Current Urology Reports (2020) 21: 40
https://doi.org/10.1007/s11934-020-00994-z

EDUCATION (G BADALATO, SECTION EDITOR)

Faculty Development: How Do We Encourage Faculty to Become Better Teachers and Mentors?

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Published online: 18 August 2020

Abstract

Purpose of Review A healthy mentor relationship is a mutually beneficial experience and a necessary part of the natural progression of a career in academic medicine. We sought to explore the advantages of and challenges to becoming a mentor in current academic urology.

Recent Findings Mentorship can promote self-confidence in the ability to choose a career, drive academic productivity, and even inspire a career in academic medicine. It is necessary to help promote advancement in diverse socioeconomic groups within medical trainees. Strong mentors can serve as role models to the next generation of doctors. However, the ability to be an effective mentor is being challenged in today's world of academic medicine.

Summary By staying current with the issues surrounding mentorship, an individual can be fulfilled and successful in training and guiding doctors into the new era of medicine.

Keywords Mentor · Mentorship · Career counseling · Academic medicine · Diversity

Introduction

Mentorship spans all levels of urology training and is a critical skillset to develop among urology faculty. As defined by Healy and Welchert three decades ago, mentorship is "a dynamic, reciprocal relationship in a work environment between an advanced career incumbent (mentor) and a beginner (protégé), aimed at promoting the development of both" [1•]. This definition remains relevant for current trainees and mentors in urology. In contrast to a role model, a person looked to by others as an example to emulate, a mentor: mentee relationship is interactive and seeks to provide mutual benefit. To be a mentor is an active pursuit, not passive. Mentorship relationships are certainly not unique to urology, but our field is uniquely poised to capitalize on the relatively small size of our specialty and close access to each trainee in our residency programs.

This article is part of the Topical Collection on *Education*

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The implementation of a formal mentorship program for residents is especially important as our specialty seeks to attract highly qualified medical students in the face of increasing burnout in urology over the past decade [2]. A recent national multispecialty survey of residents revealed that urology was among the specialties with the highest burnout rate (63.8%) and 15.5% of urology trainees reported that they regretted their specialty choice [3••]. As part of a multi-modal approach to maintain our position as a competitive specialty and address burnout among urologists, emphasis should be placed on the development, implementation, and on-going support of formal mentorship programs. A 2018 survey of 211 urology residents demonstrated that the presence of a structured mentorship program was associated with decreased burnout (p 0.019) [4]. Matriculating medical students in the USA cited mentorship and the relationship between faculty and residents as the 3rd most important criteria used to evaluate a training program, behind only operative experience and interactions with current residents [5]. Despite the evidence to support the benefits of mentorship, a significant number of urology programs have not incorporated a mentorship program. A recent survey of residency program directors revealed that only 58% of urology training programs had a formal mentorship program in place and only 5% of programs offered a mentorship training course for their faculty [6•]. As training programs

under interval evaluations, the implementation of a structured mentorship program for its residents and mentorship training for faculty should be a priority.

In addition to individual urology training programs, opportunities exist at the society level for fostering mentorship. In 2017, the Young Urologists Committee (YUC) of the American Urological Association (AUA) started a speed mentoring program at the annual AUA conference. During the program, resident and fellow trainees have the opportunity to seek mentorship from a variety of general and sub-specialist urologists in a face to face format. In 2014, the AUA developed a leadership program to provide a structured 1-year mentorship experience for junior and mid-level faculty [7]. In addition to the AUA, other urology sub-specialty organizations have developed mentorship opportunities to reach residents considering sub-specialty training. A survey of urology residents found that residents with an identifiable mentor were 20 times more likely to pursue a fellowship and 79% of respondents listed the presence of a mentor as one or the "most important" factors influencing their decision to pursue additional training [8]. The Society of Urodynamics, Female Pelvic Medicine and Urogenital Reconstruction (SUFU) currently offers an online mentoring handbook, a program that will match a mentee with a SUFU faculty mentor and an annual education and mentorship meeting for urology residents [9]. As more sub-specialties recognize the importance of mentorship, more opportunities will be available to urology trainees.

There are some general guidelines that we should keep in mind when approached by a trainee looking for career advice [10]. First, be responsive. The days of making a formal appointment, or hoping for a chance encounter in the halls, each time that a career question arises have been replaced by email, text, tweets, and other forms of instant messaging that a mentor must be in tune with. Especially in this digital age, trainees are used to immediate access. Inherent in this concept is the fact that long drawn-out conversations over coffee have been replaced by 140-character emoji-laden quips that may be less formal, although no less meaningful. Although the communication media have evolved, one thing that has not changed in the mentor-mentee relationship is the fragile and sensitive psyche of the trainee. One is bad experience, especially in the form of ignored communication, and you may have compromised the relationship or lost that trainee forever. The modern academic mentor must be not only nimble with all form of communication but also thoughtful to the mindset of those who are reaching out to them.

Another rule that a mentor must try to follow is objectivity and situational awareness [10]. All mentees do not follow a cookbook—they are individuals with different needs. Some are more independent than others. As a mentor, you must make a full appraisal of the trainee standing across from you. In your mind, you know where you want that person to be at the end of training, but you must assess what is required to arrive there. Do you need to only give loose instructions and wait at the end of 6 months for a product or have an organized weekly lab meeting to assess progress and assign finite tasks? Additionally, do not be influenced by personal experiences and try to avoid comparing the mentee to others, either current or past. These pitfalls are labeled the *liability of experience* and can hinder the mentor-mentee relationship [11].

The following are insights from academic leaders in our department. They discuss the rewards and barriers to mentoring medical students, residents, and fellows in today's environment and how these relationships can be mutually beneficial.

Career Selection and Perception of Mentorship Importance

Mentors in academic medicine come with a variety of monikers, but the relative importance of these individuals cannot be denied. There are several studies on mentorship in medicine that consider the mentor relationship as one of the most important aspects of a training program [12–14]. Indeed, it is the mark of strong mentorship when faculty at a given medical center is replete with individuals who have spent some time training at that institution. In our own department, which has a well-established and defined mentorship program, almost two-thirds of the faculty had spent time training at our medical center for medical school, residency, fellowship, or a combination of these. Several studies have pointed to the mentor as the single most influencing factor in career guidance [15, 16]. In addition to specialty selection, mentorship can be influential in a broader sense, such as when choosing whether or not to practice in an academic setting. As I have mentioned prior, we are all accustomed to the academic environment, having spent most of our lives immersed in it. However, when choosing whether to pursue academics as a career, there are several factors that may dissuade an individual from entering academics. There are studies that have directly correlated the presence of a mentorship program and the desire to pursue an academic career [17, 18]. Another potent endorsement for an established mentorship program, particularly of young faculty, is retention. Strong interpersonal relationships and leadership may be the most important factor to keep an employee on faculty, and most successful academic departments boast low faculty turnover.

The relationship between a solid mentor experience and career choice may also be used to increase exposure and recruitment to under-subscribed specialties. Heavy and strategic mentoring in the early years of medical school can increase exposure to these specialties and dissipate any negative preconceptions [19, 20]. By increasing exposure to specialists, particularly in the early years of medical school, students can be shepherded through the particulars of the specialty into

the application process, interviews, and the eventual match process. It has been demonstrated that students who participated in surgical research in the preclinical years of either undergraduate or medical school studies and developed mentor relationships in those specialties were more likely to maintain interest in those surgical subspecialties later in training [21]. Again, using our institution as an example, we have a strong and defined exposure to students in the early years of medical school prior to the clinical years. This includes shadowing, lectures, team-based learning experiences, and research opportunities. Accordingly, we have matriculated the highest number of students nationally into urology three times over the last 12 years, an accomplishment that we attribute in large part to these mentoring efforts.

Another indirect, although no less important, effect of a strong mentoring relationship is personal development. Professionalism, although recently more formally represented in medical school curricula, has historically fallen within the realm of the *hidden curriculum*, comprised of the unintended lessons that are learned but not taught [22]. There is concern when students are exposed to unprofessional behavior by practitioners in the clinical setting, potentially promoting the acceptance and propagation of such conduct. Mentoring in academic medicine should include an all-encompassing example of growth and development. Through direct observation, a trainee can glean how to conduct themselves properly and professionally in a variety of situations and with a variety of contacts, both professional and personal.

Academic Productivity

A mutually beneficial impact of a defined mentoring program is academic productivity. At all levels of training, there is a positive association between the presence of a mentor and the ability to conduct and complete research projects [23, 24]. In an international survey with over 1600 medical student respondents, one of the largest barriers to research participation was difficulty finding a mentor to support the endeavor [25]. As a result, it has been postulated that trainees at research-oriented institutions have a more replete research portfolio than their counterparts [25]. Intuitively, participating in research as a trainee is a self-fulfilling prophecy, for these individuals are more likely to pursue a career in academic medicine, all as a result of proper and early mentoring. Research participation is fostered by early and formalized mentorship programs. These trainees are exposed to all aspects of research and manuscript preparation, including research design, manuscript preparation, the revision process, and the value of the peer-review process.

The immediate correlate to an academically productive trainee is the productivity of their mentor, who is likely the senior author on most of these products (manuscripts, abstracts, book chapters, etc.). Accordingly, in academic medicine, productivity can significantly benefit junior and senior faculty alike, translating into recognition, visibility, promotion, and even compensation, depending on the institution.

Diversity

The increasing diversity in the US population has fostered the recognition that diversity should be prioritized in all workplaces, including academic medicine and urology training programs. A broad definition of diversity considers gender, race, ethnicity, socioeconomic status, and sexual orientation. With regard to race and ethnicity, the Associated of American Medical Colleges has defined underrepresented minorities (URM) as trainees who are African American, Hispanic/Latino, Native American, or from mainland Puerto Rico. [26] A growing body of literature has demonstrated the benefit of improving diversity among urology trainees and future faculty. When patients are able to self-identify with the physician, they are more likely to express medical concerns and comply with treatment plans [27••, 28]. URM and female urologists are also more likely to eventually practice in underserved communities and take on mentorship roles at an earlier stage in their career to promote diversity within their field [29, 30•]. Finally, achieving cultural competency among faculty and trainees is not possible in a homogenous environment devoid of URM urologists.

Despite the recognized benefits of increased diversity, there continues to be a high level of discordance between the general population and the composition of urology trainees and practicing urologists. Although female urologists have increased from 1.2% of the urology workforce in 1997 to 9.2% in 2018, the rate of increase has lagged behind all other surgical subspecialties [31–33]. Individuals recognized as URM currently make up approximately 30% of the US population and only 7.6% of the urology workforce [34, 35]. Once female and URM residents complete their training in urology, they are also less likely to be promoted and hold leadership positions within the field [36, 37]. Clearly there remains a need for urology training programs to improve their strategies to attract female and URM urology candidates and to later promote their career development and advancement.

One strategy to promote the recruitment and development of female and URM urologists is the implementation of formalized mentorship programs that start in medical school and continue beyond completion of residency training. Similar to acting as a mentor, this targeted recruitment and creation of a culture of inclusion must be an active process. Several other medical specialties have adopted a mentorship program that has led to the increased recruitment of female and URM residents [38, 39]. As a means to overcome a lack of diverse mentors, the National Health Service in the UK has demonstrated the value of incorporating an element of "reverse mentorship," during which the mentee becomes the mentor and

educates the more senior member of the relationship on cultural competency [40]. Although most urology departments do not have a recognized diversity champion, most academic institutions have a diversity office that can offer resources and assistance in establishing mentorship programs for URM medical students.

Challenges to Mentoring

Advising is a key component of effective mentoring. The Liaison Committee on Medical Education requires an effective system both academic and career advising [41]. Medical students often start with general career advising programs developed within their respective institutions. This may be helpful in narrowing down career options and consideration of other career paths. Specialty residency advisors should be identified within an academic department and served to support students with the best possible career advice for their respective specialty.

New Medical Schools and Regional Clinical Campuses

There is a growing trend towards close affiliation between previously separate academic medical centers and medical school partners. Examples of these partnerships include Geisinger Health System and Geisinger Commonwealth School of Medicine in Pennsylvania, Hackensack Meridian Health and Seton Hall University in New Jersey, and Banner Health with the University of Arizona. Some new institutions have a well-developed specialty advising infrastructures, often those with associated residency programs in urology. Medical students in these more developed partnerships may benefit from outstanding advising and mentorship. Others rely entirely on volunteer faculty who were previously dedicated entirely to community practice. Our experience has been that many students at newly developed medical schools and new regional campuses of existing medical schools have difficulty identifying mentors and advisors who can provide the degree of counsel needed to guide them through the complex process of choosing a specialty and, ultimately, matching in that specialty.

In many instances, pre-clinical facilities are not adjacent to clinical facilities making interaction between pre-clinical medical students and specialty faculty challenging. In addition, established medical schools often establish rapid growth in enrollment by utilizing Regional Medical Campus (RMCs), a trend which accelerated following the AAMC call for expansion of medical school enrollment in 2006 [42]. In many cases, this model allows, or even requires, medical students to complete 100% of required 3rd year rotations at remote sites where effective opportunities for specialty advising and mentorship by a practicing urologist may not be available.

Faculty and Student Challenges

There are number of challenges that students face in choosing a career path. Subspecialty rotations are inconsistent across medical schools. Many medical students who are interested in a particular specialty may have never had the opportunity to rotate in that specialty. Additionally, most subspecialty clinical rotations are short, a factor which does not promote sustained faculty-student relationships.

Faculty challenges can also impede effective advising and mentorship. Academic faculty juggle the role of clinical practice, research, and teaching. They may have little time for the competing demand of providing sustained effective mentorship to students. In many institutions, mentorship and advising are undervalued in faculty career advancement. Appropriate measures for assessing medical student advising and mentorship should be developed and considered in faculty promotion and advancement.

Academic compensation plans often serve to reward and retain high clinical performers and incentivize certain activities and behaviors while discouraging others [43]. The use of productivity-based compensation plans in academic institutions has grown in recent years. Compensation, in the vast majority of instances, is heavily tied to clinical volume and revenue-generating activities. Teaching, advising, and mentorship activities may suffer in any compensation scheme that does not appropriately value and assess productivity in these areas.

Changes in Undergraduate and Graduate Medical Education

Additional challenges towards effective mentorship and career advising relate to the constantly changing landscape of medical education. The United States Medical Licensing Examination comprises three steps (four examinations) in which a passing is required for unrestricted medical licensure in all US states and territories. Step 1 is a multiple choice examination that evaluates knowledge and the application of basic science to the practice of medicine. This examination is typically given in the 2nd year of medical school.

Performance on USMLE Step 1 was cited as the most important factor in the selection of applications to interview for a residency position by program directors [44]. This factor has significant implications on the selection of a diverse group of candidates for residency positions. First-generation college graduates, older students, and individuals from groups historically underrepresented in medicine are more likely to fail the USMLE Step 1 examination on the first attempt [45, 46].

In response to this and a number of other concerns, the USMLE announced on February 12, 2020, that performance reporting on the Step 1 examination would be transitioned to a pass/fail outcome no sooner than January 2022 [47]. Given the

weight that many residency program directors place in USMLE Step 1 results, it is a logical question to ask if the USMLE Step 2 examination, which measures clinical knowledge, will assume greater importance in selection of which candidates to interview and ultimately choose for ranking. It is thought that the de-emphasis of USMLE Step 1 scores may lead to a more holistic assessment of a candidate's record and consideration of a more diverse group of candidates for residency.

Effective advising requires a thorough and honest assessment a medical student's strengths and weaknesses. Consideration should be given to what factors residency programs value when selecting candidates to interview for positions and ultimately what they value when ranking candidates. It is imperative that mentors provide up to date advice to create a competitive residency application and successfully navigate the residency interview and selection process. Residency interviews are one of the most anxiety-provoking parts of the residency application process, and practice interviews are invaluable in preparing students to discuss challenging topic. With the possible growing use of remote interviews, rather than in-person interviews, the mentor or advisor will need to guide students through a process that they themselves may not have experienced.

Conclusions

A mentor in the current climate of academic medicine must be thoughtful, nimble, and current. They should understand their potential impact on the career choices of a student or trainee and focus on keeping a specialty well-represented by a cross-section of the general population. Finally, they need to be aware of the challenges facing today's students and trainees and how to navigate these to set these individuals up to succeed.

Compliance with Ethical Standards

Conflict of Interest Drs. Murphy, Shenot, and Lallas have nothing to disclose.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the authors.

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