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Building a mentoring network

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Abstract

Background—Mentoring has long been regarded as one of the key components of research training and faculty development.

Purpose—The Robert Wood Johnson Foundation Nurse Faculty Scholars program purposely facilitated scholars' development of a mentoring network by providing each individual with three mentors: a school-of-nursing mentor (primary), a university-based non-nurse research mentor (research), and a nationally-recognized nurse leader at another university (national).

Method—The Mentorship Effectiveness Scale was used to assess the effectiveness of each type of mentor in the first five completed cohorts.

Discussion—The ratings of mentorship effectiveness for all three kinds of mentors were generally high. Scholars valued most their mentors' support and advocacy; the biggest weakness in dealing with all mentors was accessibility.

Conclusion—Even when one mentor proved a poor match, another mentor turned out to be an advocate and helpful, thus reaffirming the benefits of a mentoring network as opposed to only a single mentoring relationship. One lesson learned is the importance of preparing mentors for their role via written materials, in-person or phone orientations, and discussions at the annual meeting.

Keywords

Mentoring; Networking; Peer mentoring; Research development; Mentorship profile questionnaire; Mentorship Effectiveness Scale; Robert Wood Johnson Foundation Nurse Faculty Scholars program

Mentoring as a socializing mechanism for encouraging growth and advancement has been a key concept since the focus on adult development in the 1970s (Kram, 1985; Levinson, 1978; Sheehy, 1976). Editorials have extolled its benefits (Joel, 1997; Kelly, 1978; Schorr, 1978). Thought pieces have advocated for mentoring in the development of scholars and

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scientists (Cameron Blackburn, 1981; Davidhizar, 1988; Fitzpatrick Abraham, 1987; Meleis, Hall, Stevens, 1994). Studies have tested its effect on career development in academia and junior faculty productivity (Rawl Peterson, 1992; Williams Blackburn, 1988). Reviews have plumbed what we know and what we don't know about this subject (Vance Olson, 1991). Over time, mentoring has become regarded as an essential component in the development of transformational nurse leaders (Ferguson, 2015).

The importance of mentoring to women, and by extension to nursing as a gendered profession, has been particularly recognized (Campbell-Heider, 1986) because mentoring involves networking. Women have historically either been excluded from many of the informal socialization experiences open to men or have themselves dismissed such activities as unimportant (Sonnert Holton, 1996). Too often, the mentoring literature has failed to be sensitive to the importance that gender, race, and class play in who is mentored (DeMarco, 1993). The historically advantaged don't necessarily understand (or may not think of themselves as privileged) the specific experiences of those who are discounted because of marginalization, structural discrimination, and unconscious bias (Case, 2013). The traditional emphasis in mentoring on the like-minded working together has disadvantaged women and underrepresented ethnic/racial groups whose numbers are still not fully represented in senior circles (Manson, 2009; Mkandawire-Valhmu, Penninah, Stevens, 2010; Wallen, Rivera-Goba, Hastings, Peragallo, De Leon Siantz, 2005). Henry's *Leadership revelations III: How we achieve the gender tipping point* (2015) and Eagly and Carli's *Through the labyrinth: The truth about how women become leaders* (2007) call for women to have multiple male and female mentors but do not speak to the complexities of leadership for women in a profession like nursing that is primarily female.

Mentoring matters in a hypercompetitive world because it is a way to develop one's personal best (DeLong, Gabarron, Lees, 2008; Gawande, 2011). Mentoring as an interprofessional concept has grown in popularity as a means for achieving research productivity and academic success (Byrne Keefe, 2002; Cole et al., 2015; Conn, Porter, McDaniel, Rantz, Maas., 2005; Haddi, Lindquist, Buckwalter, 2013; Kubiak, Guidot, Trimm, Kamen, Roman, 2012; Mass et al., 2006; Morrison-Beedy, Aronowitz, Dyne, Mkandawire, 2001; Schrubbe, 2004; Travis Anthony, 2011; Yin et al., 2015). The National Advisory Committee (NAC) of the Nurse Faculty Scholars (NFS) program, which was charged with shaping this Robert Wood Johnson Foundation commitment to the development of junior nursing faculty, saw mentoring as a means of "increasing cultural capital" for sustainable academic success (Chanderbhan-Forde, Heppner, Borman, 2012) and of decreasing levels of role conflict and role ambiguity (Specht, 2013) and looked to it as the key component in building the capacity of nursing science.

But mentoring, as a multifaceted process, must address many different activities—supporting, teaching, encouraging, challenging, counseling, affirming, coaching, advising, protecting, sponsoring, and providing feedback—that can often exceed the limits of a simple, dyadic relationship (Martina, Mutrie, Ward, Lewis, 2014). Recognizing this, the NFS approach assumed that several different mentors, working in concert, are needed to fulfill such diverse needs and are critical to sustaining supportive networks beyond the period of initial award (DeCastro, Sambuco, Ubel, Stewart, Jagsi, 2013).

Although mentoring has been traditionally seen as a single, sustained hierarchical relationship occurring during the school or early work years, professionals increasingly hope to have relationships of varying lengths that prove important to advancement over the course of an entire career. The emphasis is less on the importance of one nurturing individual and more on developing an evolving network of support (Chandler Kram, 2007). Thus, the NFS program reflected the conceptual paradigm shifts that have transpired in recent years (see Table 1). The role any one mentor plays will vary depending on the expertise in need of development (McBride, 2011, p. 55). Mentoring wasn't seen as a nicety or a kindness reserved for those who remind one of his/her younger self but as a customary professional obligation and a skill that can be developed (Johnson, 2007). Moreover, some mentoring relationships can be peer to peer (Bryant et al., 2015; Moss, Teshima, Leszcz, 2008) in which colleagues at roughly the same developmental stage provide each other with encouragement, help, and information, thus serving as additional resources.

Mentoring as Conceptualized in the NFS Program

Mentoring was one of the essentials of the NFS program and has been described as setting this program apart (Conn, 2013). The program reflected the belief that a new faculty member, fresh from doctoral studies or postdoctoral training, is most likely to reach her or his potential with support from those who have successfully negotiated senior academic challenges, including the development of a vibrant program of research. Accordingly, the NFS program emphasized four kinds of mentoring.

The School of Nursing Mentor (Also Known as Primary Mentor)

This senior School of Nursing colleague assumed primary responsibility for ensuring that the scholar learned how to synergize successfully the tripartite responsibilities of academia (teaching, research, and professional/institutional service) in a particular university. Some aspects of this role included helping the scholar to understand what constitutes good citizenship in this school/university and ensuring that the scholar is well prepared for successful tenure/promotion review. The primary mentor also bore responsibility for helping the scholar maximize the assistance of the research and national mentors, in other words, to help the scholar orchestrate best use of the mentoring team.

The University Research Mentor

This individual was expected to be a senior faculty member at the scholar's university who assumed responsibility for helping the mentee to develop an externally funded program of research. One aspect of this role was helping the scholar forge interdisciplinary connections within the university (e.g., assisting the individual in becoming affiliated with a relevant interdisciplinary center on campus) and beyond in the focus area. Because scholars were required to select someone outside their School of Nursing for this role, these research mentors were charged with helping the scholars understand how their research, which sought to answer questions of importance to nurses, dovetailed with the larger interdisciplinary issues of scientific concern in that area. Part of the qualifications for the research mentor were that they had a funded program of research in the scholar's general focus area or a closely related area so that the scholar would ideally become part of the research mentor's

research team, potentially learning additional research skills, being a coauthor on publications, and contributing valuable assistance from a nursing science perspective to that research.

The National Mentor

This senior nursing leader, with demonstrated expertise in some aspect of the scholar's focus area, was expected to serve as a resource in enabling the mentee's program of research to take shape and to look toward the future impact of that research on the discipline and on health care. Aspects of this role involved commenting on drafts of the scholar's manuscripts and grant proposals; helping the individual to understand what it means to be a productive faculty member at their own and other universities; encouraging boldness and creativity in research and teaching; "seeing the bigger picture"; recommending the scholar to various state, regional, and national policy, research and practice task forces, work groups, committees, and/or boards; and helping the mentee map out a programmatic focus (Feetham Doering, 2015). National mentors met with scholars by phone and also in person when they both attended research meetings of mutual interest where the national mentor would provide important introductions to other key leaders in that focus area.

Peer Mentor

In addition to the three formal mentors built into the program, part of the leadership training was to afford scholars opportunities to interact with their own and other NFS cohorts to assist with networking, collaborate on scholarly or nursing education projects, and provide general support for those facing many of the same challenges in both their professional and personal lives. Peers can provide the "been there/done that" support that family members and friends don't know how to give and faculty mentors may be too generationally removed to provide.

Strengthening Mentoring

Scholars were responsible for selecting their primary and research mentors usually with the assistance and input of their deans. Special consideration was given to the strength of these faculty members' scholarship/leadership and commitment to the program. National mentors were assigned to the scholars after noting their suggestions and in consultation with members of the NAC and other nurse leaders. Not only did the selection process seek to link individuals with common research interests but also this choice was mindful of other factors, for example, if a White scholar had applied with White university mentors but was interested in studying an underserved population or health inequities, that individual might be assigned to a national mentor from the underrepresented group of interest so his/her sensibilities and expertise could help shape the unfolding program of research. We recognized that matching simply on racial/gender group does not guarantee the outcomes of access to a role model or type of support that mentees sought or needed. Instead, we considered the composite of the mentorship network and tried to honor preference when possible. The effort contributed by mentors residing at the home institution was a contribution made by that university; the time of the national mentor was reimbursed by the Robert Wood Johnson Foundation with a modest honorarium (\$1,000 per year).

Primary mentors were expected to attend the orientation to the program with their mentees so they would “hear” the same thing about goals and expectations and strategizing ways to synergize efforts in all three academic faculty roles. Programming on that occasion included material on what it means to develop a program of research, address the tripartite mission of the faculty role, and develop an individual development plan (IDP) with clear-cut outcomes, the latter being increasingly used to facilitate career paths (Austin Alberts, 2007; Hobin, Fuhrmann, Lindstaedt, Clifford, 2012). Scholars were urged to use the IDP to identify roles their various mentors might play to help them achieve their goals. Figure 2 in the first article in this series sketches out the target objectives scholars were expected to achieve in the IDP—building a research program, developing as master teachers, exerting leadership, and having their authority externally confirmed.

Because an IDP should build on some needs assessment (Bleich, 2015), the mentor and mentee were encouraged to each fill out the Investigator Needs Assessment originally developed by Spero Manson and modified in consultation with the other coauthors of this article (see Appendix A). This instrument proved to be a useful device for revealing differences between mentor/mentee perceptions of the latter’s competence regarding essential skills and the relative importance attributed to said skills. Mentees invariably saw themselves as less skilled than their mentors did with this discrepancy leading to some frank discussions. Some institutions have developed a toolkit that outlines mentor roles and responsibilities and what a mutual agreement might include: http://academicaffairs.ucsf.edu/ccfl/media/UCSF_Faculty_Mentoring_Program_Toolkit.pdf.

With the usefulness of such a toolkit in mind, the orientation of new scholars always included a special session just for mentors that provided them with specific resources: an overview of the program and expected outcomes, a handbook on mentoring that included a contract that could be used for agreeing on goals for the relationship and mapping ways to meet them; bibliographic suggestions; information on the three-mentor model and their complementary roles; and a description of what learning should be nurtured at the home institution and what learning would be provided by the program. This was an opportunity to answer questions and to provide tips regarding common problems.

In this orientation session, mentors were encouraged to have scholars share materials to be submitted to the NFS program or presented at national meetings with them beforehand in order to apprise mentors of what they are doing and to improve the quality of finished products. Primary mentors were asked to urge scholars to meet regularly with all three mentors, and not just on an “as needed” basis, for example, to set up monthly meetings with the research mentor and quarterly meetings with the national mentor. The primary mentor was expected to check on the mentee’s interactions with the other two mentors, so there could be early identification of problems. Occasional three-way meetings were suggested to ensure coordination of effort. The NFS National Program Office also learned to schedule phone conferences soon after the orientation with research and national mentors so they would have a similar understanding of expectations and could have any questions answered. They, too, were provided with written materials that provided an overview of the program and expected outcomes and information on the three-mentor model and their complementary roles. Special attention was paid to minimizing loss of face on either side if there wasn’t a

good fit between mentors and a scholar, with changes discussed as positive and constructive. The primary mentor was empowered to orchestrate needed changes with the assistance of the Program Director.

Mentors wanted to know about the problems that other NFS faced during the NFS program as a basis for providing anticipatory guidance to their mentees. The NFS experience revealed four common problems:

- inability to recruit the desired sample size for their research and delayed expansion of data collection sites when indicated;
- not publishing at least two peer-reviewed articles per year, ideally data based;
- lack of research funding to continue work at end of grant period; and
- poor use of the national mentor.

It is not surprising that we found junior faculty inclined to think that problems will resolve themselves without an intervention or the need for help from others and that publications and additional grant monies are something you worry about when a project has been completed, as opposed to during its course. Because unrealistic optimism is a pervasive human trait, good mentoring may all the more be needed to help those starting out confront the reality of their situations (Sharot, Korn, Dolan, 2011).

Not only were primary mentors expected to attend the orientation but also the national conference held every December at which scholars from all ongoing cohorts described their progress. This was another occasion for primary mentors to meet as a group and clarify roles and expectations. They met before the scholars' presentations so they could become familiar with expectancies and share any concerns, and they met again after the presentations so they could suggest improvements for the next year. The primary mentors were highly accomplished faculty members and regarded as a critical programmatic resource. Accordingly, the program actively encouraged them to provide formal and informal counsel to their own and other scholars regarding research, IDPs, institutional challenges to career development, and broader issues of work–life balance. As a consequence, the annual conference introduced scholars to an even greater array of role models who became available to them in a less structured fashion, thus further building their network of connections.

Peer mentoring was actively promoted by encouraging networking both within and across cohorts. Each new scholar was assigned a “big sister/brother” from the previous cohort. Time was allocated at the annual conference for scholars to meet with each other in research interest groups. Scholars from different cohorts were involved in planning leadership programming and various interest panels, so they became known to one another in diverse ways. Scholars were encouraged to develop their review abilities by providing feedback to one scholar in each of the other cohorts after listening to that person's presentation at the national meeting. They were also urged to engage in peer mentoring at regional and national nursing research society meetings as well as research/clinical specialty interdisciplinary and/or nursing meetings.

Although we did not inquire, as such, about whether the mentoring relationships proved to be mutually beneficial, we observed that this occurred in many of the relationships. As the mentees developed in the NFS program and became more comfortable with their mentors, some were able to reciprocate by providing technical suggestions on data collection techniques that their less technologically savvy advisors might try. Some mentees got their mentors using social media approaches in their research and teaching for the first time.

Evaluation of Mentoring

Mentoring effectiveness of all three mentors was evaluated using the Mentorship Profile Questionnaire and the Mentorship Effectiveness Scale developed by the Ad Hoc Faculty Mentoring Committee at the Johns Hopkins University School of Nursing (Berk, Berg, Mortimer, Walton-Moss, Yeo, 2005). Data were collected on mentees' perceptions of both their primary and research mentors at the end of the mentee's second year and third year, but perceptions of the national mentor were only obtained at the end of the experience. Table 2 describes how the first five completed cohorts drew on the expertise of their mentors. On the whole, the NFS Scholars used all mentors as advisors and/or resources and communicated most often with their university-based primary and research mentors, principally through e-mail and in-person meetings.

The Mentorship Effectiveness Scale consists of a 12-item questionnaire with each item rated on a 6-point scale ranging from 0 = strongly disagree to 5 = strongly agree, with the possibility of noting that an item is "not applicable." Total scores, therefore, could range from 0 to 60. Items included characteristics and behaviors such as "My mentor is approachable" and "My mentor motivated me to improve my work." As can be seen in Table 3, the average assessment of primary mentors ranged from 54 to 58 and for research mentors ranged from 52 to 57 on a scale in which 60 was the maximum, with somewhat more variability in the rating of the national mentor (49–59). Not only was there more variability in ratings of national mentors but also more scholars (36%) chose not to assess them compared to missing data points in assessments of primary mentors (15%) and research mentors (19%).

These data were reviewed as soon as they became available by the National Program Office and annually by the NAC so that course corrections could be made. For example, the mean rating of national mentorship in the 2010 cohort was 49, but the next two cohorts were rated more highly, suggesting problems in initial matching and possible lack of guidance to primary mentors in envisioning their role as facilitators of the mentoring team, which was then strengthened in the orientation meeting for the 2011 cohorts and beyond.

The ratings of mentorship effectiveness for all three kinds of mentors were generally high. Box 1 provides more detail about mentor strengths and weaknesses. More open-ended comments were generally provided about primary and research mentors than national mentors, presumably because scholars saw more of them. Mentees valued most their mentors' support and advocacy. This finding is in keeping with some of these scholars' unconnected ratings of the support they received for research and leadership development that were 9.4 and 9.5, respectively, on a 10-point scale where the highest rating meant

“extremely supportive” (Hickey et al., 2014). The biggest weakness they encountered in dealings with all mentors was accessibility because of time constraints on all parties, which is consistent with the findings of others (Sawatzky Enns, 2009), including the perceptions of the primary mentors themselves (Swanson, Larson, Malone, 2017).

Lessons Learned

Some mentoring relationships in every cohort weren't as generative as one might wish; yet, the overwhelming majority of scholars who completed the questionnaires highly rated the effectiveness of their mentors. Even when one mentor proved a poor match, another mentor turned out to be a strong advocate and helpful, thus reaffirming the benefits of a mentoring network as opposed to having only a single mentoring relationship (Halvorson et al., 2015).

Possibly, the most important lesson that emerged from this program is the importance of preparing mentors for their role via written materials, an in-person or phone orientation, discussions at the annual meeting, and use of the aforementioned assessment tool. The primary mentors who met as a group at the orientation and annual meetings commented that they learned from each other. This sharing particularly benefitted less seasoned mentors at less research-intensive universities. In the first cohorts, expectations about the role of a research mentor and a national mentor were communicated in written form. It became clear over time that such correspondence needed to be complemented by phone conferences; so, these mentors could have their questions answered and feel more connected to the program. Regardless of seniority, mature scientists need to be prepared for their role as research mentors (Byrne, Topping, Kendall, Golding, 2014), thus enabling them to work from common expectations, to learn from each other, and to feel involved in the program. Because mentoring is time consuming, the mentors need to derive some personal benefit from the experience to become fully engaged, and the opportunity for less seasoned scientists to interact with more seasoned scientists proved to be a constructive mix.

The NFS program deliberately sought to help pre-tenure (early career) faculty build a mentoring network that would help them establish a program of research and successfully negotiate tenure and promotion decisions. These are goals that universities have when they hire new faculty, and many aspects of this program can be adopted by others collectively or separately—designating someone in-house as a primary mentor; connecting the faculty member with senior researchers in other, related fields; providing a modest honorarium so the fledgling faculty member can be mentored by a senior nurse scientist at another university (Mundt, 2001); and creating internal structures for peer-to-peer mentoring so new cohorts can be supported and expanded in their thinking by each other. One-to-one formal relationships of various intensity, all shaped by an IDP, can focus the mentoring in a clear direction. Systematically seeking input from mentors and mentees to improve a mentorship program is also important so that participants are clear that their gained wisdom is and will be used by the collective, not just one mentee. Clinical faculty are increasingly asking for mentoring too (Roberts, Chrisman, Flowers, 2013; Weidman, 2013), and some of these same strategies can be applied to this population. For example, peer-to-peer mentoring has been used successfully in the development of early career gerontological faculty (Bryant et al., 2015).

Formal mentoring by individuals will always have a place in faculty development, but so can the development of institutional mentoring structures, for example, orientation programs, exchanges about teaching/mentoring strategies, writing groups, and socialization experiences geared to the particular concerns of underrepresented minorities and men in nursing. These structures can be customized to the needs of a particular faculty group. For example, research-intensive faculty might profit from joining a research collaborative that cuts across universities (Bergstrom et al., 1984; Given, Given, Champion, Kozachik, DeVoss, 2003); the research interest groups at regional research meetings and the expert panels within the American Academy of Nursing serve some of this purpose. Another form that such structures can take is the intentional development of DNP-PhD faculty teams in a particular school of nursing so clinical and research-intensive faculty can work together on shared interests where they can each make a contribution (Staffileno, Murphy, Carlson, 2016).

The experience of the NFS program suggests that two career concepts—mentoring and networking—can combine in an expanded notion of what it means to become a successful nurse scientist. This program began by intentionally providing three kinds of formal mentors and maximizing peer-to-peer support. It later grew to promote an even larger array of helpful connections as members of the NAC assisted subgroups of men and other underrepresented minorities who struggled with issues with which they were personally familiar and as cohorts of primary mentors learned from their interactions with each other. Mentoring and networking became central to enhancing the capacity of young nurse scientists to pursue their professional careers, within a culture of mutual support that emphasized diverse perspectives, skills, and interests. The scholars not only ended their NFS years sustained by an array of colleagues that can serve as future supports but were also primed to build additional connections with colleagues as new developmental opportunities were to present themselves.

Appendix A. Investigator Needs Assessment

The purpose of this survey is to determine how one's mentor may assist you in accomplishing your academic career goals. Please be sure to circle one answer for each question. Thanks!

For each of the skills listed below, please rate (a) how skilled and/or knowledgeable you are and (b) how important you feel this skill is to achieving your career goals. Use the following scales:

Competence					Importance					
1 = Don't possess this skill					1 = Of no importance					
2 = Minimally competent					2 = Minimally important					
3 = Moderately competent					3 = Moderately important					
4 = Quite competent					4 = Quite important					
5 = Very competent					5 = Very important					
Competence					Importance					
1	2	3	4	5	1	2	3	4	5	Maximizing sample size and sample diversity
1	2	3	4	5	1	2	3	4	5	Dealing with IRBs/Human Subjects issues and procedures
1	2	3	4	5	1	2	3	4	5	Data entry, cleaning, and quality control procedures
1	2	3	4	5	1	2	3	4	5	Analyzing quantitative and/or qualitative data
1	2	3	4	5	1	2	3	4	5	Managing budgets
1	2	3	4	5	1	2	3	4	5	Hiring personnel/staff and managing performance
1	2	3	4	5	1	2	3	4	5	Preparing effective data displays, e.g., tables/graphs
1	2	3	4	5	1	2	3	4	5	Developing and delivering a poster session
1	2	3	4	5	1	2	3	4	5	Making a scientific presentation
1	2	3	4	5	1	2	3	4	5	Writing for scientific publication
1	2	3	4	5	1	2	3	4	5	Building a publication record, e.g., at least two per year
1	2	3	4	5	1	2	3	4	5	Identifying additional funding sources
1	2	3	4	5	1	2	3	4	5	Friend/fund raising and good stewardship
1	2	3	4	5	1	2	3	4	5	Preparing a NIH research grant application
1	2	3	4	5	1	2	3	4	5	Anticipating and working with community expectations
1	2	3	4	5	1	2	3	4	5	Giving a public presentation to a lay audience
1	2	3	4	5	1	2	3	4	5	Drafting a press release
1	2	3	4	5	1	2	3	4	5	Interviewing with newspaper or television media
1	2	3	4	5	1	2	3	4	5	Reviewing a grant application for a research sponsor
1	2	3	4	5	1	2	3	4	5	Reviewing a manuscript for a peer-reviewed journal
1	2	3	4	5	1	2	3	4	5	Working as a member of a collaborative multidisciplinary team
1	2	3	4	5	1	2	3	4	5	Using advanced instructional technologies for interactive learning
1	2	3	4	5	1	2	3	4	5	Assessing competencies and evaluating educational outcomes
1	2	3	4	5	1	2	3	4	5	Using quality-improvement methods
1	2	3	4	5	1	2	3	4	5	Knowing your institution's faculty policies and procedures
1	2	3	4	5	1	2	3	4	5	Serving on and leading a school or university-wide committee
1	2	3	4	5	1	2	3	4	5	Serving a professional organization thru committee work
1	2	3	4	5	1	2	3	4	5	Juggling different responsibilities; managing time effectively
1	2	3	4	5	1	2	3	4	5	Balancing personal and professional demands
1	2	3	4	5	1	2	3	4	5	Having a clear roadmap for career development
1	2	3	4	5	1	2	3	4	5	Being culturally competent
1	2	3	4	5	1	2	3	4	5	Being innovative
1	2	3	4	5	1	2	3	4	5	Negotiating for resources/influence
1	2	3	4	5	1	2	3	4	5	Knowing how to advise and mentor others

Competence										Importance
1 = Don't possess this skill										1 = Of no importance
2 = Minimally competent										2 = Minimally important
3 = Moderately competent										3 = Moderately important
4 = Quite competent										4 = Quite important
5 = Very competent										5 = Very important
1	2	3	4	5	1	2	3	4	5	Increasing diversity of student body and faculty
1	2	3	4	5	1	2	3	4	5	Serving as a board member or officer
1	2	3	4	5	1	2	3	4	5	identifying trends in health care and academia
1	2	3	4	5	1	2	3	4	5	Strategic planning

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STRENGTHS AND WEAKNESSES OF MENTORS

Primary Mentor Strengths

- Made himself available more than I could have imagined
- Has provided good suggestions particularly through the promotion and tenure process
- Open and honest feedback
- Helps me focus on goals and keep on track
- Strong advocate
- Provides good critiques
- Lifts up her mentees to stand on their own
- I can ask anything; excellent advice
- Challenges me to stretch
- Work ethic is exemplary

Primary Mentor Weaknesses

- We continue to have somewhat divergent views on how to handle requests for service and teaching
- Sometimes so approachable that we fail to meet formally
- Difficult to schedule regularly due to busy schedule
- She is my “boss” so there are issues I cannot bring to her, e.g., negotiating salary
- Took a while to work out how best to work with her
- Could be more supportive of my varied interests and decisions
- Research interests don’t overlap
- She is non-confrontational
- Takes credit even when no contribution
- Less of a risk taker than me

Research Mentor Strengths

- Extremely supportive and helpful
- Offered me a new role in our Stroke Center
- Pushes me to strive for higher quality work
- Learned a good deal relevant to grant writing and research conduct
- Valuable resource

- Very knowledgeable
- Methodological expertise
- Offers constructive criticism

Research Mentor Weaknesses

- We spend time discussing her projects that we collaborate on
- Busy ... hard to pin down
- Lack of individual contact (more group contact)
- Lately meetings are irregular and not always kept; meeting focused on work politics
- Did not receive feedback I wanted
- Very busy and difficult to contact
- Very analytical but not interested in strategy
- Frequency of meetings diminished over time

National Mentor Strengths

- Similar research interest and very politically astute
- Provided a networking opportunity
- Uses contacts on my behalf
- Very inspiring
- Helpful with career advice

National Mentor Weaknesses

- Not always clear how I should avail myself of the benefit of having her as a mentor
- I should have sought her out more
- Said she would review my grant and she never did
- All contact was initiated by me; was not responsive to requests
- Never set up regular communications with each other

Table 1

Paradigm Shifts in Mentoring

Twentieth Century	Twenty-first Century
A nicety	A professional responsibility
One skill	Multiple skills
Prompted by mentor's generosity	Expectation of organizational culture
Instinctive kindness	Learned behavior
Top down ("disciple") approach	Reciprocal relationship
Mentor = like mentee	Mentor like mentee
Only one and one to one	Multiple mentors and many forms
Early in career	Throughout career

Table 2

Profile of Mentoring

	2008	2009	2010	2011	2012
Primary mentor					
Role played	Advisor/resource	Advisor/resource	Resource	Advisor/resource	Advisor
Communication frequency	Weekly/monthly	Weekly	Weekly	Weekly/monthly	Weekly
Mode of communication	E-mail/in person	In person	Phone	E-mail	In person
Research mentor					
Role played	Advisor/resource	Resource	Resource	Advisor	Resource
Communication frequency	Monthly	Varied	Weekly	Monthly	Monthly
Mode of communication	E-mail	E-mail	In person/E-mail	E-mail	E-mail
National mentor					
Role played	Advisor/resource	Resource	Resource	Advisor	Advisor
Communication frequency	Monthly	Weekly/monthly	Quarterly	Monthly/quarterly	Quarterly
Mode of communication	E-mail/phone	Phone	Phone	In person	E-mail

When two items are listed, they were mentioned equally.

Table 3

Mentorship Effectiveness

	2008	2009	2010	2011	2012
Primary mentor	55 (25/30)	54 (29/30)	55 (19/24)	56 (20/24)	58 (19/24)
Research mentor	52 (26/30)	53 (29/30)	56 (18/24)	57 (17/24)	54 (17/24)
National mentor	58 (11/15)	53 (11/15)	49 (7/12)	59 (5/12)	57 (8/12)

The numbers in parentheses indicate the number of observations that went into mean score and the number of possible observations, thus providing some estimate of missing data.