Triadic Peer Review in Scenario-based Assessments

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Initial prompt/problem

In undergraduate medical education, students are expected to achieve competence in procedural skills (e.g. suturing a wound, inserting a urinary catheter). In the United Kingdom, most medical schools have clinical skills laboratories in which students practise technical procedural skills on simulated models before performing them under supervision on real patients. Although traditionally the focus of assessment, technical skill is just one component of the procedure and when students work in clinical settings they need to be able to integrate technical with communication skills and to respond to contextual stimuli (e.g. interruptions by staff, equipment unavailable).

Scenario-based assessments provide a means by which students can practise merging these complex skills in simulated and real settings (Kneebone *et al*., 2002a; 2002b; Nestel *et al*., 2003). By linking simulated models (e.g. suture pads, pelvic models) with actors who are trained to portray patient roles and give feedback to students on their communication skills, students are provided with a safe environment in which to develop their clinical skills as they will be performed in real work settings.

The key elements of scenario-based assessments are:

1. *Preparation*: Immediately before the procedure, students are prompted to think about the technical and communication skills required for the procedure and contextual factors that may influence performance (e.g. time frame).
2. *Performing the procedure*: The student performs the procedure on the actor in the simulated setting. Each procedure is observed in real time by technical and communication skills experts and recorded for later review by the student.
3. *Reflection*: The student is encouraged to write brief and immediate reflections on what worked well and what could have been improved during the procedure.
4. *Feedback*: Students receive focused feedback from the actor and communication and technical skills experts.

Although students have found scenario-based assessments highly realistic and powerful learning experiences, these formative assessments are not sustainable for large cohorts of medical students because of the extent of expert involvement required. Therefore, we proposed a triadic peer review process in which students worked in groups of three rotating through each of the three roles: technical and communication skills observers and student performing the procedure. Collaborative learning theory emphasizes group participation in which students share knowledge, attitudes and skills based on their prior experiences to explore, discuss and evaluate a problem (Brufee, 1999).

For each observer role, students are provided with rating forms to focus their observations. Each item on the rating form is accompanied by explanatory behavioural markers. The student performing the procedure is given a clear statement of the task and all students are provided with a protocol for giving feedback.

What the practice was trying to achieve

Triadic peer review addresses the resource issue of two expert faculty working with three students during a 2-hour session. The students involved in this project had all previously received technical and communication skills training relevant to the procedures and were familiar with the feedback protocol although they had not formally facilitated a learning session as part of their clinical skills programme. Rather than deny students the opportunity of this unique experience because of resource limitations, we conducted a pilot study to evaluate the feasibility of triadic peer review in formative assessment.

Identification of the gains and losses

Potential gains include: student engagement in each role; enhancing awareness of the specific skills required for procedures; providing a structure for formative assessment; developing critical observation skills; providing an insight into educational approaches and ensuring receipt of feedback from the *patient's* perspective.

Potential losses include: incorrect and/or inappropriate behaviours are left unchecked; students may reinforce inappropriate behaviours and students may find peer review threatening, which could compromise the quality of feedback. These potential losses are minimized by the use of the rating forms, the feedback protocol which prompts sensitivity in the order and balance of feedback and the presence of the actor. All procedures and feedback are recorded so can be reviewed if required.

Method of evaluation

Two qualitative evaluation methodologies were used:

1. Semi-structured interviews were conducted after each scenario-based assessment

Senior medical students were recruited to participate in the study using a convenience sampling strategy based on availability and practical constraints. Twenty-two students participated in sessions between September 2002 and June 2003.

In response to being asked about giving and receiving feedback from peers, students largely found the process constructive.

> Always useful listening to colleagues' criticisms ... they know you and can relate better, therefore it's useful.

> It's good to get feedback from peers. That together with being able to review the procedure would be very valuable. You're not always aware of things that you might be doing wrong or well.

While most students reported familiarity and value in peer-assessment, one student reported a limitation.

> If your knowledge is a little sketchy you might not pick up on another's faults.

Another student suggested peer-assessment was without benefit.

> It would take someone to be really dreadful before saying something, and would feel awkward telling someone that they were dreadful. Therefore peer review seems pretty pointless.

Students were asked what they would do if they disagreed on any aspects of the assessment.

> We'd just ask a clinician. That's what we would usually do.

One trio discovered they had been taught differently to each other and asked for clarification. This alone was a valuable learning experience. Some students suggested working with mixed cohorts so that seniors could work with juniors.

2. Observations by the research team

Faculty observations of procedures did not identify any unsafe skills that went unchecked. However, the feedback provided by students was less articulate than that delivered by experts.

Plans for future development

Consider implementation for additional clinical skills and for the entire cohort of students. Develop evaluation strategies that target measurement of professional skills other than those required for conducting the procedure (e.g. critical observation, facilitation and feedback).

References

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Keywords

Peer review, peer assisted learning, collaborative learning, integrated assessments

Biography

Debra Nestel (Monash University), Roger Kneebone (Imperial College London) and Jane Kidd (Warwick University) developed scenario-based assessments at St Mary's Hospital, London and continue to work on projects that integrate communication with technical and contextual skills using simulation at undergraduate and postgraduate levels in medical and other health care professional groups.