Association for Surgical Education

Actual vs perceived performance debriefing in surgery: practice far from perfect

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KEYWORDS:
Debriefing; Surgical education; Workplace-based learning; Qualitative

Abstract

BACKGROUND: Performance feedback or debriefing in surgery is increasingly recognized as an essential means to optimize learning in the operating room (OR). However, there is a lack of evidence regarding the current practice and barriers to debriefing in the OR.

METHODS: Phase 1 consisted of semistructured interviews with surgical trainers and trainees to identify features of an effective debriefing and perceived barriers to debriefing. Phase 2 consisted of ethnographic observations of surgical cases to identify current practice and observed barriers to debriefing.

RESULTS: Surgical trainers and trainees identified key features of effective debriefing with regard to the approach and content; however, these were not commonly identified in practice. Culture was recognized as a significant barrier to debriefing across both phases of the study.

CONCLUSIONS: There is a disparity between what the surgical community views as effective debriefing and actual debriefing practices in the OR. Improvements to the current debriefing culture and practice within the field of surgery should be considered to facilitate learning from clinical practice.

Irrespective of the educational setting, repeated practice alone is insufficient to develop surgical skills.7 Feedback and debriefing are essential to optimize learning and improve performance. Feedback involves providing specific information about a trainee’s observed performance and providing a standard, with the intent to improve the performance in the future.8 Debriefing encompasses feedback and involves trainer and trainee engaging in 2-way dialogue to develop insights into performance, including what is good about it, where improvements are required, and how to go about achieving them.9

In line with the shift toward simulation-based education, evidence regarding feedback and debriefing within the simulated setting has rapidly expanded over recent years.10 However, there remains a lack of commensurate efforts to expand the evidence for feedback and debriefing within the OR setting.11 This is important because

As a specialty, surgical training relies on repeated practice to develop and hone surgical skills.1 This has traditionally taken place in the operating room (OR).2 However, across health care systems in the developed world, surgical training is undergoing radical change.3–5 Prompted by concerns for patient safety, working hour restrictions and a proliferation of simulation-based training are successively limiting the role of the OR as the focal point for teaching and learning in surgery.3–6

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simulation-based training is still an expensive modality that is not accessible to all. Ultimately, the OR will invariably remain the constant within the changing landscape of surgical training. We ought, therefore, to gain a better understanding of the best approaches to feedback and debriefing within the OR to maximize its learning potential for residents.

Recent work from our group has identified the core components of an effective debriefing. The Objective Structured Assessment of Debriefing tool has been developed based on user opinion and the best available evidence on debriefing. The Objective Structured Assessment of Debriefing demonstrates validity and feasibility both in simulation-based training and in real OR settings. It is hoped that this tool will facilitate the measurement, evaluation, and improvement of debriefing practices within surgery. What is lacking, however, is a comparative analysis of what the surgical community regards as ideal effective debriefing practice compared with actual current debriefing practices in the OR. Exploring the disparity between the 2 practices will help identify the barriers to achieving the “ideal” in daily surgical practice. This in turn will help to inform strategies to improve the quality and quantity of feedback and debriefing offered to residents in the OR.

The aims of this study were (1) to compare surgeons’ perceived ideal with the actual practices of debriefing in the OR; and (2) to identify the barriers to good debriefing in surgical practice.

Methods

This was a 2-part qualitative study exploring the debriefing practice of surgical trainers in a large university teaching hospital in London, United Kingdom.

Phase 1: Qualitative interviews

Semistructured individual interviews were conducted with a purposive sample of surgeons. Both surgical trainees (program years [PGYs] 3 to 8) and trainers (senior residents, attending surgeons) were interviewed across a range of surgical specialties, including general surgery, breast surgery, vascular surgery, orthopaedic surgery, and urology surgery. This was to gain a comprehensive view of the perceived ideal performance debriefing and the barriers to achieving it in everyday clinical practice. Participation was voluntary and informed consent was obtained. Anonymity was ensured throughout the study. Participants were interviewed regarding the following:

- The routine practice of debriefing—whether they provide debriefings (the trainers) or receive debriefings (the trainees); trainees were also asked whether they routinely requested feedback and debriefing
- Features of an effective debriefing in terms of how to do it, what to cover, and when to do it
- Perceived barriers to effective debriefings in practice

Each interview took place in the participant’s work setting, lasted 15 to 20 minutes, and was audiotaped and transcribed verbatim for analysis. Transcripts were cross-checked with the original recordings to ensure accuracy. One researcher with a clinical background (M.A.) analyzed all interviews to identify emergent themes. Once all interviews had been analyzed, the emergent themes were reviewed by 2 more researchers with backgrounds in surgery (S.A.) and patient safety (N.S.). They had been blinded to the thematic analysis until this stage. The themes were finalized through consensus among the 3 researchers, and relevant verbatim quotes were extracted from the transcripts to illustrate each of them.

Phase 2: Ethnographic observation

All surgical trainers participating in phase 1 were observed in real time in the OR to evaluate their debriefing practices. Criteria for inclusion were cases involving a trainer and a trainee during which the trainee served as primary operator for at least part of the procedure (to ensure there was opportunity for performance feedback to occur). Other inclusion criteria included procedures that were performed using general anesthesia and in an elective setting to minimize bias from an awake patient or an emergency scenario, which tends to involve more senior surgeons and reduces feedback opportunities for residents. Participation was voluntary and informed consent was obtained. Anonymity was ensured throughout the study.

Observations were carried out by a trained clinician researcher (M.A.) who was present in the OR throughout each operation to observe any instances of performance feedback and debriefing that was provided to the trainee by the trainer either during or after the case (including up to the end of the completion of the list that day). To ensure clarity of observation, the observer noted any targeted comment made by the trainer in response to a specific aspect of the trainee’s performance (eg, when dissecting around Calot’s triangle, the attending physician comments, “This is a nice view of the structures, makes you confident you know what you’ll clip.”). The observer noted comments like this as ethnographic free-form notes. How the feedback was given, what was commented on, and the timing of it were noted on each occasion. The observer also noted whether debriefing was provided unprompted or at the trainee’s request, as well as any apparent barriers (eg, time pressure or an emergency requiring the attending surgeon to leave the OR to review another patient).

On completion of the observations, the ethnographic notes were analyzed in a manner similar to that used for the interviews, ie, they were first coded by the observer (M.A.) and subsequently reviewed by 2 other researchers (S.A., N.S.).
Results

Phase 1: Qualitative interviews

Participants. A total of 20 participants completed phase 1 of the study. Details about the number of trainers and trainees and their specialities are provided in Table 1. Interviews continued until thematic saturation was reached. The differing number of participants in each surgical specialty is representative of the volume and frequency of cases performed within the hospital.

Surgeons’ perceptions of debriefing. When asked whether they routinely provide (trainers) or receive (trainees) feedback either during or after a case, 13 participants responded “yes” (4 trainees, 9 trainers). Five participants (all trainees) said that they did not routinely receive feedback, whereas 2 respondents (1 trainee, 1 trainer) reported that it was variable.

The quality of the feedback, when provided, was questionable: “I always get feedback during the case, but it is more of a comment rather than feedback. I want to try to take away something from every operation.” (orthopedic trainee). Trainers argued that the content and delivery of feedback was dependent on the trainee: “I do normally give feedback at the end of the case but I don’t always bother with ‘what went well,’ as you can overdo the positive reinforcement. It depends on the trainee, if you have a good, experienced trainee they don’t need much positive feedback. If you have a junior, poor trainee then you might need to encourage them more.” (urology surgery trainer). A senior trainee explained: “Trainers do not normally give feedback after each and every case due to the seniority of my position.” (breast surgeon trainee).

When trainees were asked whether they routinely requested feedback or debriefing after a case, the majority (n = 7) stated that they did not. There was a strong feeling among trainees that feedback was viewed as a punitive exercise, that it was more often provided when things went wrong: “I don’t ask for feedback because I know when I did it well and I usually get told if it didn’t go well or if I did something wrong.” (general surgery trainee). “No because we’re orthopsods! You don’t ask unless you know it’s going to be good. You generally only get feedback if something’s gone bad.” (orthopaedic surgeon trainee). Trainees who did routinely ask for feedback felt you had to be prepared to accept criticism: “Yes. I find if you ask for it you get it, as long as you’re open to your weaknesses and can take it.” (general surgery trainee).

Perceptions of an effective debriefing. Timing and method of debriefing: perceptions. Participants were asked about the best way to provide feedback. The majority reported that feedback should be verbal (n = 15: 6 trainees, 9 trainers). Two trainees suggested that it should be in written form “...for portfolio purposes.” Three participants (2 trainees, 1 trainer) stated that debriefing should be structured: “It should be a structured conversation really...” (general surgery trainer). Two participants (1 trainee, 1 trainer) believed that feedback should be provided in an informal way: “...verbal, it should be an informal chat rather than formal...” (breast surgery trainer).

With regard to timing, the majority of participants (n = 13: 6 trainees, 7 trainers) felt that performance feedback and debriefing should be provided both during and after the case. The rationale for this can be succinctly summarized in the following quote: “Feedback should be provided during the case to help improve the outcome both for the patient and in terms of learning the procedure. Feedback afterwards is important for consolidation purposes.” (vascular surgery trainer). Trainers in particular identified the need to provide feedback during the case to essentially capitalize on the “teachable moment”: “It’s not like a driving test where you tell them at the end ‘oh you should have done it this way’. It’s important to make sure they learn at that point, as you may not come across a similar situation again.” (urology surgery trainer). However, there was an appreciation that trainers could hold back to allow more senior trainees to work through and learn from their mistakes in real time: “It depends on the seniority of the trainee really. The best way you learn is through making mistakes, but it can be difficult to stop yourself from saying anything, it’s good to let the trainee work through it.” (general surgery trainer). Trainers recognized that feedback provided after a case could be more comprehensive and structured: “After a case, when you’ve been given the opportunity to observe their performance and skills...” (breast trainer); “The good thing about giving feedback afterwards is that it can be structured.” (general surgery trainer). The 2 participants who argued that all feedback should be reserved until the end of the case were junior trainees: “...should be after a case, as if you get loads of feedback during a case it can be unsettling, especially if the patient is awake.” (breast surgery trainee, PGY 3); “After I think, because the patient comes first, you need to focus on the operation first. After the patient has been dealt with you can then focus on training.” (general surgery trainee, PGY 4).

Content of debriefing: perceptions. The majority of participants (n = 11: 6 trainees, 5 trainers) reported that effective debriefing should cover what went well and what did not go so well: “The brief should give an honest appraisal of things that were done well and things that

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<th>Specialty</th>
<th>Trainees</th>
<th>Trainers</th>
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<tr>
<td>General surgery</td>
<td>5</td>
<td>4</td>
<td>9</td>
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<tr>
<td>Breast surgery</td>
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<td>Vascular surgery</td>
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<td>Urology surgery</td>
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could be improved. Asking ‘What did you find particularly difficult?’ is an important question but is rarely asked...’’ (orthopedic surgery trainee). Feedback on technical skills was also commonly identified as a key feature of effective debriefing (n = 11: 3 trainees, 8 trainers). Feedback on nontechnical aspects of performance, eg, communication and teamwork was less commonly reported as a key feature (n = 6: 2 trainees, 4 trainers): ‘‘...how they communicate with the anesthetist and rest of the team—it is not just about technical skills.’’ (breast surgery trainer). Specific formulation of an action plan was identified as a core component of effective debriefing by only 5 participants (2 trainees, 3 trainers): ‘‘...how you did, what you’re expected to be able to do at that stage, what you need to work on provided in a context to achieve your goals and correct mistakes...’’ (vascular surgery trainee).

Perceived barriers to effective debriefing. Participants identified a number of barriers to effective debriefing. The most common barrier reported was time constraints (n = 15: 8 trainees, 7 trainers): ‘‘Time is number one. Time is number two. Time is number three.’’ (vascular surgery trainer). Some participants, however, argued that lack of time was simply an excuse: ‘‘I don’t think there are any barriers! You can find time—you always have time.’’ (breast surgery trainer). Cultural factors were also commonly cited as a significant barrier to debriefing in practice (n = 10: 4 trainees, 6 trainers). This was recognized at both the institutional and the individual level: ‘‘Unfortunately service delivery is ‘always’ prioritized over training.’’ (general surgery trainer); ‘‘There is a lack of priority given to training by trainers. I was reading something about the science of persuasion, there needs to be a reciprocal benefit to taking part. Often there is little incentive to trainees given the transient rotations. Surgeons are achievement driven, if you don’t achieve something from it, why do it?’’ (general surgery trainee). Closely related to the cultural barriers was the challenge of trainee-trainer communication and rapport (n = 7: 4 trainees, 3 trainers). Interestingly, trainees noted that they more often received feedback from the less senior trainers: ‘‘Registrars [= residents] are better than consultants in giving feedback—they are more forthcoming with their feedback. Probably because they understand that you need to do the procedure and get better at doing it. The biggest problem is getting consultants [= attending surgeons] engaged in the training process.’’ (vascular trainee). This could in part be explained by the open admission by some senior trainers of the embarrassment and challenge involved in providing feedback: ‘‘I think historically there is an embarrassment or ‘naffness’ associated with giving feedback on the trainee’s part.’’ (urology surgery trainer). ‘‘I think there is an unwillingness on the trainer’s part to tackle difficult issues—when someone’s rubbish/annoying it’s easier to put them on the back or to take over.’’ (vascular surgery trainer). There was reference to the fact that perhaps the ‘‘tick-box culture’’ of workplace-based assessments had affected trainee-trainer relations: ‘‘It’s the trainees’ attitude. They come along with the tick-box assessment. They’re not interested in getting real feedback, they just want their form signed!’’ (general surgery trainer). Finally, competing clinical commitments were also reported as a barrier (n = 7: 4 trainees, 3 trainers): ‘‘Because you’ve got so many other things to do at the end of a case, such as write the op notes, do the histology form, maybe consent the next patient...’’ (general surgery trainee).

Phase 2: Ethnographic observation

Sample. Thirty-five cases involving the 10 trainers of phase 1 were observed in real time over a 2-month period. Observations continued until thematic saturation was reached. The surgical case mix is representative of the volume and frequency of cases performed within the hospital. This included general surgery cases (n = 20; eg, inguinal hernia repair, laparoscopic cholecystectomy); breast surgery cases (n = 8; eg, wide local excision, mastopexy); vascular surgery cases (n = 3; eg, abdominal aortic aneurysm repair, carotid endarterectomy); orthopaedic surgery cases (n = 2; eg, shoulder stabilization, arthroscopic decompression), and urology surgery cases (n = 2; eg, nephrectomy, prostatectomy).

Observed performance debriefing in practice. Feedback was observed to take place in only 16 cases (46%). Trainees requested feedback in only 2 cases. However, in both cases, the trainees were senior, and even then there was no detailed exchange between trainer and trainee. For example, this is an observed trainer-trainee exchange in an abdominal aortic aneurysm repair:

- Senior resident: “How was the bottom end? Good pulse?”
- Attending vascular surgeon: “Yes a good strong pulse.”
- Senior resident: “I have to say I didn’t think the renal end would work.”
- Attending vascular surgeon: “Doubter!”

The attending physician did not explore why the trainee had had these concerns.

Timing and method of debriefing; observed practice. When feedback was provided, it was offered only during the case, with feedback after the case being provided (unprompted) in only 1 of the cases. Feedback was always provided verbally and in an unstructured way. Learning objectives for the case were not explicitly agreed on in any of the cases observed, but a brief aim of the operation was occasionally communicated from trainer to trainee. For example: “Okay, so we’re going to make an elliptical incision here.” (breast surgeon trainer). Feedback was offered in a didactic manner by the trainer and was mostly corrective: “Now when you’ve repositioned, stay subcostal. No, no, no you need to go at right angles.” (general surgery trainer). Trainees were rarely engaged in 2-way dialogue,
and when they were the exchange was to check progress on the immediate task at hand:

- **Attending surgeon:** “Are you in the right place?”
- **PGY 7:** “It’s not quite in the right place.”
- **Attending surgeon:** “Just twist this. So you know what you’re going to do now?”
- **PGY 7:** “Yes, once I get to the belly button I’m going to push down.”
- **Attending surgeon:** “Okay, I’ll stay scrubbed just in case you have any problems.”

The less senior trainers were generally observed to have a more friendly rapport with their trainees: “That’s it, keep going, good work. Exactly, right, perfect, perfect. See what happens when you get it right (fanfare!).” (general surgery trainer, senior resident).

**Content of debriefing: observed practice.** Positive comments were made by the trainer in many of the cases observed but were generally unspecific, eg: “There you go, well done.” (urology surgery trainer). Areas for improvement were often highlighted by trainers, eg: “...You should always look at the transverse colon and the portal vein to check for invasion.” (general surgery trainer). However, formal action plans and strategies for improvement were rarely discussed. Feedback was only ever offered in relation to technical skills. Feedback on communication, teamwork, and organization (ie, nontechnical aspects of the trainee’s performance) was not observed. In line with the observation that feedback was almost exclusively provided during the case, it follows that its quality lacked well-evidenced key components of an effective debriefing. Trainee reactions to events unfolding during the operation were rarely explored. For example, while closing during a paraumbilical hernia repair: “I’m not having a good run today.” (PGY 4); attending surgeon: (no comment). Self-reflection on performance by trainees was not encouraged by trainers and the analysis of reasons and consequences of actions was performed solely by the trainer in most cases. For example: “That’s the mistake that people make. They don’t make the incision long enough and then they struggle to take it out.” (breast surgery trainer). “I think you’re being unnecessarily cautious. It’s something I notice with junior surgeons. You can see where you need to go now, yeah. You’re miles away from anything that matters.” (urology surgery trainer).

**Observed barriers to debriefing in practice.** In the majority of cases, the trainer typically described and left the OR at the skin closure stage, leaving the trainee to close. In cases in which the trainer remained present for skin closure, there was often minimal interaction between the trainer and trainee. When interaction did occur, it was either non–case-related social discourse or the trainer enquiring about the next case on the operating list. It could be argued that the closure stage represents an opportune time for the trainer to provide feedback and debriefing to the trainee. Objectively, therefore, it appears that lack of time may not be the main barrier to debriefing in practice—rather it is the lack of a debriefing culture. Competing clinical commitments was observed as a barrier to feedback at the end of the case. For example, the trainer would leave the OR to review the next patient on the list, and the trainee would become preoccupied with dictating the operation note, sending off histologic specimens, and assisting the team in transferring the patient to recovery.

With regard to barriers to feedback during the case, case complexity was commonly observed as a barrier to debriefing; the trainer’s priority would be on ensuring a successful operation, with feedback and training being less of a priority. Finally, competing educational commitments were occasionally observed as a barrier to debriefing. In cases in which medical students were present, the trainer would revert to a didactic instructional mode of teaching the medical students and neglect to provide performance feedback to the trainee.

Table 2 summarizes the comparisons between participants’ perceptions of debriefing and actual debriefing observed in practice. A number of differences emerged between what was described to the researchers and what the researchers actually observed in practice in terms of how much debriefing occurred, the overall quality of that debriefing, and what the key barriers to debriefing were. We comment on these discrepancies further on.

**Comments**

This study aimed to compare the perceived ideal of debriefing with the actual practice of debriefing in surgery and to identify the barriers to debriefing in practice. Our results reinforce findings from our previous study of surgical teams in the United Kingdom, United States, and Australia—the majority of surgical trainers feel they routinely provide feedback and debriefing, whereas the majority of trainees disagree. Trainer-trainee feedback was observed to occur in less than half of all cases. This is comparable to findings from an observational study that found that teaching in the OR occurred in less than 50% of the 60 cases observed. Within this study, when feedback was provided it was done verbally and almost exclusively only during the case. This was despite the majority of trainers and trainees in the interview phase reporting that feedback should ideally be provided both during and after the case to allow for a more structured comprehensive debriefing. Feedback after the case is necessary to reinforce learning and facilitate improved performance in trainees as well as in medical students.

With regard to the content of debriefings, although both trainers and trainees recognized a number of key elements of an ideal debriefing when asked to do so, in practice these components were rarely covered in a structured way. When feedback was provided, it was focused solely on technical skills. Feedback on nontechnical aspects of performance was not observed in any cases, despite increasing evidence...
of its importance. Analysis of performance (what went well and not so well) was mostly observed to be unidirectional, ie, the trainer telling the trainee what he or she thought without the trainee bringing in his or her own views. Finally, although areas for improvement were identified by the trainer, a concrete action plan with strategies for improvement (ie, what to do to improve the skills in question) was not agreed on in any case observed. This disparity between ideal practice and actual practice has been reported in a similar study exploring the views of simulation center instructors; disparities between actual and ideal debriefings exist in this situation as well.

Lack of time was the most commonly reported barrier to debriefing among interview participants. However, in practice it was commonly observed that the skin closure stage represented an untapped opportunity for debriefing to occur, often with little or no trainer-trainee interaction taking place, supporting findings from an earlier observational study. A minority of interview participants felt that lack of time was simply an excuse. Indeed a study in the simulation setting concluded that effective debriefing can occur even when time and space is limited. Perhaps a more valid explanation is that debriefings do not occur as often as they should not because of time pressures but because of the lack of a debriefing culture within the field of surgery. This is something that both surgical trainers and trainees in this study commented on. The majority of trainees admitted that they do not routinely request feedback, and indeed we only observed them doing so in 2 cases. Furthermore, rapport was observed to be better between trainees and the less senior trainers (eg, senior residents approaching attending surgeon level), perhaps indicating that less senior trainers have greater insight into the need for effective debriefing of their junior peers.

With regard to limitations, this study was qualitative and hence conducted on a small sample of surgeons, so the wider generalizability of the findings could be questioned. However, qualitative studies are of this nature, and our interview findings correlate well with those of a previous larger study, giving us confidence in our results. Future work should certainly seek to repeat this study across different institutions to enable comparisons of debriefing cultures within the OR, and it should also seek to link qualitative evidence with more quantitative assessments of the frequency, quality, and impact of debriefing in surgery. Moreover, it could be argued that the presence of the observer altered the surgeons’ behavior. Although certainly possible in all observational studies, this did not seem to affect practice in our study; if it had, we would expect to observe significantly more debriefings because trainers would feel they were “expected” to offer feedback to their trainees, but this did not happen. Further, the observer may have

### Table 2

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<tr>
<th>General comparisons of routine debriefing practice</th>
<th>13 participants (65%) stated that debriefing is routinely provided and received in practice</th>
<th>Debriefing was observed to be provided in only 16 cases (46%)</th>
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<td>3 trainees (30%) stated that they routinely request debriefing from their trainer</td>
<td>Trainees’ request for debriefing was observed in only 2 cases (6%)</td>
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<tr>
<th>Approach and timing of debriefing</th>
<th>Participants stated that debriefing should ideally be provided: During the case to “improve performance and patient outcome” and after the case “to consolidate” and allow a more comprehensive, structured feedback</th>
<th>In practice debriefing was observed to be provided: During the case; feedback afterward was observed in only one case</th>
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<td>Verbally; written (minority) Verbal feedback was nonspecific In a structured way Feedback more often on negative than on positive aspects of performance; positive feedback was nonspecific Feedback on technical skills only Action plans for improvement rarely discussed</td>
<td>Verbally only In an unstructured way Corrective, didactic approach</td>
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<th>Content of debriefing</th>
<th>Participants stated that debriefing should ideally comprise: Feedback on positive and negative aspects of performance Feedback on technical and nontechnical skills (eg, communication, teamwork) Action plan to outline strategies for improvement</th>
<th>In practice debriefing was observed to comprise: Feedback on positive and negative aspects of performance; positive feedback was nonspecific Feedback on technical skills only Action plans for improvement rarely discussed</th>
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<th>Barriers to debriefing</th>
<th>Participants’ perceived barriers to debriefing in practice were: Time Culture Competing clinical commitments Trainee-trainer rapport</th>
<th>Observed barriers to debriefing in practice were: Time questionable barrier; in many cases skin closure stage not regarded as opportunity for reflection and feedback Culture Competing clinical commitments Competing educational commitments Case complexity</th>
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missed performance feedback provided at a later stage. This could have occurred, although efforts were made to minimize this problem by having the observer present until the end of the operating list for the day. Even if this did occur, however, it is not ideal practice: there is growing evidence that performance feedback is more effective if it is immediate, i.e., provided nearer the actual procedure.\textsuperscript{20,21}

In terms of the implications of this study, our results reveal a disparity between the perceived ideal of debriefing and actual debriefing practices in the OR. It appears that time may not be the main barrier to effective debriefing in practice but rather the culture within the field of surgery in which trainers and trainees fail to create the time for debriefing. Changing the culture of a profession is no easy task; however, there are simple steps to take to enhance debriefing practices. Time appears to be available toward the end of a case, when the trainee or assistant is closing up. This phase can coincide with the “sign out” part of the World Health Organization’s Surgical Safety Checklist recently introduced in ORs in many countries.\textsuperscript{22} We therefore propose that surgeons should actively seek to use this last phase of any procedure to comment on performance-related issues and set out a plan for future improvement. A “sign out and debrief” conclusion to all operations will take only 1 or 2 minutes, will greatly improve the team’s culture, and will allow the surgeon to lead by example for both the trainee and the rest of the team.

Conclusions

There is a disparity between what the surgical community views as effective debriefing and actual debriefing practice in the OR. The prevailing culture within the field of surgery needs to be addressed to foster improved performance debriefings and thus improved learning, satisfaction, and safety.

Acknowledgments

We thank all participants in the study.

References