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Dynamics Within Peer-to-Peer Surgical Coaching Relationships: Early Evidence from the Michigan Bariatric Surgical Collaborative

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Abstract

Background: Many coaching methods have been well studied and formalized, but the approach most commonly used in the continuing education of surgeons is peer coaching. Through a qualitative thematic analysis, we sought to determine if surgeons can comfortably and effectively transition to a co-learner dynamic for effective peer coaching.

Methods: This qualitative study evaluated 20 surgeons participating in a video review coaching exercise in October 2015. Each conversation was coded by two authors focusing on the dynamics of the coach and coachee relationship. Once coded, thematic analysis was performed.

Results: Two themes emerged in our analysis: (1) Participants often alternated between the roles of coach and coachee, even though they received assigned roles prior to the start of the session. For example, a coach would defer to the coachee, suggesting they felt unqualified to teach a particular technique or procedure. (2) The interactions demonstrated bidirectional exchange of ideas with both participants offering expertise when appropriate. For example, the coach and coachee frequently engaged in back and forth discussion about techniques, instrument selection, and intraoperative decision-making.

Conclusions: Our qualitative analysis demonstrates that surgeons naturally and effectively assume co-learner roles when participating in an early surgical coaching experience.

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Introduction

The practice of surgery relies on a traditionally hierarchical approach to training. Upon completion of their surgical education, the attending surgeon transitions from the role of the “learner” to that of “expert” when directing the care of patients, leading teams in the operating room, and teaching surgical trainees and medical students [1]. Once in practice, surgeons rarely encounter opportunities for “peer learning” as most continuing education opportunities rely on self-directed learning, attendance at conferences, and simulation based training [2].

Surgical coaching has emerged as a potential mechanism for continued performance improvement and development of new techniques for surgeons in practice [3]. While there are many coaching methods that have been well studied and formalized across professional disciplines, peer coaching is commonly used in the medical setting [4]. In peer coaching models, practicing surgeons are tasked with stepping out of their typical hierarchical roles in order to function as co-learners with other practicing surgeons [5]. This deviation from their traditional “expert” role requires an additional shift in mindset and prioritization of self-directed goals, openness to feedback, and goal setting [5].

With the goal of informing future surgical coaching program design and structure, we evaluated early peer coaching conversations between practicing bariatric surgeons in the Michigan Bariatric Surgery Collaborative. Through a qualitative thematic analysis, we sought to determine if practicing surgeons could comfortably and effectively transition to a co-learner dynamic in order to engage in effective peer coaching.

Methods

We sought to evaluate the content, structure, and flow of coaching exchanges between bariatric surgeons participating in the Michigan Bariatric Surgical Collaborative (MBSC). MBSC is a statewide quality improvement initiative funded by Blue Cross and Blue Shield of Michigan [6, 7]. In 2015, a surgical peer coaching program was introduced within the organization as a step towards continued improvement in surgical skill. This program involved regular video based coaching sessions focusing on key components of laparoscopic bariatric and metabolic surgical procedures.

For the MBSC Coaching Program, participating surgeons were assigned to either the “coach” or “coachee” role prior to the first session. Coaches were identified as the top performing 15 surgeons in the MBSC as determined by their risk-adjusted outcomes for the prior 2 years. All 15 surgeons invited to serve as coaches agreed to participate. Prior to engaging in the coaching exercises with coachee surgeons, the coaches received their first of several formal training sessions in peer coaching. This training emphasized coaching activities such as goal setting, guiding inquiry, constructive feedback, and facilitation of action planning [8]. The coaches were then partnered with a coachee surgeon that was identified from the other members of the MBSC. These coaching relationships were intended to be ongoing with continuity in subsequent sessions.

The coach and coachee met during a designated coaching sessions at the quarterly MBSC meetings for a total of 2 years. At each session, the coachee brought a video of a recent operation (sleeve gastrectomy, gastric bypass, or revision procedure) that was then reviewed to serve as the substrate for the coaching interaction.

Data Collection

Data was collected from the first video coaching sessions that took place at the MBSC meeting in October 2015. This meeting was the first in a series of several coaching sessions between the partnered coaches and coachees.

We evaluated 10 transcripts from the first formal coaching session based on videos of laparoscopic bariatric procedures provided by the coachee. These transcripts reflected the ten pairs of bariatric surgeons serving in the roles of coach and coachee. Aside from the instruction provided to the assigned coaches in peer coaching and the activities of coaching, the content of the dialogue was not specifically directed.

To avoid identification of participants and surgeons in MBSC, no demographic information was collected from participants. All conversations were transcribed and de-identified in order to preserve anonymity.

Data Analysis

In this phenomenological study, we employed thematic analysis in our evaluation of the transcripts. Two authors (SS and AK) read each transcript independently and used inductive reasoning to identify emerging themes. These authors separately performed line-by-line coding and then met after reviewing the first two transcripts to develop a codebook that would be used for the remainder of the analysis. This codebook served as a compilation of emerging themes that specifically focused on the content, structure, and flow of the conversations that was used in the analysis of the remaining transcripts.

The authors then met regularly to iteratively compare and reach coding consensus on the remaining transcripts. As new themes emerged that were not previously identified, the authors revisited transcripts earlier in the analysis and amended the original codebook. This process was performed to ensure consistency in thematic analysis. Any disagreements were discussed and resolved with the input of an additional author (JD).

Qualitative analyses were performed using NVivo 11 (QSR International Pty Ltd., 2017). This study was approved by the University of Michigan Institutional Review Board and informed consent was obtained from all surgeon participants.

Results

Two major related themes (Table 1) emerged in the analysis of the coaching conversations:

Theme 1: Alternating Roles: Structure of coaching sessions

Theme 2: Bidirectional Feedback: Process of coaching and feedback

These themes demonstrate that the participating surgeons were comfortable shifting from traditional hierarchical training dynamics to co-learners when engaging in peer coaching, but that they did not often set goals and develop action plans during the sessions.

Theme 1: Alternating Roles

In this coaching experience, the participants were designated to the role of coach or coachee based on their performance outcomes measured by MBSC. However, thematic analysis of the transcripts revealed that participants regularly rarely adhered to their predetermined roles thus altering the planned structure of the coaching experiences. The participants often traded roles throughout the conversations and specifically acknowledged this transition.

There were two key situations where this was noted: (1) when the coach asked the coachee to formally “teach” or “demonstrate” a particular skill or (2) when the coach self-identified an area of weakness where they felt unqualified to coach.

The conversations revealed that a coach recognized a particular strength in the technique or judgement of the coachee when the coach requested specific teaching or instruction. The coaches generally requested video examples of other surgical procedures, techniques, or equipment usage that reflected the expertise of their coaching partner. In the following instance, the coach appreciated a gap in their knowledge while recognizing that the coachee was more equipped to provide education.

For example:

“Coach: Very nice. Do you have a video with a hiatal hernia repair?”

Coachee No, I don’t think so.

Coach: Maybe make one the next time going forward.

Coachee I’ll make one next time. Okay.

Coach: I mean I’d be interested in seeing how you do it.

Coachee: Okay. Okay.

Coach: You can teach me.”

Dialogues that acknowledged an area where a coach lacked expertise were most commonly about rare or complex patient scenarios that were not reflected in the example videos presented by the coachee.

For example:

“Coachee: Yeah, the same kind of thing. You know, if I’m really concerned, then you may just go to a gastric bypass with an esophageal J, you know, or something. I don’t know. Have you ever had to do like an esophageal Jejunostomy for like revisions and those kind of things?”

Coach: Sure. Teach me how to do that. I haven’t done that. I’ve done it for cancer but not for a benign disease, I guess.”

Theme 2: Bidirectional Feedback

The second major theme identified in this qualitative analysis of early coaching conversations was that there was very limited direct feedback, but rather a bidirectional exchange of ideas. This demonstrates the natural transition from a potentially hierarchical setting of a coach and coachee to a flat structure allowed for expansion of clinical discussions.

This bidirectional exchange tended to emerge when the participants were discussing particularly challenging clinical scenarios. In these instances, each participant contributes their individual expertise to the discussion, often debating how to best manage difficult patient cases.

In the following example, the coach and coachee begin by discussing when they have had to abort a procedure.

“Coachee: Well, yeah. My thinking, too, is that, what if something happens where surgery has to be aborted?”

Coach: Oh, yeah. Yeah, yeah, yeah. Yeah, yeah. That’s fair. That’s a good point. A very good point, actually. I guess I’ve never thought about that. Have you ever had to abort an operation?”

This bidirectional exchange was also common in discussing postoperative complications, such as postoperative hemorrhage in the following example.

“Coach: Or early morning bleed, next day bleed. I’ve always wondered, does going slow make a difference, going fast? It’ll be interesting to pull people and say do you go slow or fast and how often do you see these late night bleeds? I don’t know the answer to that.

Coachee: I figured out how to make them go away. I’ll show you. What I do, you see how you get this scar here on that, that’s the gastroepiploic arcade. When I get done, I’ll run with a Stratafix from top to bottom and those lower ones, that’s where it’s bleeding down here

Coach: That stapling?

Coachee: Yeah, every two centimeters, take a stitch.

Coach So you’re over-sewing the lower stapling as well down here.”

By transitioning to a conversational, bidirectional exchange of ideas rather than a traditional hierarchical coaching model, both participants learn from one another. The surgeons each brought a unique perspective to the session and shared their experiences thereby affording each other the opportunity to learn from the coaching interaction.

Discussion

Our qualitative thematic analysis demonstrates that practicing surgeons effectively transition to a co-learner dynamic in early coaching conversations among bariatric surgeons in the Michigan Bariatric Surgery Collaborative. The surgeon participants were quick to recognize

their partners' technical and clinical skill during these video review coaching exchanges and eagerly sought to learn from one another's areas of expertise. This transition to bidirectional feedback afforded both participants significant opportunities for professional development.

Surgical coaching has become a valuable tool in the ongoing professional development of practicing surgeons and the structure of these interactions should be continually refined to best meet the needs of participants [9]. Surgeons can be experts in a variety of domains as a result of unique educational opportunities encountered in medical school, residency and fellowship training, and their current practice environment. In our analysis, we found participants to be willing and eager to learn from one another as peers by comparing experiences, surgical techniques, and clinical decision-making in caring for bariatric surgery patients.

This analysis should be interpreted in the context of the following limitations. First, this study was limited to data from 10 coaching conversations between 20 volunteer bariatric surgeons in the MBSC. While there were not enough participants to allow for collection of demographic data and still preserve anonymity, this series is one of the largest surgical coaching programs with data available for analysis. Second, only bariatric surgeons participated in this video coaching experience, so the results of our analysis may not directly translate outside of bariatric or laparoscopic surgery. Finally, we used the first coaching session transcripts for our analysis to determine the ability and comfort of surgeons in moving out of their natural hierarchical teaching structure in order to engage with a peer coaching format, but this also limited the coaches' exposure to the formal peer coaching instruction. In this first coaching session, we found the participants did not often use goal setting, guiding inquiry, constructive feedback, and facilitation of action planning in this coaching experience, but we plan to evaluate the later coaching sessions to determine the uptake and use of these coaching tools after additional peer coaching training.

Our qualitative analysis demonstrates that the participating surgeons naturally and effectively assumed co-learner roles in this early coaching experience. While further training in the activities of coaching may help structure video review conversations, this analysis suggests that deliberate peer-coaching with surgeons acting as co-learners should remain a key component of future coaching programs.

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Table 1.

Themes Identified

Theme	Explanation	Representative Quotes
Alternating Roles: Structure of conversations	(1) The coach asked the coachee to formally “teach” a particular skill.	<p>Coach: Very nice. Do you have a video with a hiatal hernia repair?</p> <p>Coachee No. I don't think so.</p> <p>Coach: Maybe make one the next time going forward.</p> <p>Coachee I'll make one next time. Okay.</p> <p>Coach: I mean I'd be interested in seeing how you do it.</p> <p>Coachee: Okay. Okay.</p> <p>Coach: You can teach me.</p>
Bidirectional Feedback: Process of coaching and feedback	(2) The coach self-identified an area of weakness where they felt unqualified to coach. There was very limited direct feedback, but rather often a bidirectional and conversational exchange of ideas.	<p>Coachee: Yeah, the same kind of thing. You know, if I'm really concerned, then you may just go to a gastric bypass with an esophageal J, you know, or something. I don't know. Have you ever had to do like an esophageal Jejunostomy for like revisions and those kind of things?</p> <p>Coach: Sure. Teach me how to do that. I haven't done that. I've done it for cancer but not for a benign disease, I guess.</p> <p>Coachee: Well, yeah. My thinking, too, is that what if something happens where surgery has to be aborted?</p> <p>Coach: Oh, yeah. Yeah, yeah, yeah. Yeah, yeah. That's fair. That's a good point. A very good point, actually. I guess I've never thought about that. Have you ever had to abort an operation?</p> <p>Coach: Or early morning bleed, next day bleed. I've always wondered, does going slow make a difference, going fast? It'll be interesting to pull people and say do you go slow or fast and how often do you see these late night bleeds? I don't know the answer to that.</p> <p>Coachee: I figured out how to make them go away. I'll show you. What I do, you see how you get this scar here on that, that's the gastroepiploic arcade. When I get done, I'll run with a Stratifix from top to bottom and those lower ones, that's where it's bleeding down here</p> <p>Coach: That stapling?</p> <p>Coachee: Yeah, every two centimeters, take a stitch. 168 Coach So you're over-sewing the lower stapling as well down here.”</p>