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Mentoring During Residency Education

A Unique Challenge for the Surgeon?

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A mentor serves as role model, counselor, and advocate for an understudy or protégé. The art and science of mentoring have been investigated most thoroughly in the educational literature, yet there are unique situational and individual considerations in the surgical arena that may warrant special consideration. The general attributes of successful mentors are not foreign to academic surgeons but may require deliberate cultivation to optimize mentorship in the context of academic medicine. Moreover, the stages of productive mentoring may be counter to the learned adaptive behaviors and instinctive personality traits of some accomplished surgeon educators. Indeed, examples of failed mentorship are common in our medical centers and, specifically, in surgical training programs. The behavioral adaptation that supports surgical decision-making under conditions of incomplete data and unusual stress often devalues succession planning and derivation of satisfaction from the success of other members of the team. Accordingly, fostering effective mentoring relationships in academic surgery will require a concerted effort to develop appropriate behaviors conducive to the mentoring process. The personal and professional growth of our students as well as the succession planning for our specialty are dependent upon the successful creation of an environment conducive to mentoring in academic orthopaedics.

Academic orthopaedic surgeons as educators and, more importantly, life-long students of orthopaedics, have all had the opportunity to participate in the mentorship process as both leader and protégé. My own perspective on this subject is derived from 25 years in the field of orthopaedics, which has encompassed a full-time academic practice for 20 years under the direction of four chairs and four deans in four universities. I have subsequently served as department chair for the past 14 years at two medical schools in academic medical centers and have been principally responsible for the education of 53 orthopaedic residents. Perhaps most important to my opinions on the subject of mentoring, I have been advised and guided personally by six department chairs, two of which (during the most formative years of medical school and residency) have been prominent mentors to me. I have hopefully been a keen observer and dedicated student of the process and styles of mentoring; these personal observations and experiences form the basis of these musings and serve to complement and place the published literature on the subject into the context of medical education.

I believe style matters. This is not profound, but nonetheless central to the ultimate success or failure of mentors, particularly academic surgeons who undertake this task as part of their mission to educate young physicians. As individual observers, we must at the same time admit our necessarily retrospective look at this matter is encumbered by various limitations of any retrospective study. This includes selection bias, which is manifest as differing circumstances for each resident, and the moving target created by advancing time, which has resulted in striking and important generational differences among residents across our period of observation. Notwithstanding these limitations implicit in any such chronicle of personal experience, we will attempt to make some sense of the matter of mentoring orthopaedic residents. Specifically, our intent is to place the literature on the subject of mentoring into the context of surgical education, considering any unique features of the orthopaedic environment that may either deserve special consideration or have unusual influence upon the mentoring process.

Derivation and Definition of "Mentor"

Webster defines mentor as a "trusted counselor or guide; a tutor or coach".[1] The American College Dictionary amplifies the description of a trusted counselor with the ad-

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jective "wise".[18] However, a much deeper understanding of the term mentor is gleaned from a limited reading of Greek mythology.[10–12] In Homer's Odyssey, Mentor is the tutor and servant of Odysseus and the human characterization of the immortal goddess Athena to whom Odysseus entrusted the care and upbringing of his son Telemachus when he parted from his wife Penelope to sail off to war in Troy. Upon Odysseus' return to Ithaca, some 20 years later, he found Telemachus a brave, honest, and respectable young man. Mentor had not simply taught Telemachus mechanical skills and reasoning, but she had inspired him to fend off disingenuous suitors of his mother and to believe in the continued survival of his father. Mentor was not only teacher in the strictest sense, but a role model and guardian responsible for the emotional and intellectual development of Telemachus. The powerful example we are given is the role of substitute father Mentor fulfilled. Such is the role of mentors for our residents, who are in need of emotional and intellectual growth as they prepare to be independently practicing physicians.

Applied and more practical definitions of a mentor can be found in the educational literature. Anderson and Shannon define a mentor as ". . . the role model, sponsor, encourager, and friend to a less skilled or less experienced person for the purpose of promoting the latter's professional and/or personal development."[2] Sullivan succinctly describes the function of a mentor as the ". . . opener of doors . . .".[17] More recently, medical educators have taken a swing at capturing the essence of mentoring in the context of postgraduate medical education. The Standing Committee on Postgraduate Medical and Dental Education in London noted mentoring had been defined traditionally as ". . . the process whereby an experienced, highly regarded empathic person (the mentor) guides another individual (the mentee) in the development of their own ideas, learning, and professional development."[16] A more pragmatic opinion was espoused by the Royal College of Physicians where a workshop on mentoring observed good doctors are not necessarily good mentors and mutual respect between the mentor and mentee was essential for a productive relationship conducive to effective mentoring.[3]

From these collective perspectives, it is apparent a good mentor is more than a teacher who provides the bits of knowledge to the learner, and much more than a role model, who may simply demonstrate a pattern of desired behavior for the learner. An effective mentor transcends the roles of educator and role-model and serves as the guardian and promoter of the young physician's personal and professional development. A true mentor takes a personal interest in the success of the mentee or protégé. Moreover, mentored individuals often attribute a substantial part of their success to the influence of their mentor, but such is not universally the case. In the business world, ⅔ of surveyed executives acknowledge having had a mentor but, interestingly, most attributed their success more to luck and their own individual talents.[13] Mentored executives were more likely to earn slightly more money at a younger age, but greater emphasis was evident on less tangible indicators. Those who were mentored were more likely to be better educated, follow a specific career plan, be happy with their career progress, and derive greater pleasure from their work.[13] It seems having a mentor raised the protégé's level of consciousness of having made achievement in some field and assigning credit to the mentor may be more prevalent in reference to intangible byproducts of the relationship, as one might more commonly observe in the medical profession.

As such, it becomes evident the need for genuine mentors can be no greater than in the field of medicine,[19] where we prepare young physicians for the calling[9] of medical practice, rather than a more mechanical or technical participation in some trade or business. The physician is more than a learned individual dispensing applied scientific knowledge and, accordingly, physicians-in-training have a profound need for emotional and medical intelligence and maturity in the course of administering health care. Mentoring is a critical and essential part of preparing young physicians for the independent practice of medicine, and academic physicians, in our role as purveyors of medical education, must be prepared to serve as effective mentors for our residents.

Traits of Successful Mentors

Having hopefully established the need for engaging medical educators in the task of mentoring, we shall return to the hypothesis that style matters. One practical derivative of this philosophy is physicians, in general, and surgeons, in particular, are not necessarily or naturally good mentors. Indeed, without a specific and directed effort to act constructively, one could logically argue surgeons are uniquely qualified to be distinctly *poor* mentors.

Rowley has characterized the good mentor as having six distinctive traits.[14] First, *the good mentor is committed to the role of mentoring* and has made a conscious decision to be engaged in the process of helping trainees find success and gratification in their work. Indeed, the characteristic cited most frequently of effective mentors is the willingness to nurture another person.[4,6] To pursue such a task, he suggests the good mentor must demonstrate persistence because the task of mentoring is neither easy nor necessarily reflexive in its course. The *good mentor should accept the beginner; empathy is critical* in being able to accept the newcomer as a developing person in progress without passing judgment. The *effective mentor is skilled at providing instructional support* to the protégé by using shared experiences as a common ground for discussion

and practical examples from which there can be shared learning. There is *a need for versatility of the mentor to be effective in different interpersonal contexts* and in recognizing there are individual styles required by various learners. This can be a most challenging task for the mentor, who must be insightful into his or her own strengths and weaknesses in interpersonal communication styles to be most effective with a variety of types of learners. The *mentor must model a life of continuous learning* in their own behavior as this affords transparency in the mentor's professional growth alongside the mentee and lends ease to the mentoring relationship. Finally, the *mentor must communicate hope and optimism* in demonstrating the belief the protégé is capable of overcoming the challenges at hand. While experience in life's lessons is an invaluable asset for the mentor, a veteran who has lost a positive outlook in favor of being a perpetual cynic personifies the quality most commonly precluding the senior surgeon from being an effective mentor.

Stages of Effective Mentorship

We can analyze additionally the specific situation of the surgeon mentor in the framework of the 10 stages of mentoring as outlined by Mendler.[6,8] These include: attraction, cliché exchange, recounting, personal disclosure, bonding, fear of infringement, revisiting the framework, peak mentoring, reciprocity, and closure. The first five stages, through bonding, represent the process of relationship building between the mentor and protégé, or the fit between these two individuals. For most pairings, where the mentor is seasoned and possesses a varied repertoire of communication styles, harmony characterizes this first half of the relationship. Nevertheless, at the stage of bonding some pairings will sour, most often at the hands of ineffective mentoring skills.

Mendler's stage of fear of infringement requires the mentor accept the premonition of a changing relationship with the protégé; it is at this stage when problems in the relationship are most likely to occur. The mentor senses and anticipates the impending transition of the relationship from educator and superior to a more collegial interaction based upon shared common experiences. The mentor considers, and must accept, the eventuality of relinquishing the role of superior. A secure ego is required at this stage to avoid being threatened by the coming of age of the protégé. Indeed, the successful mentor will relish and welcome this change in the mentee as an indication of the success of the mentoring relationship. Unfortunately, some ill-prepared mentors are sufficiently insecure as to fail at this stage of the relationship by not allowing the protégé to grow into this new role. The insecure mentor perceives this elevation of the protégé as lessening their own stature rather than enhancing it. In revisiting the framework, the secure mentor willingly and successfully accepts the transition of the relationship and effectively communicates this to the protégé. The role of superior is relinquished in favor of a collegial interaction based upon shared experiences and problems and seeking common solutions. Transparency of the mentor about his or her own search for better answers and solutions to personal challenges also solidifies the new congruence of the relationship between mentor and mentee.

The final three stages of Mendler's mentoring framework represent a culmination of the entire process of stewardship of the trainee. The intensity and effectiveness of the mentoring continues and accelerates through the stage of peak mentoring on the strength of the new collegial relationship. Mutual benefit is clearly evident to both parties as the mentor derives satisfaction from the accomplishments of the protégé and realizes these achievements also elevate the stature of the mentor. Through reciprocity and closure, the effective mentor reaps the satisfaction of a successful journey catalyzing the maturation of the protégé and providing satisfaction and reward to both parties.

Societal Benefits of Mentorship

In addition to the personal satisfaction of the mentor, there are substantial benefits to be realized by the entire healthcare profession from an effective mentoring program. One might successfully argue the optimal performance of a surgeon develops over a substantial period of time during which the individual gains meaningful experience in clinical practice. For the surgeon, such time in the saddle is generally acquired over decades of practice. It could be reasonably postulated, perhaps to the surprise of many lay persons, two of the three decades of the typical surgeon's effective practice life are spent on the steep part of the learning curve. This period is characterized by a feedback loop of incremental patient contact reinforcing a cycle adding continually and substantially to the practical knowledge base and clinical excellence of the surgeon. The practice of medicine, and certainly of surgery as described, is a highly refined example of pattern recognition requiring considerable time to reach optimum performance; in this example, arguably ⅔ of one's effective practice lifetime. If this, indeed, is the case, then the medical profession and healthcare system should be attempting to extend the practice lifetimes of these individuals. Yet the day-to-day stresses and increasing economic challenges of practice have resulted in progressively earlier retirement of seasoned physicians.[7,10] This is problematic for our profession; absent an effective way to extend individual physicians' interest in continuing practice, an effective mentoring program provides an avenue for succession planning, transfer of knowledge,[15] and practice experience broadly benefiting the medical profession and its

patients. The effective mentoring relationship is therefore a mutually beneficial method of transferring the intellectual capital of senior practitioners, acquired over decades of practice, to more junior physicians in the early stages of their careers. With the essential prerequisite the senior surgeon retains an energized and positive outlook, these elder practitioners typically enjoy a greater sense of altruism and insulation from competition (or even complete removal if retirement is near), which may represent obstacles to effective mentoring for some younger surgeons. Not only does the senior surgeon derive great personal satisfaction from the mentoring relationship, but our profession has even more compelling reasons to continue to engage these individuals in an effective mentoring program in the latter phases of their careers.

Failed Mentorship in the Surgical Arena

Having outlined the formula for successful mentoring in medical, specifically orthopaedic surgical, education, it is instructive to explore some common reasons why efforts at mentoring may fail to accomplish the intended goals. Barriers to successful mentoring are many, but they can be mitigated by a conscious awareness of the existing pitfalls. For the mentored, physicians are typically competitive individuals who find it difficult to ask for help and are generally highly self-reliant.[3] To these individuals, the notion of mentorship often has the implication of weakness or need for remedial work. This unintended and false stigma of mentorship must be overcome. For the mentor, contemporary practice is fraught with competitive (dis)incentives to share time and knowledge. This condition is the result of many factors, including the insurers' intent to complicate the method of payment for services, a system of declining reimbursement, and an increasingly high valuation of personal time espoused by contemporary physicians. Four examples of real-world failures in effective mentoring will serve to illustrate these principles. These individuals are well-known to you and your institution. No one medical center has a monopoly on these folks; specifically, they are the uncommitted phony, the perfectionist-turned-tyrant, the insecure egocentric, and the begrudger.[5]

The uncommitted phony is a mentor who is only sporadically involved in the process of mentoring and often distracted by unrelated issues. Intimidation and bluff are commonly used to deflect questions when the mentor does not have a clear response to the inquiry. Quickly, the protégé perceives a lack of sincerity and honesty in the mentor. Through the simple inability of being able to say, "I don't know", the teacher loses the respect of the student and the mentoring relationship is stalled early in its development; the relationship never passes the stages of attraction and personal development. For all intents and purposes, this false start bespeaks an underlying inability of the teacher to be an effective mentor in most any situation. Sincerity and honesty are cornerstones to the successful mentoring relationship and the ability of the protégé to pick up on the absence of these qualities is predictable.

The perfectionist-turned-tyrant is an individual who sets out on an admirable path, continually setting the bar high and always striving for perfection. This person leads by example, which is generally a very effective strategy, but is relentless in the pursuit of perfection and never stops pushing. There are neither compliments nor reassurances for the mentee, who becomes burned out and fatigued in the quest of the unattainable. The perfectionist-turned-tyrant becomes aloof and distant, and the relationship eventually becomes tedious and overbearing for the protégé. While often off to a good start, this relationship fails at the bonding stage because there are no opportunities for safe harbor provided to the mentee. No matter how noble and cherished the goal, people need reassurance and rest stops to refuel along the highway of high powered achievement.

The insecure egocentric is a bit of an enigma at first glance. These individuals, despite their own typically substantial accomplishments, are highly competitive superachievers who are never comfortable or satisfied with their own trappings in life. The insecure egocentric is demeaning and intimidating in response to questions from the mentee; this response serves the purpose of self-aggrandizement for the mentor. The relationship becomes primarily an ego-builder for the insecure teacher and mentor, who has lost sight of the intended benefit for the protégé. The mentor becomes arrogant, pompous, unapproachable, and ineffective in the mentor role. While some redeeming qualities of the mentor may prompt the protégé to stay in the relationship early on in its development, the bonding never passes the stage of fear of infringement. The insecurity of the mentor, no matter how accomplished, never allows the relationship to mature to a stage of highly effective mentoring and reciprocity.

The begrudger is a first cousin of the insecure egocentric. The begrudger is protective of the status earned through a career of hard work and is supportive of the mentee but only to a point. The begrudger shares knowledge incompletely and only in bits and pieces. Support of the protégé is apparent to a predetermined, and limited, extent defined relative to the begrudger's own perception of self-achievement. The mentoring relationship progresses quite smoothly and effortlessly to the point of independence of the mentee, but the mentor clings to the roles of superior and subordinate and is incapable of generational advancement of the younger physician. The relationship stalls at the stage of revisiting the framework as

the mentor is neither prepared for nor accepting of the prospect of welcoming the mentee as a more equal peer.

DISCUSSION

Extracted from assorted writings and confirmed by my own personal experiences, a description of 10 traits of highly effective physician mentors can be assembled. Some are quite easily generalized to mentors in all fields while others are more unique, as well as challenging, to the surgeon mentor. The highly effective mentor is accepting of individuality and the variable starting points of the mentee, shares knowledge completely and unselfishly, is encouraging and supportive of the mentee while concurrently providing constructive criticism on performance, and sets the bar high but provides rest points for the mentee to catch a breath along the road to high powered achievement. On a more personal level, the effective mentor is honest and freely admits to not knowing everything, has a secure ego with respect to self-identity and personal accomplishments unthreatened by the successes of the protégé, shares common challenges as opportunities to grow together, and welcomes collegiality when appropriately earned. Most importantly and, in my opinion, potentially most challenging for the surgeon mentor is the development of two critical personal attributes. First is the ability to revel in succession planning for the next generation, and second is the mastery of the essential skill of deriving personal satisfaction from the accomplishments of the protégé as a direct and unspoken extension of the mentor's own achievements. It is in mastery of these last two characteristics one might argue the surgeon mentor is least naturally equipped to be successful and most likely to be challenged.

It should take no one by surprise to state surgeons are trained to develop a sense of thoughtful decisiveness in the heat of the moment with only incomplete information about the matter at hand. In fact, it is under the duress of such stressful circumstances created by looming time constraints that the surgeon has greatest opportunity to practice and fully develop the art of decision making in the face of ambiguity. Refinement of such a skill may have two very opposite effects on an individual. The ever present awareness that additional information and a continuously improving context might alter the basis for the decision, and ultimately the actual decision itself, would ideally leave the individual with a constant openness to revisit events and outcomes with an eye towards learning from past experiences. The willingness to improve the response the next time a similar set of circumstances is encountered creates an environment conducive to continuous learning, which also supports the mentoring process. Unfortunately, an opposite effect may also result. Occasionally, repeated indulgence in irrevocable decision-making predicated upon limited information engenders in the leader a sense of being infallible and beyond reproach. While in the narrow context of the operating room environment, such an approach may actually be more often constructive than harmful, certainly outside of the operating theatre, and in society at large, a more collegial spirit is necessary to support meaningful working relationships with peers.

To be capable of reveling in succession planning and deriving personal pleasure from the accomplishments of those around us requires a realization we are each mortal and capable of only a finite contribution to this existence. An interest in succession planning requires, de facto, a conscious awareness our time in the spotlight will pass and the mantel will be handed off to others. For most, such a realization comes in the twilight of a productive career when it is clear passing on knowledge to the next generation is a noble and non-threatening exercise. Indeed, while such an assignment might always seem noble, to many it only becomes non-threatening when the giver of the information is no longer competing in the same arena as the receiver. That is to say, the teacher or mentor is "slowing down" or even retiring from practice. However, the sooner before retirement one realizes the value of succession planning, the more valuable a vector of information is the mentor. Such is the case because the useful half-life of medical knowledge after retirement is depressingly short in the face of the rapid technological advances occurring on a regular basis in medicine. Effective mentoring to benefit society through succession planning therefore only requires the mentor to maintain a vitality and vigor about the subject matter that facilitates its unselfish transmission to the next generation. For many, but not all, professors of surgery this activity is a gratifying closure to a rewarding career.

Deriving personal satisfaction from the accomplishments of those around us, however, is a substantially more challenging behavior to learn. This is true largely because those earning recognition are often not only our contemporaries but they compete in the same arena in which we cut our teeth and earned our own recognition and notoriety. To truly derive fulfillment from such a circumstance requires not only the ability to take some *unspoken* amount of credit for the accomplishments of our protégés, but also requires a secure ego of our own as a foundation because acknowledgment of the connection of the mentor to the success of the protégé is often made only by a minority of observers. This situation can be likened to those qualities required of a successful team captain, department chair, or organizational leader. Upon assumption of one of these roles, much like that of becoming a mentor, one's identity becomes inextricably related to the success of the group as a whole and is no longer dependent primarily upon the

success of the individual mentor, captain, or chair. This represents a sea change in reward systems for the mentor that must be recognized and anticipated in order to avoid the personal disappointment that can accompany recognition of the protégé without concomitant acknowledgement of the mentor. The derivation of such satisfaction from the success of more junior members of the team is neither universally learned in business school nor widely taught in medical school and, to no one's surprise, is not part of the basic primer on operating room etiquette. Senior professors of surgery are reliably masters of their craft and typically revered educators, but not all are naturally effective mentors. Learning to derive personal satisfaction from the accomplishments of those around them has not been a behavior that was part of the core curriculum for the successful professor of surgery. Notwithstanding this reality, the ability to derive joy from the success of one's protégé will always be a requisite for the proficient mentor. Society in general, and orthopaedics in particular, cannot prosper without more individuals being party to both groups, mentors as well as professors of surgery.

Notwithstanding these inherent challenges, contemporary medical practice and education provide an optimistic outlook for a greater number of effective surgeon mentors in the future. A more balanced gender mix in medicine in general, and orthopaedics in particular, will offer less support for the imperial approach to operating room leadership. Moreover, the patient safety movement and its call for a learning environment that values the role and contributions of all members of the healthcare team will also engender an environment conducive to effective mentorship. Furthermore, it is apparent generational differences in regard to tolerance of hierarchical leadership and educational models will no longer support the traditional framework for surgical education; this will further encourage the evolution of surgical mentorship in a productive direction. As contact hours decrease and the structure of surgical education dictates less continuity in the learning experience with patients, and consequently faculty, the importance of actively teaching professionalism and maximizing value in faculty-resident contact will give way to an increasing appreciation of the value of active mentoring. No less than such an awareness and active effort on the part of existing orthopaedic faculty, in concert with these external forces, will bring a favorable change in the numbers of effective mentors in academic orthopaedics.

Now more than ever, as the face of medicine undergoes rapid and indisputable change, there is a compelling need for effective mentoring in medical education.[19] As Osler advised us, ". . . the practice of medicine is an art, not a trade; a calling, not a business; a calling in which your heart will be exercised equally with your head."[9] The art of surgery, the practice of orthopaedics, and the calling of our profession cannot be taught from books alone; mentors are, and will increasingly be, an integral part of the effective education of our most skilled and accomplished orthopaedic trainees. Those who will lead our specialty to new achievements long after we have ceased to don scrubs will most certainly benefit from committed mentorship; this is our next calling in orthopaedics.

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