How Residents Learn From Patient Feedback: A Multi-Institutional Qualitative Study of Pediatrics Residents' Perspectives

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ABSTRACT

Background Residents may view feedback from patients and their families with greater skepticism than feedback from supervisors and peers. While discussing patient and family feedback with faculty may improve residents' acceptance of feedback and learning, specific strategies have not been identified.

Objective We explored pediatrics residents' perspectives of patient feedback and identified strategies that promote residents' reflection on and learning from feedback.

Methods In this multi-institutional, qualitative study conducted in June and July 2016, we conducted focus groups with a purposive sample of pediatrics residents after their participation in a randomized controlled trial in which they received written patient feedback and either discussed it with faculty or reviewed it independently. Focus group transcripts were audiorecorded, transcribed, and analyzed for themes using the constant comparative approach associated with grounded theory.

Results Thirty-six of 92 (39%) residents participated in 7 focus groups. Four themes emerged: (1) residents valued patient feedback but felt it may lack the specificity they desire; (2) discussing feedback with a trusted faculty member was helpful for self-reflection; (3) residents identified 5 strategies faculty used to facilitate their openness to and acceptance of patient feedback (eg, help resident overcome emotional responses to feedback and situate feedback in the context of lifelong learning); and (4) residents' perceptions of feedback credibility improved when faculty observed patient encounters and solicited feedback on the resident's behalf prior to discussions.

Conclusions Discussing patient feedback with faculty provided important scaffolding to enhance residents' openness to and reflection on patient feedback.

Introduction

Communication and interpersonal skills are essential to the patient-physician relationship.[1] Interactions between patients and physicians, including patient-centered interviews, expressions of caring and compassion, and shared decision-making, improve patient satisfaction, treatment adherence, pain control, and overall emotional and physical health.[2–5] Patients' perspectives of their physicians' communication skills provide valuable insight into physician behavior, and can help improve interactions among patients, physicians, and health care teams.[6,7]

In 2001, the Institute of Medicine (IOM), now the National Academy of Medicine, defined patient centeredness as 1 of 6 health care quality aims.[8] One facet of patient centeredness is patient experience; to assess this the IOM advocates the use of patient feedback.[9] Patient feedback is an important tool to assess the competency of residents' interpersonal and communication skills, and residency programs use patient feedback as a part of 360-degree or multisource assessment.[10]

Despite growing efforts to gather patient feedback, the effect of feedback on behavior change is variable. Several studies have suggested that residents and practicing physicians experience challenges translating feedback to their practice.[11–13] Reasons include credibility judgments, feedback timeliness and specificity, emotional reactions, and the relationship between feedback providers and the recipient.[7,14–16] Some studies have suggested that facilitated discussion of feedback with a trusted source may enhance take-up and learning,[16–18] yet there is limited evidence on specific, actionable strategies for building this trust and facilitating learning. Patient and family feedback, in particular, may be viewed with greater skepticism than feedback from physicians,[7] and this has not been well studied.

The aims of this study were to (1) explore residents' perspectives of patient and family feedback about their communication and interpersonal skills, and (2) identify strategies faculty can use with residents to

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promote their reflection on and learning from this feedback.

What was known and gap
While feedback from patients may offer actionable information to improve practice, residents are often skeptical in receiving this feedback.

What is new
A multisite qualitative study found that residents perceived patient feedback as lacking specificity and identified 5 strategies faculty used to facilitate openness to feedback.

Limitations
Single specialty study limits generalizability.

Bottom line
Discussion of patient feedback with faculty enhanced residents' openness to and reflection on patient feedback.

Methods

Study Design and Conceptual Framework

We conducted a qualitative study using the constant comparative method associated with grounded theory.[19] This entails a systematic approach to discover themes and develop an explanation of a social phenomenon or process grounded in the data. Consistent with grounded theory, we had no a priori hypotheses, and used social cognitive theory (SCT)[20] as a sensitizing framework[21] from which to examine the data. The SCT recognizes the role played by the clinical environment, relationships with supervisors and patients, and individual knowledge and belief systems in learning, and it has been used to understand learning from multisource feedback.[16,17] We used SCT to direct us to important features of the data from which we could build categories and themes.[21]

Participants

Between June and July 2016, we recruited a stratified, purposive[22] sample of pediatrics residents affiliated with the University of Chicago, Phoenix Children's Hospital, and Stanford University. Eligible residents had participated in a randomized controlled trial from June 2015 to June 2016 in which they received written patient and family feedback and either discussed this feedback with a faculty clinical advisor (intervention) or reviewed it on their own (control). Intervention-group residents also had their advisor observe 2 patient encounters and solicit feedback from these patients or families on the resident's behalf to discuss during their meeting. All feedback was gathered using the Communication Assessment Tool (CAT).[23] The CAT asks respondents to rate 14 dimensions of a physician's communication and interpersonal skills using a 5-point scale (1, poor, to 5, excellent) and has evidence of validity when used with physicians.[23] We modified the CAT to include 2 open-ended questions for details regarding residents' skills: (1) "What did you like about this resident's communication?" and (2) "How can this resident improve?" Feedback was collected in person by research assistants using a mobile device or in paper form.

Our focus groups included only residents who received completed CAT forms from 3 or more patient or family encounters. To explore how feedback influenced learning, we held separate focus groups with residents in the intervention and control groups. An aggregated written report of patient and family feedback was e-mailed to each resident prior to focus group recruitment to prompt recall.

Data Collection and Instrument

Eligible residents (n = 92 for all sites) were e-mailed invitations to participate in a 60-minute focus group. For consistency at each site, we assigned 1 nonphysician facilitator who was not involved in the study to lead the focus group. Facilitators were blinded to the groups (control versus intervention). Prior to the focus groups, facilitators participated in a 90-minute training session led by 1 author (A.L.B.). Facilitators were encouraged to use probes to enable deeper reflection and exploration of the topics discussed.

The semistructured interview guide (provided as online supplemental material) was developed from a literature search on multisource feedback and reviewed for content by the research team. Prior to implementation, we pilot-tested the guide with 4 noneligible residents for clarity and flow. The final guide included 5 open-ended questions to elicit residents' perspectives on patient feedback and to explore factors that facilitate learning from this feedback.

This study was approved by the Institutional Review Boards at the University of Chicago, Phoenix Children's Hospital, and Stanford University. Verbal consent was obtained from all residents prior to the focus groups.

Data Analysis

Focus groups were audiorecorded and transcribed verbatim. Data were deidentified and uploaded into Dedoose 7.1 (Sociocultural Research Consultants, Los Angeles, CA) for analysis. We used constant comparison and an iterative process of open, axial, and selective coding to uncover themes from the focus groups.[19] Two authors (A.L.B. and N.O.) read the first 3 transcripts to independently generate an

TABLE 1
Characteristics of Pediatrics Residents Who Participated in 7 Focus Groups

Characteristic	Institution A	Institution B	Institution C	Total, n/36 (%)
Gender				
Male	7	3	4	14 (39)
Female	8	9	5	22 (61)
PGY level				
PGY-1	5	6	2	13 (36)
PGY-2	5	3	6	14 (39)
PGY-3	5	3	1	9 (25)
Randomized controlled trial group				
Intervention	5	7	5	17 (47)
Control	10	5	4	19 (53)

Abbreviation: PGY, postgraduate year.

inductive list of codes. We refined the codes, and combined them into a single coding structure that was used to independently analyze the remaining transcripts, meeting after each analysis to discuss, add, or remove codes. We determined that codes were saturated after analysis of the fifth transcript and applied this coding structure to the final 2 transcripts without further discussion.

We used SCT to direct our attention to specific interpersonal and environmental factors that affected feedback delivery and learning. We examined the codes through the lens of the learner as well as the relational, environmental, and clinical factors (ie, axial and selective coding); we then discussed these relationships to combine codes and refine categories to generate the final list of themes.

To assess coding reliability, we calculated the Cohen kappa on a subset of transcripts after finalizing our coding structure ($k = 0.92$; ie, after analysis of the fifth transcript).[22] We also used Dedoose to quantitatively compare code applications across control and intervention groups and sites. We observed that each code was discussed in all focus groups. We shared our codes, categories, and representative quotations with the research team and asked for their perspectives on the accuracy of the themes. As a final step, a subset of participants from all institutions reviewed and commented on the themes. All agreed that we accurately conceptualized the process of feedback consumption and illustration by faculty.

Results

Participants comprised 36 of 92 residents (39%) in 7 focus groups of 3 to 10 participants per group. Participant characteristics are listed in TABLE 1.

Four main themes emerged across the 7 groups, and are described in the following sections with representative quotations in TABLE 2.

Patient and Family Feedback Is Unique and Important but May Lack Specificity and Individualization

Residents reported that patient and family feedback offered a unique and important perspective on their communication and interpersonal skills compared with feedback from faculty and peers. Yet many indicated that patient feedback lacked specificity and individualization, which some attributed to the feedback collection tool, and they commented that numeric Likert-scale ratings were difficult to interpret and translate into learning goals. They felt ratings "lacked meaning" and struggled to identify specific skills to improve on to "move from good to excellent" on a given item. In addition, residents commented that open-ended or verbal feedback also lacked the specificity they needed for learning.

Discussion About Feedback With a Trusted Faculty Member Is Helpful for Self-Reflection and Learning

Residents in both study arms reported that discussing patient feedback with a trusted faculty member was helpful for self-reflection and learning, particularly in light of the challenges they had in interpreting the feedback they received. Many residents noted that these discussions facilitated their recall of patient encounters, which helped them consider ways to transform ratings or vague comments into specific learning goals. Some residents believed trust could only be developed through longitudinal relationships with faculty, while others believed trust could be built during a single discussion. Residents in the control arm, who did not participate in the feedback discussion with an advisor, frequently spoke about sharing patient feedback with their supervising physician as a way to better understand patients' perspectives and identify areas for behavioral change.

TABLE 2
Four Themes Illustrating Pediatrics Residents' Attitudes Toward Patient Feedback and Strategies to Support Learning

Theme[a]	Representative Quotations
Patient and family feedback is unique and important but may lack specificity and individualization	"Patient feedback is really valuable and useful in terms of understanding how parents perceive us, which I think is so important. But I got a lot of 'good jobs' and 'great jobs,' and to me, this feels really good, but it doesn't help us if we want to know what to improve." *(Intervention)* "Sometimes parents will just pull me aside and give me feedback that they appreciated my time or the way I did something. It can boost your spirit and make you feel more confident, but it's not usually specific or something I can really learn from—it doesn't make me grow." *(Control)*
Discussion about feedback with a trusted faculty member is helpful for self-reflection and learning	"Sitting down with a faculty advisor to reflect on comments is helpful because we can have a conversation about what happened. We can unpack what went on and go through this process of discovery where we talk about the case, how the patient or parent responded to things the team said, and how the team responded to identify areas where I as a resident, and we as a team could do better next time. Having the conversation with someone helps us think about other perspectives so we can come up with solutions to problems patients identified and learn from it." *(Intervention)* "The feedback we get is not that helpful, at least when I first look at it, and I often don't even take it into consideration because it's pretty vague. But when I talked about it with my attending, it was really this lightbulb moment for me, 'Wow, there was something in that feedback that I can use!' She helped me remember that I can actually learn from this and develop goals out of patient feedback." *(Control)*
Faculty employ 5 key strategies to promote resident openness to and acceptance of patient feedback	"I got feedback that I could have explained what was happening better, and I remember feeling frustrated and trying to rationalize it—I was rushed, and I didn't know the full story because I wasn't the one in charge and there were a lot of people making decisions that I didn't have a hand in. But I talked to my coach and she helped me stay open and find a learning opportunity from that." *(Intervention)* "One thing that has been helpful is talking to my advisor and trying to understand the context in which the feedback was being provided. And not just the context for the patient and family—the illness, the treatment plan, who is on the team, whether the family agrees with the diagnosis, but for us as providers, you know how we're feeling. My advisor helps me reflect on all those things." *(Control)*
Faculty observation of patient encounters improves resident perceptions of feedback credibility	"I think it has been more helpful to have the coaches interview patients after we've interviewed families and solicit patients' thoughts about how our interactions went. The coaches offer that third-party perspective, so I think it makes it easier for the parents to be open about their experiences with us." *(Intervention)* "Having a third-party faculty member gather feedback takes away bias because they're just picking at random and we may want to give forms to patients that we know we have a good relationship with. With numeric forms it's especially helpful because it adds credibility to [the feedback]. It would be great for them to observe me and then ask the patient for feedback about me." *(Control)*

[a] Themes were present in 100% of focus groups and did not differ based on group assignment in the randomized controlled trial, size, or composition.

Faculty Employ 5 Key Strategies to Promote Resident Openness to and Acceptance of Patient Feedback

Residents identified 5 key strategies faculty used during these discussions to promote trainee openness to and acceptance of patient and family feedback (TABLE 3). These were to (1) situate feedback in the context of the clinical encounter; (2) help residents identify and overcome emotional responses to negative feedback; (3) develop individualized, specific goals from feedback provided; (4) frame feedback in the context of lifelong learning; and (5) hold residents accountable for behavior change. Collectively, these strategies achieved important goals. For example, when faculty situated the feedback in the context of a clinical encounter, residents could more easily reflect on their own behavior and how it affected patients' experiences and the feedback received. This motivated trainees to take "greater ownership" of the feedback and recognize its relevance to their practice.

Many residents described reacting to negative ratings or comments with frustration, surprise, or disavowal, and they commented that discussion with faculty ameliorated these reactions and helped them remain open to the feedback. Residents also indicated that faculty played a critical role in clarifying the value of patient feedback for their lifelong development and in helping them set and stay accountable for learning goals.

Faculty Observation of Patient Encounters Improved Resident Perceptions of Feedback Credibility

Residents reported that the credibility and utility of patient and family feedback improved when faculty observed patient encounters, solicited written and verbal feedback from the patient or family on the resident's behalf, and shared this feedback with the resident. Residents who participated in the intervention arm of the study commented about the value of this experience. Residents in the control arm spoke of the perceived benefits of having a "third-party faculty member" participate in this process.

Discussion

In our qualitative study using focus groups, residents identified several concrete strategies faculty used to facilitate their reflection on, openness to, and learning from patient and family feedback.

Prior studies showed limited impact of patient feedback on resident performance or behavior change.[11–13] This is possibly due to variable processes of soliciting and delivering patient feedback to residents. In addition, feedback tools often employ Likert-scale ratings that may be less transparent in allowing residents to assess patient perspectives.[7,24–27] While some studies suggest that narrative patient feedback is useful for learners,[28,29] challenges exist to collecting this type of feedback, and residents may benefit from facilitated discussion with faculty.[29–31] Studies have found that feedback is more effective in promoting learning and behavior change when delivered after an observed encounter with a trusted source.[16,17,28–31] Triangulated feedback from multiple sources (ie, patients, supervisors, and self), combined with facilitated discussion, enhanced residents' reflective capacity.[31] A recent systematic review found that feedback may improve behavior when the feedback is written, verbal, and given more than once; and when it includes action planning or discussion of specific behaviors to change.[25]

Residencies with a clinical advising program may be able to provide the structure for implementing a patient feedback program that includes patient feedback solicitation and facilitated discussion with the resident. Observation and feedback solicitation from patients, combined with a facilitated discussion with faculty, may encourage residents to reflect on patient perspectives and incorporate them into future practice. While residents in our study appreciated longitudinal relationships with faculty, long-term relationships were not essential for residents to perceive feedback discussions as comfortable and helpful. We believe this finding is important for programs with limited ability to provide faculty continuity. Prior research has identified relationship building as an important skill for supervising physicians to use when delivering their own feedback to residents.[30] Our findings complement and extend this research by identifying several concrete strategies that may promote learning from patient and family feedback specifically.

Our study has limitations. It is based on a small, self-selected sample in a single specialty, and findings may not generalize to other specialties. The study was conducted as part of a larger intervention, which may have affected resident perceptions, reducing generalizability.

Additional research is needed to determine if direct observation of patient encounters, feedback solicitation, and facilitated discussion with residents improves residents' communication skills, and whether the strategies we identified are generalizable to other specialties.

TABLE 3
Five Resident-Identified Strategies for Faculty to Promote Resident Openness to and Learning From Patient Feedback

Strategies to Promote Learning[a]	Goal for Faculty	Specific Techniques for Faculty to Use in Discussion	Representative Quotations
Situate feedback in the context of the clinical encounter	Help resident take ownership of feedback	■ Help resident recall and reflect on the specific encounters where patient and/or family feedback was collected ■ Help resident reflect on his or her cognitive and emotional state at the time feedback was collected ■ Consider and explore how resident's cognitive and emotional state impacted his or her behavior and the patient and/or family experience of care ■ Encourage resident to take the perspective of patients and families and explore how patient/family motives, needs, or concerns may have influenced the feedback provided	"It's helpful to talk about [patient feedback] with my attending. They know what went on and can help me remember how I was feeling that day and how that manifested in my behavior toward the patient." *(Control)* "I was working with a family and it was a difficult clinical situation. I didn't give the best care I could, and it led to this very difficult encounter for the whole team. It was helpful to process that with my advisor because she said, 'Imagine you were that mom. How would you feel in that situation?' She really helped me see where the family was coming from and why they reacted the way they did, which hopefully will improve how I do things in the future." *(Intervention)*
Help residents identify and overcome emotional responses to negative feedback	Develop resident self-awareness and encourage openness to feedback	■ Take time to explore and understand resident's reactions to constructive feedback (eg, What surprised the resident? How does the feedback compare to his or her self-perceptions?) ■ Validate that patient feedback can elicit a range of emotions, including surprise, anger, or feelings of satisfaction	"I have the tendency to react defensively when I hear something critical, which puts up a barrier in terms of my learning. A coach could help me work through those emotional reactions so that I don't personalize the feedback and so I stay open-minded and welcoming of it." *(Control)*
Develop individualized, specific goals from nonspecific numeric or written feedback	Help resident make meaning of the range of patient and family feedback received	■ Ask resident to share his or her interpretation of the feedback received (eg, What is helpful, not helpful, and why) ■ Acknowledge and reinforce resident's strengths and discuss areas for improvement ■ Help resident identify learning opportunities. Lessons may relate to the resident, the health care team, or the hospital system	"My coach has been able to transform the feedback I've gotten into more specific and tangible things for me to work on. We can discuss the 'good jobs' and think about the details of the encounter or overall patterns so I can take away some concrete skills or lessons to apply later." *(Intervention)*

TABLE 3
Five Resident-Identified Strategies for Faculty to Promote Resident Openness to and Learning From Patient Feedback (continued)

Strategies to Promote Learning[a]	Goal for Faculty	Specific Techniques for Faculty to Use in Discussion	Representative Quotations
Frame feedback in the context of lifelong learning	Clarify the value of patient and family feedback to resident's lifelong practice and professional growth	■ Be explicit that patient feedback may not convey the full picture of resident's skills ■ Encourage resident to value patient and family perspectives and help resident reflect on trends that point to areas of strength and improvement (eg, What does the feedback reveal about the resident as a physician?)	"I think it would be important to discuss feedback with someone like a coach or advisor because they can help with the framing of it—that it's about helping us with our lifelong learning as opposed to a direct evaluation of who we are." *(Control)* "Programs need to name [patient feedback] for what it is: data for us to use as we develop as professionals. We value patients' perspectives and want to understand them, but that we have to interpret them not as all or nothing but rather as a piece of the entire puzzle. I think my coach has been really helpful with that." *(Intervention)*
Hold the resident accountable for behavior change	Develop a concrete plan for implementing the feedback	■ Help resident set realistic and achievable goals for change from feedback ■ Develop a plan to assess whether goals have been met ■ Follow up with resident, if possible, to determine whether changes have been implemented and to explore how to overcome obstacles faced	"We have to create short-term objective goals from the patient feedback in order to really change our practice. It helps to discuss that with an attending or advisor. It's setting those specific goals that we can later return to with them that's so important to keeping us accountable." *(Control)*

[a] Themes were present in 100% of focus groups and did not differ based on group assignment in the randomized controlled trial, size, or composition.

Conclusion

We identified several practical strategies faculty can use to help pediatrics residents reflect on and learn from patient and family feedback as well as incorporate this feedback into their professional practice. We believe these strategies are generalizable to other specialties.

References

1. Travaline JM, Ruchinskas R, D'Alonzo GE. Patient-physician communication: why and how. *J Am Osteopath Assoc*. 2005;105(1):13–18.
2. Ciechanowski PS, Katon WJ, Russo JE, et al. The patient-provider relationship: attachment theory and adherence to treatment in diabetes. *Am J Psychiatry*. 2001;158(1):29–35.
3. Stewart MA. Effective physician-patient communication and health outcomes: a review. *CMAJ*. 1995;15(9):1423–1433.
4. Pollak KI, Alexander SC, Tulsky JA, et al. Physician empathy and listening: associations with patient satisfaction and autonomy. *J Am Board Fam Med*. 2011;24(6):665–672.
5. Bull SA, Hu XH, Hunkeler EM, et al. Discontinuation of use and switching of antidepressants: influence of patient-physician communication. *JAMA*. 2002;288(11):1403–1409.
6. Sargeant J, Bruce D, Campbell C. Practicing physicians' needs for assessment and feedback as part of professional development. *J Contin Educ Health Prof*. 2013;33(suppl 1):54–62.
7. Bogetz AL, Rassbach CE, Chan T, et al. Exploring the educational value of patient feedback: a qualitative analysis of pediatric residents' perspectives. *Acad Pediatr*. 2017;17(1):4–8.
8. National Research Council. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academies Press; 2001.
9. Davis K, Schoen C, Schoenbaum SC. A 2020 vision of American health care. *Arch Intern Med*. 2000;160(22):3357–3362.
10. Hicks PJ, Englander R, Schumacher DJ, et al. Pediatrics milestone project: next steps toward meaningful outcomes assessment. *J Grad Med Educ*. 2010;2(4):577–584.
11. Ferguson J, Wakeling J, Bowie P. Factors influencing the effectiveness of multisource feedback in improving the professional practice of medical doctors: a systematic review. *BMC Med Educ*. 2014;14:76.
12. Reinders ME Ryan BL, Blankenstein AH, et al. The effect of patient feedback on physicians' consultation skills: a systematic review. *Acad Med*. 2011;86(11):1426–1436.
13. Brinkman WB, Geraghty SR, Lanphear BP, et al. Effect of multisource feedback on resident communication skills and professionalism: a randomized controlled trial. *Arch Pediatr Adolesc Med*. 2007;161(1):44–49.
14. Telio S, Regehr G, Ajjawi R. Feedback and the educational alliance: examining credibility judgements and their consequences. *Med Educ*. 2016;50(9):933–942.
15. Watling C, Driessen E, van der Vleuten CP, et al. Learning from clinical work: the roles of learning cues and credibility judgements. *Med Educ*. 2012;46(2):192–200.
16. Voyer S, Cuncic C, Butler DL, et al. Investigating conditions for meaningful feedback in the context of an evidence-based feedback programme. *Med Educ*. 2016;50(9):943–954.
17. 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.
18. Sargeant JM, Mann KV, van der Vleuten CP, et al. Reflection: a link between receiving and using assessment feedback. *Adv Health Sci Educ Theory Pract*. 2009;14(3):399–410.
19. Corbin J, Strauss A. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. 3rd ed. Thousand Oaks, CA: SAGE Publications; 2007.
20. Bandura A. *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice-Hall; 1986.
21. Bowen GA. Grounded theory and sensitizing concepts. *Int J Qual Methods*. 2006;5(3):12–23.
22. Creswell J. *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. Thousand Oaks, CA: SAGE Publications; 2007.
23. Makoul G, Krupat E, Chang CH. Measuring patient views of physician communication skills: development and testing of the communication assessment tool. *Patient Educ Couns*. 2007;67(3):333–342.
24. Dine CJ, Ruffolo S, Lapin J, et al. Feasibility and validation of real-time patient evaluations of internal medicine interns' communication and professionalism skills. *J Grad Med Educ*. 2014;6(1):71–77.
25. Ivers N, Jamtvedt G, Flottorp S, et al. Audit and feedback: effects on professional practice and healthcare outcomes. *Cochrane Database Syst Rev*. 2012:(6):Cd000259.
26. Brouwers M, Rasenberg E, van Weel C, et al. Assessing patient-centered communication in teaching: a systematic review of instruments. *Med Educ*. 2017;51(11):1103–1117.
27. Denniston C, Molloy E, Nestel D, et al. Learning outcomes for communication skills across the health professions: a systematic literature review and qualitative synthesis. *BMJ Open*. 2017;7(4):e014570.

28. Overeem K, Wollersheimh HC, Arah OA, et al. Factors predicting doctors' reporting of performance change in response to multisource feedback. *BMC Med Educ*. 2012;12:52.
29. Overeem K, Lombarts MJ, Arah OA, et al. Three methods of multisource feedback compared: a plea for narrative comments and coworkers' perspectives. *Med Teach*. 2010;32(2):141–147.
30. Sargeant J, Mann K, Manos S, et al. R2C2 in action: testing an evidence-based model to facilitate feedback and coaching in residency. *J Grad Med Educ*. 2017;9(2):165–170.
31. Keister DM, Hansen SE, Dostal J. Teaching resident self-assessment through triangulation of faculty and patient feedback. *Teach Learn Med*. 2017;29(1):25–30.

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