497-502.

66. Lakshminarayana I, David W, Bindal T, Goodyear HM (2015) A multi-source feedback tool to assess ward round leadership skills of senior paediatric trainees: (1) Development of tool. Postgraduate Medical Journal 91: 262-267.

67. Mann K, van der Vleuten C, Eva K, Armson H, Chesluk B, et al. (2011) Tensions in informed self-assessment: how the desire for feedback and reticence to collect and use it can conflict. Academic Medicine 86: 1120-1127.

68. Salamonson Y, Everett B, Halcomb E, Hutchinson M, Jackson D, et al. (2015) Unravelling the complexities of nursing students' feedback on the clinical learning environment: A mixed methods approach. Nurse Education Today 35: 206-211.