

# A Conceptual Model for Navigating a Career Path in Medical School Leadership

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## ABSTRACT

There is a paucity of literature providing guidance to physicians hoping to attain a position as a medical school dean. Realizing this gap, the Society for Academic Emergency Medicine (SAEM) Faculty Development Committee organized an educational session focused on offering faculty guidance for obtaining a position in medical school leadership. The session involved panelists who are nationally known leaders in medical school administration and was successfully presented at the SAEM 2018 annual meeting in Indianapolis, Indiana. Knowledge and perspective gained both during this session and through literature review was analyzed using a conceptual thinking skills framework. This process offered insights that promoted the development of a conceptual model informed by current evidence and expert insight and rooted in educational, economic, and cognitive theory. This model provides a step-by-step guide detailing a process that physicians can use to create a plan for professional development that is informed, thoughtful, and individualized to their own needs to optimize their future chances of advancing to a career in medical school leadership.

## INTRODUCTION OF THE TOPIC AND REVIEW OF PREVIOUSLY PUBLISHED WORK

As the field of emergency medicine (EM) continues to grow and mature, emergency physicians (EPs) are increasingly involved in leadership roles throughout their institutions and medical schools. These include roles in their department (e.g., program director, clinical director, chair), in their hospital (e.g., chief executive officer, chief medical officer), and within the medical school (e.g., assistant dean, associate dean). There is a good base of literature on faculty development on becoming a leader in emergency medical education, departmental administration, and departmental/institutional operations and management.<sup>1-4</sup> However, being a dean of a medical school has a different set of demands, with a common notion among those with experience in deanship roles being, simply

stated, “What got you here won’t get you there.”<sup>5</sup> Institutions reward and promote faculty based on individual autonomy and achievement. Yet deans must be skilled at collaborative behavior and implement a more systems-based approach to understand institutional priorities and challenges and realize a vision that comprehensively addresses organizational demands.<sup>6</sup> Although deanship requires a unique skill set, literature describing a comprehensive approach to guidance and mentorship for physicians wishing to pursue a role in the medical school dean’s office is lacking.

Recognizing this gap, the Society for Academic Emergency Medicine (SAEM) Faculty Development Committee tasked a working subgroup to develop an instructional session involving a panel of nationally known EPs with extensive experience in medical school leadership to provide guidance for residents and faculty aspiring towards a deanship role. This didactic was successfully presented at SAEM 2018 in

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Indianapolis, Indiana, with the panel consisting of Michelle Daniel, MD, MHPE (current assistant dean for curriculum); Leon L. Haley, Jr., MD, MHSA, CPE (current CEO and dean); and Brian Zink, MD (former associate dean for student programs and departmental chair).

As described below, based on lessons learned from critical analysis of current literature and the insight and context provided by the session's panelists, a conceptual model was developed describing a strategy for thoughtfully navigating a career path to the dean's office. For this article, the term "dean" refers to any/all deanship roles and the phrase "dean's office" refers collectively to institutional medical school leadership.

## IMPLICATIONS FOR EDUCATION AND TRAINING IN EM

For EPs wishing to pursue a career in the dean's office (or those advising such physicians), our conceptual model provides a method to help thoughtfully consider and seek out opportunities that would contribute to achieving this goal in an effective and efficient manner. By following the process detailed in our conceptual model, faculty can make informed decisions regarding their development based on their personal needs and prior experiences, as well as the needs of the institution and the dean's role they are hoping to attain.

## METHODOLOGY USED TO DEVELOP MANUSCRIPT AND HOW WRITING GROUP WAS IDENTIFIED

A working subgroup of the SAEM Faculty Development Committee performed a literature review searching for publications offering insight and advice on this topic. Literature was searched from 1990 to present for articles relevant to recruitment, development, guidance, mentorship, or characteristics of successful job performance involving deanship or medical school leadership roles. Articles were screened by two subgroup members and 83 articles were deemed relevant and reviewed. This search demonstrated a modest base of literature involving topics such as dean's responsibilities, qualities most important for being a dean, and descriptions of the types of faculty development programs for those appointed as a dean.<sup>7-10</sup> However, there is a paucity of literature describing how to approach development, guidance, and mentorship for physicians wishing to

pursue deanship roles. This insight informed the goals of the didactic and determined which topics panelists were to focus on.

During the session, our panelists focused on *what* types of activities, roles, and experiences should be pursued and *how* to operationalize this in one's own career. From this discussion, an important concept arose that seemed integral, impacting almost all aspects of the development process: "needs."<sup>11</sup> Although literature has described some general themes involving the types of skills one should develop to become a successful dean, guidance for any one physician should be *individualized* based on the: 1) needs of the specific deanship role that one seeks, 2) needs of the institution, and 3) needs of the individual physician based on their prior experience and current skill set. Collectively these (1-3) will be referred to as **essential needs** in this paper.

Conclusions from the literature review and the instructional session described above were critically analyzed by employing a conceptual thinking skills framework described by MacInnis.<sup>12</sup> This framework clarified and organized this information and promoted the use of theory and principles from the fields of education, economics, and social science to create a conceptual model to help guide faculty on their journey towards becoming a dean. Data Supplement S1<sup>13,14,16,17</sup> describe how we integrated specific theory and principles to develop this model (available as supporting information in the online version of this paper, which is available at <http://onlinelibrary.wiley.com/doi/10.1002/aet2.10212/full>).

## UNIQUE ANALYSIS OF CURRENT KNOWLEDGE ON THE TOPIC

Although there are a limited number of publications describing theoretically based conceptual models for mentorship<sup>18,19</sup> or generalized faculty development,<sup>20,21</sup> our model offers a number of novel aspects compared to this current body of literature. First, it has a unique *focus* in that it describes professional development aimed at pursuing a deanship role. Next, by considering the role of **essential needs**, our model offers faculty a novel strategy to *approach* questions regarding which activities and experiences are most beneficial for their professional development. Finally, informed by theory, our model offers a step-by-step *process* that faculty can follow to design an individualized, self-directed professional development program.

## EXPLANATION OF THE CONCEPTUAL MODEL FOR NAVIGATING A CAREER PATH TO THE DEAN'S OFFICE

### Introduction

Informed by a constructivist approach, we used Kern's curricular development method to conceive a model outlining a user-friendly, stepwise process that faculty or advisors can follow to guide professional development aimed at a deanship position.<sup>13,15</sup> This model promotes the integration of domain-specific content knowledge (from the literature), theory (to provide support for key elements and assumptions within the model), and a needs-based approach. Figure 1 offers a detailed overview of this conceptual model. Below is a brief description of the elements comprising each step in this model (steps A–E). Data Supplement S1 explains the theories and principles used to develop this model, which provide support and context for the model's elements that are described in further detail below.

### Step A: Identification of Which institutional Leadership Role One Wishes to Pursue

The aim of this step is to identify one's overarching goal. The first step in considering one's development for navigating a career path to the dean's office is thoughtfully contemplating the question: *Why* do I want to be a dean? Simply defined, deans are the leaders and chief academic officers of medical schools.<sup>10</sup> There is typically a single "dean" at the helm of medical school leadership. Reporting up to "the dean" are several vice, associate, and assistant deans responsible for various domains and subdomains (e.g., undergraduate medical education, clinical affairs, research). To illustrate relationships between various roles, Figure 2 offers an example of the organizational structure of a dean's office.

Deciding which dean's role or domain to pursue is a critical component of our conceptual model. This determination allows one to define the needs associated with the particular role/domain and helps direct future decisions involving which professional development activities to participate in. We suggest reviewing an institution's organizational chart ("org chart") to obtain a broad overview of deans' roles and relationships, however, their responsibilities vary widely between institutions depending on their exact titles, positions, and institutional needs and expectations. Therefore, it is essential to probe medical school leadership at the specific institution of interest to determine the exact responsibilities and expectations for each deanship role and domain.

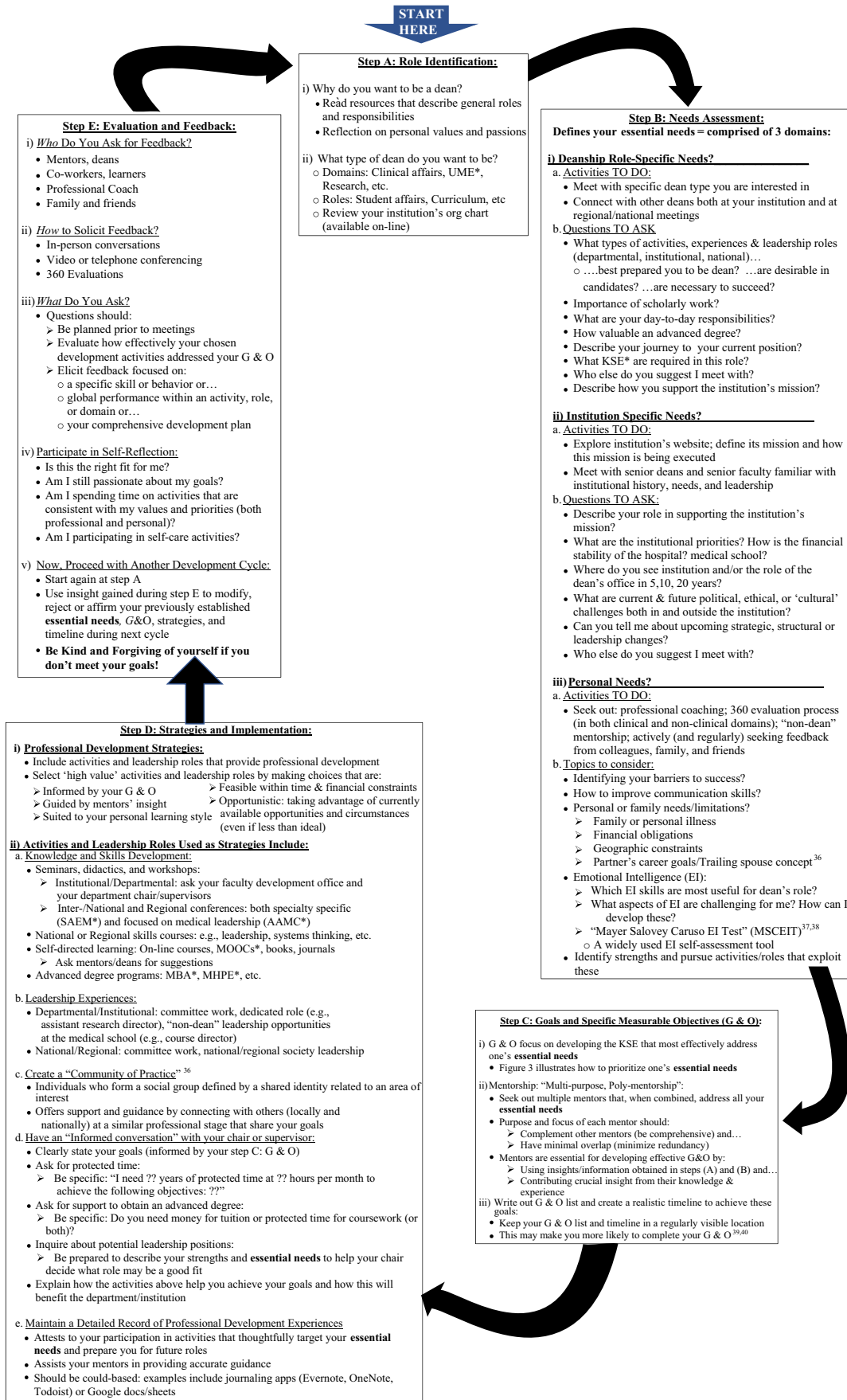
### Step B: Needs Assessment

This step focuses on determining the personal and contextual needs required for an individual to successfully pursue a specific deanship role.<sup>11</sup> Because there are limited time and resources to dedicate toward professional development, it is important to pursue activities offering the greatest value for achieving one's goal. The "value" of a developmental activity depends on many factors including how important the knowledge, skills, and experience (KSE) offered by this activity are for performing duties relevant to the deanship role one desires and how well these KSE complement one's current abilities (see Data Supplement S1).

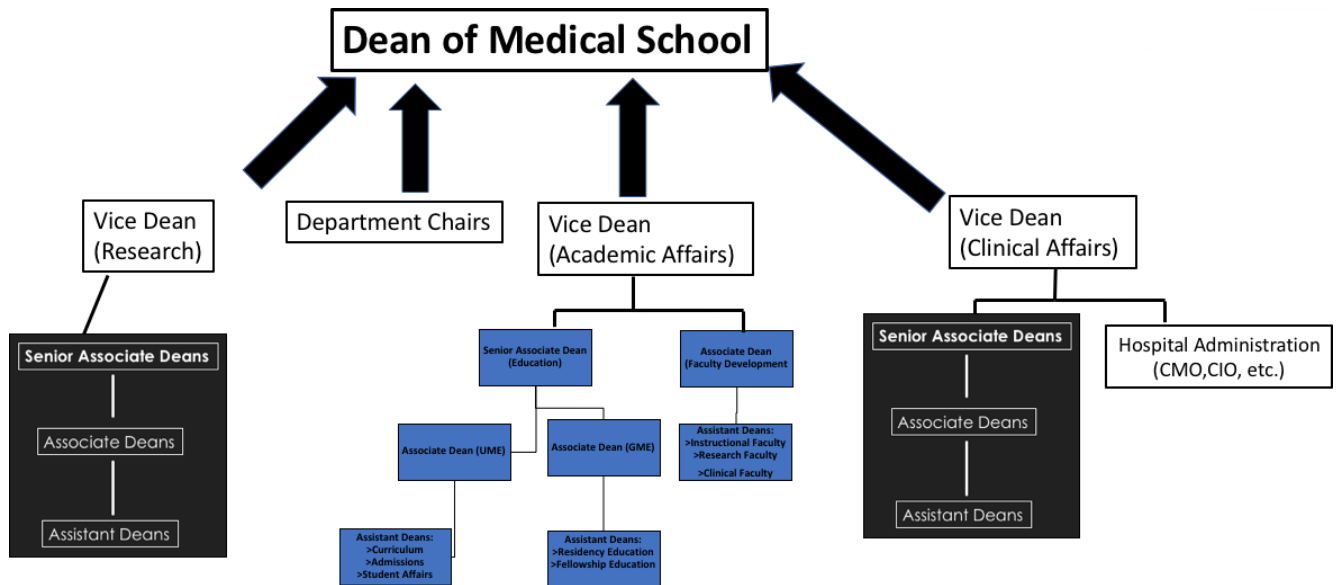
Considering that deans have a unique skill set compared to other institutional leaders (i.e., "what got you here won't get you there"<sup>5</sup>) and that each physician has a unique set of personal KSE, the thoughtful assessment of one's **essential needs** provides insight that is customized to help a specific physician choose the best possible development opportunities for pursuing a specific deanship role (i.e., activities with the

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**Figure 1.** (next page) "A Guide for Reaching the Dean's Office." This model offers a structured method that provides individualized guidance for physicians wishing to achieve a deanship position. By offering a strategy that is customized based on your unique set of **essential needs** and strengths, this model helps you create a professional development plan that is informed, efficient and effective. The five steps comprising the model and details explaining actions required to implement each step are illustrated. Please note this is an iterative process, therefore: (i) it is not recommended that every item in each step be pursued within a "single cycle"; (ii) the model requires cycling through the five steps a number of times to gain optimal benefit; and (iii) faculty should periodically review this model to evaluate their progress and obtain further guidance on which development activities to pursue. Insights identified during step E (evaluation stage) are used to inform the next cycle's "role identification" and "needs assessment," which subsequently impacts one's "G&O" and "strategies for implementation," etc. KSE = knowledge, skills, and experiences; UME = undergraduate medical education; EP = emergency physician; SAEM = Society for Academic Emergency Medicine; AAMC = Association of American Medical Colleges; MOOC = massive open on-line course; MBA = Master of Business Administration; MHPE = Master of Health Professions Education. Citations: Trailing Spouse Concept,<sup>36</sup> MSCEIT,<sup>37,38</sup> G&O List/Timeline,<sup>39,40</sup> and Community of Practice.<sup>41</sup>







**Figure 2.** An example of one type of organizational structure for a medical school's office of the dean. For illustrative purposes, dean's roles/titles under the vice dean for academic affairs have been expanded. Similar roles would likely exist under the vice-deans in other domains. It is important to emphasize that each institution has a unique leadership structure, roles, and titles and we encourage readers to review their specific institution's organizational chart. UME = undergraduate medical education; GME = graduate medical education; CMO = chief medical officer; CIO = chief information officer.

greatest “value”). **Essential needs**, as used in this paper, are composed of: 1) needs specific for the deanship role that one seeks, 2) needs specific to one's institution, and 3) personal needs based on one's experience and current skills. Each of these is briefly reviewed below with a detailed description offered in Figure 1, step B.

**i) Deanship Role-specific Needs Assessment.** Needs involving a specific deanship role are best identified by meeting with the dean in the domain and role that one is most interested in. Consider meeting with additional deans and medical school leadership both within your institution and at regional and national conferences that have similar, albeit seemingly unrelated, interests and roles to gain a more complete understanding of the culture, responsibilities, and lifestyles of various deans. These conversations help determine if the identified dean's role aligns with one's interests and which KSE and leadership positions make an individual a desirable applicant and best prepare them for successfully performing as a dean. (see Figure 1, step B)

**ii) Institution-specific Needs Assessment.** Institution-specific needs are best identified by meeting with senior deans and senior faculty members familiar with the institution's history. Understanding the institution's mission is essential because “institution-specific needs” are frequently defined by their

ability to support this mission. For example, medical schools that are heavily oriented toward research may have expectations for their deans that are very different from schools that focus more on clinical training or serving the local community.

Institutional needs may change gradually (through mergers, financial changes, etc.) or quickly (through scandal, mass faculty, or administrative turnover, etc.). Thus, an institution may need very different qualities in their leadership depending on the current state of affairs. This concept was illustrated by Daugherty in his landmark paper on modern deanship. He describes how the successful, bold actions taken by President Roosevelt during the Great Depression and World War II may have completely failed during a less volatile period in history. In essence: “a nation at peace and a nation under threat require different types of leaders.”<sup>6</sup> Therefore, one should inquire about issues that are dynamic in nature and have a large impact on institutions, as described in Figure 1, step B.

**iii) Personal Needs Assessment.** A “personal needs assessment” requires an honest evaluation of one's professional and personal self to identify areas of strength, personal limitations (e.g., illness, finances), and professional challenges. This insight allows one to pursue opportunities that utilize their strengths and help develop challenge

areas, while remaining cognizant of personal limitations.

Although performing a personal needs assessment may seem straightforward, a significant body of evidence has determined that individuals have insufficient accuracy and reliability when identifying their own areas of weakness and strength.<sup>22,23</sup> An explanation for this poor performance is best offered by Dunning: “If you’re incompetent, you can’t know you’re incompetent . . . [because] the skills you need to produce a right answer are exactly the skills you need to recognize what a right answer is.”<sup>24</sup> Therefore, it is essential that we seek feedback from others, including both professional and personal sources. Figure 1, step B provides guidance to further assist with the personal needs assessment process.

When considering one’s personal development needs, we must emphasize the importance of emotional intelligence (EI) and a related concept called integrative leadership. EI is “the ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotion, and regulate emotion in yourself and others.”<sup>25</sup> The significance of EI cannot be overstated. A substantial body of literature supports the importance of EI for personal and professional development, professional success, and effective leadership.<sup>26</sup> Because a comprehensive discussion of EI is beyond the scope of this article, we wish to direct readers to practical resource that describes real-world EI skills presented in an easy-to-use format.<sup>27</sup>

Integrative leadership describes a leader who works with his or her team to holistically address their viewpoints, strengths, and weakness and achieve goals through influencing and empowering others to succeed.<sup>10,28</sup> EI is an essential component of this modern, effective leadership style and we encourage considering integrative leadership as an idealized model when reflecting and receiving feedback on one’s own leadership style.

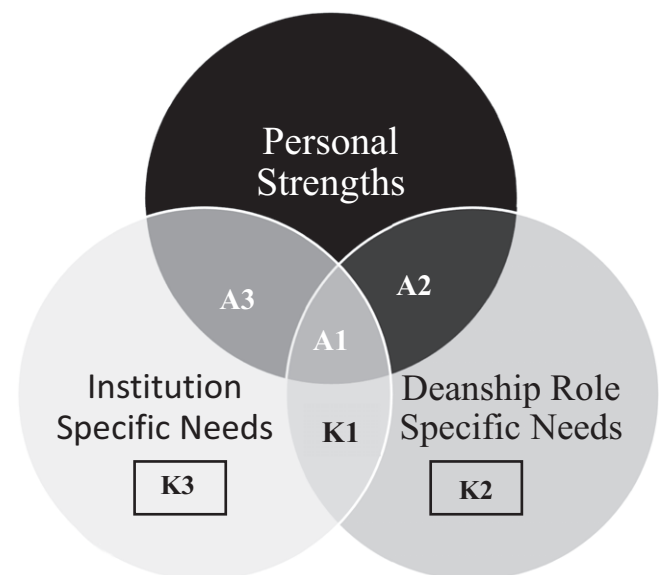
Finally, a personal needs assessment also involves identifying one’s strengths to: 1) choose leadership experiences that take advantage of these strengths and 2) prevent dedicating resources to development activities involving domains in which one already has effective KSE. It is important to recognize that as a result of clinical practice and training, EPs have a number of KSEs that are well suited for a deanship position. These include:

- A “solution-focused” mind-set;
- Effective teamwork and communication skills;
- Experience with interdisciplinary and multiprofessional practice;
- A fairly flexible clinical schedule;
- Experience with systems practice and thinking;
- Experience managing crises, limited resources, and risk management practices;
- Knowledge of the breadth of medicine.

### Step C: Developing Goals and Specific Measurable Objectives

The next step in this conceptual model is focused on identifying goals and objectives that one hopes to achieve during professional development. A goal is a desired aim or result that is broadly described, while objectives are specific, measurable actions that detail what is needed to achieve a certain goal.<sup>15</sup>

Informed by insight gained during the “needs assessment” process, one’s goals and objectives should focus on developing the KSE with the greatest overlap between the three components comprising their **essential needs** (see Figure 3). This promotes effective planning and thoughtful decision making regarding which activities and roles will provide the greatest value for



**Figure 3.** The needs assessment will define the KSE and personal strengths present in these 3 circles. When pursuing step C, “developing goals and objectives,” and step D, “creating your strategic development plan,” you want to prioritize KSE that require development in the following manner: K1 > K2 > K3. When speaking with deans or applying for a dean’s position, you want to emphasize your strengths which include the KSE and personal qualities contained in: A1 > A2 > A3 (in order). KSE = knowledge, skills, and experiences.

one's development. Experience and knowledge offered by one's mentors provides crucial guidance for constructing appropriate goals and objectives. Important guidance on mentorship and its role throughout this conceptual model are offered toward the end of this paper. Figure 1, step C provides more information on developing goals and objectives.

### Step D: Developing Strategies and Implementation

This step determines which strategies should be pursued to achieve one's goals and objectives. Selection should focus on strategies involving "high-value" experiences that most effectively address one's individualized development needs. To accomplish this, one should thoughtfully choose professional development strategies that: 1) address one's goals and objectives; 2) suit one's personal learning style; 3) are feasible when considering available resources (time and financial); and 4) are opportunistic, taking advantage of opportunities available departmentally, institutionally, and/or nationally.<sup>15</sup>

Types of professional development strategies include knowledge and skills development, pursuing leadership experiences, creating a "community of practice," having "informed conversations" with departmental or medical school leadership, and maintaining records of professional activities and experiences. All of these strategy types are reviewed in detail in Figure 1, step D. Additional discussion on pursuing leadership experiences and obtaining an AD is offered below.

**Leadership Experiences.** Departmental and institutional leadership roles and positions on committees often encourage personal and professional development and can provide important experience to prepare for a deanship position. When deciding which opportunities to pursue, ask mentors and deans which roles and committees best address your goals and objectives. Additionally, consider the team that you will be working with. Reflect on what you would be contributing to this team and whether the other team members would be constructive partners for your professional development. The "competing values framework" offers guidance around effective team functioning and its relation to the skills offered by each individual team member.<sup>29</sup>

Ideally, a leadership role may become available that offers opportunities to address your goals and

objectives and work with a team that complements your skill set. However, more commonly a leadership or committee position is offered that may be less than ideal. In these circumstances, it is important to discuss your concerns with mentors and consider if this position may:

- Be a "stepping stone" to a more desirable position;
- Provide KSE that, although not currently needed, will still contribute to your breadth of experience and make you a more appealing candidate for your desired position in the future;
- Demonstrate your willingness to take on challenging tasks that are outside your comfort zone to support the institution's mission, address a need, and/or grow personally or professionally.

Importantly, after evaluating the considerations listed above, if you decide to decline an opportunity, we suggest making it clear to institutional leadership that your decision was based on thoughtful self-reflection concerning role fit and your intention to make a choice that is in the best interest of the institution.

**Advanced Degrees.** Common reasons for pursuing an AD (e.g., master of health professions education, master of business administration) involve making oneself a more competitive candidate for a potential future role and/or assisting with responsibilities of either a current or a future role. However, the importance of pursuing an AD as part of development for a position in the dean's office is unclear and supported by limited evidence.<sup>30,31</sup> Nevertheless, our panelists offered valuable insight on this topic.

Advanced degrees offer up-to-date instruction on content, concepts, and skills used to implement interventions, address challenges, and enact innovation. This training provides development of a common language and deep understanding involving leadership skills, systems thinking, best practices, theory, and implementation processes. Although these skills are crucial, we argue that the value of an AD is relative and depends on one's individualized **essential needs**, goals, and objectives.

Stated simply, by providing a standardized skillset, ADs provide physicians "credibility." However, the impact this credibility has on a certain individual's success depends on factors such as the specific role being pursued, one's prior experience, one's history with the institution, and the institution's attributes

and mission. Some implications of this argument are as follows:

- The more experience one has, the less important an AD is. Typically, a significant body of work/experience within the relevant domain provides reassurance that an individual has the skills necessary to perform the job duties
- The earlier one is in his or her career or the less experience one has in the domain of interest, the more valuable the credibility (and skills instruction) associated with an AD becomes.
- ADs are more beneficial when looking to change institutions. By providing a standardized skill set, ADs offer transferable credibility that is easier for outside institutions to understand when compared with one's record of work at his or her home institution, which may be difficult to interpret as a result of an increasing number of EPs pursuing fellowships. There has been, and will continue to be, an increasing number of EPs obtaining ADs prior to starting as faculty.

### Step E: Feedback and Evaluation

Evaluation is the “identification and application of criteria to determine the merit or worth of what is being evaluated.”<sup>15</sup> Feedback is the process of providing information regarding the performance of an individual or activity. This is a critical step in our model because feedback provides the information needed to evaluate how well one's chosen development strategies are addressing his or her goals, objectives, and **essential needs** (i.e., feedback informs “judgment of the program's success”).<sup>15</sup>

Based on a modified version of Kern's approach to curricular evaluation, the process physicians can use to collect feedback for evaluating their current professional development plan is detailed in Figure 1, step E. After completing this step, one should start the cycle again at step A. Insight and conclusions established in this step feed back into the cycle of development and drive the reevaluation of the **essential needs**, goals, objectives, strategies, and timeline that was previously established. This is an essential feature of our conceptual model. By outlining a process composed of periodic evaluation and reflection aimed at informing one's professional development choices, this model provides a method for making thoughtful, needs-based choices that will most effectively support one's goal of becoming a dean.

## OTHER IMPORTANT COMPONENTS OF THIS CONCEPTUAL MODEL

### Roadblocks and Mentorship

**Roadblocks.** It is not uncommon in the competitive world of academic medicine that following the steps outlined above and cultivating necessary skills still may not lead to the dean's suite. In addition to completing a thorough evaluation process (step E), other strategies such as “career coaching” or pursuing a “lateral transition” should be considered to address potential roadblocks. Career coaching typically involves using a professional to help physicians reflect on their performance, develop EI, create action-oriented plans, and provide accountability.<sup>32</sup>

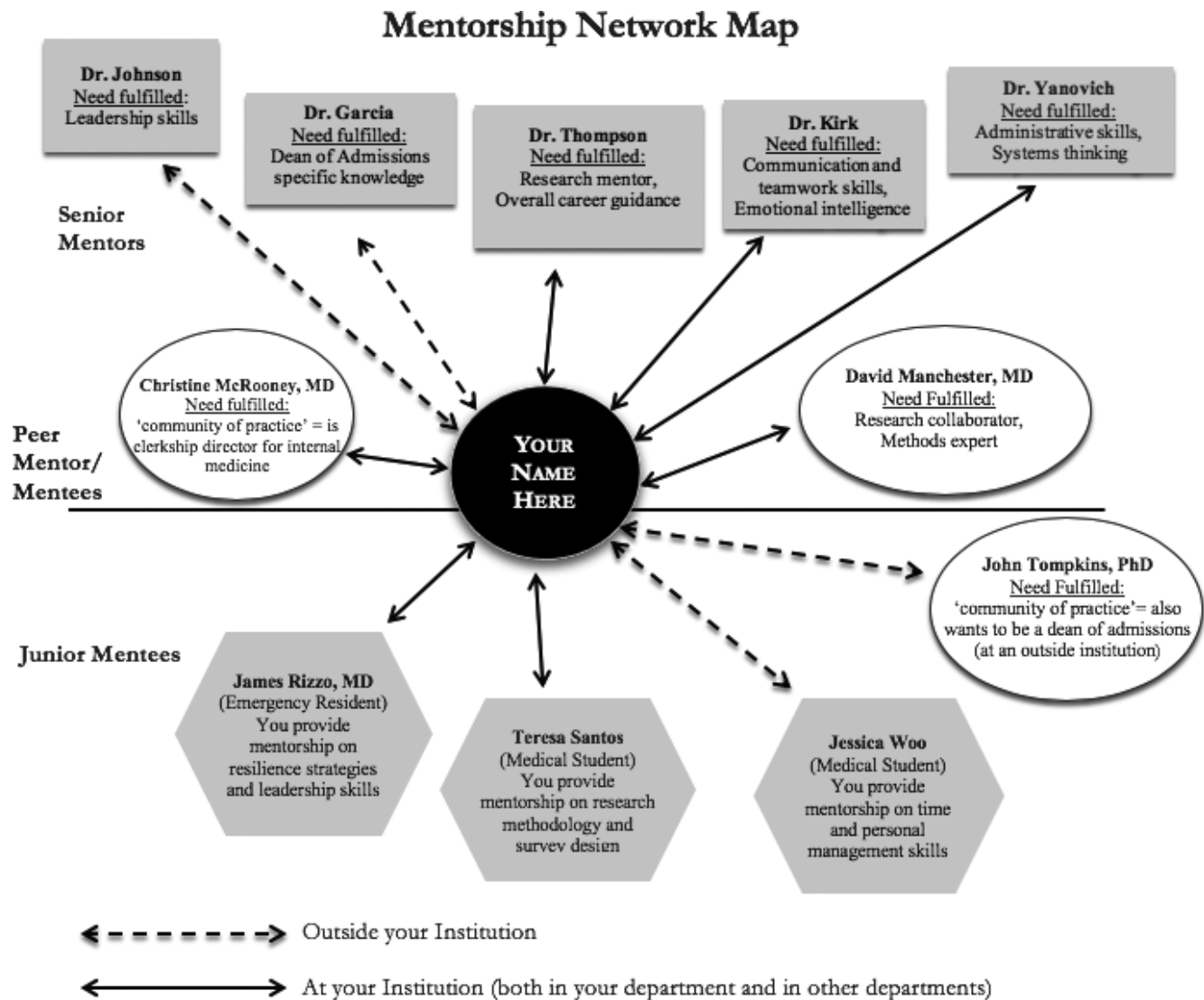
The concept of lateral transition involves accepting a similar position in a different division, department, or institution (either locally or through distant relocation) that has an environment more conducive to one's professional advancement or an available position more consistent with one's KSE. Put simply: often, the path up the ladder is not straight upward. Rather, when you run out of rungs and can't go any higher, take a lateral leap to a nearby ladder that is taller and provides the opportunity for you to continue higher . . . until you run out of rungs on this ladder and start the process again.

**Mentorship Primer.** Mentorship is typically a hierarchical relationship in which the mentor is an expert in the same domain as the mentee and provides professional development around this domain.<sup>18,32</sup> The crucial role that mentors play in professional development cannot be overstated. A review of mentoring in multiple disciplines including education, business, and medicine suggests its significant impact on “learning, personal growth and development.”<sup>33</sup>

Supported by social-cognitive learning theory<sup>13</sup> (see Data Supplement S1), our conceptual model requires seeking multiple mentors, with each mentor being used to provide guidance on a number of issues spanning multiple steps of this model.<sup>11,34,35</sup> This is a concept that we have named “multipurpose polymentoring.”

Because mentors should be chosen based on their ability to provide guidance and insight involving one's **essential needs**, different mentors should serve different roles. Each mentor should address a specific set of needs/objectives and the guidance provided by each mentor should complement one another, so that (ideally) all of one's **essential needs/objectives** are





**Figure 4.** An example of a “mentorship map”: When creating your mentorship map, be mindful of the role/purpose of each mentor listed. Mentors should each serve a somewhat unique purpose that is informed by your **essential needs**, goals and objectives. Although some overlap of purpose is common, one should be mindful to not have too many mentors offering guidance that addresses the same domain or goal. Mentors should complement one another in purpose so that collectively, all of your mentors address all of your unique set of **essential needs**.

addressed by the set of mentors that are chosen. Alternatively, for the purpose of efficiency, one should be cognizant to not have numerous mentors to address the same needs/objectives (although some overlap is acceptable). We suggest creating a “mentorship map” that details both senior (hierarchical) and peer (lateral) mentors and the needs/objectives that they are addressing<sup>11</sup> (see Figure 4 for an example of a “mentorship map”).

When seeking out mentors, begin by speaking with individuals in your department that have institutional insight and/or longevity. Be specific and ask them to refer you to others that could address specific **essential needs** that you have. Be sure to consider individuals outside your field or discipline (e.g., nursing scholars, PhDs, faculty from the school of business or public

health). Also, consider reaching out to authors on papers that are relevant to your area of interest; although they may not be available, they may be able to refer you to someone else that would be a good match. Network with speakers and other attendees at regional and national conferences. Finally, consider an “advanced people search” on LinkedIn or a similar professional website.

To summarize, mentorship is essential for professional development and the traditional “apprenticeship” archetype (one teacher per apprentice) is not sufficient to address the diversity of guidance required to use this conceptual model. For this reason, we strongly advise being guided by the principle of multi-purpose polymentoring when seeking out mentorship.

## SUMMARY

Based on current literature, best practices, and expert opinion, this article describes a conceptual model rooted in educational theory that offers a needs-based approach for guiding professional development decisions aimed at successfully navigating a career path to the dean's office. This model offers a self-directed, step-by-step "guide" that faculty can follow to help them make effective decisions regarding their professional development.

## References

- Hargett CW, Doty JP, Hauck JN, et al. Developing a model for effective leadership in healthcare: a concept mapping approach. *J Health Leadersh* 2017;9:69–78.
- Frich JC, Brewster AL, Cherlin EJ, Bradley EH. Leadership development programs for physicians: a systematic review. *J Gen Intern Med* 2015;30:656–74.
- Detsky AS. How to be a good academic leader. *J Gen Intern Med* 2011;26:88–90.
- Kay D, Clawson MD, Wilson EA. *The Medical School Dean: Reflections & Directions*. 1st ed. Kuttawa, KY: Univ of Kentucky College of; 1999.
- Goldsmith M, Reiter M, Bunn C, Clester S. *What Got You Here Won't Get You There/Marshall Goldsmith with Mark Reiter; Adapted by Cullen Bunn and Shane Clester; Illustrated by Shane Clester*. Writers of the Round Table Press/Round Table Comics, 2011.
- Daugherty RM. Leading among leaders: the dean in today's medical school. *Acad Med* 1998;73:649–53.
- Rich EC, Magrane D, Kirch DG. Qualities of the medical school dean: insights from the literature. *Acad Med* 2008;83:483–7.
- Mallon WT, Grigsby RK. *Leading: Top Skills, Attributes, and Behaviors Critical for Success (AAMC Successful Medical School Department Chair Series)*. Washington, DC: Association of American Medical Colleges, 2016.
- Kashiwagi DT, Varkey P, Cook DA. Mentoring programs for physicians in academic medicine: a systematic review. *Acad Med* 2013;88:1029–37.
- Buckley PF. The medical school dean: leadership and workforce development. *Acad Psychiatry* 2014;38:82–5.
- Mezias JM, Scandura TA. A needs-driven approach to expatriate adjustment and career development: a multiple mentoring perspective. *J Int Bus Stud* 2005;36:519–38.
- MacInnis DJ. A framework for conceptual contributions in marketing. *J Marketing* 2011;75:136–54.
- Merriam S, Bierema L. Traditional learning theories. In: *Adult Learning: Linking Theory and Practice*. San Francisco, Jossey-Bass, 2014.
- Charalambos V. Constructivism versus objectivism: Implications for interaction, course design, and evaluation in distance education. *Int J Educ Telecom* 2000;6.
- Kern DE, Thomas PA, Hughes MT. *Curriculum Development for Medical Education: A Six-step Approach*. Baltimore, MD: Johns Hopkins University Press, 2009.
- Buchanan JM. Opportunity cost. In: *The New Palgrave Dictionary of Economics*. London: Palgrave Macmillan UK, 2018. p. 9822–6.
- Mariolis T, Tsoulfidis L. Old and modern classical economics. In: *Modern Classical Economics and Reality*. Tokyo: Springer, 2016. p. 1–14.
- Sambunjak D. Understanding wider environmental influences on mentoring: towards an ecological model of mentoring in academic medicine. *Acta Med Acad* 2015;44:47–57.
- Scandura TA, Pellegrini EK. Workplace mentoring: theoretical approaches and methodological issues. In: *The Blackwell Handbook of Mentoring: A Multiple Perspectives Approach*. Malden, MA: Blackwell Publishing Ltd, 2008. p. 71–91.
- Hewson MG. A theory-based faculty development program for clinician-educators. *Acad Med* 2000;75:498.
- Saroyan A, Amundsen C, Li C. Incorporating Theories of Teacher Growth and Adult Education in a Faculty Development Program. *To Improve the Academy* 1997;16:93–115.
- Davis DA, Mazmanian PE, Fordis M, Van Harrison R, Thorpe KE, Perrier L. Accuracy of physician self-assessment compared with observed measures of competence: a systematic review. *JAMA* 2006;296:1094–102.
- Eva KW, Regehr G. Self-assessment in the health professions: a reformulation and research agenda. *Acad Med* 2005;80(10 Suppl):S46–54.
- Dunning D. *Self-Insight: Roadblocks and Detours on the Path to Knowing Thyself*. New York: Psychology Press, 2005.
- Sternberg RJ, Kaufman SB, editors. *The Cambridge Handbook of Intelligence*. New York: Cambridge University Press, 2011.
- Mintz LJ, Stoller JK. A systematic review of physician leadership and emotional intelligence. *J Grad Med Educ* 2014;6:21–31.
- "FYI: For Your Improvement: A Guide for Development and Coaching" (Lombardo 2014)
- Knutson L. *Integrative Leadership: An Embodied Practice*. Durham, NC: Duke Integrative Medicine, 2015.
- Cameron KS, Quinn RE. *Diagnosing and Changing Organizational Culture: Based on the Competing Values Framework*. San Francisco, CA: Jossey-Bass, 2011.
- Steinert Y, Naismith L, Mann K. Faculty development initiatives designed to promote leadership in medical education. A BEME systematic review: BEME Guide No. 19. *Med Teach* 2012;34:483–503
- Zwanikken PA, Dieleman M, Samaranayake D, Akwataghibe N, Scherpier A. A systematic review of outcome

- and impact of master's in health and health care. *BMC Med Educ* 2013;13:18.
32. Deiorio NM, Hammoud M. *Coaching in Medical Education, a Faculty Handbook*. Chicago: American Medical Association, 2017.
  33. Ehrich LC, Hansford BC, Tennent L. Formal mentoring programs in education and other professions : a review of the literature. *Educ Admin Q* 2004;40:518–40.
  34. Sawiuk R, Taylor WG, Groom R. An analysis of the value of multiple mentors in formalised elite coach mentoring programmes. *Phys Educ Sport Pedagogy* 2017;22:403–13.
  35. Baugh SG, Scandura TA. The effect of multiple mentors on protege attitudes toward the work setting. *J Soc Behav Personal* 1999;14:503–21.
  36. McKinnish T. Spousal mobility and earnings. *Demography* 2008;45:829–49.
  37. Brackett MA, Salovey P. Measuring emotional intelligence with the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT). *Psicothema* 2006;18 (Suppl):34–41.
  38. Fiori M, Antonietti JP, Mikolajczak M, Luminet O, Hansenne M, Rossier J. What is the Ability Emotional Intelligence Test (MSCEIT) good for? An evaluation using item response theory. *PLoS One* 2014;9:e98827.
  39. Matthews G. *Goals Research Summary*. Presented at the Ninth Annual International Conference of the Psychology Research Unit of Athens Institute for Education and Research (ATINER). San Rafael, CA: Dominican University of California, May 2015.
  40. Turkay S. *Setting Goals: Who, Why, How?* Cambridge, MA: Harvard University Press, 2014.
  41. Wenger E, McDermott R, Snyder W. *Cultivating Communities of Practice: A Guide to Managing Knowledge*. Boston, MA: Harvard Business School Press, 2002.

### Supporting Information

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The following supporting information is available in the online version of this paper available at <http://onlinelibrary.wiley.com/doi/10.1002/aet2.10212/full>

**Data Supplement S1.** Process used in developing this conceptual model for a guiding faculty on a career path to the dean's office.