Where philosophy meets culture: exploring how coaches conceptualise their roles

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CONTEXT Although conceptually attractive, coaching in medicine remains ill-defined, with little examination of the transferability of coaching principles from other fields. Here we explore how coaching is enacted both within and outside of medicine; we aim to understand both the elements required for coaching to be useful and the factors that may influence its translation to the medical education context.

METHODS In this constructivist grounded theory study, we interviewed 24 individuals across three groups: physicians who consider themselves coaches in clinical learning settings (n = 8), physicians with experience as sports, arts or business coaches (n = 10), and sports coaches without medical backgrounds (n = 6). Data collection and analysis were conducted iteratively using constant comparison to identify themes and explore their relationships.

RESULTS We identified a shared philosophy of coaching, comprising three core elements that our participants endorsed regardless of the coaching context: (i) mutual engagement, with a shared orientation towards growth and development; (ii) ongoing reflection involving both learners and coaches, and (iii) an embrace of failure as a catalyst for learning. Enacting these features appeared to be influenced by culture, which affected how coaching was defined and developed, how the coaching role was positioned within the learning context, and how comfortably vulnerability could be expressed. Participants struggled to clearly define the coaching role in medicine, instead acknowledging that the lines between educational roles were often blurred. Further, the embrace of failure appeared challenging in medicine, where showing vulnerability was perceived as difficult for both learners and teachers.

CONCLUSIONS Medical education's embrace of coaching should be informed by an understanding of both coach and learner behaviours that need to be encouraged and trained, and the cultural and organisational supports that are required to foster success.

Medical Education 2019: 53: 467–476
doi: 10.1111/medu.13799

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INTRODUCTION

The idea of coaching is gaining traction in medical education, but how we best realise the potential of the idea remains muddy. Coaching's surging popularity in medical education may be grounded, in part, in the extent to which it just seems to make intuitive sense. Spurred on by comparisons to the worlds of sports, music and executive coaching,[1–3] medical educators have begun embracing the idea that coaching may effectively foster learning. Coaching has been touted as a necessary facilitator of competency-based medical education approaches[4,5] and, perhaps, as a necessary counterweight to the frequent assessments that such approaches require.[6] Certifying bodies, such as the Royal College of Physicians and Surgeons of Canada, have begun to champion coaching, producing educational materials to facilitate its uptake.[7] But does coaching risk becoming a runaway train? If we embrace coaching uncritically, we may find that it fails to serve our distinct educational needs as effectively as we may hope.

A growing literature suggests that coaching approaches may be valuable in certain domains of medical education. Several investigations of the impact of coaching in surgical education have yielded promising results, with coaching interventions demonstrating improvements in both technical and non-technical skills.[8–11] Lovell's recent review of coaching in medical education revealed good quality data showing that coaching improves technical skills acquisition, reduces surgical error, improves examination scores and identifies struggling students.[2] But as published work explores what coaching *does*, it has not tended to illuminate what coaching *is* in medical education. Lovell, in fact, noted that a review of coaching in medical education was particularly challenging because of definitional fuzziness; the term coaching was often used interchangeably with teaching and mentoring.[2]

Coaching's unclear relationship with feedback complicates matters further. Although feedback tends to be positioned as central to effective medical education, many have decried the profession's failure to deliver feedback of sufficient quality to consistently promote performance improvement.[12–14] Medicine's chronic frustration with the state of its feedback practices may contribute to coaching's new-found popularity. But in fact, some contemporary models of feedback explicitly emphasise relationship, honest conversation and learner safety in efforts to overcome some of the feedback challenges and render it more useful to learners.[15,16] What remains unclear is exactly what coaching approaches are expected to add, and how – or whether – coaching differs from feedback performed with care.

Ideas of coaching imported from other domains may offer inspiration for medicine's use of coaching, but may not provide a strong theoretical foundation. Although the sports coaching literature is extensive, it has been critiqued for offering a limited empirical basis for the approaches it endorses.[17,18] Similarly, the field of executive coaching has been plagued by a lack of theoretical research, even as the business of executive coaching has exploded.[19] Despite these limitations, a few overarching principles of coaching have emerged. Coaching, whether for athletes or executives, focuses on learning, performance improvement and personal growth.[20] Increasingly, however, researchers are viewing coaching as a social practice that cannot be understood adequately without reference to the culture and environment in which it is situated.[20,21] Whereas lessons from other fields are instructive, we must aim to understand coaching within the distinct professional culture of medicine.

A limited literature has, in fact, sounded notes of caution about the challenges of grafting coaching onto current medical education approaches. Mutabdzic identified cultural barriers to adopting coaching strategies in medicine, including the pressure for doctors to portray competency and the value doctors place on autonomy.[22] Research on direct observation and feedback in medical education (pedagogical strategies that feature prominently in coaching) has further highlighted the importance of professional culture. Direct observation is embraced as valuable by learners, but its use challenges two core cultural values in medicine: efficiency and autonomy.[23] As a result, teachers and learners alike may harbour ambivalence about direct observation that compromises efforts to bolster the frequency of its use.[23–26] Research on feedback has demonstrated that although feedback needs to be credible and constructive to be viewed as useful by learners, the very definitions of credible and constructive are culturally influenced; credible feedback in music and credible feedback in medicine may not be the same.[27]

These notes of caution demand careful attention. Because medical education is importing notions of coaching from other domains (e.g. music and sports) we need to consider our cultural receptivity to the philosophies and practices that characterise coaching. The way that pedagogical practices unfold is strongly influenced by culture and context. As Shulman has pointed out, 'signature pedagogies' have evolved within professions.[28] These characteristic and sometimes singular approaches to teaching and learning tend to resist change because they are deeply rooted in culture.[28] Although explorations of pedagogical approaches from other professions can provide fodder for refreshing our own signature pedagogy, these other approaches cannot simply be adopted wholesale.

In this study, we seek to both understand what coaching *is* and to appreciate the challenges of importing its principles to medical education. We ask how coaches conceptualise their roles, aiming to understand the fundamental features of the role of coach that may transcend context or setting. We also explore factors, including professional culture, that may influence the translation of coaching approaches to the medical education context.

METHODS

Because coaching is opaquely defined and under-theorised in medical education, we used constructivist grounded theory,[29] a qualitative research methodology useful for producing robust theoretical insights about poorly understood concepts or processes, to better understand both what coaching means in medicine and the cultural influences that may impact its uptake in training. Our approach involved exploring the experiences of individuals with a variety of professional and coaching experiences both within and outside of medicine. Specifically, we e-mailed all physicians (n = ~1000) at one Canadian academic institution and invited those who either identified as clinician teachers *and* sports, arts or professional coaches, or who had an interest in medical coaching but no direct coaching experience, to participate. As clinicians with specific experience and training in coaching outside of medicine are relatively uncommon, we enlarged our participant pool by purposefully sampling clinician teacher colleagues at other institutions known to have coaching experience. Finally, to understand both how coaching unfolds in other domains and whether its elements might translate readily to health professions training, we sent an e-mail invitation to sports coaches at one Canadian university. We chose to sample university-level sports coaches because sport is likely to be the domain that has the metaphors that are most often invoked in discussing coaching in medicine, and because we had access to a wide range of such coaches at our institution.

A total of 24 individuals consented (21 from our institution and three from outside); the sample included 10 clinician teachers who identified as coaches outside of medicine, eight clinician teachers with an interest in coaching but no direct coaching experience outside of medicine, and six university sports coaches. Clinician teacher participants represented a variety of career stages and specialties (surgical and non-surgical); similarly, some university coach participants were novices whereas others had more than 30 years of coaching experience. Amongst clinician teachers with coaching experiences outside of medicine, most (eight) coached recreational or competitive sports for youth, adults or both; also included in this group were one clinician teacher with experience coaching music and another with experience as an executive coach. As we aimed to explore rather than erase the conceptual ambiguity inherent in the coaching role, we allowed clinician participants to self-identify as coaches; clinicians did not require explicit named roles as medical 'coaches' to participate.

Data collection and analysis

Data collection and analysis occurred iteratively during three stages of initial, focused and theoretical exploration. We conducted semi-structured interviews lasting 30–75 minutes with participants; all interviews were audiorecorded and transcribed verbatim. Of note, two participants coaching the same university sport asked to be interviewed together. We asked participants to describe their experiences as coaches, to relate experiences in which they felt successful as coaches and reflect on why, to discuss their motivation for coaching, and to articulate principles that guided their coaching approach. For those participants with experience coaching both in medicine and in another domain, we asked them to compare the experiences and to reflect on any challenges they encountered in bringing coaching approaches into the medical education realm. As is customary in grounded theory research, our approach to interviews evolved as the study progressed, responsive to our concurrent data analysis.[29]

CJW and KALD independently read the first two transcripts to develop initial codes based on participants' descriptions and experiences. These initial codes were then consolidated into focused codes, which KALD and a research associate used to code a subset of transcripts. As analysis progressed, CJW and KALD drafted memos about their interpretations and met regularly to move their analysis from the descriptive to the theoretical. That is, we used constant comparative analysis to identify patterns amongst preliminary themes such as definitions of coaching, coaching philosophies, barriers and facilitators to coaching in medicine, and similarities and differences between coaching in medicine and other domains. We also engaged in reflexivity,[30] not only to develop theoretical categories or 'storylines' based on these themes, but also to ensure the rigour and trustworthiness of our inquiry.[31]

As constructivists, we recognise that our experiences and interests shape not only the questions we ask, but also how we interpret participants' experiences. CJW is both an education researcher and an education leader with administrative responsibility for residency training. He identifies as a clinical teacher and as a mentor, but not explicitly as a coach. He has significant musical training. KALD is a scientist with an interest in exploring opportunities to optimise medical training by engaging multiple perspectives, including non-physicians, in teaching and assessment. She identifies as a teacher and as a research supervisor, but not as a mentor or a coach. Both authors (CJW and KALD) are avid sports fans and active participants in recreational sports. Throughout the research process, we reflected on how our interests in, and knowledge about, team and individual sports influenced our analysis. We considered whether our data reinforced or upended our assumptions about coaching and engaged in regular discussions with each other about our evolving perspectives. For example, we were surprised by sports coaches' stronger emphasis on the development of their athletes as people than on their athletic success. Reflecting on how these data challenged our assumptions about sports coaching led us to wonder how such a holistic, learner-centred approach would fit in a patient-centred clinical environment.

We ceased data collection and analysis when we determined that our data were sufficient for answering our exploratory research questions.[32] The Western University Research Ethics Board approved all study procedures.

RESULTS

We identified a shared philosophy of coaching, comprising a number of core elements that seemed to anchor participants' approaches to coaching, regardless of context. These elements included a mutual orientation towards growth and development, an endorsement of reflection and an embrace of failure as a catalyst for learning. But the enactment of this philosophy appeared to be influenced by professional culture, which affected how coaching was defined and developed, how the coaching role was positioned within the learning context, and how comfortably vulnerability could be expressed. Despite a similar guiding philosophy to that espoused in sports and other domains, medical coaching thus appeared constrained by distinct cultural challenges. Each of these ideas will be elaborated below, highlighted by example quotations from participants.

Shared philosophy: mutual orientation towards growth and development

Whether experienced in sports coaching or medical coaching or both, participants tended to describe the intended purpose of coaching as the unlocking of human potential. As one participant noted, 'For me, it's all about that person reaching their own personal goals, and being the best they can be' (P5, physician and music coach). Participants distinguished good coaches, in fact, less by their own knowledge and skill, and more by their ability to bring out the best in their learners:

> A coach is somebody that – and maybe this is the analogy to sport - whose skill is really trying to draw out your best performance. (P13, physician and executive coach)

The coaching role was perceived to involve not only instructing and guiding, but also motivating and inspiring. One participant noted, for example, that coaching encourages learners 'to go beyond what you want and push your own limits – and do more, basically' (P1, physician). Part of drawing out the best in learners was the ability to inspire confidence and self-belief; as one participant noted, coaches 'add motivation and excitement … they make people believe in themselves and that's huge' (P9, sports coach). The fundamentally learner-centred

approach ascribed to coaching was reflected in the tendency to describe it in altruistic terms. One participant identified 'a humility' inherent in coaching, noting that 'the best coaches I've seen or ever been involved with were more selfless' (P22, physician and sports coach).

Unlike teaching, which participants tended to perceive as being driven by the teacher's agenda, and mentoring, which they perceived as being driven by the mentee's needs, coaching was seen as egalitarian. Participants tended to portray the coaching dynamic as one of mutual engagement; as one noted, 'the big thing with coaching is that both sides want to be there' (P5, physician and music coach). Speaking of their experiences as a coach of an individual sport, one physician commented that in coaching, 'the language is about *we* - we're working on this, not that you've done that or you've done that' (P6, physician and sports coach); this comment encapsulates the widely held sentiment that coaching implies a partnership. For some, the mutual commitment to the coaching process went beyond engagement, with its connotations of enthusiasm and interest, and included 'a sense of accountability between the two of them – I provide you with time and advice, you should provide me with some results' (P2, physician) Coaching was described by some as a deliberate choice to foreground goals of personal growth and development:

> Coaching is about explicitly choosing to be dedicated to the growth of an individual or a team. That's what coaching is . . . I bring my expertise to bear to help someone grow. So, the key words for me are the growth mindset and dedication. (P10, physician and sports coach)

Shared philosophy: valuing reflection

Across participants, reflection was repeatedly identified as a fundamental strategy to support effective coaching. First, coaches felt that a core part of their job was to instill habits of reflection in their learners, whether those learners were athletes or physicians. One participant described their role as an executive coach as '. . . helping them to reflect on their situation. Again, it's not telling them what they should do. It's helping them to reflect on what went well, what didn't, and elaborating some options – options in the plural – for the future' (P13, physician and executive coach). In sports, too, coaches spoke of asking questions that would nurture continuous reflection. Describing an approach to rowers, one coach commented on asking the athletes 'How did you feel? . . .Where did you feel the highest force? Where did you feel that your blade would not come out of the water?' (P12, sports coach). Coaches recognised that they could not be with their learners continually, and reflective habits could 'give somebody something useful that they can apply as they continue to work' (P6, physician and sports coach). Reflection, thus, was viewed as empowering learners to maintain their progress between coaching sessions.

In our data, however, coaches' engagement in self-reflection on their own roles was even more striking than their expressed efforts to support reflection amongst their learners. Those with experience coaching in sports devoted considerable effort to reflecting on their role in the development, success or failure of their athletes. As one coach noted, 'Figuring out what I did the previous season that led to success or failure is the hardest part of my job' (P9, sports coach). Reflection thus involved a process of coaches routinely questioning how they could be more effective in their role; growing out of this routine of self-reflection was an openness to continuous self-improvement: 'We're always going somewhere, to listen to other coaches, to watch how other coaches run their system, run their camps . . . how they teach, how they do things' (P14, sports coach). This commitment to self-improvement was, for some, expressed in terms of an accountability to athletes that echoes the theme of mutual engagement described above. One swim coach, for example, spoke of the work he or she did to remain current as a coach as a responsibility: 'You're doing a disservice to your swimmers by not applying yourself to new trends and new research and better ways of doing things. I don't want to let my swimmers down so that's why . . . I want to know how I can be better' (P9, sports coach). We did not, however, identify a similar emphasis on self-reflection in participants' descriptions of their medical coaching experiences.

Shared philosophy: embracing failure

Aligned with the value they placed on reflection, sports coaches endorsed the learning value of failure. Espousing the philosophy that 'you can learn out of mistakes' (P12, sports coach), many sports coaches viewed failure as a catalyst for athlete development, an experience that, if handled thoughtfully, could actually accelerate progress. Drawing a parallel with sports, one executive coach noted 'It's like any sport. The faster . . . if you fail, you'll learn something more than if you win' (P13,

physician and executive coach). Some coaches viewed it as one of their key functions to help athletes to 'fail well' (P10, physician and sports coach); one articulated the need to shift the athletes' perspective about failure in order to stimulate their development:

> It's good for them to see failure in a different perspective. That's really, really important. They have to know that it's okay and it will happen and you'll deal with it and you'll learn from it and it will take you higher. If they are not failing, they are not trying hard enough. (P14, sports coach)

The potential value of failure was appreciated even when participants described coaching in the medical setting. Describing coaching around a common procedure, for example, one participant commented 'Sometimes, I actually just push them to do the mistake or let them do it wrong, until they figure out what their mistake is and that's how they learn' (P2, physician). Giving a medical learner permission to make a mistake, in fact, was seen as a key function of a coach in some situations:

> Sometimes all the coach did was just let you feel comfortable enough to … stick your neck out … I think that's a coaching moment right there, because what you're basically doing to the learner is that you're giving them licence to either make a mistake or show you what level they're at. (P8, physician and sports coach)

Cultural influences: comfort with vulnerability

Embracing a philosophy of reflection and of learning from failure demands a level of comfort with vulnerability that appeared difficult to achieve in medicine. Although athletes might be comfortable displaying vulnerability in training with their coaches, the same might not be true in medicine: 'My experience has been that even in the most sensitive, trustworthy faculty, it's really hard for the learner to believe that they can be vulnerable with that person because they're so conditioned not to be' (P13, physician and executive coach). Our results suggest that the discomfort with vulnerability lies not only with learners. One participant, commenting on efforts to develop peer coaching amongst colleagues, noted 'People are incredibly shy and nervous about being observed in the clinical setting. So, I have done it with some colleagues bilaterally, but it has been in very small pieces. People don't seem to want it' (P17, physician). Despite their general endorsement of the coaching philosophy, physicians appeared to struggle with ambivalence about actually being coached themselves: 'Some people find coaching intimidating because it requires an ongoing admission of imperfection … They see the need to be coached as a sign of weakness potentially' (P24, physician), Our participants thus revealed a discomfort with the vulnerability required to drive coaching success; they acknowledged that it was not only potentially difficult for learners, but also challenging for coaches themselves, who may struggle to role model the acceptance and embrace of coaching for their own development.

Cultural influences: defining and developing coaching

In sports, there appeared to be a clear definition of the coaching role; although coaches were informed by knowledge of the sport, their roles were seen as very distinct from the roles of players or performers. As one coach noted:

> 'You can play hockey, when you played for a number of years without thinking about why you do what you do. But when it comes to then being able to teach that to kids who don't have a lot of experience, that's a whole different skill set'. (P16, physician and sports coach).

Sports coaching often involves well-defined pathways for preparing coaches for their roles, and demands that coaches be properly trained before they are allowed to take on coaching responsibilities. As one swim coach noted:

> You can't just roll up your pant legs and show up on deck and wing it … it's a level of professional coaching. (P9, sports coach)

In medicine, however, the coaching role tends to be ill-defined; the role and its responsibilities are often embedded within clinical supervision. One participant instructively contrasted the regimented preparation required of ski instructors with the world of medical education:

> You don't make promotion decisions [as a ski instructor] unless you are really explicitly trained to do that kind of assessment. So, an instructor who … promotes people along will have worked first as an assistant in that process and will have explicitly developed those skills around promotion … But in medical faculties, it's usually the

> principal supervisor, whoever they happen to be, who really carries the brunt of responsibility for that decision. (P6, physician and sports coach)

Despite, or perhaps because of, the sharper definition of coaching expertise and its boundaries, sports coaches appeared comfortable delegating elements of the coaching work to others. Participants repeatedly acknowledged that no coach could possess all the skills necessary to offer all the support and guidance that each player might require. As a result, there was considerable comfort with the attitude that 'If I can't do something, I find someone who can' (P11, sports coach). The clearer definition of the coaching role perhaps led to a readier acceptance of the need to bring in others to support an athlete's development; as one coach noted, 'We have coaches that teach different things. We have coaches that are more technical. We have coaches that are more tactical' (P14, sports coach). Sports coaches, in fact, did not expect to do it all themselves, and rather viewed assembling a team of coaches for specific needs as part of their responsibility to their athletes. We found only three examples of this practice from medical coaching, however, and in two of these cases the experiences involved sending a learner to a wellness professional to assist with issues that the coaches clearly felt were outside of their role. Medical coaches, in fact, tended to assume the coaching role solo; some felt this tendency reflected a culture in which physicians are 'neurotically self-sufficient; they think they can do it all, but actually they don't' (P23, physician).

Cultural influences: blurring the lines

In medicine, the lines between the coaching role and other pedagogic roles are often blurred. For example, what might begin as coaching might bleed into supervision, assessment, or even discipline depending on the circumstances. Medical coaches were more likely than sports coaches to identify a point at which consequences for learner underperformance needed to be invoked:

> I think I've reached my limit at this point, where I'm going to say "You are going to do this whether you like it or not because I said so, and because it's in your requirement, and because there are going to be consequences if you don't do it". (P20 – physician)

Lines also blurred in medicine between coaching and playing. Comparing medical coaching to sports, one participant noted 'In sports . . . the coach can't all of a sudden set foot on the ice or the tennis court and actually start playing. Whereas in medicine a coach can very quickly become a player' (P24, physician). Although the imperative to ensure patient safety demands this dynamic, a medical coach may also be 'reluctant not to be a player' (P24, physician). Contrasting sports coaching with medical coaching, one participant commented that in sports 'you want to build the basic skills so they can actually get better than you', whereas noting that in medicine 'I never get that feeling, because I think I'm probably going to be as good as any of them, no matter how good they are at the end of their career' (P16, physician and sports coach). In medicine, therefore, a coach's identity may remain strongly tied to being a 'player' in a way that may not occur in sports.

DISCUSSION

Our results suggest both reasons for optimism about the potential of coaching, and reasons for caution about its implementation in medical education. Despite differences in the nature and stakes of performance in sports compared with medicine, our participants tended to endorse shared philosophical underpinnings as they reflected on their roles as coaches. These shared principles offer a starting point for conversations about how coaching might be adopted in medical education. Our findings suggest that for coaching to be coaching, it needs to involve mutual engagement, with a clear and bilateral orientation towards learner growth and development. It needs to embed reflection, which is also bidirectional: coaches not only instil habits of reflection in learners, but also practise those habits themselves. Finally, it needs to acknowledge failure as inevitable and invaluable, embracing its potential to stimulate continued improvement.

The notes of caution we sound relate to the translation of those principles into the medical education setting. Medicine's lack of a clear definition of the coaching role, for example, compromises its ability to develop faculty members adequately for the job. Earlier work has shown that clinical learners tend to look to the strongest clinicians as their most credible sources of feedback.[33] Unlike fields such as sports and music, medicine does not have an archetype of the expert instructor or coach that is distinct from its notion of an expert performer. However, as our participants reminded us, performance ability does not always translate into coaching ability. If we are to expect medical coaches to engage in the kind of self-

reflection on their own performance that our study suggests may nurture sound coaching, then we will require a clearer articulation of what coaching *is*, how it is distinct from performing and role modelling, and how we can train and develop it in our faculty members.

Intertwined with medicine's failure to clearly define coaching is its habitual tendency to blur educational roles; coaching, mentoring, supervising, teaching and assessing are all roles that may be assigned to the same individual faculty member, sometimes simultaneously. Although some have suggested that the roles of coach and assessor should be divorced in medical education,[3,15,34] achieving a clean separation is no easy task, particularly when educational duties are shouldered by a small number of faculty members. Our work adds an additional layer of complexity to the issue of role uncertainty, highlighting the potential for coaches to rapidly become players, either because the safety of the patient demands that they step in, or because they remain invested in their identities as players. Coaching, however, relies heavily on coach and learner achieving a shared sense of purpose; both must be confident that the intent of their interaction is to support learners in realising their potential. When roles are fluid, this confidence may be shaken, and the potential value of coaching may be undermined.

Confidence in the developmental intent of coaching is also critical if we expect learners to be vulnerable enough to expose their areas of weakness and uncertainty to the scrutiny that begets effective coaching. Our finding that coaching philosophically embraces failure as a catalyst for learner growth and development poses a problem for coaching's implementation into medical education. Medicine's professional culture struggles to make room for vulnerability amongst either its learners or its practitioners. Molloy and Bearman describe 'an endemic need to promote credibility and hide vulnerabilities' in clinical medicine; learners in this environment seek to gain and maintain credibility and the social status that accompanies it.[35] Additionally, medicine's professional culture values autonomy and independence;[22] learners, in fact, aim to graduate from the need to be observed and coached.[23] Against this backdrop, learners may feel a persistent pressure to portray competence. But for individuals to receive meaningful coaching, they must be prepared to expose the cracks in a veneer of competence that they may work hard to maintain.

Of course, medicine's discomfort with failure is not solely grounded in culture; it is also grounded in patient safety. As long as medical education is sited in real clinical workplaces, there will be limits to the extent that learner failure can be tolerated. We therefore need to grapple with how to achieve the right balance between safe spaces in which learners can receive coaching and safe spaces in which patients can receive care.

Achieving this balance will require some compromises; for example, we may need to acknowledge that medical coaches will need to step out of the coaching role and into the player role at times. But how much compromise can we make before this thing we are calling coaching is no longer coaching? Research on the introduction of pedagogical innovations into new contexts has highlighted the centrality of compromise. Varpio cautioned that when a novel pedagogical approach is integrated into a new context, some of its fundamental principles are preserved, some are transformed and some are abandoned.[36] Varpio et al.[36] concluded that educational movements hinge on the philosophical rather than on the technical; when techniques or principles are modified to a new context, we need to ensure that the philosophy of the approach is upheld. Otherwise, the promised benefits of that novel approach may be lost in translation. Our work illuminates the features of the coaching philosophy that demand preservation as coaching is adapted to the medical milieu. Whatever form coaching takes in medical education, we need to preserve its orientation towards learner development, its habits of reflection and its capacity to enable learners to grow from failure.

Coaching thus encompasses both a distinct orientation towards learning on the part of the individuals involved and a thoughtfully crafted learning environment. These same factors have been addressed in efforts to enhance feedback practices in medical education.[37] Future research should examine how the coaching mindset influences the exchange and impact of feedback, and should better elaborate the particular elements of medical learning that are best supported by coaching. Not all feedback, perhaps, demands coaching to ensure its effectiveness.

Our study is limited by some of our design decisions. We recruited sports coaches from a single university, for example, and thus these individuals might have embraced a shared institutional philosophy of coaching that would

not occur in other places, or in other contexts such as professional sports. That our participants consistently reflected a learner-centred approach to coaching is almost certainly influenced by our sampling strategy; coaches of professional sports teams might well have instead invoked winning and profit as motivators. We were struck, however, by the similarities in philosophy that we found across our participants, including those with experience solely as medical coaches and those with one foot in the medical world and one in the coaching world, suggesting that our sampling strategy was appropriate for this exploratory work. We also did not rely on a predetermined definition of coaching as we approached our interviews; although we think this approach allowed us to understand better how coaches themselves define their roles and to identify areas of overlap between coaching and other pedagogical tasks, we acknowledge that this approach also probably led some participants to relate experiences that would not be labelled as coaching by some who study this area. Finally, we recognise that our participants tended to discuss coaching in idealistic terms; individuals who would choose to participate in a study about coaching perhaps harbour a distinctly positive orientation towards coaching that is not universally held.

CONCLUSIONS

Adopting coaching approaches in medical training demands careful attention to how we define coaching, how we understand its key principles, and how we adapt its philosophies to medicine's professional culture. Coaching must not simply be a new label for old approaches; merely rebranding 'feedback' as 'coaching', for example, is unlikely to yield more productive outcomes for learners. Rather, we should ensure that we understand and preserve the philosophical pillars on which our coaching approaches must be built.

Contributors: CJW conceptualised and designed the study, participated in data collection, led data analysis and drafted the manuscript. KALD contributed to study design, conducted many of the participant interviews, contributed meaningfully to data analysis and offered critical feedback at all stages of manuscript preparation. Both authors (CJW and KALD) agree to be accountable for all aspects of this work.
Acknowledgements: the authors acknowledge Emily Field for her valuable contributions to this study.
Funding: none.
Conflicts of interest: none.
Ethical approval: The Western University Research Ethics Board approved all study procedures.

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Received 11 July 2018; editorial comments to authors 24 September 2018; accepted for publication 30 November 2018