



# Transitioning from Teaching to Mentoring in Medical Sciences

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## Abstract

The transition from traditional teaching to mentoring in medical education is urgently required to create future-ready physicians, researchers, and medical teachers in India. A roadmap was drawn by the pioneers of modern medicine more than 100 years ago, who mentored and prepared the next generation of subspecialists and teachers. We need mentors rather than conventional teachers to inspire students to dream, learn, and grow. In today's world, the role of teachers transcends imparting information to foster critical thinking and contextual application of knowledge. Mentors play a pivotal role in cultivating future medical leaders through recognition, guidance, and mutual respect. Mentors guide lifelong learning and personal development. A trusting mentor–mentee relationship is critical for effective medical education, research, and professional growth. Mentoring significantly benefits residents by fostering well-being, collegiality, and professional skills. Academic mentorship results in increased publication rates, grants, career satisfaction, and retention of faculty in the institutions. With mentors, navigating academia's challenges proves manageable, impacting career trajectory. While mentoring is crucial for career advancement and personal development, there are disparities, especially for women. Formal institutional support for mentoring is essential for sustained impact. Mentor–mentee relationships in academia are evolving toward short-term, need-driven interactions facilitated by workshops during the annual professional society meetings and speed mentoring. E-mentoring offers flexible, cost-effective support transcending geographies and time zones. Identifying the right mentor is crucial for academic success, emphasizing shared knowledge, effective communication, and mutual trust. Evaluating mentoring programs remains challenging, requiring comprehensive, stakeholder-driven assessment tools.

## Keywords

- e-mentoring
- Harvey Cushing
- mentoring
- speed mentoring
- teaching
- William Osler

## Introduction

All of the 20th century and well into the first quarter of the 21st century, medical teachers, albeit without any formal training in pedagogy, and their role in imparting quality medical education continue to dominate the chatter worldwide, especially in

India. The 1.4 billion population of India is dependent on their primary and advanced health care needs on nearly 109,170 medical graduates in modern medicine and half as many specialists and superspecialists (47,526) that come out every year of almost 706 medical schools (<https://www.nmc.org.in/>

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information-desk/college-and-course-search/, accessed May 30, 2024). The quality of medical education and research, medical teachers, and, of course, the end product—the young medical doctor—is hugely heterogeneous in India. All aspiring doctors and specialists in India undergo a single rigorous national entrance eligibility test (NEET) that most often tests only the lowest rung in the cognitive domain in Bloom's taxonomy.<sup>1</sup> The training facilities and the exit examinations in medical schools across the vast expanse of India remain of questionable quality. There is an urgent need to create high-quality physicians, original content creators, researchers, and teachers to make India self-sufficient in meeting the burgeoning health care needs of our people.

## Mentoring Lessons from Historical Vignettes

I share briefly how mentors, rather than mere teachers, impacted the advancements in practice and the development of subspecialization in medicine in the early decades of modern medicine.

William Osler, who cofounded the Johns Hopkins Hospital and School of Medicine in Baltimore, Maryland (United States), is the father of modern bedside medicine. He had a profound and lasting impact on medical education. "Osler's wisdom is as relevant now as in his era."<sup>2</sup> His textbook *The Principles and Practice of Medicine*, first published in 1892, was the most widely read book for the next 40 years.<sup>2</sup> He mentored several physicians, among the most famous of which was Harvey Cushing (the first neurosurgeon to operate on brain tumors).<sup>3</sup> Avid book collectors shared a common interest in neurological disorders, and Osler often referred his patients to Cushing. Harvey Cushing was also mentored and befriended by one of the founders of the Mayo Clinic, William James Mayo. They exchanged nearly 100 letters of correspondence discussing complex and exciting case presentations.<sup>3</sup> Mayo helped him found the Society of Neurological Surgeons. A protégé of Cushing, Van Wagenen, a second-generation neurosurgeon, continued the legacy of Cushing's high standards in neurosurgery.<sup>4</sup> Decades later, Cushing's neuroanatomical studies highly impacted Rhoton Jr, who, while working at the Mayo Clinic, carried forward the legacy of Cushing and became the father of microsurgical neuroanatomy.<sup>3</sup>

Tinsley Harrison was an Oslerphile physician whose father had worked with Osler for a while, which influenced his entry into the Johns Hopkins Hospital.<sup>5</sup> Harrison believed that Osler was a perfect physician and followed his principles all his life. Hardly a physician today has not read Harrison's *Principles of Internal Medicine*.

Dr. John E. Molder, a well-known scientist in radiation biology at the Medical College of Wisconsin, studied extensively the effect of ionizing and nonionizing radiation on normal tissues and mentored the next generation of radiation biologists. He expanded the field by recruiting new scientists, providing critiques and hands-on laboratory training, and organizing didactic programs and seminars. His mentees went on to significantly impact the field, as

evidenced by their contributions to publications, conference presentations, and obtaining funding.<sup>6</sup>

Osler invested heavily in his students, who gathered every Saturday evening at his house for "conversations and suppers."<sup>7</sup> During these informal evening sessions, Osler often taught the history of medicine, which whetted his students' appetites to "learn more," a trait far more helpful to them later than learning only bits of factual knowledge.<sup>8</sup>

In the olden days, bright residents and fellows, as well as their mentors, believed marriage was a hindrance to academic careers. Percival Bailey, who first classified gliomas, was a protegee of Harvey Cushing. The latter was so invested in Bailey's life, then his student, that he even traveled to meet Bailey's future Armenian in-laws to block his marriage by most effusively praising Bailey. It had precisely the opposite effect.<sup>9</sup>

Important lessons learned from some of these historical vignettes include teachers' recognition of talent, providing opportunities, righteousness, mutual respect, shared interests, guidance, and sustained interest in their students' lives and professional progress.<sup>4</sup>

## How Do We Become Medical Teachers in India?

Many become teachers opportunistically, lured by a steady income and life. Opportunistic teachers abound in our medical schools. The traits of teachers who ultimately evolve into mentors are rooted in the reasons that prompt them to become teachers in the first place: be it for altruistic reasons, a passion for teaching, a desire to be surrounded by curious young minds, or to ignite their minds to ask questions that have no answers.

## Do Medical Teachers Seek Appreciation from Their Students?

It is common knowledge that students seek appreciation from their teachers. Is it true the other way around? Teachers need to know what students think about them. Generally, the students are highly perceptive. They can quickly tell whether they learned a lot or learned very little. They can quickly tell the difference between a good and a poor teacher when prompted. They also point out the signs of weak teachers who tend to dominate, control, and instill fear.<sup>10</sup> I suggest a simple test—do your students look forward to attending your class?

## The Teacher Redefined

I shall quote John Quincy Adams, the sixth President of the United States, who once defined leaders thus: "If your actions inspire others to dream more, learn more, and become more, you are a leader." With due apologies to John Quincy, my definition of a teacher is the following: "If your actions inspire others (students) to dream more, learn more, and become more, you are a teacher." An ideal teacher aims to inspire students to carry his ideals, techniques, and legacy forward. According to the bible, "God created Adam and Eve in his own

image (Genesis 1:26, 27), that is, holy and righteous" (<https://wels.net/about-wels/what-we-believe/this-we-believe/creation/>, accessed June 20, 2024). An ideal teacher creates students in her own holy and righteous image.

## Parents and Teachers as Mentors

Mentoring starts at home. Children imitate their parents and siblings. Being a parent is a highly responsible business. "Being a good parental mentor requires much selflessness and nurturing."<sup>11</sup> During the most impressionable age, the medical undergrads and the postgrads stay in close contact with their teachers for several years. Besides learning, students imperceptibly imbibe their teachers' gestures, body language, communication skills, and value systems. These values stay with the students forever. My carry-home message is, "Just like parents, you as a teacher are like a stage performer. There cannot be any unguarded moments. There are no retakes for parents or the teachers."

## Is There a Role for Teachers in Today's World

Until September 4, 1998, when Larry Page and Sergey Brin launched Google (<https://en.wikipedia.org/wiki/Google>), there was a significant disparity in accessing information, mainly limited by the lack of resources. Teachers were the proverbial "fountains of knowledge" from whom the information and knowledge flowed to students. Teachers sat on a high pedestal with students, often at their mercy, whether they had learned much or little. If you knew a specific question and an answer was available, Google would find it within a fraction of a second. Google made access to information a level playing field. Students with internet access had access to as much information as their teachers. Information is simply a way of organizing the facts in an understandable format. The prime examples of information are books, newspapers, magazines, scientific journals, and conference proceedings. Smartphones and notebooks in the classrooms emboldened the students to question the teachers if they were wrong. Teachers bemoaned that students do not come to their classes. Teachers, who were simply suppliers of information, became redundant. William Osler once said, "It is much simpler to buy books than to read them, and easier to read them than to absorb their contents" (<https://wellcomecollection.org/works/xaza2yys>). It becomes knowledge only when the information is internalized, absorbed, and understood. However, more critical for physicians is to apply knowledge in the proper context. A contextual application of knowledge makes them wise. Mere possession of information, which students have in plenty, does not make them knowledgeable or wise. Information in medical sciences is growing exponentially. The role of teachers lies in making the students knowledgeable and wise.

## The Changing Role of Medical Teachers

Traditionally, teachers have been assigned the function of providing information, facilitating learning, designing courses and curricula, and doing facultative and summative

assessments of learning. They are expected to be role models in all these functions.<sup>12</sup> Teachers, when asked, rated teaching in the clinic or laboratory and role modeling as their highest-ranking activity.<sup>12</sup> Medical teachers become wise with experience and facilitate the student's ability to sieve the grain from the chaff. In complex situations, they teach how to solve problems and resolve conflicts. The clinical and surgical skills, the keystones of medical sciences, cannot be learned from textbooks.

Moreover, they help the students find unanswered research questions and become knowledge creators. While the trust between doctors and patients is well known, the trust between a medical teacher and the student in whose care patients are often left is critical for the patient's welfare. The institutions must create an enabling environment for the most effective teaching-learning activity.<sup>13</sup>

## Transitioning from a Teacher to a Mentor

The word "Mentor" was first used in Homer's epic poem in the 12th century BC, *Odyssey*, which describes the story of the apocryphal long drawn-out Trojan War. When Odysseus, the king of Ithaca (a Greek island), left for the war, the goddess of wisdom, Athena, appeared as a friend named Mentor to teach and guide Telemachus, his son. Barondess quotes Duffy to summarize Mentor's role: "Mentor was the transition figure in Telemachus' life during the journey from youth to manhood."<sup>14</sup> However, a more modern interpretation of "Mentor" comes from a book authored by a 17th-century bishop, Francois Fenelon, who wrote on the adventures of Telemachus.<sup>15</sup> According to Dr. Ferreres, "Athena represents the good counsel, the wisdom and righteousness."<sup>15</sup> To "teach and guide" is the essence of being a mentor.

While the role of teachers is more formal, mostly confined to classroom teaching to the students of the same institution, the role of a mentor is more fluid and informal and can cut across institutions and distances. Paula Marantz Cohen once summed up the subtle differences between teachers and mentors. She says, "A teacher has greater knowledge than a student; a mentor has greater perspective. In this sense, a mentor is more like an editor—or the best kind of editor."<sup>16</sup> The term "mentee" was possibly first used for students in 1916 by the University of Michigan's School of Engineering and decades later by a report in the *Journal of the American Institute of Architects* ([https://www.cjr.org/language\\_corner/mentee\\_fresh.php](https://www.cjr.org/language_corner/mentee_fresh.php), accessed on June 16, 2024). The Merriam-Webster dictionary used the term "Mentee" in 1965 to define the student being mentored. It is a synonym of "Protégé," which is defined as "one who is protected or trained or whose career is furthered by a person of experience, prominence, or influence" (<https://www.merriam-webster.com/dictionary/mentee#word-history>, accessed on June 16, 2024).

A universally accepted definition of mentoring is "The process whereby an experienced, highly regarded, empathic person (the mentor) guides another individual (the mentee) in the development and re-examination of their own ideas, learning, and personal and professional development."<sup>17</sup> The

relationship between the mentor and the mentee is lifelong. It may be informal based on mutual interests shared between the mentor and the mentee.<sup>18</sup> Unfortunately, formal mentoring is often discontinued upon completing the formal course.<sup>18</sup>

There is, however, a need for institutional mechanisms to promote formal mentoring. Mentors should always be available to their “mentees” and guide them in academic and research activities and making future career and life choices. As Rohrich put it, “The mentors I remember best have become lifelong friends. They have been there for me ‘rain or shine.’”<sup>11</sup> Mentoring increases faculty vitality and a sense of belonging to the institute.<sup>19</sup> Successful mentoring requires a “chemistry” or trust between the mentor and the mentee. Looking out for mentors may require a lot of effort and persistence. The house staff, research fellows, and junior faculty members at Harvard defined monitoring the research progress, not abusing power, advice on career plans, helping research, improving communication skills, and providing professional networking as the most significant qualities of their mentors.<sup>20</sup>

### Who Benefits the Most from Mentoring

In a systematic review of resident physicians, the prevalence of depression or depressive symptoms was 28.8% (range: 20.9–43.2%).<sup>21</sup> Medical residents feel that not only are they overworked but also their work is undervalued by their attending physicians, resulting in a loss of self-worth and unhealthy interrelationships among the residents.<sup>17</sup> A mentor–mentee approach promotes collegiality, personal well-being, an egalitarian approach to patients, and confidence in problem-solving and consulting skills.<sup>17</sup> Moreover, there is objective evidence that the mentor–mentee relationship works to the advantage of both in an academic environment. Together, they publish more papers, get more grants, get quicker academic promotions, and have greater career satisfaction.<sup>22</sup>

The mentored junior faculty are more academically successful and likely to stay in the institution than their nonmentored colleagues.<sup>23</sup> While the primary goal of structured mentoring of students is to increase their professional competencies, it is often short-lived and lasts till the course is completed.<sup>24</sup> In one such program in the department of pediatrics, 81% of the surveyed house staff believed the mentorship program helped them provide feedback, emotional support, and practical advice. It was crucial for completing their residency.<sup>25</sup> Mentoring ought to be self-perpetuating. In a study of senior faculty members of the University of Wisconsin, 90% had mentors, 75% of whom mentored their students. Most believed that having a mentor early in their career led to career and personal development advancements and prepared them to deal with stress later in life.<sup>26</sup>

### How to Link the Mentors and Mentees

Strikingly, only 8% of the “protégés” admitted to having a mentor.<sup>26</sup> However, in an extensive survey of the faculty of

26 academic health centers, irrespective of gender, seniority in an academic position, or minority status, only 30% admitted being positively mentored. In contrast, 43% believed they were inadequately mentored.<sup>19</sup> There is a lack of good-quality data on the benefits of mentoring programs. In a systematic review, less than 50% of the students and less than 20% of the faculty in some specialties admitted to having a mentor.<sup>27</sup> The teaching faculty is saddled with increasing patient care workload, research demands, and administrative tasks. There is a clear gap in understanding the mentoring phenomenon between the faculty and the residents. Linking the mentors and mentees remains a significant challenge. There is an obvious need to introduce formal mentoring programs in academic institutions to increase dialog and awareness among faculty and students and promote mentor–mentee relationships. A systematic review identified at least seven models of formal mentoring techniques, including person-to-person (dyad model), peer, facilitated peer, functional, speed, group, and distance mentoring, of which dyad mentoring was the most commonly followed.<sup>18</sup> Mentor–mentee programs are most successful when the mentees are encouraged to choose their mentors and develop facultative alliances with them.<sup>28</sup> One of the exit surveys of mentees found “speed mentoring” as the most effective strategy to achieve this linkage by providing them with brief biographies of the potential mentors and arranging a 15-minute brief meeting between the potential mentors and mentees, a strategy on the lines of “speed dating.”<sup>29</sup>

The major limitation of running mentoring programs is the need for more institutional support. Providing grants to protect mentors’ time, especially for underrepresented minorities, has been successful.<sup>30</sup> Mentoring can be built into continuing medical education programs with multilevel outcomes measured from time to time.<sup>31</sup> The lack of suitable mentors can be compensated through peer groups and facilitated mentoring, whereby more mentees can be helped.<sup>18</sup>

### Life without Mentors

Several euphemisms used to differentiate teaching, role modeling, coaching, tutoring, and supervision are a continuum and integral components of mentoring.<sup>32,33</sup> The growth of an academic without mentors is slow, organic, and full of hits and misses. Typical mentors play four distinct roles—the traditional mentor, the coach, the sponsor, and the connector.<sup>34</sup> With a mentor, it is easier to know the rules of academic medicine and how to deal with the frequent roadblocks. Ninety-eight percent of the interviewed academic medicine faculty members suggested that lack of mentorship significantly hindered career development.<sup>35</sup> It is already too late when you overcome the hurdles.<sup>35</sup>

### Locating the Right Mentor

Locating the right mentor is critical in furthering the academic career of the mentees. The mentor should help achieve the mentee’s personal goals as a researcher, teacher, or

practicing physician. While an ideal mentor should be a role model and a highly accomplished person in the field, his or her presence should not be intimidating. Mentees need to be comfortable communicating with him or her. Moreover, he or she should be available, generous, and willing to mentor you. Contact his or her previous mentees to learn about their experiences and career paths. However, the most critical factor in fostering a successful mentor–mentee relationship is mutual trust. A mentor failing to keep the promise of sharing an article with the mentee or the mentee failing to complete a simple task before the next meeting may be signs of a relationship heading for failure. Therefore, it is essential to establish and maintain mutual trust in the mentor–mentee relationship.<sup>36</sup>

Qualities of a teacher that make him or her an ideal mentor: Great mentors share several personal attributes, including effective communication, motivation, sharing, and nonjudgment.<sup>37</sup>

- **Mentors are accomplished:** As stated earlier, mentors are seniors in age, have spent decades in their profession, are already accomplished in their field, and are well known and respected in their peer group. They will happily provide research ideas to their mentees, help write grants, and guide them in bringing the research to fruition with a suitable publication. They will offer their mentee the first or even the corresponding authorship and often take the last position on the list of authors.<sup>37</sup> Straus and Sackett remarked: “Career disasters occur when mentors compete with their mentees.”<sup>37</sup> A mentor who is not ready to accept the first authorship of their mentee in a major journal that as a mentor they helped to get through is not ready to be a mentor.<sup>37</sup>
- **Communication:** Verbal and nonverbal communication between the physician and the patient is the keystone of interpersonal relationships and empathy,<sup>38</sup> which the students and mentees imbibe. Communication failure, rather than the lack of technical skills, is at the root of over 70% of severe adverse health outcomes.<sup>39</sup> It is universally agreed that good listeners make for great teachers, leaders, and mentors.<sup>37</sup> A teacher who does not encourage questions from either the students or the patients is far from being an ideal mentor.
- **Comprehension:** The teachers who quickly grasp and paraphrase the issue under discussion make for great mentors.
- **Mentors share freely:** Unlike poor teachers, mentors do not keep new knowledge and resources to themselves but freely share these without reservations. It is often said that knowledge dies with the person who holds it confined to the self but multiplies manifold when it is shared. The biblical fable that Jesus could feed 5,000 people from five loaves and two fishes, yet the basket remained full, is an apt analogy for sharing knowledge, wisdom, and insight with others.<sup>40</sup> Surrounded by sharp young minds, mentors learn more from their mentees than vice versa.<sup>33</sup>
- **Mentors do not like the “status quo”:** They are on an eternal quest for the better, bigger, and higher. They keep

the bar moving up. Mentors do not believe that they have all the answers. True mentors are critical and skeptical of their observations and remain open to criticism and acceptance if they ever made a mistake in the past. They believe someone (their mentee, who else!) will find a better solution. Researching with a mentor who says “I do not know; let us find out” can be great fun. William Oh, a legendary neonatologist known for his groundbreaking research and mentoring the next generations of neonatologists, recalled the words of his mentor John Lind at the Karolinska Institute in Stockholm: “Johnny was always thinking and would ask, ‘Why?’ He would say that if you have three whys, and you do not have an answer, that’s a project worth doing. I told my fellows that as well.”<sup>41</sup>

- **Mentors have sharp observation skills:** Observations are the keystone of all sciences. True mentors are good observers and know when a new observation departs from what is already known and what questions to ask to further the knowledge in the field.<sup>42</sup> They teach how to frame the unasked questions and use valid, reliable, and verifiable tools to carry out their research.
- **Mentors walk the talk:** No matter what the temptation, true mentors react to the dictates of their conscience. Their values are constant and do not change with situations. They cherish punctuality, honesty, integrity, equity, and discipline. They often maintain a calm temperament even in a grave provocation.

## Challenges of Gender Disparities in Mentoring Roles

More women now join the residency programs. However, women face gender discrimination at several levels. Women physicians have less research output, have a lesser package, are less likely to be promoted, and have less job satisfaction.<sup>43,44</sup> Work–life balance issues are incredibly challenging for women physician-researchers.<sup>45</sup> Women physicians need more help locating mentors than male colleagues.<sup>27</sup> It is generally believed that women prefer women mentors.<sup>46</sup> A nationwide survey among young women physicians indicated unavailability or access to senior women mentors. When available, they often needed more personal guidance to maintain a life–work balance.<sup>47</sup> However, when available, mentors had a more significant impact on the careers of women mentees than men.<sup>47</sup> Cross-gender mentoring can be successful in personal and professional growth, provided distinct boundaries are adhered to.<sup>35</sup> When senior mentors are not available to women, the peer group can be a valuable alternative source of support.<sup>47</sup> It is as accurate now as it was three decades earlier that most physicians (53% women) believed that women still faced gender-based issues in India that prevented their entry into leadership roles in medicine.<sup>48</sup> It is no different in super-specialties. Twenty percent or less of positions of chairpersons, speakers, paper presenters, or orations in the Indian Rheumatology Association were given to women, depriving them of career development, networking opportunities, and peer group visibility and recognition.<sup>49</sup>



## Changing Dynamics of Mentor–Mentee Relationships

Admittedly, mentors play a crucial role in shaping the professional careers of mentees. The fast-evolving and complex needs of mentees may not allow for a single long-term relationship, but rather multiple short-term mentor–mentee relationships driven by the needs of mentees rather than the mentors. A network of mentor–mentees across disciplines and institutions can be created in a workshop model to meet this demand.<sup>50</sup> During the annual meetings of the professional bodies, a concept of speed mentoring was introduced recently to connect novice and mid-career mentees with leaders in the profession, which may eventually lead to long-term relationships.<sup>50</sup>

## Mentor Training Programs

A free interactive group discussion among all the stakeholders is the key to developing a successful formal or informal mentorship program to promote clinician–researchers.<sup>51</sup> Having realized that promoting translational research requires strong mentors, the University of California, San Francisco, developed an exhaustive curriculum consisting of 10 case-based seminars for formal training of future research mentors. Nearly 90% of the trainee mentors were extremely satisfied and confident in achieving the program's goals.<sup>52</sup> Other universities have also successfully implemented faculty development programs to enhance connectivity with the students and faculty colleagues to teach core professional values.<sup>53–55</sup>

A 6-week preceptorship program under the guidance of a physician–scientist faculty member was successfully initiated by the University of Wisconsin medical scientist training program with the Institute for Clinical and Translational Research of the same university to provide hands-on clinical experience and integrate it with research. Five years later, the students who had gone through the course were found to be highly confident in carrying out translational research and the nuances of clinical research.<sup>56</sup> There is a strong need to clearly define and align the goals, milestones, and expectations for mentors and mentees before entering into formal relationships to prevent later disappointments.<sup>57</sup>

## E-Mentoring

In the resource-limited regions of the world, e-mentoring, a web-based distance learning resource rather than the more conventional face-to-face mentoring, is potentially an alternative model.<sup>58,59</sup> It reduces costs and provides adaptable and timely support.<sup>60,61</sup> It allows for privacy and honest discussions, facilitates knowledge and collaborative learning, and provides networking opportunities. Furthermore, e-mentoring supports mentees whenever needed, without being restricted by time or geographical limitations.<sup>62</sup>

## Evaluation of Mentoring Programs

Several parameters can measure the success of an informal mentoring program, including the number of publications,

awards and honors, research grants, professional leadership roles, and mentoring and advisory roles played by the mentees.<sup>23</sup>

However, formal evaluation by the mentees of their mentors in real time is a significant challenge. Mentees and students are usually hesitant to opine freely because of fear of retribution by their mentors.<sup>63</sup> Several instruments have been designed to evaluate the performance of both the mentors and the mentees. These are, in general, based on the frequency of communication, availability, satisfaction levels in the meetings, and the ability of the mentees to meet the training or research goals. A mentor–mentee relationship in the long term has ever-evolving goals. The major challenge in evaluating mentorship programs is the need for high-quality, experimental (interventional), and prospective data on the impact of informal or formal mentor–mentee programs on career choices and professional growth.<sup>27</sup>

Nonaligned expectations of mentors/mentees, poorly trained mentors, unethical behavior resulting primarily from inadequate institutional oversight, lack of training, and objectivity in evaluating such programs need urgent attention.<sup>64</sup> While innumerable tools have been used in the past that remain unvalidated, there is a need to develop a consensual holistic tool based on discussions between all stakeholders.<sup>65</sup> Overcoming the barriers identified in the evaluation process also remains a significant challenge.

## Conclusion

The need for mentorship skills in medical teachers is a significant challenge in India. Mentorship–mentee programs are needed to create future-ready physicians for health care needs and innovative research. The availability of search engines like Google has made the role of teachers redundant as mere information providers. Teachers need to get regular feedback from their students as a first step. In the changing paradigm, teachers must create an enabling environment, resolve conflicts in information, teach the students problem-solving skills, and apply knowledge in the proper context. Mentorship begins at home with parents and continues through teachers in formal education courses. Students may need multiple mentors in specific fields in an ever-evolving dynamic world, ensuring a robust support system. Although formal mentorship programs are difficult to evaluate objectively, they have led to increased vitality and output in the academic environment.

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None declared.

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