



Opinion & Special Articles: Mentoring in neurology

Filling the residency gap in academic mentoring

Paul R. Lee, MD, PhD
Elisabeth B. Marsh, MD

Correspondence to
Dr. Marsh:
ebmarsh@jhmi.edu

ABSTRACT

Effective academic mentoring significantly affects a physician's choice of career, academic productivity, and professional trajectory. The mentoring relationship is necessary for the continued success of medical training. It is critical to cultivate a climate in which mentoring can thrive. In order to improve the quality and outcomes of mentoring, we must adopt a comprehensive plan. There are interventions at every level of training that will ensure that the current cohort of neurologists receives the requisite expertise needed to flourish and inspire future trainees. Professional organizations must articulate a comprehensive vision of mentoring. Institutions must create an infrastructure to support mentors. Mentors should work in active partnerships with their mentees to forge sustained, productive relationships. Mentees must actively contribute to their own mentoring. Proper mentorship will ensure a bright future for academic neurology.

Neurology® 2014;82:e85–e88

In Homer's *Odyssey*, Odysseus tasks his friend "Mentor" with caring for his son while he goes to war. To honor this ancient commitment, in modern English a "mentor" is an individual who helps someone, a "mentee," to achieve a personal or professional goal. Medicine has long recognized the significance of mentors. The Hippocratic Oath contains a pledge to "hold him who has taught me this art as equal to my parents." Equal parts teacher, guidance counselor, parent, sage, cheerleader, role model, and critic, the modern academic mentor assists those with less experience as they navigate the perils of their nascent careers. Such individuals might seem mythological, but their importance in a physician's life cannot be overstated. Unfortunately, the realities of academic training environments impose significant limits on the mentor–mentee relationship. There is a genuine concern that medicine will suffer from an absence of formal mentoring if this relationship is not protected.¹

Proper mentoring is necessary for successful training and positively influences an academic physician's career choice, productivity, and professional growth.^{1,2} More than 60% of neurology residents report that their fellowship choice is attributable to a mentor.³ Upon transitioning to junior faculty, physicians who have mentors are more likely to obtain competitive grants, to publish, and to be promoted.^{1,2,4} Mentoring is considered a part of the "Professionalism" core competency defined by the Accreditation Council for Graduate Medical Education (ACGME).² When one considers the influence that one well-mentored physician can have on innumerable patients, students, colleagues, and institutions, it becomes clear that quality mentoring is critical to the continued success of medicine.

While there is agreement that academic mentoring is vital, few studies have examined how to mentor residents.^{1,2} A survey of the literature suggests that successful mentoring requires adequate training of the mentor, validation by the institution, and investment by the mentee.^{1,5,6} However, a lack of mentor training and poor institutional support is widespread.⁷ In order to improve mentoring, we must consider a comprehensive, multifaceted approach. What follows are specific recommendations for how organizations, institutions, mentors, and mentees can collaborate to foster an environment suited for quality academic mentoring (table).

ORGANIZATIONS National organizations must espouse a vision for effective mentoring. The American Academy of Neurology (AAN) affirms the importance of mentoring in the education of neurologists.⁷ Organizations like the AAN must create standards to which institutions and individuals can be held. National meetings provide a platform by which a vision can be communicated, processes vetted, and results assessed. The Internet provides an alternative avenue for communication and implementation of mentoring policies. The AAN offers

From the National Institute of Neurological Disorders and Stroke (P.R.L.), NIH, Bethesda; and the Department of Neurology (E.B.M.), the Johns Hopkins University School of Medicine, Baltimore, MD.

Go to Neurology.org for full disclosures. Funding information and disclosures deemed relevant by the authors, if any, are provided at the end of the article.

Table Action items for filling the gap in academic mentoring

Organizations
Role: Communicate the vision of effective mentoring
Expand Web-based “e-mentoring” services
Provide mentorship training at national meetings
Incorporate mentoring into recertification training
Institutions
Role: Create conducive infrastructure for successful relationships
Mandate mentorship training for all faculty
Assign mentors to all residents, fellows, and junior faculty
Recognize mentoring excellence as a criterion for successful promotion
Mentors
Role: Execute vision within the infrastructure
Volunteer to mentor
Acquire and maintain mentoring skills
Critically evaluate and define mentoring relationships
Mentees
Role: Actively participate in the partnership
Take advantage of all mentoring opportunities
Actively engage in the mentoring process
Seek mentors who meet identified professional needs

“Mentor Connect” (<http://careers.aan.com/ementor/>), and the American Neurological Association sponsors a Web site–based program (https://mutualforce.com/American_Neurological_Association/home.html) offering “virtual mentoring” via direct matching and discussion forums. While these services cannot replace in-person mentoring, they are worthwhile supplements and alternative sources for individuals with specific needs that cannot be addressed locally.

INSTITUTIONS Institutions are responsible for creating the infrastructure to support effective mentorship. Mentoring should be elevated from an assumed voluntary task to an evaluated and rewarded commitment, separate from formal teaching and other professional obligations.^{5,7,8} To promote mentoring excellence, academic programs must establish formal mentor training for all faculty. There are model faculty training programs like “Mentor Emory” (http://www.learningservices.emory.edu/mentor_emory/index.html), and the Johns Hopkins Department of Neurology has a formal faculty position dedicated to overseeing the mentorship of junior faculty. A program’s commitment to career development should be evident early in training and revisited often. Neurology departments should assign a faculty mentor or small committee to all residents, fellows, and junior faculty. Universal, mandatory

assignments will ensure that all trainees receive equal access to mentorship and address a known gap in the mentoring of underrepresented minorities and women.^{1,2} There should be flexibility to add or change mentors, ensuring that necessary resources are available to all mentees throughout their careers. Expectations of the program’s mentoring experience should be posted for review. Particular excellence in mentoring should be publicly acknowledged to enhance prestige.⁵ Programs should track mentoring efforts and evaluate success based on their trainees’ feedback and achievement of desired career goals.

Implementing standardized mentoring can yield rapid improvements. After identifying a need for more mentoring of fellows at the National Institute of Neurological Disorders and Stroke, the clinical director proposed a universal policy of advisory meetings separate from routine group meetings. A 2013 survey of fellowship trainees found that, compared to the previous year, more than twice as many of the respondents met with their mentors at least weekly, and that 94% (an increase of more than 20%) of fellows reported these regular interactions as useful in defining training and career goals. Nearly identical findings were published from a retrospective review of a mentoring initiative at the Brigham and Women’s/Faulkner Hospital, confirming that simply mandating assignments and one-on-one meetings yields good outcomes.⁵

MENTORS Good mentors are critical. An analysis of award-winning mentors found that the “ideal” mentor has admirable personal and professional qualities, provides a goal for the mentee’s career, commits time through regular meetings, supports a healthy balance between professional and personal lives, and leaves a legacy by encouraging mentorship by the mentees.⁴ Mentors can be considered “academic parents,” given their selfless labor.⁸ Therefore, while mentors technically represent half of the mentor–mentee relationship, they bear far more than half of the responsibility for skill enrichment, time commitment, and relationship evaluation. Mentors must view their mentoring proficiency as a “practice,” ever-changing and demanding refinement through experience. A core competency approach similar to those defined by the ACGME should be encouraged for self-assessment.⁹

Mentors are a valuable, but limited, resource. A mentor should recognize that mentoring represents a significant time commitment. In the aforementioned National Institute of Neurological Disorders and Stroke survey, the average weekly meeting spans between 30 and 60 minutes, and a consistent commitment to regular meetings is a key characteristic of model mentors.^{4,8} Potential mentors should remain

visible to medical students, residents, and fellows at their training institutions; however, their primary responsibility is to their designated mentee. Junior faculty can be excellent role models but require limitations to ensure a balance between their own career demands and the needs of their rising peers.

Finally, mentors should review the mentoring relationship critically and decide whether it is sufficient to meet the mentee's goals. Mentors should appreciate the idiosyncrasy of "good chemistry," should keep interactions confidential, and must observe appropriate boundaries.^{5,8} Although some aspects of mentorship never end, mentors should plan for a mentee's transition to independence, appropriately delineating limitations of financial support, authorship, and other professional obligations prior to separation.¹⁰

MENTEES Although the mentor–mentee dyad is inherently asymmetric, mentees share responsibility for the success of any mentoring experience.^{6,7} Mentees must take an active role in their mentoring by maintaining an inventory of personal goals, cultivating the relationship, and supplementing their mentoring as needed.^{6,10} When selecting a mentor, a mentee should look for an individual with a proven record of successful mentoring. If their desired mentor is inexperienced, mentees should consider naming an established faculty member as a co-mentor to offset any concerns, especially for competitive grant proposals, which may penalize applications featuring novice mentors. Prior to the initial meeting with a mentor, mentees should prepare a list of goals for the following time frames: 3 months, 1 year, and 5 years.⁶ Mentor and mentee should then determine together how best to achieve these milestones. Mentees should view their mentors as professional partners. Friendships may develop, but the ultimate goal is to be collegial, not cordial. Though much of the interaction may remain informal, mentees should arrange convenient, productive meetings and provide timely feedback to their mentors.

Mentoring requires flexibility. If a mentee finds the mentor is not a good match, it is best to bring issues, and proposed solutions, to the mentor's attention. If the relationship is not meeting established goals, a mentee can redefine the relationship's objectives or consult other possible mentors to address the deficiency. A mentee's needs may change, requiring advice from several sources for different aspects of his or her career. A mentoring committee, consisting of a general career development mentor as well as individuals providing training in specific areas, may be ideal for some mentees.

DISCUSSION Quality mentorship is the self-perpetuating strategy by which medicine conveys its practices and values from one generation of

physicians to the next. It is difficult to fully appreciate the impact of quality mentoring, but a loss of mentoring through active attrition and passive neglect will harm generations of neurologists. Modern academic medicine creates significant constraints, forcing faculty and trainees to divide their time between multiple worthy endeavors. A multifaceted approach comprised of simple, achievable objectives will prevent the incalculable losses an absence of mentoring would cause. This intervention begins with promoting mentoring at every training level and rewarding it as an equal to teaching and clinical expertise. Offering formal mentor training at both the national and local levels will make it an expected component of professional development throughout a neurologist's career. Now is the best time to reaffirm our commitment to mentoring, for the future of neurology is dependent on preserving the mentor–mentee relationship.

AUTHOR CONTRIBUTIONS

Dr. Lee reviewed the relevant literature on this topic, provided unpublished data to the review, and drafted and revised the manuscript. Dr. Marsh reviewed the relevant literature on this topic and drafted and revised the manuscript.

ACKNOWLEDGMENT

The authors thank Dr. R. H. Llinas for review of the manuscript and Dr. A. Nath for sharing results of the intramural National Institute of Neurological Disorders and Stroke fellowship program surveys from 2012 and 2013.

STUDY FUNDING

Dr. Lee is supported by the intramural program of the National Institute of Neurological Disorders and Stroke. Dr. Marsh is supported by a Clinician Scientist Award through the Johns Hopkins School of Medicine.

DISCLOSURE

The authors report no disclosures relevant to the manuscript. Go to Neurology.org for full disclosures.

REFERENCES

1. Sambunjak D, Straus SE, Marusic A. Mentoring in academic medicine: a systematic review. *JAMA* 2006;296:1103–1115.
2. Ramanan RA, Taylor WC, Davis RB, Phillips RS. Mentoring matters: mentoring and career preparation in internal medicine residency training. *J Gen Intern Med* 2006;21:340–345.
3. Freeman WD, Nolte CM, Matthews BR, Coleman M, Corboy JR. Results of the American Academy of Neurology resident survey. *Neurology* 2011;76:e61–e67.
4. Cho CS, Ramanan RA, Feldman MD. Defining the ideal qualities of mentorship: a qualitative analysis of the characteristics of outstanding mentors. *Am J Med* 2011;124:453–458.
5. Levy BD, Katz JT, Wolf MA, Sillman JS, Handin RI, Dzau VJ. An initiative in mentoring to promote residents' and faculty members' careers. *Acad Med* 2004;79:845–850.
6. Zerzan JT, Hess R, Schur E, Phillips RS, Rigotti N. Making the most of mentors: a guide for mentees. *Acad Med* 2009;84:140–144.

7. Strowd RE, Reynolds P. Opinion & special articles: the lost resident: why resident physicians still need mentoring. *Neurology* 2013;80:e244–e246.
8. Jackson VA, Palepu A, Szalacha L, Caswell C, Carr PL, Inui T. “Having the right chemistry”: a qualitative study of mentoring in academic medicine. *Acad Med* 2003;78:328–334.
9. Abedin Z, Biskup E, Silet K, et al. Deriving competencies for mentors of clinical and translational scholars. *Clin Transl Sci* 2012;5:273–280.
10. Detsky AS, Baerlocher MO. Academic mentoring: how to give it and how to get it. *JAMA* 2007;297:2134–2136.

Neurology[®]

Opinion & Special Articles: Mentoring in neurology: Filling the residency gap in academic mentoring

Paul R. Lee and Elisabeth B. Marsh

Neurology 2014;82:e85-e88

DOI 10.1212/WNL.000000000000190

This information is current as of March 10, 2014

Updated Information & Services	including high resolution figures, can be found at: http://n.neurology.org/content/82/10/e85.full
References	This article cites 10 articles, 2 of which you can access for free at: http://n.neurology.org/content/82/10/e85.full#ref-list-1
Citations	This article has been cited by 1 HighWire-hosted articles: http://n.neurology.org/content/82/10/e85.full##otherarticles
Permissions & Licensing	Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: http://www.neurology.org/about/about_the_journal#permissions
Reprints	Information about ordering reprints can be found online: http://n.neurology.org/subscribers/advertise

Neurology® is the official journal of the American Academy of Neurology. Published continuously since 1951, it is now a weekly with 48 issues per year. Copyright © 2014 American Academy of Neurology. All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.

