Effects of Longitudinal Coaching on Relationships and Feedback Processes in Pediatric Subspecialty Fellowships—An Interpretive Description Study

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ABSTRACT

Background Coaching in graduate medical education provides a facilitative approach to feedback as well as opportunities for residents and fellows to engage with feedback and develop individualized improvement goals.

Objective To explore the roles and actions of successful coaches in longitudinal coaching relationships and how they enable feedback processes.

Methods Using interpretive description methodology, we performed semi-structured interviews with pediatrics fellows (n=11), faculty coaches (n=9), and program directors (n=2) from 2 pediatric subspecialty fellowship training programs at Ann and Robert H. Lurie Children's Hospital of Chicago. Both training programs had previously implemented longitudinal clinical coaching programs. Interview questions aimed to explore the roles and impacts of coaches within a longitudinal coaching program. Interviews took place in 2019 and 2020.

Results We identified 4 major actions to the coaching role in longitudinal coaching relationships: (1) establish the coach-fellow relationship; (2) prepare for the coaching conversation; (3) facilitate feedback dialogue; and (4) serve as the go-to person to raise uncomfortable issues. Additionally, nearly all participants expressed support for a longitudinal coaching program to support fellows' growth and development of personalized learning goals.

Conclusions By fulfilling these 4 key aspects to the coaching role, coaches in longitudinal relationships with coachees enable feedback processes.

Introduction

In modern medical education, educators no longer view feedback processes as one-way endeavors; they increasingly focus on how learners receive, process, and respond to feedback.[1] This transition in feedback culture poses challenges, including actively engaging learners in the process. Recent work introduced "coaching,"[2-6] using feedback to identify areas for improvement and developing specific plans to address these goals. Coaches are increasingly being used as feedback givers in medical education. Residency programs have established coach-resident dyads and incorporated formal models for reflective feedback processes, with variable success depending on coach and resident engagement, their relationship, and program culture.[5-7] Empirically derived frameworks for facilitated feedback conversations increase resident engagement in feedback processes and development of learning change plans.[5,8]

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Editor's Note: The online version of this article contains the interview guide used in the study.

In addition to feedback processes, Telio and colleagues proposed "educational alliances" to reconceptualize feedback; these alliances represent educational relationships with shared goals of performance improvement to enhance feedback uptake.[9] Further, such relationships depend on learner perceptions of credibility as clinicians, educators, and feedback providers.[10] While this link between feedback and productive longitudinal relationships exists, we require more nuanced understanding, specifically, about how coaches facilitate learning by helping coachees engage with and grow from feedback.

Recent conceptualizations of coaching draw parallels between coaching in medicine and athletics. Across domains, coaching requires mutual engagement of coaches and learners with shared orientations toward growth and development.[11] Coaching supports ongoing reflection, with openness to continuous self-improvement while using failure to catalyze learning.[11] Formal faculty-level coaching programs in surgery promote self-reflection and benchmarking, and allow coaches and coachees to become "co-learners" to improve clinical performance.[12-16] Additionally, coaching aligns with notions of psychological

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safety that enable frank dialogue between coaches and coachees as allies.[17] Coaches can balance a coaching dialogue and a teaching monologue to promote learner self-direction while ensuring progression to competence.[18] To be effective, coaches juggle several tasks: maintaining the coach-coachee relationship, preparing for coaching sessions, promoting learner self-reflection, engaging learners in a dialogue around strengths and areas for improvement, collaboratively identifying performance gaps, and developing improvement plans.[18] While this has been explored in shorter term coach-resident dyads (3-6 months), how successful coaches enable feedback processes in longitudinal coaching relationships remains insufficiently explored.

Thus, we aimed to better understand (1) how coaches help fellows engage with and grow from feedback, and (2) how longitudinal coaching relationships promote feedback processes. To achieve these aims, we explored coaches' roles and actions within longitudinal coach-fellow relationships and how these actions enable feedback processes. We hope educational leaders will use our findings to foster longitudinal coaching programs to support resident and fellow growth and development.

Objectives
This study explores coaches' roles and actions within longitudinal coach-fellow relationships and how these actions enable feedback processes.

Findings
We identified 4 major actions to the coaching role in longitudinal coaching relationships: (1) establish the coach-fellow relationship; (2) prepare for the coaching conversation; (3) facilitate feedback dialogue; and (4) serve as the go-to person to raise uncomfortable issues.

Limitations
Future studies should explore how our findings transfer to larger training programs where residents or fellows outnumber potential faculty coaches and to non-pediatric subspecialty programs.

Bottom Line
Coaches in longitudinal relationships with coachees enable feedback processes, which support resident and fellow growth and development.

Methods

Study Design

We used interpretive description methodology[19] to: (1) examine coaching, a complex medical education phenomenon, and identify themes among subjective perspectives, and (2) begin untangling the complexities of coaching in health care education, yielding practical implications for coaches within longitudinal coaching programs. Although they share an iterative approach and constant comparison, we favored interpretive description methodology over constructivist grounded theory methodology because we sought to explore the social influences of coaches in medical education and their effect on feedback processes.[20,21]

Context

Fellows and attendings in pediatric emergency medicine and pediatric cardiology at Ann & Robert H. Lurie Children's Hospital of Chicago participated in a longitudinal clinical coaching program. The coaching program aimed to enhance fellow engagement with feedback. Fellows were paired with attending physicians in their specialty for all 3 years of training. Given the potential for power differential, program directors (PDs), associate program directors (APDs), and division chiefs were ineligible to be coaches. In this way, formal evaluation of fellows was clearly separated from coaches, who focused on formative feedback and improvement goals. This program included:

- Recruiting interested clinical coaches. Coaches received no protected time or funding to serve in this role.
- Educating faculty and fellows on coaching principles, giving and receiving feedback, and facilitating feedback conversations using the R2C2 model[8] (*r*elationship building, exploring *r*eactions to feedback, exploring understanding of feedback *c*ontent, *c*oaching for change). One author (P.G.J.) facilitated these educational sessions.
- Coordinating 3-4 formal coach-fellow meetings a year, plus informal meetings, calls, and emails during and outside of clinical work.

Additionally, the training programs optimized collection of comprehensive clinical performance feedback by: (1) replacing Likert-scale milestone-based questions with descriptive narrative comments; (2) increasing feedback frequency and timeliness; and (3) increasing 360-degree feedback and incorporating regular faculty group feedback sessions.[22-25]

Participant Recruitment and Sampling

We invited all fellows (n=22), clinical coaches (n=16), and fellowship program directors (n=2) in pediatric cardiology and pediatric emergency medicine to participate in individual semi-structured interviews (TABLE). At the time of sampling, all coaches and fellows had participated in at least 3 coaching meetings.

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TABLE
Characteristics of Participating Interviewees (N=22)

Characteristic	No.
Interview group	
Fellow	11
Coach	9
Program director	2
Year of fellowship (fellows only)	
First year	3
Second year	6
Third year	2
Subspecialty training program (fellows)	
Pediatric emergency medicine	5
Pediatric cardiology	6
Subspecialty program (coaches)	
Pediatric emergency medicine	5
Pediatric cardiology	4
Subspecialty program (program directors)	
Pediatric emergency medicine	1
Pediatric cardiology	1

Although PDs, coaches, and fellows were initially invited to interview, most early interview participants were PDs and coaches. Subsequently, we used purposive sampling to increase fellow recruitment. Participation was voluntary, and participants received no compensation. We obtained informed consent from each participant.

Data Collection and Analysis

Semi-structured individual interviews took place between April 2019 and November 2020, either in-person or via videoconferencing technology. See online supplementary data for the interview guide. Interviews lasted 30 to 60 minutes and focused on coaching in general, coach-fellow relationships, a coach's role in enabling feedback processes and supporting trainee development, and perceptions of the program. Interview questions were developed based on the coaching literature and our experience as educators (P.G.J., M.E.M.) and qualitative research expertise (W.E.). We collected and analyzed data iteratively, modifying the interview guide based on our ongoing analysis. All interviews were audio-recorded, transcribed, and de-identified by the independent interviewer (A.C.).

During initial analysis, early interviews were coded line-by-line by 3 authors (P.G.J., M.E.M., W.E). We used constant comparison to create focused codes. In line with interpretive description, knowledge gained from early iterations guided future data collection and analysis. As our initial coding scheme matured, P.G.J. and M.E.M. coded remaining interviews, meeting frequently to ensure consistent coding and resolve disagreements through discussion. We met regularly to identify major themes and their interrelationships, and we specifically included A.C. in analytic discussions to ensure alignment between our analysis and her field observations from the interviews and to identify topics for greater exploration in upcoming interviews. In later stages, analytic considerations guided recruitment. A.C. reached out specifically to fellows to ensure adequate representation of this group in the data. Data collection was considered complete when our analysis achieved sufficiency.[26] Microsoft Word was used for data management, coding, and memo writing. Our processes were informed by the Standards for Reporting Qualitative Research.[27]

In interpretive description, researchers acknowledge that their backgrounds and beliefs influence their work.[19] In the spirit of reflexivity, we are pediatric subspecialty physicians with formal training in medical education. One author (W.E.) holds a PhD in medical education and has expertise in qualitative research. For P.G.J., M.E.M., and W.E., medical education shapes their perspectives and academic focus. P.G.J. and W.E. are pediatric emergency medicine physicians and M.E.M. is a pediatric cardiac intensivist. Both P.G.J. and M.E.M. are APDs for their fellowship programs. For these reasons, we prioritized confidentiality. To protect participant identity, an independent interviewer (A.C.) distributed all recruitment emails, scheduled and conducted all interviews, and oversaw processing and deidentification of interview transcripts before sharing them.

The institutional review board at Ann & Robert H. Lurie Children's Hospital of Chicago approved this study.

Results

We interviewed 22 subjects: 2 PDs, 9 faculty coaches, and 11 fellows across both fellowships and all training levels. Overall, PDs, coaches, and most fellows reported enthusiastic support for the clinical coaching program. We identified several key coach actions that promoted fellow engagement in feedback processes. Despite broad enthusiasm, in isolated examples, fellows expressed more neutral reactions, citing low yield from their participation. Due to the de-identified nature of the interviews, we lack specific details about these fellows, including training level or program. These discrepant examples provided opportunities to characterize potential barriers to successful coaching in medical education. Notably, we did not

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identify similar neutral or negative responses among coaches or PDs.

We identified 4 major coaching actions influenced by the longitudinal nature of the relationship that informed feedback processes:

1. Establish a longitudinal coach-fellow relationship
2. Prepare for the coaching conversation
3. Facilitate feedback dialogue
4. Serve as the "go-to" person to raise uncomfortable issues

We now discuss these 4 actions in detail and illustrate key findings using representative quotations. Anonymous participant codes identify these quotations from PDs, coaches, and fellows by the letters "PD," "C," and "F," respectively.

Establish a Longitudinal Relationship

Longitudinal coach-fellow relationships fundamentally shaped coaching processes. Based on our analysis, productive relationships both (1) evolved from purely professional to close and personal, and (2) continued to develop over time. One fellow referred to her coach as her "Chicago big sister" (F2). One coach described the initial relationship with their fellow as "superficial," yet becoming "close and personal" (C1).

> *I definitely think we know each other better than when we started. I'd say it's been a lot of sharing. . .the interface of professional and personal.* (C5)

The trust and established relationships between coaches and fellows also allowed coaches to advocate for and ensure growth of fellows during their training.

> *You have somebody who is on your side who will help advocate for you if. . .they have a way to boost you up even more or open another door or if things are not going well, they can help advocate for you as a faculty member, which is nice because you don't have a voice like that.* (F5)

When the relationship wasn't developed or maintained, fellows felt the coaching process lost its purpose. One fellow reported it seemed "convoluted and unnecessary" to use a "game of telephone" rather than faculty simply delivering feedback directly to them (F8). Further, coaches were perceived as go-betweens, simply taking feedback from its source and delivering it, rather than engaging the fellow in feedback processes.

Prepare for the Coaching Conversation

Coach preparation was crucial to successful coaching conversations. This preparation started with gathering multisource feedback. As part of the program, clinical divisions enhanced written and verbal feedback mechanisms to capture and provide fellows with more formative feedback. Additionally, teaching faculty could provide feedback directly to coaches during newly instituted faculty feedback meetings. Faculty also sought out a fellow's coach to provide specific real-time feedback after clinical encounters. Faculty expected that coaches would integrate this contextualized performance feedback and provide it to fellows at an appropriate time. Coaches reported "taking (feedback) from the bigger group and bringing it to fellow[s] to talk about it" (C4), while fellows benefited from coaches' preparatory work in synthesizing feedback.

> *Somebody who would actually be going through and assimilating the feedback we were getting from a million different people that was sort of coming from different roles and different rotations, helping to piece all of that together and help us interpret it and help us channel it to grow from it.* (F5)

Based on prior coaching conversations, coaches knew fellows' current goals and active areas for improvement. Armed with nuanced understanding of their fellow's feedback needs, coaches also solicited specific feedback from other clinicians to gauge progress. After synthesizing all feedback, coaches prefiltered it by consolidating and "packag[ing]" feedback through the coach's "lens" (F10), filtering out frank "opinions" (C4), choosing what to emphasize during the conversation, and determining how best to communicate the feedback.

> *Having someone to. . .look at all the feedback in aggregate and use their experience and expertise to. . .summarize. . .what they think is best for you [and]. . .your personality I think is helpful.* (F6)

When coaches failed to adequately prepare for coaching conversations, feedback was impersonal, acontextual, or lacked thematic coherence. Inadequate preparation stymied efforts to help fellows identify priority areas since feedback lacked sufficient specificity to shape improvement goals, for example, "You're doing a good job" (F12). Without specific feedback, fellows risked engaging in only limited self-

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reflection. Further, without sufficient feedback, coaches could not guide fellows to develop specific improvement goals and lacked specific areas in which to solicit further feedback during faculty group feedback meetings for upcoming coaching conversations, fueling a cycle of low-yield coaching meetings.

Facilitate Feedback Dialogue

Longitudinal coaching relationships helped coaches gain individualized understanding of fellows' personalities, feedback preferences and reactions to feedback, perceived strengths and areas needing improvement, and potential outside stressors. This fellow-specific knowledge inform coaches' abilities to communicate feedback, help fellows understand and process feedback, and guide them to develop individualized goals.

1. Communicate Feedback: Coaches familiar with their fellows' personalities and current life situations reported assuming a softer tone to buffer challenging feedback when the fellows were experiencing difficult personal situations. At other times, coaches provided feedback more directly. In both circumstances, because of the established educational alliances characterized by deep trust, coaches were well-positioned to help fellows view constructive feedback with a growth mindset, rather than as punitive. One fellow noted:

> *The way that [they] give feedback…[the coach] interprets it through their point of view and so even if it might be a negative thing or something to work on, it doesn't feel like I did something poorly. There's still a positive spin or there's room for growth here…the way that it's delivered is a way that doesn't make me feel bad about it and I think truly is actually helpful for growth.* (F10)

Similarly, one coach observed:

> *I found it was a real challenge for me to make sure that I said it in a way that she could comprehend it and take it in but not get…so emotionally upset…that it was devastating to her.* (C9)

2. Separate Coaching From Evaluation: Fellows, coaches, and PDs reported an additional advantage—since coaching disentangled formative feedback from summative assessment or evaluation, fellows viewed feedback as for their growth and benefit, allowing coaches to point out areas not meeting expectations. Fellows reported viewing PDs with more reserve given clear power differentials and potential "leverage over you" (C4), leading to fellow perceptions that PDs were "always judging you a little bit" (F4). One PD noted:

> *Sometimes the program director...was a little formal, it's scary when the program director is telling you you're not up to par, and so we've used the coach as the first line of offense.* (PD2)

3. Guide Fellows to Develop Individualized Goals With Plans: Finally, coaches supported fellows to develop individualized goals with concrete plans because they were familiar with the fellows' developmental trajectory. These goals and improvement plans were fellow-driven and collaboratively developed; fellows controlled which areas they felt would benefit from their focused energies. Further, successful coaches encouraged fellows to modify their future performance in ways that remained true to individual personalities and preferences while still improving their overall professional capabilities.

> *Not telling me* ***how to develop*** *but guiding me to figure out* ***how I want to develop****, which I think is, really, it's an art [emphasis added].* (F3)

In the absence of constructive feedback, successful coaches promoted fellow self-reflection and led them to identify areas or skills in which they hoped to improve. When fellows were not pushed to develop improvement goals, coaching conversations became less impactful.

> *There hasn't been any point where we had to come up with a plan to get better at something. Do you know what I mean? Or if it was like deficiency and we had to say, 'What are we going to do about this?'* (F12)

After coaching conversations, fellows implemented their improvement plans in clinical practice, which informed subsequent feedback. Based on their longitudinal coaching relationships, coaches were ideally positioned to follow up with fellows to identify successes and struggles for future coaching conversations.

Serve as the Go-To Person to Raise Uncomfortable Issues

We identified one additional important coach action—serve as the go-to person to discuss uncomfortable issues. While mostly focused on clinical

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strengths, areas for improvement, and career guidance, some coaching conversations needed to touch on difficult personal behaviors or other professionalism concerns. Coaches and PDs reported that faculty were often aware of potentially sensitive issues, but few felt comfortable broaching such topics, such as "tics, eye contact, verbal, inappropriate comments" (PD2). However, once trusting coaching relationships were established, program leadership and other faculty relied on coaches to communicate difficult personal feedback to fellows. Coaches could follow up on professionalism issues through formal and specifically solicited feedback. Further, coaches could facilitate fellow self-reflection and efforts toward improvement. Without coaches identified as the go-to people for these difficult conversations, fellows risked unknowingly continuing behaviors that prevented them from presenting themselves in their best light.

> *My thought process around it was how to deliver. . .very personal commentary without making her feel bad or like you're the only one who had ever done this, and you know that. . .was a little challenging but I think she trusted me. . .I think the behaviors that we were working on have almost ceased.* (C2)

This unexpected but not altogether surprising role of coaches highlights the vital role of trusting relationships in "making the undiscussable discussable."[28]

Discussion

Based on our findings, coaches in longitudinal relationships with fellows (1) establish and maintain longitudinal coaching relationships; (2) dedicate time to prepare for coaching conversations; (3) facilitate feedback dialogues; and (4) serve as the go-to person to deliver uncomfortable feedback. Our work also illustrates that suboptimal relationships, inadequate coach preparation, unspecific feedback, and lack of guidance toward personalized improvement goals severely hinders the coaching process. Our data shed little light on why, in some cases, the coach-fellow relationship failed to develop or be maintained. We hypothesize that this may result if individuals in particular dyads have mismatched personalities or if either the coach or the fellow is not sufficiently invested and engaged in the coaching process.

Our study both replicates and extends key findings in the current coaching literature in several ways. Prior work developed and refined constructs and definitions for coaching, including (1) a focus on relationships and mutual engagement between coaches and learners, with a shared orientation toward growth and development; (2) ongoing reflection of coaches and learners; (3) learner assessments and action plans that embrace failure as a catalyst for learning; and (4) assessment of results and modification of learning goals accordingly.[11,29] Our empiric study, based on a qualitative evaluation of our own coaching program, demonstrates that these key elements of a contemporary coaching definition hold up in educational practice. While Armson et al[18] applied these constructs within short-term coaching relationships, we add insights on the additional impact of longitudinal relationships on coaching to enhance feedback processes. As opposed to shorter term dyads, coaches and fellows in our study had been paired for 1 to 3 years, which allowed coaches to take on various roles for which they may not have otherwise been optimally positioned. We also provide a further example of successful application of the R2C2 model[8] for facilitated feedback conversations.

Coaching should ideally help residents and fellows achieve their personal best, making active engagement paramount. Building on work by Telio et al, we demonstrate that longitudinal educational alliances[9] between coaches and fellows contribute to this goal. Coaches gather, filter, and synthesize feedback in preparation for the coaching conversation as well as communicate personalized feedback and engage fellows in feedback processes in unique ways. Additionally, after feedback conversations, coaches are ideally positioned to follow up with fellows to gauge performance improvement. Finally, longitudinal relationships led to mutual trust, fostering the psychological safety necessary for fellows' deep engagement with feedback, including sharing concerns, insecurities, and potential areas of weakness, and being willing to accept and learn from constructive feedback.[17]

Limitations of this study include participants being from a single pediatric hospital and exclusively fellows in pediatric subspeciality programs. It remains unclear how coach-trainee relationships form and function in medical students, residents, and fellows in other departments or specialty cultures. Fortunately, we had enough interested and talented coaches to support one-to-one coach-fellow pairings. Future study should explore how our findings transfer to larger training programs where residents or fellows outnumber potential faculty coaches. Further research may also identify selection criteria to help determine which faculty members may have more successful coaching relationships than others.

We also recognize that our definition of "coach" may differ from those who view a coach in the

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traditional sense as someone who specifically avoids giving advice or feedback, and instead supports the learner in developing their own path for improvement by asking questions that allow for self-reflection. In our view, coaches not only synthesize and deliver feedback from others but also provide their own feedback. While coaches guide the fellows in self-reflection and development of improvement goals, they may also directly observe fellows, advocate for them, and provide career guidance. In this way, while coach-fellow relationships are largely coachee-driven, it does differ from the traditional definition of "coach."

Of note, 2 authors (P.G.J., M.E.M.) are APDs of their fellowship programs and P.G.J. was responsible for faculty development of coaches. By using an external interviewer (A.C.), we maintained anonymity and confidentiality of interviewees as the other 3 authors remained blinded to participants' identities. Still, we acknowledge that some fellows and coaches may have hesitated either to participate in an interview or truthfully share their impressions due to concerns of being identified based on their responses.

Conclusions

Faculty coaches in longitudinal coaching programs perform 4 major actions that enable feedback processes: (1) establish the coach-trainee relationship; (2) prepare for coaching conversations; (3) facilitate feedback dialogue; and (4) serve as the go-to person to raise uncomfortable issues.

References

1. Atkinson A, Watling CJ, Brand PLP. Feedback and coaching. *Eur J Pediatr*. 2022;181(2):441-446. doi:10.1007/s00431-021-04118-8
2. Lovell B. What do we know about coaching in medical education? A literature review. *Med Educ*. 2018;52(4):376-390. doi:10.1111/medu.13482
3. Graddy R, Reynolds SS, Wright SM. Longitudinal resident coaching in the outpatient setting: a novel intervention to improve ambulatory consultation skills. *Perspect Med Educ*. 2020;9(3):186-190. doi:10.1007/s40037-020-00573-5
4. Graddy R, Wright S. On the value of coaching in medicine. *Acad Med*. 2016;91(8):1037. doi:10.1097/ACM.0000000000001270
5. Sargeant J, Lockyer JM, Mann K, et al. The R2C2 model in residency education: how does it foster coaching and promote feedback use? *Acad Med*. 2018;93(7):1055-1063. doi:10.1097/ACM.0000000000002131
6. 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. doi:10.4300/JGME-D-16-00398.1
7. Rassbach CE, Blankenburg R. A novel pediatric residency coaching program: outcomes after one year. *Acad Med*. 2018;93(3):430-434. doi:10.1097/ACM.0000000000001825
8. Sargeant J, Lockyer J, Mann K, et al. Facilitated reflective performance feedback: developing an evidence- and theory-based model that builds relationship, explores reactions and content, and coaches for performance change (R2C2). *Acad Med*. 2015;90(12):1698-1706. doi:10.1097/ACM.0000000000000809
9. 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. doi:10.1097/ACM.0000000000000560
10. Telio S, Regehr G, Ajjawi R. Feedback and the educational alliance: examining credibility judgements and their consequences. *Med Educ*. 2016;50(9):933-942. doi:10.1111/medu.13063
11. Watling CJ, LaDonna KA. Where philosophy meets culture: exploring how coaches conceptualise their roles. *Med Educ*. 2019;53(5):467-476. doi:10.1111/medu.13799
12. Birkmeyer JD, Finks JF, O'Reilly A, et al. Surgical skill and complication rates after bariatric surgery. *N Engl J Med*. 2013;369(15):1434-1442. doi:10.1056/NEJMsa1300625
13. Kreutzer L, Hu YY, Stulberg J, Greenberg CC, Bilimoria KY, Johnson JK. Formative evaluation of a peer video-based coaching initiative. *J Surg Res*. 2021;257:169-177. doi:10.1016/j.jss.2020.07.048
14. Stulberg JJ, Huang R, Kreutzer L, et al. Association between surgeon technical skills and patient outcomes. *JAMA Surg*. 2020;155(10):960-968. doi:10.1001/jamasurg.2020.3007
15. Greenberg CC, Ghousseini HN, Pavuluri Quamme SR, Beasley HL, Wiegmann DA. Surgical coaching for individual performance improvement. *Ann Surg*. 2015;261(1):32-34. doi:10.1097/SLA.0000000000000776
16. Shubeck SP, Kanters AE, Sandhu G, Greenberg CC, Dimick JB. Dynamics within peer-to-peer surgical coaching relationships: early evidence from the Michigan Bariatric Surgical Collaborative. *Surgery*. 2018;164(2):185-188. doi:10.1016/j.surg.2018.03.009
17. Johnson CE, Keating JL, Molloy EK. Psychological safety in feedback: what does it look like and how can educators work with learners to foster it? *Med Educ*. 2020;54(6):559-570. doi:10.1111/medu.14154
18. Armson H, Lockyer JM, Zetkulic M, Konings KD, Sargeant J. Identifying coaching skills to improve

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feedback use in postgraduate medical education. *Med Educ*. 2019;53(5):477-493. doi:10.1111/medu.13818
19. Thompson Burdine J, Thorne S, Sandhu G. Interpretive description: a flexible qualitative methodology for medical education research. *Med Educ*. 2021;55(3):336-343. doi:10.1111/medu.14380
20. Watling CJ, Lingard L. Grounded theory in medical education research: AMEE Guide No. 70. *Med Teach*. 2012;34(10):850-861. doi:10.3109/0142159X.2012.704439
21. Eppich WJ, Olmos-Vega FM, Watling CJ. Grounded Theory Methodology: Key Principles. In: Nestel D, Hui J, Kunkler K, Scerbo MW, Calhon AW, eds. *Healthcare Simulation Research*. Berlin, Germany: Springer International Publishing; 2019:127-133.
22. Hodges B. Assessment in the post-psychometric era: learning to love the subjective and collective. *Med Teach*. 2013;35(7):564-568. doi:10.3109/0142159X.2013.789134
23. Hemmer PA, Hawkins R, Jackson JL, Pangaro LN. Assessing how well three evaluation methods detect deficiencies in medical students' professionalism in two settings of an internal medicine clerkship. *Acad Med*. 2000;75(2):167-173. doi:10.1097/00001888-200002000-00016
24. Schwind CJ, Williams RG, Boehler ML, Dunnington GL. Do individual attendings' post-rotation performance ratings detect residents' clinical performance deficiencies? *Acad Med*. 2004;79(5):453-457. doi:10.1097/00001888-200405000-00016
25. Thomas MR, Beckman TJ, Mauck KF, Cha SS, Thomas KG. Group assessments of resident physicians improve reliability and decrease halo error. *J Gen Intern Med*. 2011;26(7):759-764. doi:10.1007/s11606-011-1670-4
26. Varpio L, Ajjawi R, Monrouxe LV, O'Brien BC, Rees CE. Shedding the cobra effect: problematising thematic emergence, triangulation, saturation and member checking. *Med Educ*. 2017;51(1):40-50. doi:10.1111/medu.13124
27. O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. Standards for reporting qualitative research: a synthesis of recommendations. *Acad Med*. 2014;89(9):1245-1251. doi:10.1097/ACM.0000000000000388
28. Argyris C. Making the undiscussable and its undiscussability discussable. *Public Admin Rev*. 1980;40(3):205-213. doi:10.2307/975372
29. Deiorio NM, Carney PA, Kahl LE, Bonura EM, Juve AM. Coaching: a new model for academic and career achievement. *Med Educ Online*. 2016;21:33480. doi:10.3402/meo.v21.33480

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