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Chapter

Coaching and Mentoring: Focus on Graduate Medical Education

Stephen N. DeTurk, Anish J. Kaza and Anna Ng Pellegrino

Abstract

Individuals at any level of the medical field could potentially benefit from feedback and supervision: from medical students, nurses, or physician assistants; to residents, advanced practitioners, and attending physicians. Two of the most common forms of feedback and supervision utilized in medical education are coaching and mentoring. These terms are often used interchangeably but are commonly misunderstood. In this chapter, we will highlight the differences between coaching and mentoring, place emphasis on the use of mentoring in medical education, discuss the characteristics of a successful mentor-mentee relationship, and provide an example of a mentoring program at a local community hospital.

Keywords: mentor, mentoring, coach, coaching, mentor-mentee relationship

1. Introduction

1.1 Origins of mentoring

When examining the differences between coaching and mentoring, it is useful first to consider the origins of these words, and their original usage and meanings. The term *mentor* comes from ancient Greek mythology [1]. In Homer's epic poem, *The Odyssey*, a character named Mentor was a trusted friend and advisor to king Odysseus. When Odysseus left for the Trojan War, he entrusted Mentor to look after and care for his son Telemachus. While away, Odysseus's house was overrun by those who wished to remove him from power. The goddess Athena disguised herself as Mentor, and provided counsel and guidance to Telemachus, and encouraged him to go on a journey to find his father [2]. In modern times, *mentor* was first mentioned in the Francois Fenlon's book *Les Aventures de Telemaque* in 1699, a rewriting of *The Odyssey*. In this version, Mentor takes a more pivotal role in the teaching and guidance of Telemaque. The book was immensely popular and became the most reprinted book in the 18th century. It is from the book's popularity that the word which we now use as *mentor* gained usage, first appearing in the English language around 1750 [2]. Today mentoring has become a well-established pillar in medicine as well as many other fields, including business, teaching, and academics.

1.2 Origins of coaching

The term *coach* was first used to refer to academic tutors at Oxford in the 1830s. These coaches would guide students by asking questions that helped them develop

reflective thinking and analysis [3]. This term is now commonly associated in sports, where a coach guides a player in the development of skills and instructs them what to do during games. Nowadays, *coach* is more so used in business and psychology, and is rarely a term related to medical education [4, 5].

2. Research methods

Pubmed and Google scholar databases were used to conduct literature searches. Searches were conducted with the terms: “Mentoring” or “Mentors” and “Coaching” or “Coaches” both with and without additional qualifiers “Graduate Medical Education”, “Residents,” “Residency,” “Medical Students,” and “Medical School.” Titles and abstracts were reviewed for relevancy, and full text of selected articles were reviewed. References of articles were also reviewed for relevance and unique insight or perspectives on the topic.

3. Purpose of mentoring

The purpose of mentoring is to provide a nurturing relationship, where a more experienced person serves as a role model, teacher, and counselor to the mentee [6]. The goal of mentoring is to enhance the professional development of the mentee through the direct transfer knowledge and experience. The relationship may last for several years and evolve as needs for continued professional development evolves. Mentors provide guidance in a wide area of topics such as career development, political advice, and personal issues. The guidance should be provided in a “push” method, directly advising the mentee what they should do [7]. In addition to providing advice, mentors may help facilitate the mentee’s career development by providing new opportunities. As a more senior professional, mentors often have connections within the field, which may benefit the mentee. Introducing the mentee to other significant players in the field and providing opportunities to attend networking events are some ways the mentors can use these connections to help the mentee’s development [7]. Mentoring relationships are often bidirectional, as mentors should feel a great sense of fulfillment from helping others, but both parties can benefit from professional development. Professional development can lead to more efficient and effective workers, as well as opportunity for individual introspection, self reflection and self-renewal.

4. Purpose of coaching

Coaching is a type of inquiry-based learning that guides people to effectively use their existing knowledge and skills [8, 9]. The purpose of coaching is to focus on specifically defined goals, leading to an immediate improvement in performance. Goals can be skills-based, such as surgical technique, or more abstract goals such as personal skills (e.g., goal-setting, planning, proactive initiation) and interpersonal skills (e.g., communication, conflict resolution, and team development) [10]. To accomplish these goals, coaches should facilitate the coachee to find their answers or solutions. This is best accomplished in a “pull” method, where the coach asks questions to allow the coachee to develop skills in self-evaluation and critical thinking [7].

5. Mentoring: the traits of a mentor

Mentors should exemplify several key character traits necessary for successful mentor-mentee relationships: display admirable qualities, be honest and trustworthy, be altruistic, be approachable, and have professional experience.

5.1 Admirable characteristics

An ideal mentor should serve as a role model with personal and professional admirable qualities that motivate the mentee to further their own career. Some personal qualities include being compassionate, insightful, inspiring, ethical, and wise. Important professional qualities include being collaborative, intellectual, skilled, accessible, articulate, passionate about medicine and health, and to be a visionary [11].

5.2 Being honest, trustworthy, and an active listener

The mentor should always be honest when guiding the mentee. It's important that the mentor tells the mentee whether something is a bad idea or if they need to take a completely different approach to obtain their goals. A good mentor understands the limitations of the mentee. Honesty can create a trustworthy relationship between the mentor and mentee that can further their productivity [12].

Trustworthiness is a very important characteristic of being a good mentor and involves the mentor to be a good active listener. The best way for a mentor to give effective advice is to listen to what the mentee is saying and understand the mentee's aspirations and goals. This is crucial to help the mentees work through their problems and give tailored advice. The mentor should be engaged at every session with the mentee and help to facilitate a goal for the mentee [13].

5.3 Being altruistic

The mentor should always act and advise in the best interest of their mentee. It is crucial for a good mentor to be altruistic and have selfless concern for the progression and goals of their mentee's career. Inattention and exploitation are counterproductive to effective mentoring. A mentor should not make much distinction between proposals or projects where he or she may or may not be a co-author between themselves or mentees. Mentees gain even more admiration for their mentors when the mentor looks for little to no professional recognition or benefit. A good mentor should put the mentees' careers before their own and introduce key collaborators that can further the mentees' careers [12, 14].

5.4 Being approachable and available

A successful mentor-mentee relationship requires the mentor to have a strong commitment to being available and accessible. The mentor should not only be initially meeting with the mentee frequently but also stay in touch with the mentee for the duration of the mentee's career. There should also be a certain quality of effort given to the mentee. During the meetings, the mentor should not be distracted and should give his or her full undivided attention to the mentee [11].

Approachability is an important characteristic that goes hand in hand with being a good mentor. There should be scheduled, consistent meetings and an open-door policy, so the mentee always feels comfortable reaching out to the mentor. This

is crucial for a longstanding, stable mentor-mentee relationship. Mentors should always be encouraging and check in with their mentees to show how they are progressing [12].

5.5 Have professional experience

Credibility is a very important characteristic of a good mentor. A mentor should have a good network of colleagues and collaborators that can help also guide and optimize the chances of success for the mentee. The mentor should continually create opportunities that bring value to the mentee. While mentors should always allow their mentees access to their network and connections, they should also warn and protect the mentees from harsh interactions [12].

Good mentors are able to effectively cultivate and develop highly productive faculty members. This leads to higher retention numbers of faculty at institutions. These faculty members are also able to obtain more grants, get more articles published, and promoted sooner than their colleagues without mentors [15, 16].

5.6 Promote a balance between personal and professional goals

Successful mentors should be able to provide a good balance between personal life and professional work to the mentee. The mentees should not only look at their mentors as role models at work or in a professional setting but also at home in their personal life. Good mentors are able to show the mentee how to deal with stress and are able to support them through their struggles. A mentor should be a guide and not force a mentee down a particular path. This requires the mentor to be compassionate and to stand by the mentee to offer emotional support. The mentor should be able to identify factors that might contribute to the mentee's stress and then teach the mentee how to deal with the stress or problem [11].

It is the mentor's responsibility to guide and transform the mentee toward their goals, but to also unlock their full potential. Mentors should be able to see the big picture and identify the mentee's potential. They should then set high standards and give a vision to help create a plan that can prioritize and achieve the mentee's goals. The mentor's advice should be specifically tailored to each mentee and offer a unique perspective to help expand the vision and ambition. The mentee should be allowed to fail, but it is important for the mentor to be present to advise and be a pillar of support as the mentee's career progresses. It is also important that the mentor allows the mentees to find their own way by leading instead of direction [12].

6. Mentoring: the traits of a mentee

Persons who would especially benefit from mentoring include those recently entering the profession or transitioning to a new position, those experiencing personal or professional difficulty, and those seeking to become organizational leaders [17]. It is important for the mentee to drive the relationship with the mentor and take the responsibility to seek out the mentor. Mentees should be respectful of the mentor's time and input. An effective mentee is able to make the most out of their time with their mentors by being prepared before sessions: come to the session with a structured plan, list of discussion points, timelines, and questions. During the session, the mentee should actively listen to the advice given by the mentors and be open to the criticism or feedback given by the mentor [9].

The mentee should feel inspired by the mentor and gain motivation to pursue their career. They should think of their mentors as a resource and not rely on their

mentors to obtain their goals. Having someone to lean on and go to for advice can then inherently lead to more confidence and a greater chance for them to reach success [18, 19].

7. Coaching: the traits of a coach

Unlike mentoring, coaching is not necessarily a confidential relationship. A more supervisory role is also provided to the coachee. Although some goals may require that a coach is an expert in the same field as the coachee (e.g., improving surgical techniques), this is not always the case. The key characteristics seen in good coaches include: being a skilled interviewer with excellent listening skills, being analytical and observant, being able to provide meaningful performance feedback, and being able to possess appropriate qualifications [20].

7.1 Skilled interviewer and excellent listening skills

Coaches help guide the coachee to develop their own insight and synthesize knowledge during coaching sessions. It is vital that the coach has the skills to guide the coachee in learning toward self-reflection and new knowledge. This requires a balance of both active listening for areas where insight may be lacking, and the ability to guide interviews in the desired direction. It is important that the coachee not only provide the information directly, but also allow the coachee to realize new insights themselves.

7.2 To be analytical and observant

In assessing objective measures of skills and performance, a coach must be able to identify areas of improvement. This requires them to be observant to not just major significant areas for development to meet an adequate level of skills, but also minor deficiencies that need to be corrected to reach superior skill levels. They must be analytical in their approach so that they may break down a skill in individual components and assess each part. Without these skills, it would not be possible to provide feedback for areas of improvement.

7.3 To provide meaningful performance feedback

During coaching sessions, coaches should review objective skills and performance assessments with the coachee. The insights the coach gained from observing and analyzing skills needs to be presented to the coachee in a constructive insightful manner. Providing constructive criticism and insight will allow the coachee to implement changes in the future necessary to accomplish the goals previously established. The feedback should be tailored to the expectation and skill level of the coachee, in order to provide achievable goals.

7.4 To possess appropriate qualifications

Not all coaches need to be medical professionals to provide coaching on certain skills. Skilled coaches without medical qualifications may provide insight into personal and interpersonal skills. However, technical skills (e.g., surgical skills, procedural skills) require a medical expert who is able to meaningfully assess the coachee's performance. It is, therefore, essential to select a coach with the knowledge to help the coachee reach their desired goals.

8. Coaching: the traits of a coachee

The traits a coachee should display are similar to those needed in a mentee. Before attending a coaching meeting, a coachee should self-reflect and be able to attend sessions with an agenda of challenges they wish to address [21]. They should also seek feedback from their coach and any supervisors to aid in this self-reflection. During coaching sessions, the coachee should be fully present and take advantage of the input from their coach. Immediately after a session and in between sessions, a coachee should practice new skills and be committed to follow through on their assignments [22]. Practicing the skills should be done with intention and consistency [21]. As their skills develop, coachees they should be able to track their progress and recognize and celebrate their success.

9. Establishing a mentoring relationship

A good mentoring relationship highlights a mutual symbiosis between mentor and mentee. Both parties can benefit personally and professionally. It is crucial that the mentor does not play a supervisory position. Having a mentor who has influence over the mentee's current position would make the mentee feel uneasy about being honest with the mentor about any difficulties they are having. Mentors should maintain a confidential relationship with the mentee, so that problems may be discussed freely without fear of repercussions.

Mentoring relationships can be formed through formal or informal means. Most mentoring relationships develop informally [23]. These relationships develop organically; typically a mentee seeks out a mentor on their own. Although most agree that having a mentor is essential, many without access to formal mentoring programs do not have a mentor. This is especially true for women and racial minorities, who are less likely than their peers to have a mentor [19, 24, 25]. Common reasons cited for lack of mentorship include fear of approaching faculty and inability to find a trusted faculty member [24].

There have been an increasing number of formal mentoring programs in the academic and medical fields. Mentors and mentees are paired together through a committee process. The pairing may be decided based on similar personality traits or common goals between the two parties. One key advantage of formal mentoring programs is that mentees that would otherwise not have a mentor can find one. Formal mentoring programs typically provide more structure compared to informal mentoring, wherein they explicitly establish rules, goals, expectations, and meeting times. If a formal mentoring program does not consider the importance of pairing between the mentor and mentee, the relationship may not be successful [26].

When first establishing a mentoring relationship, the two parties should get to know each other through open dialog, establish goals and expectations, and agree to a commitment of confidentiality [27]. The mentee's goals may be personal, educational, clinical, professional, or research-oriented. These goals may change over time when new priorities, opportunities, and difficulties arise, so it is essential to be flexible. Expectations should include establishing how frequent the two will meet in person and form an open line of communication available between meetings. During mentoring sessions, the mentor should advise the mentee on what steps should and should not be taken to reach their goals. Early on, the mentor may identify which professional organizations or institutional committees the mentee should join. The mentor should also be willing to share their own professional and personal experiences to provide context and facilitate in establishing the relationship.

10. Establishing a coaching relationship

Coaching relationships are almost always formed formally through structured institutional programs. Coaching relationships should first establish what the specific tasks that the coachee wishes to improve upon and assess the coachee's skills through observation and questioning. During coaching sessions, coaches should not lecture or tell the coachee what to do. Instead, development should come from a dialog where knowledge and insight are generated by the coachee through guided questions to facilitate discussion (28). Coaches should review objective performance data, guide the coachee to gain their own insights into their assumptions, clarify meaning about the outcome, and identify specific actions necessary to achieve results. The coach does not need to share the same level of personal information as a mentor, as the goal is focused on accomplishing single tasks and not developing a relationship.

11. Examples of mentoring

At a local community hospital in Bethlehem, PA, an *Emerging Leader* mentoring program has been established to support and encourage interaction between more experienced leaders with newer or less experienced leaders. This program aims to create a mutually beneficial mentoring relationship where mentors and mentees share candid insights and discussions about how to effectively navigate and function as a leader in the hospital network. The program creates an environment of support that positively impacts a leader both professionally and personally and encourages the leader to be successful and to develop to their fullest potential. Among the program's competency goals include: development of business acumen, gaining interpersonal savvy and skills, obtaining self-fund of knowledge, understanding and managing the vision and purpose of his/her position, and to provide accountability and responsibility to those he/she is managing.

A brief survey/questionnaire was sent out to mentors and mentees of the mentoring program. Here are some receptive comments from mentees:

"I had a pleasant and affable mentor who was more than willing to get together. We met 2-3 times over the course the 18 months."

"I found the program very helpful. We met once every 2 months. I feel we were matched very well – similar personalities, thinking and approaches to issues. The best advice I've received: Invest time now developing my direct goal reports. Focus on the ones who take projects and run with them. I felt that this program changed my approach to our growing group. I have delegated more in my department and spent more time developing my leadership skills. This program has helped me mold into being a good leader/individual."

"I see better opportunities in the pairing process between a mentor and mentee. I would have preferred a pairing with a person from a different area of the health network. For example, clinicians paired with strategic/business leaders as opposed to paired with other clinicians. I think this would broaden both the relationship development in the network, as well is the skills set each mentee can expand."

"Opportunities to touch base were limited based on my mentor's off-site location and busy clinical schedules."

Below are some comments taken from mentors in the program:

“My mentees are my most valuable asset. That is why I would make myself available for them as much as possible. They will gain your trust and respect when you as a mentor dedicate/carve out time for them out of your busy schedule.”

“One of my goals as a mentor is to provide servitude of others. I ask myself ‘how can I use my fund of knowledge and experiences to help serve others?’”

“It is important to steer your mentee on motives on becoming a leader. I have them ask themselves ‘what is your vision for your department?’ It is also just as important to allow your mentee to make mistakes and to learn from them. Self reflection is a must.”

“Do not allow your mentee to make hierarchal relationships with others, as no one may listen or respect the ‘do as I say’ approach. Instead, guide your mentee into a ‘what can I do to help you and to help me’ approach. This will provide success in leadership”.

“So as not to waste anyone’s time during a meeting, in the first meeting, I lay out my goals in the relationship and my mentee will lay out his/hers. We come up with a plan for future meetings as well. Having a concrete structure in our meetings helped expedite each others goals and expectations in our relationship.”

“An aspect of mentoring involves how well you may be able to ‘read’ your mentee. That is, to develop the insight about your mentee’s personality traits and to get to understand his/her strengths and weaknesses. The sooner you may lock into a strength or weakness, the sooner you may be able to help guide your mentee.”

12. Examples of coaching

In a clinical/academic setting, coaching should be used when an individual needs to improve specific skills through repetition. For example, obtaining surgical skills to perform surgery is an area that would benefit from improvement through coaching. Studies on utilizing coaching techniques have shown that it improves surgical skills more than traditional training alone [29]. In one study, surgical trainees were randomized to receive either coaching or traditional training. The coaching group received structured feedback based on video reviews of surgical techniques. During coaching sessions, video clips of surgical performance were reviewed and self-reflection of performance was encouraged. The trainees developed training goals with the coach and then implemented them in subsequent cases. Those in the coaching group showed considerable improvement in general surgical skills, procedure skills, and fewer errors [30].

Coaching to improve surgical techniques is not only useful for those in training, but for attending surgeons as well. In an article in the New Yorker, Dr. Atul Gawande described his experience with surgical coaching [31]. At the time, he had been a surgeon for several years and had seen his complication rate improve past the national average but then plateau. He sought out a retired surgeon, Dr. Robert Osteen, who was his attending during residency. Dr. Osteen observed Atul’s operations in the OR and on video recordings providing feedback on what small changes could be made. Since he started working with a coach, Dr. Gawande reported that his complication rates have improved.

Coaching is also useful for nonphysical skills, including communication and clinical reasoning. In one study, Family Medicine residents were coached by psychiatry faculty in order to improve their communication skills with difficult patients [32]. The coaching sessions followed encounters with standardized patients where difficult clinical situations could be evaluated. During one month of weekly coaching sessions, communication skills improved in the residents and were maintained at a follow up of 6 months. After residency, clinical coaching has been found to be useful as well. At Massachusetts General Hospital, a coaching program was developed that allowed new hospitalists to review cases and clinical questions with more senior and experienced hospitalists [33]. During the program more junior hospitalists changed their diagnostic approach, called fewer consults, and felt more comfortable as attending physicians. After reviewing cases with the senior hospitalists, unnecessary laboratory tests and invasive procedures were avoided. The senior hospitalists also reported being satisfied with the program and being more comfortable acting as coaches after participation.

13. Conclusion

Mentoring and coaching are distinct in many ways, including in their purpose, duration, methods, and driving factors (**Table 1**). *Mentoring* is based on the formation of a long term nurturing relationship, where mentors guide the professional and personal development of the mentee. Mentors provide guidance to mentees by advising on personal, professional, and educational issues. They may provide insight into institutional and professional politics, and provide the mentee with opportunities to network with others in the field. These relationships are unique in their influence on the development of the trainee and are pivotal for achieving maximal career success. Individuals who have an identified mentor often have greater career satisfaction and go on to achieve more than those who never had a mentor. Coaching is distinct from mentoring in both its methods and end goals. *Coaching* aims to improve specific skills in a short period of time. It is driven by improving performance and through self-reflection so that the coachee may become more self-aware. Studies assessing coaching-based programs show that this method of teaching is more effective when compared to traditional teaching methods.

	Coaching	Mentoring
Formality	Formal	Formal or Informal
Purpose	To accomplish specific goals; Task oriented	To promote Professional & Personal Development; Relationship Oriented
Duration	Weeks to months	Years
Assessment	Requires observation of skills and behaviors	No initial assessment
Methodology	Pull-Encourage Self-Reflection	Push-Provide guidance and advice
Performance review	Required	Not required
Directionality	Unidirectional	Bidirectional
Confidentiality	Not necessary	Necessary
Supervisory role recommended?	Yes, may be a clinical supervisor or manager to coachee	Not recommended in relationship

Table 1.
Coaching vs. mentoring relationship summary [28, 34].

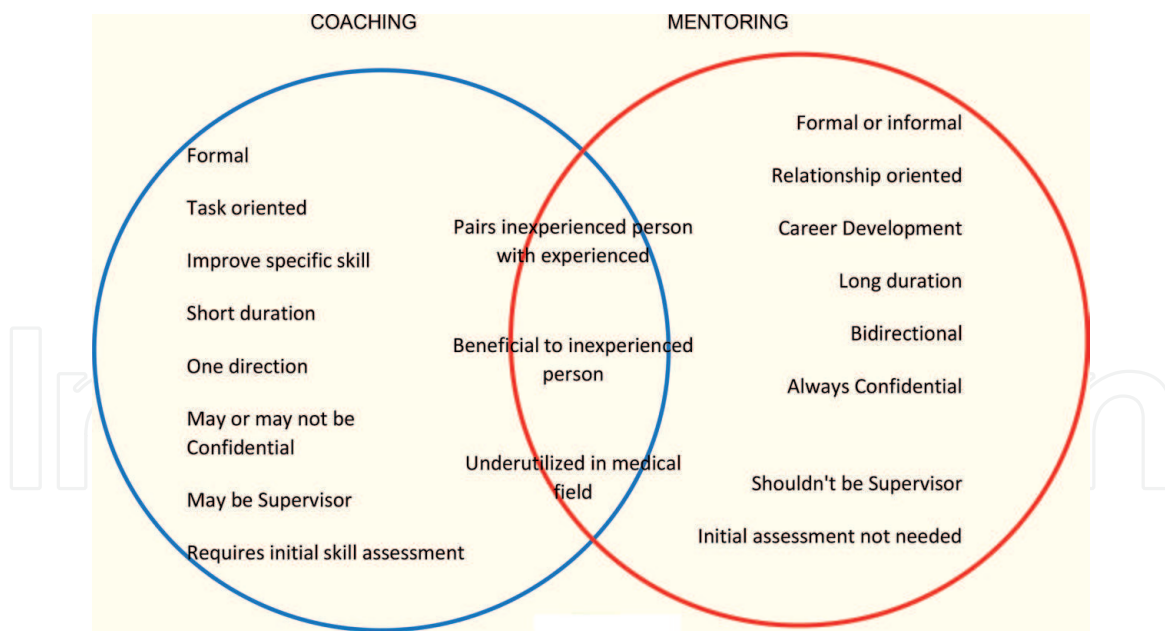


Figure 1.
Similarities and differences between coaching and mentoring.

Both coaching and mentoring focus on building up a less experienced person (medical student, resident, new attending). However, the methods used for development are different between the two. Understanding these differences allows program to better utilize resources and develop students or employees to maximize their potential (**Figure 1, Table 1**).

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