

# Giving and Receiving Effective Feedback

## A Review Article and How-To Guide

Rachel Jug, MB, BCh, BAO; Xiaoyin "Sara" Jiang, MD; Sarah M. Bean, MD

• **Context.**—Feedback is the delivery of information based on direct observation that is meant to improve performance. Learning is at the heart of feedback, and as such, feedback is a required competency in pathology resident education. In the laboratory setting, the ability of laboratory professionals in all practice settings and experience levels to give and receive feedback is crucial to workflow and ultimately patient care.

**Objective.**—To summarize the importance of feedback, strategies for optimizing feedback exchange, and overcoming barriers to giving and receiving feedback.

**Data Sources.**—Peer-reviewed original articles, review articles, medical education literature, and published books on feedback and communication were reviewed to explore ideal methods of giving and receiving feedback and to identify common barriers to feedback exchange.

**Conclusions.**—Medical education literature emphasizes

techniques for giving feedback and describes barriers often encountered to feedback exchange in medical practice. Effective feedback requires that the giver, receiver, and environment be carefully considered. Likewise, each of these factors can impose barriers to feedback exchange. Various methods for giving feedback have been described. All feedback should address a specific behavior, be nonevaluative in nature, and be followed by confirmation of understanding and an action plan. Few articles describe the importance of receiving feedback. Receiving feedback can be difficult, but it is enhanced by learning to listen and making conscious decisions regarding implementing the messages heard. Giving and receiving feedback become easier with practice.

(*Arch Pathol Lab Med.* 2019;143:244–250; doi: 10.5858/arpa.2018-0058-RA)

### IMPORTANCE OF FEEDBACK

Feedback is personalized information based on direct observation crafted and delivered so receivers can use the information to achieve their best potential. In the medical setting, feedback (or lack thereof) extends beyond self-improvement and ultimately impacts patient care. The ability to give and receive feedback is key for trainees, as an integral component of the professionalism competency. Feedback informs every human interaction we have in our professional and personal lives. This is true of all corners to pathology, including laboratory professionals, administrative assistants, medical students, allied health students, residents, and fellows, and is true for pathologists in all practice settings and at all experience levels.

Learning is at the heart of feedback, and feedback in medical education is important. Failure to provide feedback could be dire because "...mistakes go uncorrected, good performance is not reinforced, and clinical competence is achieved empirically or not at all."<sup>1</sup> The Accreditation

Council for Graduate Medical Education (ACGME) requires that pathology residents receive formative feedback. Specifically, the ACGME mandates that residency programs provide residents with semiannual performance evaluation, including feedback, and that residents develop skills to incorporate formative feedback into their daily practice.<sup>2</sup> In addition, Clinical Competency Committees at least biannually evaluate residents' ability to give and receive effective feedback (Figure 1).<sup>3</sup>

Regardless of job title and experience, we are all simultaneously educators and learners, both giving and receiving feedback on a daily basis. Thus, competence in giving and receiving feedback is crucial to the delivery and maintenance of excellent patient care.

### WHAT IS FEEDBACK?

Webster's dictionary defines feedback as: something returned to a machine or system, an annoying sound caused by returned signals to an electronic sound system, or information given to someone to improve performance.<sup>4</sup> The word *feedback* was first coined in the 1860s during the Industrial Revolution, used to describe information that was returned to machines or processes, but it was not until World War II that the term *feedback* was applied to interpersonal landscapes.<sup>5</sup> Since then, feedback has gained much traction, especially in business. Corporations pour billions of dollars into training human resources officers and other managerial workers how to give effective feedback. Feedback did not gain popularity in medical education until the 1980s.

Accepted for publication March 14, 2018.

Published online August 13, 2018.

From the Department of Pathology, Duke University Medical Center, Durham, North Carolina.

The authors have no relevant financial interest in the products or companies described in this article.

Corresponding author: Sarah M. Bean, MD, Duke University Medical Center, PO Box 3712, Durham, NC 27710 (email: sarah.bean@duke.edu).

PROF4: Professionalism: Gives and receives feedback (AP/CP)					
Has not achieved Level 1	Level 1	Level 2	Level 3	Level 4	Level 5
	Receives feedback constructively	Accepts feedback constructively and modifies practice in response to feedback	Able to provide constructive feedback	Exemplifies giving and receiving constructive feedback  Encourages and actively seeks feedback to improve performance	Models giving and receiving constructive feedback  Encourages and actively seeks feedback to improve performance
Comments:					

**Figure 1.** Pathology residents' ability to give and receive feedback is assessed at least biannually. Abbreviation: AP/CP, anatomic pathology/clinical pathology.

In 1983, Jack Ende published a groundbreaking article on feedback in clinical medical education and is credited with first describing feedback as it pertains to medical education. He posited that feedback is descriptive information regarding a learner's performance in a given activity—information that is intended to guide future performance.<sup>1</sup> Others have offered alternative definitions and refinements.<sup>6</sup> The early definitions of feedback were based on a unilateral exchange of information, often minimizing the learner's role in the exchange.

Effective conversations are bidirectional, and feedback sessions should be no different. Telio et al<sup>7</sup> suggested an alternative bidirectional feedback framework centered around the formation of an educational alliance between learner and educator. This concept emphasizes the bidirectional nature of feedback between giver and receiver and mirrors the therapeutic alliance used in psychotherapy. The feedback process is transformed from that of unidirectional information delivery to one of a dialogue occurring within a committed learning relationship that is used to create shared understanding of goals, performance, and standards, and a mutually agreed-upon action plan.<sup>7</sup> Learner and educator work together to reach goals and collectively create opportunities to use feedback in practice. An enduring relationship built on the foundation of honesty and trust is necessary to facilitate the educational alliance. More recently, Bing-You et al<sup>8</sup> compared optimal feedback exchange to the tango. They used this metaphor to illustrate the dynamic partnership between learner and teacher based on listening, trust, and awareness of the other person's emotional state and surroundings to facilitate effective communication.<sup>8</sup>

Feedback can positively impact physician clinical performance.<sup>9</sup> Not all feedback is effective, however. Feedback can have a negative impact.<sup>10</sup> Characteristics of effective feedback can be related to the interpersonal relationship between learner and educator. The learner's perception of the educator's clinical expertise and emotional investment in the learning relationship determines the effectiveness of the feedback.<sup>11,12</sup> Learners evaluate a supervisor's commitment to the learning process from the very beginning of the interaction, assessing whether the supervisor cares about them, what the supervisor thinks about them, if the supervisor cares about the learner's goals, and whether

the supervisor has the learner's best interests at heart. Thus, nurturing the interpersonal relationship is crucial to effective feedback. The structure of a pathology residency curriculum, however, may present challenges to forging educational alliances, especially in the setting of subspecialty rotations, where interactions between learner and educator are limited. To address these challenges, residency programs could include longitudinal experiences that foster building of enduring relationships between faculty and residents. For example, mentoring programs, regularly scheduled small group lunches, and longitudinal apprenticeship experiences can provide opportunities for the development of trusting relationships.

#### FEEDBACK VERSUS EVALUATION

Feedback is a formative assessment and should be distinguished from evaluation, which is summative. Feedback is an informal assessment tool that provides timely, descriptive information regarding direct observations of the learner in the learning environment. Direct observation is always a prerequisite for feedback, providing the observer with specific data for feedback analysis.

Feedback is descriptive, constructive, and nonjudgmental. Word choice should be deliberate, composed primarily of nouns and verbs—for example, "the smears were thick, and tissue fragments were not adequately visualized on microscopic examination" in lieu of "these smears are terrible." By using specific language and avoiding judgment, the tone of the message remains nonthreatening and provides an opportunity for dialog, establishing a positive interpersonal environment, which in turn fosters learning.

Feedback is frequently provided either during a learning opportunity or immediately following completion of the activity, and in doing so provides an opportunity for future improvement prior to a formal summative evaluation. When feedback is effective, evaluations are never a surprise.

Evaluation is a summative assessment that is a cumulative performance report. Unlike feedback, evaluation is a high-stakes assessment that judges past performances. It can be used as a final assessment, such as at the end of a clinical rotation. Evaluations are formal assessments that become part of the learner's official record. Evaluation allows for learners to be compared against a standard to ensure that the competencies are attained. Language used in evaluation

is, by definition, judgmental and uses adjectives and adverbs as supporting evidence.

### FEEDBACK: PERCEPTIONS VERSUS REALITY

A mismatch between the perceived amount of feedback received versus feedback given exists. When asked, learners frequently say they receive insufficient feedback, whereas educators say they are giving feedback frequently.<sup>13,14</sup> Lack of established feedback relationships and disharmonious expectations for feedback frequency and methods may contribute to the problem.<sup>13,15</sup> In addition, the problem may be as simple as not recognizing when feedback is happening. Feedback should be explicitly labeled.<sup>14</sup> Labeling the conversation as feedback sets the stage and primes the feedback process. Feedback can be effectively labeled verbally; for example, “I would like to give you some feedback about the gross examination of the uterus. Is now a good time?” Feedback pocket cards can improve both quantity and quality of feedback.<sup>16,17</sup>

### GIVING EFFECTIVE FEEDBACK

Giving feedback is a skill that we all practice numerous times, often on a daily basis and possibly without awareness. As mentioned above, feedback conversations should be labeled as such. Explicitly labeling a feedback conversation primes both the giver and receiver and emphasizes the underlying feedback goal of the conversation.

Effective feedback requires that the giver, receiver, and environment be carefully considered. Ensuring that a committed and caring interpersonal relationship has been established is of paramount importance for effective feedback.<sup>18,19</sup>

To provide effective feedback and to maximize learning, the receiver should be engaged at the beginning of the learning experience, such as at the beginning of a rotation, prior to performing a procedure, prior to sign-out, etc. Learners should be asked to suggest learning goals for the learning experience. Educators should assist the learners to ensure that learning goals are SMART: specific, measurable, attainable, relevant, and time-bound.<sup>20</sup> Mutually agreed-upon learning goals can then be used to guide the educational experience and to focus the feedback. Omitting this step can be detrimental to the learning process.

Effective educators understand that feedback is not a unidirectional conversation. Feedback requires that the learner not only welcome feedback, but also be an active participant in the discussion. In general, feedback should be provided only when the learner welcomes it. When engaging the learner, he or she should be asked to self-assess his or her performance. Learner self-assessment provides information regarding the learner’s insight and understanding of his or her ability and can be used to guide the specifics of the feedback discussion, taking cues from the learner and using his or her own words when applicable. Physicians, however, have a limited ability to correctly self-assess their competence,<sup>21,22</sup> which is why external feedback is so critical. Inclusion of self-assessment in the feedback process could improve self-assessment ability.

Feedback should be descriptive and based on direct observations. To be effective, observed learner behaviors are compared against an established level of competency. The teacher and learner should have a shared understanding of the performance standard. This does not have to be in the

form of explicitly written goals and objectives, but it certainly could include goals and objectives. Pathologists are masters of observation and description, having carefully honed skills for describing objective laboratory findings both in anatomic and clinical pathology laboratories; these skills are useful for giving feedback.

Carefully crafted comments are critical to effective feedback. Feedback is constructive, descriptive, and non-judgmental, and can be distinguished from evaluation by the parts of speech emphasized in comments provided to the learner. Ende states, “Evaluation is expressed as normative statements, peppered with adverbs and adjectives; feedback is neutral, composed of verbs and nouns.”<sup>1</sup>

Caution must be taken to avoid language attributing feedback to the recipient rather than to the directly observed behavior. Feedback based on personality traits should be avoided unless an observable behavior relating to personality can be described. Similarly, subjective data are sometimes appropriate when personal reactions or opinions are clearly stated and labeled using “I” statements.<sup>1</sup> For example, “when you contradicted my diagnosis publicly during the tumor board, I felt humiliated; next time, can you please share your opinion with me privately?”

Avoid the perils of praise (for example, “great job” or “keep up the good work”). Statements such as these imply that the person rather than his or her work is being evaluated. When feedback of this nature is given in a group setting with other learners, the praised learner may feel embarrassed and ultimately withdraw. This type of feedback also has an addictive quality where learners come to expect it and feel let down or even discouraged without it.

Receiving feedback can be a difficult task, depending on the message. Givers should modulate the quantity of feedback delivered. Too many items of feedback may overwhelm the receiver. Prioritize feedback based on importance and omit feedback of lesser priority as needed. It is difficult to know how much feedback to deliver. This determination is contextual and requires the use of emotional intelligence.

Sometimes the intended feedback message is not received. Before the feedback session ends, verify that the message has been accurately received. Have the receiver paraphrase the message, and invite discussion and questions to clarify the feedback and to reach a shared understanding.

### FEEDBACK METHODS

Numerous feedback methods have been described, and each one has advantages and disadvantages (Figure 2). Elements of effective feedback should ideally include: establishing a respectful interpersonal climate, selection of an appropriate location, establishing mutually agreed-upon learning goals, eliciting learner self-reflection and self-assessment, describing observed behaviors, and offering suggestions for improvement.<sup>23,24</sup> Regardless of the method used, feedback should follow the aforementioned guidelines (Figure 3).

Perhaps the most commonly recognized feedback method is the feedback sandwich. This technique, first described by LeBaron and Jernick<sup>25</sup> in 2000, sandwiches negative feedback between positive feedback such that the first and last comments are positive. This structured feedback method is fast, is relatively easy, and may be a useful starting point for someone learning to give feedback.

Method	Feedback Sandwich	Ask - Tell - Ask	Pendleton Method	One-Minute Preceptor
Overview	Positive feedback given before and after negative feedback.	<b>Ask 1:</b> Learner self assessment. <b>Tell:</b> External feedback. <b>Ask 2:</b> Check understanding and develop improvement plan.	Learner then teacher describe what went well followed by areas to be improved, sequentially.	Teaching technique whereby learner commits to conclusion (diagnosis) and supervisor elicits learner's thought process while teaching general rules.
Example	<b>Teacher:</b> The diagnosis was right and the wrong cancer template was completed. The correct stains to confirm the diagnosis were used.	<b>Teacher:</b> How was the transfusion reaction work-up?  <b>Learner:</b> I was so focused on the technical work-up, I forgot to ask if the transfusion was stopped.  <b>Teacher:</b> Correct, first you should always ask if the transfusion was stopped. Otherwise, you performed the key steps in working up a transfusion reaction. What's your plan for the next reaction work-up?	<b>Teacher:</b> What went well? <b>Learner:</b> I got adequate material from my fine needle aspiration (FNA) biopsy. <b>Teacher:</b> You did; you successfully made both air-dried and fixed smears. <b>Teacher:</b> What needs to be improved? <b>Learner:</b> I forgot a few things while consenting the patient. <b>Teacher:</b> Yes, don't forget to check if the patient is on anticoagulants and to warn them of the risk of bleeding.	<b>Learner:</b> The diagnosis is papillary thyroid carcinoma. <b>Teacher:</b> You are correct; which cytological features helped you make the diagnosis? <b>Learner:</b> Nuclear grooves. <b>Teacher:</b> Yes, as well as nuclear membrane irregularities and inclusions. Scant background colloid is another helpful feature on this smear.

Figure 2. Overview of methods for giving feedback.

Although the feedback sandwich may make receiving negative feedback more palatable for some learners, the prescribed format can often seem rigid or contrived both for the learner and the person providing feedback. The receiver may not hear the positive feedback because he or she is anxiously anticipating of the arrival of the wolf in sheep's clothing—specifically, the negative feedback to come. Conversely, the negative feedback message may be diluted by the positives, altering perception but not performance.<sup>26</sup> The positive feedback can be unintentionally negated when it is followed by the conjunction “but.” For example, “your demeanor remained calm when the patient became increasingly nervous and agitated, but you failed to wash your hands prior to palpating the patient’s neck mass.” Instead, the word “and” could be used to connect feedback.

The feedback sandwich is a unidirectional technique that fails to effectively start a feedback conversation; it also does not allow for assessment of the learner’s understanding of

the feedback received or for the development of a learning plan. Ask-Tell-Ask is a simple and effective alternative to the feedback sandwich.<sup>27</sup> This bidirectional feedback construct creates a feedback conversation. The first ask allows for learner self-assessment. Then, the giver tells the receiver what he or she observed, addressing concerns and providing insight into what went well and what could be improved. The second ask checks for understanding and allows giver and receiver to develop an improvement plan. This method is easy to teach and has been used in a pathology residency program.<sup>28</sup>

Pendleton rules are another way to begin a feedback dialog between learner and supervisor, to elicit positives and negatives, and to provide the learner with an opportunity for self-assessment.<sup>29</sup> In the Pendleton method, the learner is asked to begin with a self-assessment of what went well. The supervisor then contributes additional specifics as appropriate. The discussion is then turned to areas of improvement, beginning with a learner self-assessment followed by the supervisor’s contributing comments. Like the feedback sandwich method, the Pendleton method is structured, separating the positives from the negatives. Adhering to the structure can be difficult and contrived, constraining the natural flow of conversation and the comingling of positives and negatives. Although the inherent structure does ensure that both positives and negatives are covered, the fact that the negatives are discussed second can be anxiety-provoking for some learners. Pendleton rules can be modified to ask the learner how he or she thinks he or she did, with the supervisor following the learner’s cues. Frequently the learner comingles positives and negatives, allowing for a more natural feedback dialog.

The 5-step microskills model (also known as the 1-minute preceptor) is a useful teaching technique that incorporates feedback<sup>30</sup> and is well suited to both anatomic and clinical pathology. The 1-minute preceptor technique is widely used for improving teaching skills and can be readily learned.<sup>31</sup>

### Giving

- Label feedback
- Establish a respectful dialogue
- Create shared goals
- Share descriptive, constructive details based on direct observation
- Ask for understanding
- Develop an action plan

### Receiving

- Recognize unlabeled feedback
- Be an active participant
- Create shared goals
- Ask clarifying questions
- Avoid defensive responses
- Identify and avoid triggers
- Develop an action plan

## High Yield Feedback Tips

Figure 3. High-yield feedback tips.

Source	Barriers to Feedback
Environment	Time Isolated incident (lack of established relationship) Lack of privacy
Giver	Fear of emotional reaction Unknown expectations (staff) Uncertain of feedback utility Lack of (feedback) training "Likable" staff
Receiver	Unknown expectations (learner) Early in training "Likable" learner Overconfidence or lack of confidence

Feedback Type	Brief	Formal	Major
Time	<5 min	5–20 min	15–30 min
Audience	Group, individual	Group, individual	Individual/private
When	During/after task	Following observations	Rotation midpoint

<sup>a</sup> Data derived from Branch and Paranjape.<sup>42</sup>

feedback messages should be considered carefully. Mentors may be able to help in the decision process on what to do with feedback. Self-reflection can also be helpful.<sup>32</sup> The feedback message should always be considered in the context of humility. Knowledge that no one is perfect, that everyone needs help and feedback, and that everyone can make changes in performance can be a useful way to consider feedback.<sup>37</sup>

Feedback provides a learning opportunity about the self. The feedback message is information that may or may not have been known prior to the learning experience. Some feedback provides a glimpse of the blind spot in the Johari window,<sup>38</sup> which is information known to others but not to the self.

When receiving feedback, there are a few simple steps that can be followed to maximize the learning experience (Figure 3). Active participation in the feedback receiving process is crucial.

1. Listen. Too often the first impulse is to interrupt in a defensive attempt to negate the feedback message. Allowing the giver to provide feedback is important. Defensive responses will likely diminish the amount and quality of the information received.
2. Express gratitude. Giving feedback can be difficult and uncomfortable. Barriers to giving feedback, such as perception of insufficient time, lack of direct observation, lack of training, lack of goals/objectives, and fear of the learner's response, are difficult to overcome.<sup>39</sup> That someone has surmounted these feedback barriers to deliver a message shows that he or she cares about you and about patient care.
3. Clarify feedback given through self-reflection and open communication with the person who gave the feedback. Internal feedback skills translate to improvements in clinical performance and professional success.<sup>32</sup> The ability to reflect on feedback received internally, as well as to confirm understanding of the feedback<sup>19</sup> and how to integrate it into modifying one's learning/action plan with the person giving feedback, is crucial to realizing the full benefit of feedback.

Occasionally the feedback received is all positive. When feedback is unbalanced, invite the giver to provide "just one thing" to improve.<sup>24</sup> This invitation mentally prepares the receiver to receive feedback on an area for improvement. Further, "just one thing" signals permission to the feedback giver to provide constructive feedback.

Seek feedback frequently. Receiving feedback on a regular basis improves receipt practices<sup>1,37,40</sup> and strengthens the alliance between the feedback giver and receiver.<sup>7</sup> Furthermore, increased exposure to receiving feedback equips the recipient to identify other additional sources of feedback and

This technique uses dialog between the learner and the supervisor in the learning environment. The learner is asked to give a commitment: for example, asking a learner to provide a diagnostic interpretation of a cervical biopsy during sign-out. Then, the supervisor probes for supporting evidence and teaches general rules. "Why did you call this biopsy high-grade squamous intraepithelial lesion/cervical intraepithelial neoplasia grade 3 (HSIL/CIN3)?" The learner provides supporting evidence and explains the reasoning behind the commitment. General rules are "pearls" or key "take-home" points. This is followed by feedback. The supervisor should provide constructive feedback, reinforcing what was done well. Finally, corrective feedback is provided. The provider should explain why the learner was correct or incorrect.

Regardless of the method used, feedback should address specific behaviors and be nonevaluative in nature, providing an opportunity for improvement before high-stakes evaluations are completed.

### RECEIVING FEEDBACK

Few articles describe receiving feedback,<sup>1,18,32,33</sup> yet the art of receiving feedback is very important. Good feedback receivers learn to hear the message and to make conscious decisions on how to use (or not use) the information received. Receiving feedback can be difficult, especially in medicine, where perfection is expected. Coaching in receiving feedback effectively can improve perception of feedback skills and information received.<sup>34</sup>

Recognition of feedback events is critical. Feedback happens all the time in daily life, both personally and professionally. Feedback is frequently unlabeled, placing the burden on the receiver to recognize the learning opportunity. Recognition of performance comments as feedback allows space for self-reflection and learning. Failure to recognize the feedback message as such may elicit an emotional response.

Mindset can determine how feedback is received.<sup>35</sup> Dweck<sup>36</sup> defines 2 mindsets (fixed versus growth) to describe an individual's reaction to failure. In the fixed mindset, ability is fixed, and potential is predetermined. In contrast, the growth mindset allows for failure, viewing it as a learning opportunity. Receiving feedback in the context of a growth mindset is optimal.<sup>35</sup>

The realization that feedback is a gift is helpful. Like a gift, feedback messages can be used immediately, stored for later use, or not used at all. The decision of what to do with

**Table 3. Triggers That Block the Feedback Message<sup>a</sup>**

Triggers	Definition	Consequence
Truth	Unhelpful or untrue comments elicited by the substance of the feedback	Cause the receiver to reject the feedback message
Relationship	The person giving the feedback diverts focus from the feedback message onto himself or herself	Can cause a counterattack
Identity	Person giving feedback shifts the focus from the feedback message to the recipient	Person receiving feedback feels overwhelmed, ashamed, embarrassed, or threatened, ultimately leading to withdrawal

<sup>a</sup> Data derived from Stone and Heen.<sup>5</sup>

to continuously improve performance in a low-stakes setting prior to high-stakes assessment.

Develop a postfeedback plan. Use the feedback information to guide learning and to make changes in daily practice. Reflect on how the interventions are useful or not.

### OVERCOMING BARRIERS TO EFFECTIVE FEEDBACK

Barriers to effective feedback can be attributed to the environment, giver, and receiver (Table 1). Likewise, solutions to overcoming barriers to feedback can be considered as such and collectively promote a feedback culture.

Environmental considerations include not only the physical space but also the interpersonal space. The tone and the seriousness of the message should be considered when determining where and when the feedback exchange occurs. For example, negative feedback should usually be delivered in a one-on-one setting and not in an elevator. Insufficient time and lack of direct observation are often cited as barriers to feedback and can even have a negative impact on the learner.<sup>39</sup> These may be overcome by planning ahead so that learning encounters take place under supervision by the teacher who is expecting to give feedback, so that the teacher can prepare specific feedback accordingly. Feedback need not be a lengthy discussion and can be effectively delivered in a few minutes (Table 2).

Barriers to feedback contributed by both the giver and the receiver can be overcome by setting clear goals and objectives related to performance (in the context of a preestablished shared learning plan) in addition to receiving formal training in giving and receiving feedback.<sup>41</sup> The interpersonal relationship between feedback giver and receiver in part determines whether feedback will be effective. Perception of credibility is important and can be shaped by sharing clinical experience and cultivating positive interpersonal behavior.<sup>11</sup> Furthermore, receivers need to feel that the feedback giver cares about them, helps establish mutually agreed-upon goals, and helps them achieve these goals.<sup>12</sup> Similarly, if those giving feedback fear the learner will respond poorly or will not like them consequent to receiving feedback, it will discourage feedback exchange. Learners practiced in receiving feedback are superior at integrating it and responding well to it, which encourages supervisors to continue in the feedback exchange.<sup>39</sup>

Triggers that block the feedback message were identified by Stone and Heen<sup>5</sup> and include: truth triggers, relationship triggers, and identity triggers (Table 3). Truth triggers may be avoided by restricting feedback commentary to constructive comments based on performance knowledge obtained via direct observation. It is the feedback giver's responsibility to focus on the feedback message that contributes to the recipient's learning plan rather than the giver's own agenda or personal qualities of the recipient. Feedback content and delivery methods should be educational and empowering to prevent relationship and identity triggers from leading to the recipient's withdrawal from the learning experience.

### CONCLUSIONS

Feedback is crucial to learning and to optimizing patient care by facilitating continuous learning and improvement. Every member of the laboratory team should be proficient at giving and receiving feedback. Giving and receiving effective feedback, although challenging, becomes easier with practice.

### References

- Ende J. Feedback in clinical medical education. *JAMA*. 1983;250(6):777–781.
- Accreditation Council for Graduate Medical Education. ACGME program requirements for graduate medical education in anatomic pathology and clinical pathology. 2017. ACGME Web site. [http://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/300\\_pathology\\_2017-07-01.pdf?ver=2017-05-03-154456-593](http://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/300_pathology_2017-07-01.pdf?ver=2017-05-03-154456-593). Accessed March 14, 2018.
- Naritoku W, Alexander B, Bennett B, et al. The Pathology Milestone Project. July 2015. <https://www.acgme.org/Portals/0/PDFs/Milestones/PathologyMilestones.pdf>. Accessed March 14, 2018.
- Feedback. Merriam-Webster Web site. <https://www.merriam-webster.com/dictionary/feedback>. Accessed August 1, 2017.
- Stone D, Heen S. *Thanks for the Feedback: The Science and Art of Receiving Feedback Well*. New York, NY: Viking; 2014.
- Shute VJ. Focus on formative feedback. *Rev Educ Res*. 2008;78(1):153–189.
- Telio S, Ajjawi R, Regehr G. The “educational alliance” as a framework for reconceptualizing feedback in medical education. *Acad Med*. 2015;90(5):609–614.
- Bing-You R, Varaklis K, Hayes V, Trowbridge R, Kemp H, McKelvy D. The Feedback tango: an integrative review and analysis of the content of the teacher-learner feedback exchange [published online ahead of print October 3, 2017]. *Acad Med*. doi: 10.1097/acm.0000000000001927.
- Veloski J, Boex JR, Grasberger MJ, Evans A, Wolfson DB. Systematic review of the literature on assessment, feedback and physicians' clinical performance: BEME Guide No. 7. *Med Teach*. 2006;28(2):117–128.
- Bangert-Drowns RL, Kulik CLC, Kulik JA, Morgan M. The instructional effect of feedback in test-like events. *Rev Educ Res*. 1991;61(2):213–238.
- Bing-You RG, Paterson J, Levine MA. Feedback falling on deaf ears: residents' receptivity to feedback tempered by sender credibility. *Med Teach*. 1997;19(1):40–44.
- Eva KW, Armon H, Holmboe E, et al. Factors influencing responsiveness to feedback: on the interplay between fear, confidence, and reasoning processes. *Adv Health Sci Educ Theory Pract*. 2012;34(10):787–791.
- Adcroft A. The mythology of feedback. *High Educ Res Dev*. 2011;30(4), 405–419.
- Boud D, Molloy E. *Feedback in Higher and Professional Education: Understanding It and Doing It Well*. New York, NY: Routledge; 2013.
- De SK, Henke PK, Ailawadi G, Dimick JB, Colletti LM. Attending, house officer, and medical student perceptions about teaching in the third-year medical school general surgery clerkship. *J Am Coll Surg*. 2004;199(6):932–942.
- Peccoraro L, Karani R, Coplit L, Korenstein D. Pocket card and dedicated feedback session to improve feedback to ward residents: a randomized trial. *J Hosp Med*. 2012;7(3):170–175.
- Connolly A, Hansen D, Schuler K, Galvin SL, Wolfe H. Immediate surgical skills feedback in the operating room using “SurF” cards. *J Grad Med Educ*. 2014; 6(4):774–778.
- Gaunt A, Patel A, Fallis S, et al. Surgical trainee feedback-seeking behavior in the context of workplace-based assessment in clinical settings. *Acad Med*. 2017;92(6):827–834.
- Ramani S, Krackov SK. Twelve tips for giving feedback effectively in the clinical environment. *Med Teach*. 2012;34(10):787–791.
- Doran GT. There's a S.M.A.R.T. way to write management's goals and objectives. *Manage Rev (AMA Forum)*. 1981;70(11):35–36.
- Davis DA, Mazmanian PE, Fordis M, Van Harrison R, Thorpe KE, Perrier L. Accuracy of physician self-assessment compared with observed measures of competence: a systematic review. *JAMA*. 2006;296(9):1094–1102.
- Gordon MJ. A review of the validity and accuracy of self-assessments in health professions training. *Acad Med*. 1991;66(12):762–769.

23. Hewson MG, Little ML. Giving feedback in medical education: verification of recommended techniques. *J Gen Intern Med.* 1998;13(2):111–116.
24. Gharib I, Rolland SL, Bateman H, Ellis JS. Just One Thing: a novel patient feedback model. *Br Dent J.* 2017;222(10):797–802.
25. LeBaron SW, Jernick J. Evaluation as a dynamic process. *Fam Med.* 2000;32(1):13–14.
26. Parkes J, Abercrombie S, McCarty T. Feedback sandwiches affect perceptions but not performance. *Adv Health Sci Educ Theory Pract.* 2013;18(3):397–407.
27. French JC, Colbert CY, Pien LC, Dannefer EF, Taylor CA. Targeted feedback in the milestones era: utilization of the ask-tell-ask feedback model to promote reflection and self-assessment. *J Surg Educ.* 2015;72(6):e274–e279.
28. Prayson RA, Rowe JJ. Pathology resident perspectives on feedback and a proposed trainee curriculum on giving feedback. *Am J Clin Pathol.* 2016;146(5):525–529.
29. Pendleton D, Schofield T, Tate P, Havelock P. *The New Consultation: Developing Doctor–Patient Communication.* 2nd ed. Oxford, UK: Oxford University Press; 2003.
30. Neher JO, Gordon KC, Meyer B, Stevens N. A five-step “microskills” model of clinical teaching. *J Am Board Fam Pract.* 1992;5(4):419–424.
31. Furney SL, Orsini AN, Orsetti KE, Stern DT, Gruppen LD, Irby DM. Teaching the one-minute preceptor: a randomized controlled trial. *JGIM.* 2001;16(9):620–624.
32. Cho KK, Marjadi B, Langendyk V, Hu W. The self-regulated learning of medical students in the clinical environment—a scoping review. *BMC Med Educ.* 2017;17(1):112.
33. Kruger J, Dunning D. Unskilled and unaware of it: how difficulties in recognizing one’s own incompetence lead to inflated self-assessments. *J Pers Soc Psychol.* 1999;77(6):1121–1134.
34. Bing-You RG, Bertsch T, Thompson AJ. Coaching medical students in receiving effective feedback. *Teach Learn Med.* 2009;10(4):228–231.
35. Perrella A. Room for improvement: palliating the ego in feedback-resistant medical students. *Med Teach.* 2017;39(5):555–557.
36. Dweck C. *Mindset: The New Psychology of Success.* New York, NY: Ballantine Books; 2006.
37. Gruppen LD. Humility and respect: core values in medical education. *Med Educ.* 2014;48(1):53–58.
38. Luft J. *Group Processes: An Introduction to Group Dynamics.* 3rd ed. Palo Alto, CA: Mayfield Publishing Co; 1984.
39. Hesketh EA, Laidlaw JM. Developing the teaching instinct. *Med Teach.* 2002;24(3):245–248.
40. Gruppen LD. Competency-based education, feedback, and humility. *Gastroenterology.* 2015;148(1):4–7.
41. Reddy ST, Zegarek MH, Fromme HB, Ryan MS, Schumann SA, Harris IB. Barriers and facilitators to effective feedback: a qualitative analysis of data from multispecialty resident focus groups. *J Grad Med Educ.* 2015;7(2):214–219.
42. Branch WT Jr, Paranjape A. Feedback and reflection: teaching methods for clinical settings. *Acad Med.* 2002;77(12, pt 1):1185–1188.

## Submit Your Research to the CAP19 Abstract Program

Abstract and case study submissions to the College of American Pathologists (CAP) 2019 Abstract Program are now being accepted. Pathologists, laboratory professionals, and researchers in related fields are encouraged to submit original studies for possible poster presentation at the CAP19 meeting.

Submissions will be accepted until 5 p.m. Central Friday, March 8, 2019. Accepted abstracts and case studies will appear on the *Archives of Pathology & Laboratory Medicine* Web site as a Web-only supplement to the September 2019 issue.

Visit the CAP19 Web site ([www.thepathologistsmeeting.org](http://www.thepathologistsmeeting.org)) or the *Archives* Web site ([www.archivesofpathology.org](http://www.archivesofpathology.org)) for additional abstract program information including a link to the submission site.