

# Mentorship: A Surgeon's Tool of Trade

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Mentorship dates back to the Trojan War in Greek mythology. While Odysseus is at battle, he entrusts his son Telemachus to Mentor. Mentor fails to strengthen Telemachus, allowing suitors access to Odysseus' wife in order to thwart Telemachus' claim to the throne. Athena saves the day by providing Telemachus with advice and protection until his father returns from war ten years later (1). Mentorship is described as the advice and influence provided by a mentor to a mentee. A mentor is someone who, in an organizational environment, gives advice to a less experienced individual (mentee), impacting their personal and professional growth (1).

In neurosurgery, Dr. William Osler mentored Harvey Cushing, who is regarded as the pioneer of modern neurosurgery, by recognizing his talent as an excellent surgeon, providing patient management and career direction, and continuing the mentorship until Dr. William's death. Harvey Cushing perpetuated the mentoring culture to his students who further led to the growth of the neurosurgery fraternity (2).

Training competent and compassionate surgeons is a complex multifaceted process. Mentorship has been shown to have an impact on career selection, job satisfaction, 'hidden curriculum' on professionalism and psychosocial support (3). In academic surgery, mentorship has been shown to improve patient care, academic promotion enhancing faculty retention and diversity, research productivity and leadership (4). The surgical environment, combined with operating room stressors, make the specialty unique and challenging for trainees, emphasizing the importance of mentorship (5).

Clinical mentorship employs a hierarchical apprenticeship model, allowing residents to work under supervision while honing their surgical skills (6). Clinical mentorship facilitates the transfer of skills and knowledge during the initial years of training by observing, coaching, and offering practical solutions during operation. This includes intraoperative decision making, surgical technique, pre and post-operative care, and team communication (7). This is further enhanced by continuous learning using the 'low dose high frequency approach' adult learning model, which allows knowledge transfer in small chunks over time (8). In a study on multimodal mentorship intervention to improve surgical quality in Tanzania, participants prioritized clinical skills above all other areas of mentorship received, with 78 percent and 74%, respectively, reporting increased confidence and improved clinical skills post mentorship (8).

Due to demanding newfound responsibilities and perceived inadequacies in leadership and organizational skills, newly graduated consultants face challenges with confidence building and new institutional culture. This has been linked to a number of errors that have resulted in patient harm (9). A study of UK doctors' perceptions of mentorship found that was useful to help junior doctors manage their professional and psychosocial workload (9).

Mentorship plays an important role in the training and development of surgeon scientists. Mentees require assistance in applying for grant funding and identifying alternative sources of income to fund their research, which will increase productivity and

clinical innovation (4,10). With the fast pace of change in medicine, mentoring allows for the sharing of teaching techniques with faculty, enhancing the student's learning experience. Faculty can also be mentored in novel areas such as digital technologies, social media, and crowd sourcing (4). Academic mentoring helps to foster future leaders by providing them with business and administrative experience, financial acumen, management skills, team building to improve working relationships between doctors and patients, and interpersonal skill (4).

Mentorship is essential in academic medicine because the challenges of rapid change in the healthcare environment contribute to career fatigue or burnout. Institutions frequently invest in academic "stars" who may be unprepared for the realities of rising organizational demands. Formal mentorship programs for "average" staff members may improve organizational leadership and flexibility, faculty retention, and alignment with institutional values and goals. Professional mentoring relationships may help to mitigate the challenges of professional burnout and early identification of individuals struggling with personal and professional growth. (10).

Despite overwhelming evidence demonstrating the value of mentorship, there has been a decline in these relationships at the residency level, which has been linked to a lack of clear objectives guiding discussions. There is also a lack of knowledge and transparency among residents when it comes

to dealing with practical aspects of medicine (11). Furthermore, there is a generational divide in terms of work ethic, with the younger generation placing a greater focus on family and personal lives. This brings up the much-needed discussion on work-life balance (5). In most academic institutions, integrating work and life is a major challenge. Despite policies like deferred tenure, part-time employment, and maternity/paternity leave, most academic institutions are struggling to keep faculty (12). This is thought to be due to professional culture that frowns upon self-preservation. Mentorship, in combination with measures that address professional culture and de-stigmatize the use of flexibility, is likely to enhance work-life integration (13).

Poor communication, perceived competition between the mentor and the mentee, lack of commitment, personality incompatibilities, and the mentor's lack of experience are all reasons why mentoring programs fail(14). These programs being labor and resource intensive poses a challenge in their implementation in academic and healthcare institutions due to financial constraints (9). Mentoring relationships thrive in particular settings and to create a model that works in academic medicine needs an understanding on how institutions and societal factors including culture impact mentoring relationships of both the mentor and mentee (10). This is a call to action to assess mentorship and its impact on academic medicine, as well as what we can do as a community to change the narrative.

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