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# Establishing Effective Mentoring Networks: Rationale and Strategies

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## Abstract

**Introduction:** Mentoring networks constitute an effective mentoring model in academic medicine and significantly add to the traditional dyadic mentor-mentee relationship. There is an unmet educational need for medical faculty to recognize the importance and characteristics of effective mentoring networks and to develop tools and strategies to appraise and construct strong, individualized mentoring networks. **Methods:** An interactive educational session on developmental mentoring networks for physicians and scientists in an academic environment was designed. This session can be presented as part of a series on mentoring topics or as a stand-alone module. **Results:** Using preassigned readings and a mentoring network mapping exercise, participants were able to describe their current mentoring relationships and identify strengths and opportunities for enhancing their effectiveness. **Discussion:** A structured educational session is a useful approach towards advancing the ability of academic mentors to help create optimally effective mentoring networks. The learning environment is enhanced by the interactive nature of the session when used in an interdisciplinary cohort of faculty participants.

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## Introduction

Effective mentoring is of vital importance in academic medicine and has been shown to positively influence career development, satisfaction, productivity, and retention.<sup>1</sup> The traditional mentoring model involves a hierarchical, dyadic relationship between a senior mentor and a less experienced protégé/mentee in which the mentor provides technical, career, and psychosocial guidance to the mentee until the mentee is ready for independence. However, with increasing recognition that not all of a mentee's evolving needs can be met by a single mentor, the concept of developmental mentoring networks has been introduced as an addition to the traditional model.<sup>2</sup>

Higgins and Kram called mentoring a “multiple developmental relationship phenomenon” and argued that developmental mentoring networks are more effective than hierarchical, dyadic mentoring models.<sup>3</sup> These mentoring networks have the following characteristics: They are multilevel, intra- and extraorganizational, career/person-related, and based upon mutuality and reciprocity.

Mentoring networks have been widely used in the business world.<sup>3</sup> Two key elements of a mentoring network are diversity and the strength of the relationship among the network members. The diversity of a mentoring network is determined by the number of social systems the individuals in the network come from (referred to as the *range* of the network) and the extent to which the members of the network are connected (referred to as the *density* of the network). A high-density (closed) network is one in which all or many members know each other, whereas a low-density (open) network includes members who are unknown to each other. In a low-density network, there is increased likelihood that input from members can be truly unconflicted, objective, and, to the extent possible, unbiased. The strength of the relationships in a mentoring network is determined by its levels of mutuality, reciprocity, and interdependence, as well as by the frequency of communication.

Some of the authors of this article (S. Jean Emans, Maxine E. Milstein, Kathy E. Kram, Audrey Haas, and Ellen W. Seely) adapted the Kram/Higgins mentoring network exercise for application to academic medicine in 2009. This adaptation included relatable roles and hierarchy. With this adaptation, an example of a diverse mentoring network in an academic medical center that is both large range and

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low density would be one that includes members from a medical school, a teaching hospital, a professional society, and a community organization, with such members being mostly unrelated or unknown to each other.

The adapted mentoring networking exercise for application to academic medicine has been successfully incorporated into the Brigham and Women's Hospital (BWH) Faculty Mentoring Leadership Program (FMLP), a nine-module educational program created to improve the effectiveness and efficiency of established mentors. With the evolution of the FMLP and the publication of *Strategic Relationships at Work*,<sup>4</sup> we updated the developmental mentoring network exercise to reflect new approaches to developmental relationships, such as adding the option of identifying professional sponsors (people with power, seniority, and influence who advance one's career) in a network and explicitly connecting the developmental network to a career development plan.

The FMLP's goals are to improve the quality of mentoring relationships, emphasize and encourage leadership in mentoring, and cultivate a vibrant, interdisciplinary community of faculty mentors. The FMLP course directors coauthored a paper describing the rationale, design, and ongoing impact of the course.<sup>5</sup> FMLP consists of nine interactive sessions that occur monthly over 10 months. Each FMLP session addresses a separate topic in the broader area of mentoring. We have previously published one of these sessions, entitled "Structuring the Mentoring Relationship: Expectations and Boundaries," on MedEdPORTAL {Dookeran, 2015 #9}.<sup>6</sup> Other session topics include the life course of mentoring, mentoring across differences, mentoring for innovation, mentoring up, difficult or complex mentoring situations, difficult conversations and effective feedback, and others. The present mentoring networks educational session, like many of the other sessions within FMLP, can be offered as part of a series, similar in format to the original, nine-module FMLP, or as a stand-alone session.

A summary of the session is presented here to facilitate this valuable mentoring network exercise being adapted for use in a variety of settings.

## Methods

### Approach

Our educational approach is, by intention, primarily experiential rather than didactic in order to increase the

## Educational Objectives

By the end of this session, learners will be able to:

1. Describe the importance of effective mentoring networks.
2. Identify the characteristics of effective mentoring networks.
3. Appraise the composition of their current mentoring network.
4. Recognize patterns and gaps in their current mentoring network.
5. Formulate strategies to build an effective personal mentoring network.

opportunity for peer learning through an applied network mapping exercise and facilitated discussion. The active involvement of adult learners provides an opportunity for program participants to confront controversial issues and share their ideas and personal experiences. Prior to the session, a preexercise encourages self-reflection, self-assessment of goals, and the evaluation of strengths and weaknesses as an approach towards achieving one's goals. The structure of the educational session aims to establish an effective learning climate where learners feel safe and comfortable expressing themselves. Through their participation in personalized exercises, learners are involved in diagnosing their own needs. This triggers internal motivation and supports learners in carrying out their unique learning plans to create and sustain effective mentoring networks.

## Resource Materials and Implementation

An agenda and time line for the 90-minute session are included in Appendix A. Preassigned readings and exercises (Appendices B & C) can be distributed to participants in hard-copy binders upon registration and then emailed to them again 2 weeks prior to the session along with instructions to complete the preexercise and preassigned reading before the session and to bring their network maps to the session. The preexercise introduces the participants to developmental network theory and provides the opportunity for them to identify members of their networks and the roles different members play and to conceptualize their networks as maps. During the educational session, a one-slide PowerPoint presentation (Appendix D) is shown to guide discussion, and additional resources (Appendix E) are provided so participants can learn more about mentoring networks. A session evaluation form (Appendix F) is distributed at the end of the session.

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For the educational session, the case discussion involves an analysis of each participant's individual mentoring network following completion of an exercise to map this network.<sup>7</sup> After an introduction to the changing nature of mentor relationships, from hierarchical and dyadic to multidimensional networks, participants are asked to pair up with an individual they do not normally work with in order to encourage interaction with new colleagues. In pairs, they share their prepared network maps in order to understand the potential value and limitations of their current networks, with emphasis on the following themes:

- Diversity: How similar or different are these individuals (in terms of gender, race, function, geography, organizations) to/from each other and me?
- Redundancy: How much overlap is there?
- Interconnectivity: How closed is the network in the sense that most of the people know each other?
- Strength of connection: What is the spread of people in terms of closeness and distance?
- Balance: Is the network balanced or in danger of tipping?
- Connections to power and influence: How many people in the network might be characterized as influential in the department, hospital, or field?

Paired partners discuss both the strengths of and the gaps in their network maps according to their goals. The pair then explores steps that each partner can take to overcome identified limitations.

Small groups of several pairs (generally, two or three pairs, depending on the total number of participants) are then formed to identify common themes and opportunities across networks. Each small group is asked to pick a primary theme on which to focus and encouraged to cover a second theme as time allows. Small groups are asked to choose a reporter for the upcoming larger cohort discussion. During the final portion of the session, the small groups come together, and each reporter shares with the entire cohort the patterns noted in the chosen theme, as well as strengths and weaknesses in the network along that theme. Solutions are focused on filling gaps in the network for that theme.

During the final discussion, a facilitator writes the main points on a whiteboard and asks whether other small groups have chosen the same theme. If so, the reporter for that small group is asked whether he/she has anything to

add. The same process is followed until each reporter has participated. For example, one small group may focus on diversity regarding organizational affiliations, while another small group may focus on the topic of diversity regarding gender. Finally, the facilitator summarizes the points and common themes raised by the small-group reporters and within the large-group discussion. These are subsequently collated and distributed as learning pearls. At the end of the session, each participant is asked to write down two action items he/she will carry out in the next 2 weeks in response to what was discovered during the network exercise. For example, a participant may plan to enhance the diversity of his/her network by seeking mentors external to the organization.

#### Participant Recruitment and Preparation

A cohort of approximately 15 faculty participants is recruited from diverse disciplines and departments. The mentoring networks educational session can also be offered to individuals from one specific discipline or department.

Prereadings and the preexercise are distributed in advance of educational sessions. The preexercise and the *Wall Street Journal* article "A New Approach to Mentoring" (listed in Appendix E) are mandatory for the session. Hard copies of the mentoring networks exercise are also distributed to participants during the session itself for group discussion.

#### Facilitators

Faculty facilitators are themselves senior mentors from diverse disciplines of academic medicine and are recruited from participants in prior cohorts. We pair a new facilitator with an experienced facilitator, with attention to diversity of both personal (gender, race) and professional (department, clinician/researcher) identity. The faculty facilitators are committed to a culture of excellence in mentoring. Depending on the size of the participant group, the session may be led by one facilitator rather than two. Facilitators may choose to complete this exercise along with the participants and/or take part in pair or table discussions.

#### Facilitation

The 90-minute session is facilitated by a faculty facilitator (or two depending on the size of the participant cohort), who presents a brief, introductory overview and explains the mentoring network exercise (15 minutes). The participants pair off, and each presents his/her network to and receives feedback from the other over a period of 15

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minutes. The participants then divide into groups of four to six and choose one theme for more focused discussion (15 minutes). The session concludes with a 45-minute discussion period led by the faculty facilitator, during which reporters present their group's analysis of patterns and differences in the participants' mentoring networks and begin a discussion on strategies to enhance these networks. Each participant is asked to write down two action steps that he/she will take in the next 2 weeks to enhance his/her network and to make a decision regarding when to revisit his/her network. It is explained that networks need to be revisited as goals are achieved or altered. At the end of the session, participants are asked to complete an evaluation.

### Evaluation

Using a 5-point Likert scale (1 = *poor*; 5 = *excellent*), each session evaluation form (Appendix F) assesses the following:

- Teaching abilities of the facilitators and/or presenters.
- Relevance of the material.
- Achievement of the session's stated objectives.
- Overall quality of the session.

The session evaluation also asks for comments on the most and least valuable elements of that session, changes in the participant's professional work as a result of the session, and potential future course topics or suggestions.

### Results

As of March 2017, 107 faculty members have participated in seven cohorts of the 9-month FMLP and in the mentoring network exercise in particular. Over the numerous cohorts of the FMLP (2009-2015), the current session has averaged a 4.70 rating (on a 5-point scale, 1 = *poor*; 5 = *excellent*) at the end of its 90 minutes and a 4.59 rating in the retrospective evaluation of the entire 9-month course (upon course conclusion). Specifically, we asked participants to rate the presenter's ability to present material and facilitate discussion, the degree to which the material was relevant to their practice or research, the degree to which the course met the objectives, and the overall quality and value of the course. These scores are similar to those of other modules in the FMLP series (range: 4.46-4.67) and the overall scores for the entire course (range: 4.46-4.71). In response to the question of what they liked best about the mentoring networks session, learners cited the interactive nature of the session, the open and transparent discussion, and the individual mentoring network exercise.

Pertaining to the mentoring exercise, participants found it to be "informative," "thought-provoking," "very valuable," "very practical," and "relevant." As a result of their participation in this session, learners indicated that they would map and reassess their own mentoring networks annually and encourage their mentees to do the same. In addition, participants stated that they intended to "re-evaluate," "expand," "diversify," "enlarge," "seek external mentors," and "fill the holes" in their respective mentoring networks.

### Discussion

The unique strength of this mentoring networks educational session, as a component of the FMLP course, is that each participant serves as a case study by completing the mentoring network mapping exercise. The interactive aspect of this session creates the opportunity for participants to learn from each other, thus enhancing their understanding of characteristics inherent in effective mentoring networks. As a result, the exercise supports the development of a road map for learners to build stronger and more efficient mentoring networks for themselves and their mentees. The exercise was very well received by participants, who considered it a useful tool for their own career development, as well as for those of their mentees.

An important limitation of our educational session as described here is the lack of follow-up with participants to evaluate its effectiveness. This could be addressed with a follow-up session after a defined period of time in which participants complete the mentoring mapping exercise again and reevaluate the effectiveness of their individual mentoring networks. At BWH, we convene an annual FMLP alumni luncheon to identify future directions and opportunities. Although this meeting presents an opportunity for self-reflection and evaluation of the impact of this educational session on participants' careers, we have not prospectively collected information from it. A potential challenge during this educational session is the diversity of clinical disciplines and academic paths among participants, which may lead to lack of common ground during discussion. However, it is the responsibility of the facilitators to guide the participants in identifying common themes and trends and in formulating strategies to enhance the effectiveness of mentoring networks.

The mentoring networks exercise has been successful as a stand-alone session. We have been invited to run workshops using this exercise locally at BWH, Boston Children's Hospital, and other Harvard Medical School

venues. We have also been invited to present the workshop at both national and international meetings. The multiple requests for this workshop suggest that there is widespread interest in the exercise. In disseminating this educational module, our goal is to equip faculty mentors with the knowledge needed to be part of successful mentoring networks that will enhance their own academic career development as well as that of their protégés/mentees.

## Keywords

Mentoring Expectations, Career Development

## Appendices

- A. Agenda and Session Time Line.docx
- B. Instructions for Network Preassignment.docx
- C. Preassignment.docx
- D. PowerPoint Presentation.pptx
- E. Required and Suggested Reading List.docx
- F. Evaluation Form Template.docx

All appendices are considered an integral part of the peer-reviewed MedEdPORTAL publication. Please visit [www.mededportal.org/publication/10571](http://www.mededportal.org/publication/10571) to download these files.

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