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Feedback: A Key Feature of Medical Training¹

As we instruct trainees in the health sciences, we serve as teachers, tutors, and preceptors with knowledge and experience to be transmitted to and used by learners. Many diverse methods of instruction are used throughout a training experience, but the most available and influential method of learning probably is feedback. Feedback is immediate information. It is inexpensive, requires little preparation, and is highly desired by the learner; yet, in medical instruction, it is a scarce occurrence, and our trainees miss an experience that is highly formative in their development.

In the context of feedback, consider two issues: To practice medicine well, one must necessarily be an effective life-long learner, and learning is under the learner's strategic control of memory, experience, and attention. The sparseness and sterility of feedback occur because of two possible situations: the infrequency with which trainees are closely observed performing a skill or participate in deep discussion with a mentor, and the unease felt by faculty preceptors in delivering feedback. Inadequacy of a feedback mechanism produces a deficiency in training, which should be reversed to ensure high-quality graduates of training programs. There are preparatory steps to ensure that meaningful feedback occurs, and there

are general guidelines to follow in giving feedback. Both will be discussed in this article.

To compose a learning model in which feedback occurs, the learner and preceptor can work together to prepare a learning context. The first step is to orient the learner to the environment, the goals and objectives of the experience, and the expectations for the learner. The learner should work with the preceptor to understand and accept the objectives, for it is on the basis of these objectives that feedback—and eventually evaluation—will be based. A wise preceptor plans a time and setting for the orientation at the very start of a segment of training. Planning for feedback occurs at the same time, so that the learner expects a feedback session and is familiar with the objectives that will be used.

The most successful planning is a cooperative venture, carried out with input from the learner. In this way, the learner understands and accepts the objectives and can begin to match them to his or her own action. The preceptor's expectations of the level and type of performance are set at the same time. Feedback is a two-way street, and it is a good idea to inform learners that they will be expected to monitor their own performance and provide their own perspectives. The preceptor helps to elicit and clarify the purposes of the individuals in the learning group and should not fear accepting contradictory purposes and conflicting aims, if the individuals can be permitted a sense of freedom in stating what they would like to accomplish. This procedure helps create a climate for learning.

Learners may be uneasy and may experience conflicts of purpose in unfamiliar situations. The preliminary orientation and discussion of responsibilities and goals set the stage, which makes the learner more comfortable and responsible; thus, the individual's drives and purposes are used as a moving force for learning (1). This session helps the learner

get to work without ambiguity or loss of time as he or she searches for direction. The preceptor takes the initiative in sharing himself or herself with the group in ways that do not impose but allow the preceptor to share his or her own satisfactions or disappointments. The "owned" attitudes are shared; they are not judgments or evaluations of the trainees.

Feedback is exclusive to what actually occurs. The preceptor's responsibility is to observe the learner completely and without bias, to reflect on what has been observed, and to establish an environment for deep discussion and analysis to understand the learner's reasoning processes. Brief notes of encounters are helpful in structuring the feedback session, which is the opportunity to facilitate honest interchange.

Feedback is formative; that is, feedback is designed to influence, reinforce, or change behavior, concepts, or attitudes. Learning is a process by which behavior is changed, shaped, or controlled. Malcolm Knowles (2) has established that "Intellectual development depends on a systematic and contingent interaction between a tutor and a learner." Feedback should not be confused with evaluation, which bears the connotation of a grade, comparison, or judgment. Feedback is nonevaluative and nonjudgmental and deals with specific learning situations, actions, attitudes, or decisions. The aim of feedback is understanding and modification of performance. "Good feedback is an informed, nonevaluative, objective appraisal of performance intended to improve clinical skills" (3).

Feedback is a modifier of behavior but not an estimate of personal worth. The wise learner considers feedback in this spirit, welcomes it, uses it effectively, and learns to develop self-reflection in future performance, thereby establishing a system of personal checks on activities. Feedback should not lead to anger, defensiveness, or other emotions. Feedback is most effective when expected, solicited, and

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understood. Without a system of constructive feedback, we are in danger of producing uncertain and overconfident physicians without adequate self-checks to regulate their activities and decisions.

Guidelines for feedback have been set forth (4), and by following these guidelines, the feedback that is formulated will be useful and should produce a positive effect on learner performance. The following guidelines remove the uneasiness and discomfort the preceptor experiences in a feedback situation.

1. Comments should be based on observable behavior and not on assumed intentions or interpretations. Feedback is objective and reflects the experienced preceptor's observation of an encounter. The information may include the words used, body language, specific actions, and decisions that have been made. The preceptor must not interpret behavior. The preceptor does not know the trainee's thinking or intentions at the time. The trainee may later be willing to reveal them. A technique to use may be the "I thought . . ." technique. Instead of saying, "You were nervous about explaining the consent form to the family," which would turn the experience into an observation, the preceptor would say, "I thought you looked uneasy when you were explaining the procedure; how did you feel?"

2. Positive comments may be provided first to give the learner confidence. A learner often is unsure of his or her performance or decisions, and a statement of a positive act will restore confidence and focus the trainee on the process of feedback. The preceptor now has the learner's attention and can proceed with the remainder of the session. Sometimes a positive performance has occurred by chance, and this presents an opportunity to reinforce the behavior. "I found your questions and follow-up on the social history to be well thought out and thorough. You obtained important information." The language used should describe specific behaviors and situations and should not represent general statements or value judgments, such as "Good job." The more general the issues falling under discussion, the more likely that the feedback session will be judgmental and not useful for learning. The keeping of notes for reference to words or specific behaviors helps focus comments. When discussing specific problems, the preceptor enables the learner to work out strategies to rectify or modify actions. Although the specific feedback is less global, the learner is in an environment of identified deficiencies and objectives for im-

provement. "Do you think it would be a good idea to approach the progression of this lesion in a sequential manner?"

3. Feedback should emphasize the sharing of information; both parties contribute. Adult learners have opinions, sensitivity, and well-developed control systems. Ask learners what they thought of their performances. Encourage them to be their own critics, and offer observations when needed. This will transform the feedback situation to a discussion of actions and problems. To maintain or improve performance, the learner must internally recognize both the problem and the objective. Open discussion allows clarification, disagreement, and learner "buy-in" to objectives or plans for change. "What did you think of the accuracy of your technique in placement of the drainage catheter?" "Are there ways you might clarify your dictation of this case?"

4. Feedback should be given at an appropriate time and place. The more frequent the feedback and the closer in time to the event, the more profitable it is for the learner. Behaviors, concepts, and actions that need revision can be influenced best when they are fresh. As time passes, much recall of the surrounding event and thought process is lost. The place and time may be arranged beforehand, during the orientation. Feedback then becomes an integral and expected part of performance. Feedback should be given in private; it is a personal learning matter between the trainee and the preceptor. It is hard to predict what will make a learner uncomfortable or embarrassed. Feelings of discomfort will negate the effect of feedback, and the trust of the learner may be lost. Expressions of anger, mistrust, and inner doubt are part of a feedback session, and may resolve attitudinal problems. The stage is then set for collaboration with the preceptor as a facilitator in learning.

5. Feedback should include specific, subjective data but not so detailed or broad as to overload the learner. The learner should be able to use feedback by applying it to a similar situation or by transferring an approach or behavior to a parallel situation. Although too much specificity makes transfer difficult, overly broad feedback is useless because it can neither be reconciled to the situation just completed nor transferred logically to other contexts. Specificity is assisted by the preceptor's intent observation of the trainee at work and by means of the preceptor's notes. Remember that feedback is based on the stated objectives and level of performance. Revisit the objec-

tives during the feedback session. As feedback strays from specifics, it becomes more judgmental. Discussion of specific behaviors helps avoid meaningless commentary such as "Try to be more precise next time" or "This is not up to your usual level of good work" or "You were not very organized in that procedure." Both the learner and the preceptor are more comfortable with a factual approach: "When you are planning the procedure, it might be a good strategy to rehearse the steps in the order so that you do not become confused when something interrupts your train of thought."

6. Feedback should deal with behaviors the learner can control and modify; it should deal with decisions and actions. It is frustrating or demeaning to the learner to expect a change that is beyond his or her control. To broach such a comment is detrimental to the relationship of preceptor and trainee, because the purpose of facilitation is to help the learner form his or her own teaching experience. However, the motivated learner is eager to gain approval or suggestions for improvement of conscious actions and decisions. The role of the preceptor is to work with the trainee to mature and modify behavior as experience and expertise are gained. "I agree with your decisions on the emergency management of this allergic reaction. Would you have added any longer-acting antihistamine to the pharmacologic management?"

7. Learners should be asked to verify feedback. Even the most carefully thought out feedback is useless if the trainee does not hear it, disregards it, or does not understand it. By asking the learner to agree (or disagree) with and restate the feedback in his or her own words, the preceptor gains the assurance that the learner has understood the nature and content of the feedback. In addition, a relationship of trust and commitment has been developed.

8. Feedback requires preparation and the ability to tolerate discomfort and criticism. As much as learners wish to have and require feedback for effective training, they must cultivate the ability to heed the given information and address it. One immediate reaction to correction or the suggestion of a different approach is to defend the action that was taken. However, if the trainee understands that the feedback is not a personal judgment but is aimed at improved performance and discovers improved outcomes once the suggestions have been applied, he or she will welcome feedback that is given in a nonevaluative manner and will

learn to apply external feedback and start to form his or her own internal feedback mechanism. The preceptor must establish a bond of constructive understanding that will lead to learners seeking feedback and developing internal monitors to provide checks of personal performance.

For the mature learner faced with developing experience and expertise in medicine, feedback from a caring teacher is the most valuable training resource.

Unfortunately, it is also one of the most poorly and infrequently used. To establish an effective system of feedback, preparation of learners and preceptors is needed to ensure that feedback is objective, nonjudgmental, and useful in molding actions, behaviors, and decisions. We are training physicians to develop a lifelong process of monitoring skills and decisions, and an effective feedback system is the mainstay of such an action.

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