

Group Peer Mentoring: An Answer to the Faculty Mentoring Problem? A Successful Program at a Large Academic Department of Medicine

LINDA H. POLOLI, MBBS, FRCP; ARTHUR T. EVANS, MD, MPH

Introduction: To address a dearth of mentoring and to avoid the pitfalls of dyadic mentoring, the authors implemented and evaluated a novel collaborative group peer mentoring program in a large academic department of medicine.

Methods: The mentoring program aimed to facilitate faculty in their career planning, and targeted either early-career or midcareer faculty in 5 cohorts over 4 years, from 2010 to 2014. Each cohort of 9–12 faculty participated in a yearlong program with foundations in adult learning, relationship formation, mindfulness, and culture change. Participants convened for an entire day, once a month. Sessions incorporated facilitated stepwise and values-based career planning, skill development, and reflective practice. Early-career faculty participated in an integrated writing program and midcareer faculty in leadership development.

Results: Overall attendance of the 51 participants was 96%, and only 3 of 51 faculty who completed the program left the medical school during the 4 years. All faculty completed a written detailed structured academic development plan. Participants experienced an enhanced, inclusive, and appreciative culture; clarified their own career goals, values, strengths and priorities; enhanced their enthusiasm for collaboration; and developed skills.

Discussion: The program results highlight the need for faculty to personally experience the power of forming deep relationships with their peers for fostering successful career development and vitality. The outcomes of faculty humanity, vitality, professionalism, relationships, appreciation of diversity, and creativity are essential to the multiple missions of academic medicine.

Key Words: collaboration, culture/diversity/cultural competence, faculty development, leadership, mentoring, reflective practice, culture change, academic medicine

“The central discovery for me in the mentoring program has been the power of reflection. In reflecting on the various domains of academic physicianhood—teacher, healer, colleague, leader, learner—I have had opportunities to take stock. I now hold up the resulting portrait against the one I imagined at the outset of the journey as a medical student. I have also had the opportunity to assess the extent to which

the past 15 years have measured up relative to my averred priorities and objectives as a physician and colleague. Finally, I have been able to discern areas where I may have fallen short. Now I have an opportunity to make the necessary adjustments, to get back on track to being the doctor and colleague I have always wanted to be.”

— Faculty participant in the Mentoring for Collaborative Leadership in Academic Medicine program

Disclosures: The authors report that the Weill Cornell Medical College, Department of Medicine supported the development and implementation of the mentoring programs. There are no potential conflicts of interests for authors.

Dr. Pololi: Senior scientist, Brandeis University; Director, National Initiative on Gender, Culture and Leadership in Medicine: C - Change; Resident Scholar, Women’s Studies Research Center; **Dr. Evans:** Chief, Division of Hospital Medicine; Professor of Medicine, Weill Cornell Medical College.

Correspondence: Linda Pololi, Brandeis University, 415 South Street, Mailstop 079, Waltham, MA 02454-9110; e-mail: lpololi@brandeis.edu

© 2015 The Alliance for Continuing Education in the Health Professions, the Society for Academic Continuing Medical Education, and the Council on Continuing Medical Education, Association for Hospital Medical Education • Published online in Wiley Online Library (wileyonlinelibrary.com). DOI: 10.1002/chp.21296

Introduction

Mentoring is widely recognized as an important approach for facilitating continuing professional development among health care providers. Although the focus of this report is on the professional development of faculty in an academic medical center, we believe that group peer mentoring can potentially be used with other health professions in a variety of organizational settings.

In medical schools, mentoring faculty is broadly endorsed, and having in place genuine efforts for faculty professional development is recommended for medical school accreditation by the Liaison Committee on Medical Education.¹ Even so, a majority of faculty at US medical schools reports inadequate mentoring.^{2–7} In response, some schools have established traditional dyadic mentoring, with a senior faculty member mentoring a junior colleague.^{8,9}

Unfortunately, the traditional dyadic approach often proves inadequate or problematic.^{10,11} First, mentors are hard to find; the best are overcommitted or inaccessible due to myriad responsibilities and limited time. Although senior faculty generally endorse the desire to mentor junior faculty, these desires are challenged by growing pressures to increase clinical income and research funding at the expense of educational and mentoring goals. Second, there are several pitfalls to dyadic mentoring.^{11,12} Mentors and protégés may have disparate goals, expectations, and levels of commitment. The inherent power differential between mentor and protégé can be problematic.^{12,13} Within the mentoring relationship, there is the potential to perpetuate the status quo, and protégés may feel pressure to evolve into “clones” of their mentors rather than developing their own personal values-based interests and career goals.¹⁴ Mentors can exploit less experienced faculty in research¹⁵ or foster overdependency. For some mentors, such as division chiefs, a mentoring relationship may involve a conflict of interest between fiduciary responsibilities and the mentor’s duty to advocate for and guide an individual faculty member. There may also be generational tensions, personality clashes, insensitivities to gender or cultural differences, and poor communication.^{15,16}

Difficulty in achieving optimal dyadic mentoring is illustrated by the results of a notable, large, well-organized, well-supported, formal dyadic mentoring program for junior faculty in academic medicine,¹⁷ which documented a discrepancy between what protégés reported needing assistance with and what was actually discussed with mentors. For example, 61% of protégés reported discussing personal-professional balance, even though it was one of the top 5 topics that junior faculty wanted assistance with. (This aligns with reports highlighting the high prevalence of burnout in faculty.^{18–20}) Feldman postulated that perhaps mentors define the parameters of their mentoring more narrowly than do most protégés, limiting the scope of their assistance to funding, grants, and manuscripts.¹⁷ Alternatively, protégés may lack the communication skills and confidence to broaden the agenda,¹⁷ as may mentors. A number of academic medical centers have experimented with programs using peer mentoring in groups rather than in dyads, and often these have focused on the needs of women.^{21–26}

To confront the problem of inadequate mentoring, while avoiding some of the well-documented failures of dyadic mentoring,¹⁵ we designed and implemented a series of

yearlong facilitated group peer mentoring programs within a department of medicine with more than 350 full-time faculty and 17 divisions of a large urban academic health center. This mentoring initiative was implemented in response to a department-wide faculty needs assessment that consisted of a quantitative survey of all full-time Medicine faculty using a reliable, validated survey¹⁸ and qualitative data from a series of facilitated discussion groups with departmental faculty at various career stages. A dominant theme that emerged from both data sets was a dearth of mentoring. Responding to this broadly stated need, we designed and implemented 2 mentoring programs: one for faculty early in their careers and the other for midcareer faculty. We postulated that through participation in a group peer mentoring program, faculty would experience a desired culture in academic medicine, and that this would support and enhance their career planning and skill development. This article describes the theoretical basis of the intervention, its process and curriculum, participant views of the microculture that was created, program evaluation, and the impact of the program on participants’ career planning.

Methods

Program Structure

We conducted 5 yearlong facilitated group peer mentoring programs over 4 years (2010–2014). Two of the yearlong programs were for early-career faculty, called the *Mentoring Program*, and 3 programs were for midcareer faculty, called *Mentoring for Collaborative Leadership in Academic Medicine*. Each program involved a cohort (or group) of 9–12 participants. All permanent departmental faculty were invited to apply to participate. Faculty were eligible if they had been on faculty at Weill Cornell for at least 1 year, were committed to advancing their academic careers, and had strong support from their division chief. Early-career candidates were assistant professors, and midcareer candidates had to have been an assistant professor for at least 3 years or have the rank of associate or full professor. We selected eligible applicants who would maximize group diversity—across dimensions of gender, ethnicity, division, and academic interest. The recruitment and enrollment process occurred 6 months prior to the start of the program so that participants would have time to arrange their schedules and attend all sessions of the mentoring program.

An initial 2-day session in September was followed by 9 additional monthly daylong sessions throughout the academic year. Each mentoring cohort program was designed as a learning community that emphasized peer consultation and sharing of perspectives and expertise. During each daylong session, the group of participants engaged in a structured process of career development²⁷ as well as development of

TABLE 1. Group Peer Mentoring Program: Theoretical Foundations

Formation and realization of a person's own dream ²⁸
Small group dynamics ²⁹
Facilitation of learning
Learner-centered (adult) education ^{30,31}
Praxis: action-reflection cycles ³²
Relationship formation ³³
Challenge and support ³⁴
Reflective practice, mindfulness, self-awareness ^{35–38}
Personal renewal and meaningfulness in work ^{38,39}
Appreciative Inquiry ^{40,41}
Nonhierarchical peer relationships ⁴²

skills in key areas for career advancement. All sessions were deliberately scheduled during customary working hours and were facilitated by one of the authors (LP). The program was funded by the department chair with discretionary funds.

Design Principles

To address program goals, all sessions were designed to bring formal attention to the culture and communication within the group. Meetings were designed to embody characteristics of the culture needed in medical schools to support relationship formation, values alignment of personal core values and career goals, and the humanity of the faculty. Aligned with Levinson's concept that effective mentoring facilitates the formation and "realization of a person's own dream,"²⁸ we used a facilitated group process characterized by nonhierarchical peer relationships and protégé empowerment, self-direction, and reflection. The sessions employed experiential, cognitive, and reflective/affective learning methods. The theoretical foundations of the program are based on education and psychology literatures (TABLE 1).^{28–42} The role of the facilitator was not to act as a mentor, but rather to maintain the safety of the group for all participants, to ensure that all voices be heard, to maintain the timekeeping and structure of the planned program and reflective practices, and to explain the theoretical underpinnings of the program.

Reflective Practice. A central premise of the program was that faculty would develop a better understanding of their own identity and core values, which would then help them make congruent choices in their professional careers, enhance and sustain their vitality, and inform their leadership roles and collaborations with colleagues. The facilitator employed different methods of reflective practice to enhance awareness of the participants' personhood and their ability

to be authentic both during the program sessions and in their professional activities. We hypothesized that focusing on the inner life of the leader³⁹ would translate into more effective and collaborative leadership behaviors.

Reflective practices included the use of narrative writing in response to various prompts such as: *What is the most meaningful part of what you are doing in academic medicine?*, and working with poetry, visual images and silence. To facilitate the practice of "speaking from the heart," the group alternated between reflective dialogue in pairs (including while walking) and in small subgroups. Each participant compiled an individual written record of his or her most meaningful learnings from each session. At the conclusion of the program, participants wrote anonymously about what was most meaningful to them and about key learnings from the program.

Dialogue Strategies. Novel dialogue strategies were employed in the program, such as Appreciative Inquiry^{39,40} and World Café.⁴³ Appreciative Inquiry is a guided dialogue technique that focuses attention on what individuals and organizations are doing well as opposed to their deficiencies or problems. This strategy is based on evidence that human systems are most successful when they concentrate on enhancing the positives rather than on diminishing the negatives. Appreciative Inquiry assumes that people already know much about the subject due to their own experiences, but they may lack the framework for that knowledge and skill. World Café⁴³ dialogue (we called this "Knowledge Café") involved rotating subgroups discussing scholarly articles on topics such as leadership models and mindfulness. As novel dialogue strategies were introduced, a brief period was added to explain the strategy after the participants had used the method in an exercise, thus highlighting that participants might wish to use these methods in their own work beyond the mentoring program. Often, the group revisited these strategies in the closing discussion session for each day.

Curriculum. TABLE 2 lists program themes and foci of skill development comprising the curriculum. A bibliography of selected readings relevant to each curricular theme was provided to participants. Below, we briefly describe 2 components of the curriculum: collaboration and negotiation. These descriptions illustrate how the teaching of skills, process, and theory were integrated into the sessions, and how protégés were repeatedly called upon to guide each other in the program, how trust was created, how intimacy developed, and how the real-life needs of participants were addressed.

In the session focused on collaboration and effective teams, we used the strategy of Appreciative Inquiry^{40,41} to explore when participants had experienced being members of a highly effective collaboration or team. After being instructed to recall an experience of successful collaboration,

TABLE 2. Group Peer Mentoring Program Themes and Foci of Skill Development

Program Themes	Illustrative Quotation From Program Evaluation
Values clarification	<i>The program provided the opportunity to think about and define clearly my core values, and to redefine the idea of career and success with core values in mind.</i>
Strengths identification	<i>I learned to value my strengths relative to the strengths of my peers; we all have something different to contribute</i>
Mindfulness and reflective practice	<i>What was most meaningful was the license and protected time/space to perform self-reflection. In doing so, it allowed me to understand more fully where my ambitions lay and in what way I was not being true to myself.</i>
Collaboration and effective teams	<i>“Relationships” absolutely is the magic of the program. I can actually see a lot of potential collaborations and relationships moving forward and so I’m excited about that.</i>
Dialogue and listening	<i>Listening to other participants has helped me make some changes in my division and monthly conferences in the division.</i>
Diversity and differences	<i>Having heard the stories, the challenges, the life pathways of the researchers, educators, administrators, and clinicians among the 12 of us—has shown me that, at our core, we’re facing the same things, despite the fact that we have chosen different paths and have very different talents.</i>
Negotiation and conflict resolution	<i>The tools that were introduced during the program (team building, conflict management, negotiation) will help me successfully navigate challenges that will surely arise and create an atmosphere that will also help my colleagues, coworkers, fellows—to thrive, reach our goals, and enjoy our work.</i>
Effective mentoring	<i>It’s not the typical mentoring that I think most of us are familiar with, which is more related to technical skill and transactional skills, . . . this will help you get to the next level—leadership and team building and professional advancement—to what we truly want to do, how we want to develop academically, and how to get there.</i>
Oral presentation and scholarly writing [†]	<i>I feel more energetic about writing manuscripts and grants that are necessary to achieving my goals. It has solidified my commitment to research in addition to my clinical career.</i>
Models of leadership [‡]	<i>I learned about a number of areas in leadership that I had no idea even existed. I feel much more confident about my ability to lead as a result.</i>

*A yearlong group peer mentoring program for faculty (51 participants) in the department of medicine at WCMC was conducted 5 times, 2010–2014.

[†]Early career only.

[‡]Midcareer (Mentoring for Collaborative Leadership in Academic Medicine) only.

in pairs, program participants interviewed each other to hear the stories of these successful collaborations. Then the entire group derived the elements of successful collaboration from their compiled experiences, and this list was subsequently distributed to everyone. The exercise was followed by a 15-minute didactic on small-group theory. Participants were then invited to apply this new learning and understanding to a real group that they would be working with in the subsequent 6 months.

In the session focused on the development of negotiation skills, a 20-minute didactic interlude described the Ladder of Inference⁴⁴ and elements of principled negotiation and conflict resolution.⁴⁵ Participants were invited to identify a conflict they had personally experienced in their professional life. The session then proceeded using a fishbowl technique where volunteers role-played 1 participant’s scenario. Participants observing the role-play were assigned single negotiation skills on which to focus. After the role-play, observers

were invited to give feedback to the role-players in accordance with the effective feedback principles that had been learned in a prior mentoring program session.

Academic Development Plan. For 75–90 minutes each day in the program, participants were guided through the steps of formulating a written personal academic development plan (ADP), the steps of which have been described elsewhere.²⁷ The steps are broadly applicable and not specific to any group of faculty or roles. The components included clarifying and prioritizing values; identifying strengths; setting long-term and short-term career goals; identifying tasks and learning objectives to achieve 1-, 3-, and 10-year goals; writing learning contracts for task and skill development; and discussing or negotiating the plan with their division chiefs (TABLE 3). At least a third of the time devoted to career planning over the duration of the program focused on identification and exploration of core personal values. All subsequent ADP steps

TABLE 3. Success in Accomplishing Tasks in Academic Development Plan²⁷ by 5 Mentoring Program Cohorts of Faculty, 2010–2014*

Task	Accomplished During Program <i>n</i> (%)
Clarified my governing values.	51 (100%)
Prioritized my values.	50 (98%)
Identified my strengths.	50 (98%)
Decided on 10-year vision of my career, based on my values.	45 (88%)
Defined my intellectual focus.	45 (88%)
Identified my 1- and 3-year goals.	51 (100%)
Involved my supervisor in discussions of the plan.	45 (88%)
Identified skills and tasks necessary to achieve 1-year goals.	51 (100%)
Completed a learning contract for skill development for 1-year goals.	47 (90%)
Identified skills and tasks necessary to achieve 3-year goals.	51 (100%)
Completed a learning contract for skill development for 3-year goals.	44 (86%)

*Yearlong group peer mentoring programs for faculty (51 participants) in the Department of Medicine at WCMC were conducted 5 times, 2010–2014.

had to align with these values. In the ADP exercises, participants worked in dyads or in triads, describing their plans to each other and then receiving suggestions from program colleagues. Initially, 1 volunteer offered to work on their own ADP step with the entire group and receive suggestions from everyone. This was followed by participants individually working within a dyad or triad. At the end of the day's ADP session, each participant wrote an account of his or her individual objectives relevant to the ADP step being attended to. This entailed listing the detailed sequential steps needed to achieve the objective, together with a target date for each task or skill to be learned; resources needed for each step; and a means of self-evaluating and verifying that he or she would have achieved the objective. These handwritten plans were compiled in a purposefully constructed folder so that each participant possessed, by the end of the program, a coherent, written, detailed career development plan.

Writing Program. Recognizing the importance of scholarly publications, in the early-career program, 75 minutes of each monthly session were devoted to writing skills.⁴⁶ This dedicated time was facilitated by a senior department faculty member and a fellow with expertise in scholarly writing. The

protégés were paired as author-editor dyads for the duration of the program. Fifteen minutes were devoted to a check in with 1 author-editor dyad where their writing-editing process was described, followed by 15 minutes' focus on a topic such as overcoming barriers to writing. Then, in silence, each participant worked on his or her own writing project for 20 minutes. The remaining time was spent hearing from the next author-editor dyad about what help and feedback they would seek from each other before the next mentoring program session. Each protégé then wrote an individual plan or contract with themselves for their own writing for the following month.

Program Evaluation

Data Sources. Evaluation data were collected anonymously at the end of each yearlong program. We aggregated data from the 5 programs. We used 3 data sources for the evaluation results reported in this article. Evaluation questionnaires were completed anonymously during the last program session.

Program participants were asked to rate how well the program actually achieved each program goal. Each item was rated on a 5-point scale from 5 = excellent to 1 = poor. Participants also indicated whether they had completed each step of the ADP and wrote narrative responses to the open-ended questions: How would you describe what was most meaningful to you about the mentoring program to your best friend? How has participation in the mentoring program affected your career/professional goals? What important things have you learned in the mentoring program?

Data Analysis

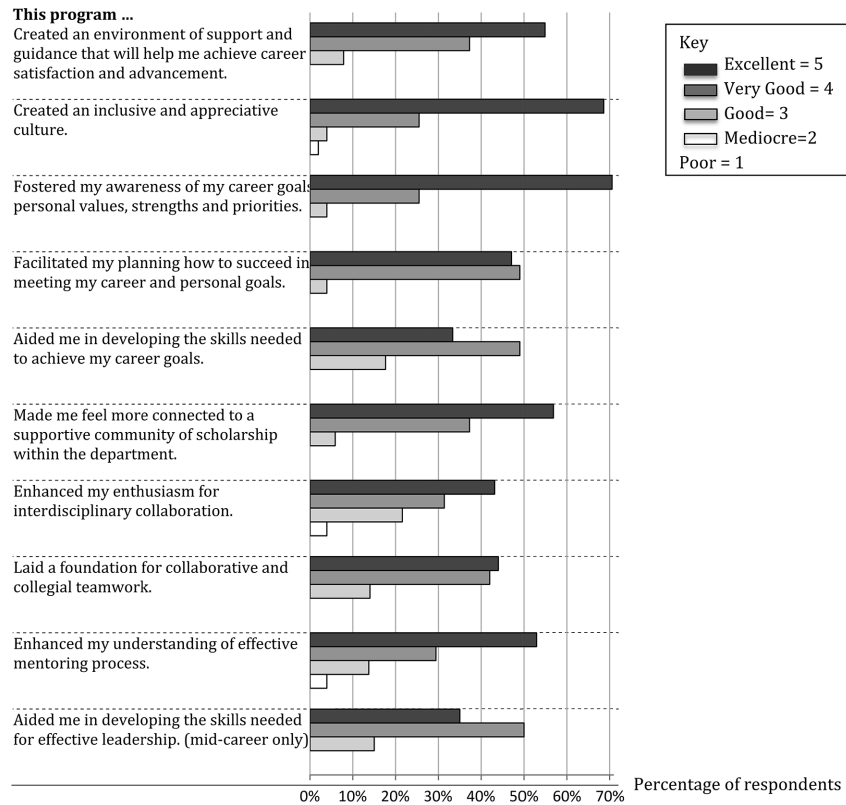
- **Quantitative data.** Descriptive statistics were used to analyze Likert scale responses about program goals (FIGURE 1). We calculated the percentage of participants who had completed each step in their own ADP (TABLE 1).
- **Qualitative data.** Narrative responses to the open-ended questions were transcribed, and information that might identify the respondent was deleted. The masked transcripts of all the comments were read carefully by the authors to understand and interpret their meaning. Using an inductive analysis process, the authors identified a consensually defined set of emergent program themes (TABLE 2), and illustrative quotations were selected by consensus.

Human subjects' institutional approval was obtained from Weill Cornell Medical College.

Results

The 51 participants (19 early-career, 32 midcareer) were drawn from 15 divisions. Twenty-five (50%) participants

Group Peer Mentoring



* Yearlong group peer mentoring programs for faculty (51 participants) in the Department of Medicine at Weill Cornell Medical College were conducted with 5 cohorts over 4 years, 2010–2014.

Program participants were asked to rate how well the program actually achieved each program goal. Each item was rated on a 5-point scale from 5 = excellent to 1 = poor. The lowest response was a 2, provided by one respondent for two items.
No item received a score of 1.

FIGURE 1. Evaluation of achievement of mentoring program goals by 5 mentoring program cohorts of faculty*

were female, seven (14%) were PhDs, 46 (90%) were physicians, and 3 (6%) were from racial/ethnic groups underrepresented in medicine. This composition closely resembled the overall demographics of the department faculty where 43% of the faculty were female, 8% were from underrepresented in medicine minority groups, and 9% had PhD degrees. Participants included faculty whose principal roles were in medical education, clinical care, basic science research, clinical research, and health services research. Attendance over the 10 sessions averaged 96% for the 5 cohorts.

FIGURE 1 shows the evaluation of achievement of the program goals. TABLE 3 shows the frequency of completing the individual steps in career planning during the program. Regarding the different program activities, participants most highly evaluated the academic development plan, working in small groups to discuss ideas, and the large-group sessions. Next most valued were discussing literature from social sciences and management disciplines, and skill development sessions. To date, 49 of the 51 faculty participants continue in the department of medicine. Sixty-six scholarly manuscripts

were completed during the program by the 19 participants in the 2 early-career cohorts (ie, 3–4 manuscripts per participant).

The programs succeeded in helping faculty align their professional goals with their core values:

After developing the academic development plan, it was much easier for me to think through problems that I was facing in my research and to prioritize what was most important in my academic development.

At annual follow-up meetings, we were heartened to observe that participants brought their ADP compilations to the meetings and commented that they had continued to follow these self-formulated career guidelines. Despite the ubiquity of electronic records and familiarity with writing on a computer, participants seemed to value the paper record of their own thinking compiled in this simple way. Slowing down the process seemed to provide a welcome interlude.

The programs also supported the formation of strong positive relationships—“*Relationships absolutely [are] the magic of the program*”—and trust among faculty, which are predictive of optimal vitality in faculty.⁴⁷ Completing the program gave the participants the experience of working and learning in an unfamiliar and improved culture, and the faculty were able to describe and discuss the culture changes that they were experiencing. Many faculty members commented that they would be able to apply these principles to their work with colleagues and trainees. Faculty also valued the diversity within their peer mentoring group and appreciated its role in enhancing career development discussions. The group sessions were a learning laboratory for appreciating diversity and for mentoring.

Simultaneously, the participants were provided the experience of being mentored in addition to learning how to mentor effectively. The program structure required that participants would guide each other through the career planning steps, and use role-play during skill development sessions. Most of the attributes of effective mentorship identified in the in-depth analysis by Straus¹⁰—good listening, feedback, reciprocity, mutual respect, personal connection, providing career guidance, not trying to solve problems but helping protégés find their own solutions, navigating the institution, setting strategies—were all amply implemented in the group setting, whereas attributes of failed mentoring relationships were avoided.

Annual daylong follow-up meetings were offered, which were well attended and embodied the sense of camaraderie and trust that had developed in the yearlong programs. Participants used these days to report on the status of their plans, engage in reflective practice, and check in on their own career plans for the year ahead—either modifying the plan or congratulating themselves on their accomplishments. Frequently, participants expressed surprise over how they had expedited their own anticipated timelines.

Discussion

The programs provided a feasible and sustainable model of mentoring and professional development that was rewarding for midcareer and junior faculty as well as the organization. Exceedingly high attendance of the program sessions provides a stark contrast to attendance difficulties common in dyadic mentoring programs. As compared with professional development programs offered nationally, the participants were able to continue their relationships and collaboration within the institution after the end of the program and use the specific context of their own organization. We anticipated a ripple effect from participants that would change the broader departmental culture.

Lessons for Practice

- Mentoring is valued, but traditional formulations of mentoring—with one-on-one, senior-junior, mentor-mentee dyads—fail to meet institutional needs because there are too few experienced and available mentors and because the relationships are often problematic.
- Newer options for mentoring include facilitated group peer mentoring, which can reliably meet mentoring needs and career development goals for early-career and midcareer faculty.
- Group mentoring programs succeed because they facilitate meaningful relationships among peers, foster an appreciation for diversity, and focus on aligning personal values and professional choice.

The program results highlight the need for faculty to personally experience the power of forming trustworthy relationships with their peers—relationships that foster systematic and successful career development in academic medicine, and that spark and sustain faculty vitality.⁴⁷ Although the mentoring programs described were offered in an academic setting, we anticipate that many of its features such as specific curricular content and the writing program could be readily adapted to meet the needs of various groups.

Converting from a dyadic to a group model of mentoring will help address the need for effective faculty mentoring in academic health centers. In turn, faculty mentored in this way will probably be more likely to use similar guidance methods with their colleagues, students and residents. A necessary step to allow more widespread adoption is creating facilitator training programs because many academic health centers lack access to skilled group facilitators. This step is much less daunting and less costly (and more likely to succeed) than attempting to adequately train multiple senior faculty at each institution for dyadic mentoring. There is the inherent limitation that the program was implemented at a single institution with a single group facilitator. The value of the report, however, is that it provides “proof of concept” that an alternative to traditional dyadic mentoring can succeed at an academic medical center.

Another next step is more rigorous and meaningful evaluation of mentoring programs. Although the “hard outcomes” of publications and promotions are often touted, we

believe that faculty humanity, compassion, vitality, developing deeply understood values, professionalism, relationships, appreciation of diversity, and creativity—all of which were nurtured in the collaborative mentoring model described in this article—are still more important outcomes.⁴⁸ Even though these outcomes are more complex to develop and sustain, each is essential to the multiple missions of academic medicine. Since these changed ways of being were experienced by our program participants, we conclude that mentoring programs employing methods such as those described in this report have the power to change the culture of academic medicine.

Acknowledgments

The authors thank all the faculty participants in the Weill Cornell mentoring programs who embraced culture change so enthusiastically. The authors thank Drs. Brendan Reilly and Sarah Rosenbaum for their wonderful contributions to the writing program, and Dr. Andy Schafer, Chair, Department of Medicine, for supporting the programs. The authors thank Dr. Nan Cochran for her contributions to the Negotiation session, Ms. Mary Elizabeth Kelser for her gracious management of the programs and for evaluation data collection, and Ms. Vasilina Vasiliou for assistance with manuscript preparation.

References

1. Liaison Committee on Medical Education (LCME). http://www.lcme.org/connections/connections_2013-2014/FA-11_2013-2014.htm. Accessed May 4, 2015.
2. Mark S, Link H, Morahan P, Pololi L, Reznik V, Tropez-Sims S. Innovative mentoring programs to promote gender equity in academic medicine. *Acad Med*. 2001;76:39–42.
3. Ramanan R, Phillips R, Davis RB, Silen W, Reede J. Mentoring in medicine: keys to satisfaction. *Am J Med*. 2002;112(4):336–341.
4. Palepu A, Friedman RH, Barnett RC, et al. Junior faculty members' mentoring relationships and their professional development in US medical schools. *Acad Med*. 1998;73:318–23.
5. Fox S, Corrice A. Mentoring in academic medicine: the current state of practice and evidence based alternatives. *Faculty Forward: Ideas in Practice*. 2010.
6. Takagishi J, Dabrow S. Mentorship programs for faculty development in academic general pediatric divisions. *Int J Pediatr*. 2011;ID 538616.
7. Pololi LH, Evans AT, Civian JT, Vasiliou V, Coplit LD, et al. Mentoring faculty: a US national survey of its adequacy and linkage to culture in academic health centers. *J Cont Educ Health Prof*. 2015;35(3):176–184.
8. Sambunjak D, Straus SE, Marušić A. Mentoring in academic medicine: a systematic review. *JAMA*. 2006;296(9):1103–1115.
9. Kashiwagi DT, Varkey P, Cook DA. Mentoring programs for physicians in academic medicine: a systematic review. *Acad Med*. 2013;88(7):1029–1037.
10. Straus SE, Johnson MO, Marquez C, Feldman MD. Characteristics of successful and failed mentoring relationships: a qualitative study across two academic health centers. *Acad Med*. 2013;88(1):82.
11. Pololi L, Knight S. Mentoring of faculty in academic medicine: a new paradigm? *J Gen Intern Med*. 2005;20:866–870.
12. Hansman CA. Diversity and power in mentoring relationships. In: Hansman C, Mott V, Ellinger AD, Guy T, eds. *Critical Perspectives on Mentoring: Trends and Issues*. Eric Info Series No. 388. Ohio, Japan: ERIC Clearinghouse on Adult, Career, and Vocational Education, Ohio State University; 2002:39–48.
13. Freeman R. Faculty mentoring programs. *Med Educ*. 2000;34:507–508.
14. Rogers JC, Holloway RL, Miller SM. Academic mentoring and family medicine's research productivity. *Fam Med*. 1990;22:186–190.
15. Straus SE, Chatur F, Taylor M. Issues in the mentor-mentee relationship in academic medicine: a qualitative study. *Acad Med*. 2009;84:135–139.
16. 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.
17. Feldman MD, Arian PA, Marshall SJ, Lovett M, O'Sullivan P. Does mentoring matter: Results from a survey of faculty mentees at a large health sciences university. *Med Educ Online*. 2010;15(1).
18. Pololi LH, Krupat E, Civian JT, Ash AS, Brennan RT. Why are a quarter of faculty considering leaving academic medicine? A study of their perceptions of institutional culture and intention to leave in 26 representative medical schools. *Acad Med*. 2012;87:859–869.
19. Shanafelt TD, Boone S, Tan L, et al. Burnout and satisfaction with work-life balance among US physicians relative to the general US population. *Arch Intern Med*. 2012;172(18):1377–1385.
20. Schindler BA, Novack DH, Cohen DG, et al. The impact of the changing health care environment on the health and well-being of faculty at four medical schools. *Acad Med*. 2006;81:27–33.
21. Pololi L, Knight S, Frankel R. Helping medical school faculty realize their dreams: an innovative collaborative mentoring program. *Acad Med*. 2002;77:377–384.
22. Fleming GM, Simmons JH, Xu M, et al. A facilitated peer mentoring program for junior faculty to promote professional development and peer networking. *Acad Med*. 2015;90:819–826.
23. Moss J, Teshima J, Leszcz M. Peer group mentoring of junior faculty. *Acad Psychiatry*. 2008;32(3):230–235.
24. Bussey-Jones J, Bernstein L, Higgins S, et al. Repaving the road to academic success: the IMERGE approach to peer mentoring. *Acad Med*. 2006;81(7):674–679.
25. Seritan AL, Bhargava R, Garma S, DuBé J, Park JH, Hales R. Society for women in academic psychiatry: a peer mentoring approach. *Acad Psychiatry*. 2007;31(5):363–366.
26. Varkey P, Jatoti A, Williams A, Ko M, Files J, Blair J, Hayes S. The positive impact of a facilitated peer mentoring program on academic skills of women faculty. *BMC Med Educ*. 2012;12:14.
27. Pololi L. Career development for medical school faculty: a nine-step planning strategy. *BMJ: Careers*. 2006;332:38–39.
28. Levinson D, Darrow C, Klein E, Levinson M, McKee B. *The Seasons of a Man's Life*. New York, NY: Knopf; 1978.
29. Tuchman BW. Developmental sequence in small groups. *Psychol Bull*. 1965;63:384–399.
30. Brookfield SD. *Understanding and Facilitating Adult Learning*. San Francisco, CA: Jossey-Bass, 1987.
31. Knowles MS. *The Modern Practice of Adult Education: From Pedagogy to Andragogy*. New York, NY: The Adult Education Company, 1980.
32. Freire P. *Pedagogy of the Oppressed*. New York, NY: Continuum, 1986.
33. Rogers CR. The facilitation of significant learning. In: Siegel L, ed. *Instructions: Some Contemporary Viewpoints*. San Francisco, CA: Chandler, 1967:37–54.
34. Daloz L. *Effective Teaching and Mentoring: Realizing the Transformational Power of Adult Learning Experience*. San Francisco, CA: Jossey-Bass; 1996.

35. Epstein RM. Mindful practice. *JAMA*. 1999;282(9):833–839.
36. Epstein RM. Mindful practice in action (II): cultivating habits of mind. families. *Syst Health*. 2003;21(1):11–17.
37. Schon D. *Educating the Reflective Practitioner*. San Francisco, CA: Jossey Bass; 1987.
38. Palmer PJ. *A Hidden Wholeness: The Journey Toward an Undivided Life*. Hoboken, NJ: John Wiley & Sons; 2009.
39. Palmer PJ. *Leading From Within*. In: *Let Your Life Speak*. New York, NY: Jossey-Bass; 1999: Chapter 5.
40. Hammond SA, Royal C. *Lessons From the Field: Applying Appreciative Inquiry*. Plano, TX: Thin Book; 2001.
41. Cooperrider DL, Sorensen PF, Whitney D, Yaeger TF, eds. *Appreciative Inquiry: Rethinking Human Organizations Toward a Positive Theory of Change*. Champaign, IL: Stipes; 2000.
42. Kram K, Isabella L. Mentoring alternatives: the role of peer relationships in career development. *Acad Manage J*. 1985;28:110–132.
43. Brown J, Isaacs D. *The World Café: Shaping Our Futures Through Conversations That Matter*. San Francisco, CA: Berrett-Koehler; 2005.
44. Argyris, C. *Overcoming Organizational Defenses: Facilitating Organizational Learning*. Upper Saddle River, NJ: Pearson Education; 1990.
45. Roger F, Ury W. *Getting to Yes: Negotiating Agreement Without Giving In*. Boston, MA: Houghton Mifflin; 1981.
46. Pololi L, Knight S, Dunn K. Facilitating scholarly writing in academic medicine: lessons learned from a collaborative peer mentoring program. *J Gen Intern Med*. 2004;19:64–68.
47. Pololi LH, Evans AT, Civian JT, et al. Faculty vitality—surviving the challenges facing academic health centers: a national survey of medical faculty. *Acad Med*. 2015;90:930–936.
48. Leach DC. Transcendent professionalism: keeping promises and living the questions. *Acad Med*. 2014;89:699–701.