[Educational/Faculty development material]

Common models and approaches for the clinical educator to plan effective feedback encounters

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Abstract

Giving constructive feedback is crucial to ensure and facilitate learners in bridging the gap between their current performance and the desired standards of competence.. Giving effective feedback is a skill that can be learned, practised, and improved. Therefore, our aim is to explore models in clinical settings and assess their transferability to different clinical feedback encounters. There were 6 most common and accepted feedback models, including the Feedback Sandwich, the Pendleton Rules, the One-Minute Preceptor, the SET-GO model, the R2C2, and the ALOBA model. We present a handy resource describing their structure, strengths and weaknesses, requirements for educators and learners, and suitable feedback encounters for use, for each model.These feedback models represent practical frameworks for educators to adopt but also to adapt to their preferred style, combining and modifying them if necessary, to suit their needs and context.

Keywords: Feedback; Formative Feedback;Medical education; Medical student

Introduction

Background/rationale: How should we approach feedback encounters as clinical educators? Which models or techniques could we use to give constructive and effective feedback to our learners and trainees? What should be the rationale behind the feedback approach? Undoubtedly, giving (and receiving) constructive feedback is crucial to ensure and facilitate learners in bridging the gap between their current performance and the desired standards of competence [1]. Ende [2] defines feedback in clinical education "as information describing students' or house officers' performance in a given activity that is intended to guide their future performance in that same or a related activity". A number of authors have provided detailed principles and tips for giving constructive feedback in the clinical environment, emphasising that feedback should be specific and goal-oriented, descriptive, non-judgemental, based on observed behaviours, provided sensitively, timely and constant, manageable, actionable, and established as a dialogue [2,3].

It is now well established from several studies that constructive feedback drives learning and development [4], helps to gauge performance and make action plans for improvement [5], supports

competence and autonomous motivation [6], and reconstructs knowledge and enhances clinical performance [7]. On the contrary, when non-constructive or no feedback is given, good practice is not reinforced, and performance might deteriorate [3], and learners may adopt a feedback-avoidance stance in the absence of good educator-learner rapport [4]. Therefore, giving constructive and effective feedback is an essential skill that should be included in our educator toolbox. However, clinical educators in faculty development courses frequently cite feedback skills as the most significant challenge and as an area for improvement in their practice [8]. This is mainly due to limited knowledge and practise in using different feedback models/techniques, how to approach feedback encounters, and a reluctance to cause offence or provoke defensiveness [2].

Objectives: Giving constructive feedback is a skill, and like any other skill, it can be learned, practised, and improved. Therefore, it aims to explore 6 of the most common and accepted feedback models in clinical settings and assess their transferability to different clinical feedback encounters so that clinical educators can make an informed decision on how and when to use them. These are the Feedback Sandwich, the Pendleton Rules, the One-Minute Preceptor, the SET-GO model, the R2C2, and the ALOBA model. These were selected by reviewing the literature on feedback models in clinical education and on the authors' experience in delivering multiple faculty development workshops on the subject. We present a handy resource in Table 1 describing their structure, strengths and weaknesses, requirements for educators and learners, and suitable feedback encounters for use, for each model. These feedback models represent practical frameworks for educators to adopt but also to adapt to their preferred style, combining and modifying them, if necessary, to suit their needs and context.

Ethics statement: It is not a human subjected study; therefore, neither approval by the institutional review board nor obtainment of the informed consent was required.

Six common feedback models: how and when?

Within the teaching and learning process, it is helpful for the clinical educator to explore several feedback models and techniques described in the literature for their applicability in clinical settings and analyse the transferability to their educational practice in macro or micro feedback encounters. Micro-feedback, also known as informal or unplanned encounters, corresponds to brief doses of feedback, between 1- to 5- minutes, usually following daily performance of skills [9]. Macro-feedback, on the other hand, also known as formal or planned encounters, corresponds to less frequent but more detailed and structured feedback, between 5- to 20- minutes, commonly occurring at the middle and end of a rotation or placement, or after a significant event such as a workplace-based assessment or a medical error [9]. Some of the most common and accepted feedback models are the Feedback Sandwich [10], the Pendleton Rules [11], the One-Minute Preceptor [12], the SET-GO model [13], the R2C2 [14], and the ALOBA model [15]. Other techniques have been developed; however, these are all based on and correspond to adaptations of the six models mentioned above [4]. Table 1 describes the 6 feedback models, from the most educator- to learner-centred, outlining their structure, strengths and weaknesses, the required educator expertise level, the learner reflection and self-assessment skills required, and the type of feedback encounter where they would be suitable to use.

The 6 models have similarities and differences in their structure and objectives for the feedback encounter, from the simplest and educator-centred, such as the Feedback Sandwich, to the most complex and learner-centred models, such as the ALOBA. Several aspects must be considered as part of the decision-making process when choosing the ideal model for a feedback encounter. The Feedback Sandwich receives its name due to the two doses of positive/reinforcement feedback with one dose of critical/corrective feedback sandwiched between to make it more palatable and acceptable. It is a brief and highly structured model that requires low levels of feedback-giving expertise by the educator and low reflection and self-assessment skills by the learner, therefore being suitable for inexperienced educators and applicable in various feedback encounters. Its weaknesses lie in that it is educator-centred and a one-way transmission of information with no input from the learner [3,10].

Pendleton Rules is a modification of the Feedback Sandwich [3,11], where the educator's comments are preceded by the learner's reflections on what was good about their performance, and what were the areas for improvement. This model represents a structured and rigid dialogue, less educator-centred than the Feedback Sandwich, appropriate to initiate learners on reflective practice and self-assessment skills, and suitable for educators with low feedback-giving expertise. Its limitations are linked to the inflexibility of the conversation and the anticipation of critical feedback. Though it is applicable in various situations, it is mainly recommended for macro-feedback encounters [3].

One model particularly useful in micro-feedback encounters and busy clinical settings is the One-Minute Preceptor model [12], also known as the 5-step 'Micro skills' model. It provides a brief and straightforward framework for teaching and giving feedback during patient care. The educator first gets a commitment from the learner on one specific aspect, such as the diagnosis or treatment plan, then probes for supporting evidence exploring the learners' rationale, teaching general rules if necessary, and finally establishes a brief discussion reinforcing the positive aspects and correcting mistakes. This just-in-time feedback model facilitates the development of clinical reasoning and decision-making skills, preferably individually, requiring medium feedback-giving expertise from the educator to explore one aspect and provide balanced feedback, and medium learner reflection and self-assessment skills.

The SET-GO (aide memoire for the sequence described in Table 1) model becomes especially useful when giving feedback in group encounters [13]. It is based on descriptive and non-judgemental feedback, where the educator asks the observed learner and group to describe what they saw, further explores and contributes to these observations, and then refers back to the learner on possible solutions and reflections. The group then establishes the goals to achieve and offers suggestions on how to accomplish those objectives, which might include developing skills or rehearsing [4]. This model encourages peer feedback, establishes a dialogue, and facilitates vicarious learning through the experience of others. The downside is that it requires enough time for everybody to contribute, learners themselves need to develop feedback skills, and the educator requires medium to high expertise to provide feedback and manage the group dynamics.

The R2C2 (Rapport/Reaction/Content/Coach) model has been specifically developed to give assessment- and performance-based feedback rather than based on daily practice or specific rotation moments [14]. The model establishes a dialogue by exploring an assessment result, its value and the learners' perception/reaction. The educator first builds rapport with the learner, creating a respectful and trustful climate, exploring the learners' reactions to the assessment, and stimulating reflection and self-assessment. Subsequently, the educator explores the learners' understanding of the contents and results of the assessment, and adopts a coaching stance agreeing on solutions and an action plan. The R2C2 model provides a learner-centred framework that facilitates the acceptance of the assessment and the feedback received, requiring learners to look beyond the assessment result and therefore requiring medium to high reflection and self-assessment skills. The educator needs high feedback-giving skills as they must be prepared to face negative reactions and fully understand the assessment's purpose and content to be reviewed.

Finally, the ALOBA (Agenda Led Outcome-based Analysis) model aims to establish a learner-centred conversation or interview-type feedback guided by the learners' agenda and learning needs complemented by the educators' view [15]. The learner is first asked to reflect and identify their needs and agenda for the feedback encounter. The educator then encourages self-assessment and problem-solving skills, reinforces theory-practice links, and provides balanced feedback. A discussion of suggestions and alternatives to accomplish the learner's objective and learning needs follows this, and finally, the educator checks the learner's acceptance, summarises the encounter and agrees an action plan [4]. The ALOBA model is considered an evolution of the Pendleton Rules as it adds learner-centredness and flexibility to the feedback encounter, where the learner is an active participant throughout rather than a passive recipient of suggestions. The learner requires high insight, reflection, and self-assessment skills to lead the discussion and identify their needs and agenda. The educator requires high feedback-giving skills and judgement to facilitate the conversation and provide balanced feedback and theory-practice links.

These feedback models, with their strengths and weaknesses, represent practical frameworks for clinical educators to adopt but also to adapt to their preferred style. The models may be combined and

modified to suit educators' and their learners' needs, considering the context in which feedback is given, the educator's expertise, and the learner's insight, reflection, and self-assessment skills. However, irrespective of the model used, clinical educators should always consider the aspects listed below when giving feedback [2,3,16].

Common features to consider for an effective feedback encounter

1. Establish a safe feedback environment encounter.
2. Base feedback on direct observation and provide it in a timely manner.
3. Establish learners' needs, goals and self-assessment, and the objective of the feedback encounter.
4. Provide balanced feedback (positive/critical aspects) as a dialogue, including descriptive information on what and how learners are doing (or not doing) in their efforts to reach a goal.
5. Establish theory-practice links, recognising 'teachable moments'.
6. Check learners' understanding and acceptance of the feedback.
7. Agree on an action plan.
8. Document the encounter and plan a follow-up/subsequent feedback encounter.

Conclusion

Giving feedback is critical for learners' development, and educators play a crucial role in planning and providing constructive feedback encounters. Clinical educators should consider these feedback models, practise, and incorporate them into practice, reflecting on their performance and seeking feedback on their feedback skills from learners, peers and/or trusted colleagues.

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Conflict of interest

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Supplement 1. Audio recording of the abstract.

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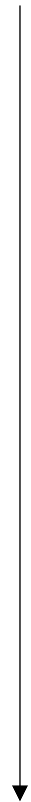
Table 1. **Feedback models detailing their structure, strengths, weaknesses, educator and learners' requirements, and suitable feedback encounter in which to be used.**

Simple and educator-centred ↑

Model	Structure	Strengths	Weaknesses	Educator feedback-giving expertise	Learner reflection and self-assessment skills	Useful in which type of feedback encounters?
Feedback Sandwich	1. Educator provides a dose of positive/ reinforcement feedback. 2. Educator provides a dose of critical/corrective feedback. 3. Educator provides a dose of positive/ reinforcement feedback	• Acceptable by learner as impact of critical feedback is cushioned by the positive feedback • Highly structured and easy to apply when time is limited and during clinical activities. • Useful with passive/low insight learners and for inexperienced educators.	• Anticipation and increased tension knowing that critical feedback will be received. • Mostly focused on the educator, more monologue than dialogue. • False positive if encounter is mostly focused on reinforcement/positive feedback.	Low	Low	• Micro- or Macro Feedback. • Written or verbal. Individual or group.
Pendleton Rules	1. Educator asks learner what was good of their performance. 2. Educator states areas of agreement and elaborates on good performance. 3. Educator asks learner what was poor or could have been improved. 4. Educator states what they think could have been improved.	• Safe environment created by covering positive aspects first and then those that should be improved, from the perspective of the learner and educator. • A dialogue is established, although highly structured. • Supports learners to initiate reflective practice and improve self-assessment skills. • Useful with passive/low insight learners and for inexperienced educators.	• Anticipation and increased tension knowing that critical feedback will be received. • Unsuitable in practice, during clinical care, but recommended in formal feedback encounters. • Risk of not covering aspects to improve when time is limited. • The rigid structure prevents an interactive discussion and limits exploring or expanding on topics that might be relevant to the learner, risking becoming a passive recipient of suggestions, skills to develop and action plans.	Low	Low	• Preferably Macro- over Micro-Feedback. • Verbal. • Individual or group.

One Minute Preceptor	1. Educator gets a commitment from learner (e.g., differential diagnosis, treatment plan). 2. Educator probes for supporting evidence and explores learner's rationale. 3. Educator teaches general rules. 4. Discussion with learner reinforcing what was done well. 5. Discussion with learner correcting mistakes.	• Effective use in practice, suitable for busy or time- constraint clinical environments. • Facilitates the development of clinical reasoning and decision-making skills. • In a few minutes, it allows the educator to explore an aspect, reinforce knowledge/skills and provide balanced feedback. • Just-in-time feedback.	• Variable duration of feedback encounter according to the needs of the learner and complexity of clinical case/scenario. • Does not allow exploration with a great level of detail or to expand on the learner's agenda. • Unsuitable for formal feedback encounters.	Medium	Medium	• Micro-Feedback. Verbal. • Preferably Individual over group feedback.
SET-GO	1. 'What did I **s**aw?'- Educator asks observed learner and group to describe the situation/scenario/performance. 2. 'What **e**lse did you see?'- Further contributions are encouraged from group and/or by the educator. 3. 'What do you **t**hink?'- Educator encourages learner to self-assess/problem-solve. 4. 'What **g**oals are we trying to achieve?'- Group discussion on outcome/objective. 5. '**O**ffers on how to achieve goals'- Educator encourages group to discuss suggestions to achieve goal.	• Focuses on descriptive feedback to encourage a non- judgmental approach. • Effective when delivering group feedback • Encourages peer feedback and joint problem solving. • Focuses on the learner establishing a dialogue with the supervisor and peers. • Facilitates a vicarious learning and reflection through the experiences of others.	• Not recommended for individual feedback, though some of its elements could be transferred. • Requires having enough time to involve the whole group. • Requires supervisor group facilitation skills. • Unsuitable for informal feedback encounters. • Requires learners to develop feedback skills as the whole group is involved.	Medium to high	Medium	• Macro-Feedback. • Verbal. • Group feedback.



Complex and learner-centred

R2C2	1. Educator builds a respectful and trustful relationship and establishes rapport with the learner. 2. Educator explores the learner's reactions to the assessment/performance report, stimulating self- assessment and reflection. 3. Educator explores the learner's understanding of the contents of the assessment/performance report and results. 4. Educator adopts a coaching stance to agree on solutions and action plans.	• Effective when providing assessment- and performance- based feedback and reporting assessments. • Empowers learners, stimulates reflection, facilitates acceptance of assessment results and the use of the feedback. • A dialogue is established by exploring the assessment results, its value, and learner's perception/reactions. • Provides a framework to feedback in defensive-stance situations. • A joint educator-learner action plan is developed in response to the assessment results.	• Unsuitable for informal feedback encounters. • Requires learners' insight 'to look' beyond the assessment results. • Requires a skilled educator to be non-judgmental when exploring the content and learner's reactions to the assessment results. • Enough protected time needed to explore the learner's context/situation, and to establish rapport and a safe environment. • Educator must be prepared for negative reactions and must fully understand the purpose and content of the assessment/performance to be reviewed.	High	Medium to high	• Macro-Feedback. • Verbal. • Preferably Individual over group feedback.
ALOBA	1. Learner is asked to reflect on and identify their learning needs, objectives, and agenda for the feedback encounter. 2. Educator encourages learner to self-assess, reflect, and problem-solve on their situation. 3. Educator reinforces theory-practice links and delivers descriptive and balanced feedback. 4. Educator and learner discuss on suggestions and alternatives to reach the objective and learning needs. 5. Educator checks feedback acceptance, provides a summary and they agree on the action plan.	• Priority is given to the learner's objectives and agenda, complemented by the educator's vision and agenda. • Supports learners' self-assessment, reflection, and clinical reasoning skills. • Established as a dialogue and interview style, where the learner is active in the skills and action plans to follow. • Theory-practice links are discussed. • Focused on the learner and their needs, creating a safe environment. • A joint educator-learner action plan is developed focused on the learner's objectives and needs.	• Unsuitable for informal feedback encounters, enough protected time needed. • Shares SET-GO model disadvantages when it is used in group feedback. • More suitable for individual than group feedback encounters. • Requires developed insight and reflective skills in learners so they may identify their agenda and learning needs. • Educator requires advanced disciplinary knowledge/skills to provide theory-practice links. • Developed skills and judgement by the educator to provide balanced feedback.	High	High	• Macro-Feedback. • Verbal. • Preferably Individual over group feedback.