Mentorship: The Necessity of Intentionality

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A large body of research exists that is dedicated to exploring and defining mentoring. It is widely recognized that mentorship is a process informed by one's personal experiences. Yet, mentorship literature primarily centers around advancing technical proficiencies, and very little focuses on individual characteristics, such as honesty, consistency, and transparency. Individual wisdom is an invaluable tool for intentional mentorship. Intentional mentors catalyze the ability to understand and tap into one's own power, promote awareness of individual strengths and limitations, and clarify personal vision. Through intentional mentorship, mentors identify, improve, and implement strategies and skills that they acquired throughout their career. After conducting a self-assessment and *identifying* the personal skills that can be attributed to effective mentoring, mentors advance along the mentorship continuum to *improve*, and subsequently *implement,* these skills. Given the changing landscape of the scientific workforce in general, faculty mentors must be intentional about seeking avenues for growth. Beyond individual implementation, it is essential for educational institutions to also take a systemic approach when it comes to supporting faculty advisors and their mentees. A few tools and resources are offered to encourage mentors in taking a proactive role as they intentionally develop and enhance their individual mentoring process.

Public Policy Relevance Statement
Mentorship is a critical component for both academic and professional success. A "one size fits all" approach to mentoring can promote exhaustion, burn-out, and inherently impact academic rigor, longevity, and promotion. Given the changing landscape of the scientific workforce in general, an intentional mentoring experience informed by one's personal experiences is beneficial and rewarding for mentors and mentees alike.

"We make a living by what we get, we make a life by what we give."
—*Winston Churchill*

Whereas there is a large body of research dedicated to exploring and defining mentoring, the belief that mentorship is a process informed by one's personal experiences is widely recognized as an essential component. Individual characteristics, such as honesty, consistency, and transparency, lie at the core and are fundamental to building the trust required for an effective mentor–mentee relationship. Effective mentors are often self-aware, self-developed, and they do not underestimate the time and energy required of the relationship. In other words, effective mentors are intentional.

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Individual wisdom is an invaluable tool for intentional mentorship. Mentors who take time to reflect on personal experiences and note what has helped to inform their career path purposefully awaken a specific level of knowledge within mentees. This knowledge, which cannot be found in a textbook or classroom, is tremendously insightful. It cultivates a sense of humility that is equally helpful for mentees. The sharing of personal stories and experiences helps mentees learn as they navigate through critical decisions along their trajectory. Another key component central to effective mentoring is trust. As such, intentional mentors nurture solid relationships with their mentees, recognizing and valuing the unique qualities everyone brings to the enterprise. This is especially important in the context of the changing landscape of the scientific workforce in general, and specifically the behavioral and biomedical workforce.

It is well established that the United States population is becoming more diverse (Frey, 2018). Moreover, approximately one-quarter of the U.S. public health workforce is projected to retire in the next 10 years (Leider, Coronado, Beck, & Harper, 2018). As such, it is imperative that the behavioral and biomedical research community prepare to mentor a diverse population of public health researchers (United States Census Bureau, 2018). This requires first that there is collective and consistent understanding that achieving diversity in science hinges on cultivating talent and promoting the full inclusion of excellence across the entire population. Significantly, this requires inclusion of people from backgrounds that are traditionally underrepresented in the behavioral and biomedical sciences and those from backgrounds that are traditionally well represented (Gibbs, 2014).

Underrepresentation of certain groups in science, technology, and engineering fields is a critical issue, particularly given that underrepresentation increases throughout the training stages and is accompanied by a wide range of taxing social and institutional stressors (National Science Foundation, 2018; Dancy & Brown, 2011). This is true for students from certain racial and ethnic groups (Blacks or African Americans, Hispanics or Latinx, American Indians or Alaska Natives, Native Hawaiians, and other Pacific Islanders), first-generation students, sexual and gender minority students, students with disabilities, and students with hearing impairments. Among others, students from these groups experience stressors such as impostor syndrome, stereotype threat, and isolation (Steele & Aronson, 1995; Heinrich & Oberleitner, 2012; Dancy & Jean-Marie, 2014), all of which can lead to depression and lack of productivity. Mentors in the behavioral and biomedical fields, therefore, must be equipped with tools enabling them to recognize these stressors and help mentees to be resilient in the development of their professional identity (Clark, Harden, & Johnson, 2000). Herein, a few of these tools will be shared.

Toward Intentional Mentorship

Faculty advisors in the areas of behavioral and biomedical science occupy a critical space where long-term success hinges not only on their abilities to handle the rigors of academic research, but also the extent to which they engage in the broad range of professional development opportunities available to them. Although many of these opportunities often center on advancing technical proficiencies, there are also many that focus on developing soft skills. This is particularly true with respect to mentoring.

The role of faculty advisors in training the next generation of scholars who will comprise the behavioral and biomedical workforce cannot be understated. Advisors provide scientific training, guidance, and instruction in how to conduct research with integrity. In addition, and equally significant, advisors are expected to fulfill the role of mentor (Breslin et al., 2017). Effective mentorship involves a deeper level of engagement with the trainee that includes advising on potential career paths, providing networking opportunities, helping them navigate the research funding landscape, and facilitating professional development opportunities (Rockey, 2014). For the vast majority of faculty advisors, "Mentoring 101" was not an official component of their pre- and/or postdoctoral training experiences. As a result, they, and the institutions at which they work, must be intentional about seeking avenues for growth.

Identify

In the absence of formal training on effective mentorship, where does one begin? First by conducting a self-assessment of skills linked to effective mentoring as a means to identify one's own strengths and weaknesses. There are a number of established instruments and programs in which faculty advisors can take part to acquire baseline insight into their mentoring capabilities. One example of this is the Mentoring Competency Assessment (MCA), a tool designed by researchers at the University of Wisconsin-Madison. This 26-item skills assessment evaluates six key mentoring competencies—maintaining effective communication, aligning expectations, assessing understanding, addressing diversity, fostering independence, and promoting professional development (Fleming et al., 2013). Researchers at the University of Wisconsin-Madison have also generated a mentoring seminar designed to provide an intellectual framework to engage peers in identifying and developing mentorship capabilities (Pfund, Branchaw, & Handelsman, 2015).

An increasing number of academic institutions have recognized effective faculty mentorship as integral to both student and faculty productivity and success and have consequently worked to advance it at a more systemic level. Many institutions support faculty participation in multiday mentorship training workshops that begin with the critical step of helping participants identify key blind spots in how they engage and work with their mentees. Whole curricula across numerous disciplines are available to departments and institutions, providing guidance on where and how to begin instilling foundational principles of effective mentorship (Center for the Improvement of Mentored Experiences in Research, 2018).

Improve

Achieving and sustaining high levels of mentoring success in behavioral and biomedical research is a process. It is incumbent upon mentors to develop their strengths and address weaknesses with the goal of improving their mentoring skills. Resources available for early stage investigators (ESIs) and junior faculty aimed at helping them advance their mentoring skills include, but are not limited to, the National Research Mentoring Network (NRMN; National Research Mentoring Network, 2018) and the American Psychological Association's Centering on Mentoring Task Force

(American Psychological Association, 2018). In addition to highlighting scholarly research about mentoring in general, these resources propose tangible ways to define mentoring, focus on the various stages of mentor–mentee relationships, and address mentoring etiquette. Thus, offering faculty the skills needed to improve upon their mentoring experience and providing a firm platform to which key principles for their own mentor–mentee relationships can be applied.

Mentoring programs contribute to improved faculty morale and higher career satisfaction. Institutions that provide formal mentoring programs for faculty seek to improve the sense of community and faculty retention rates. Since the fall of 2017, the Washington State Board for Community and Technical Colleges has offered the Cross-Institution Faculty of Color Mentorship Program. Upon discovering that the number of full-time faculty of color across the state's college system had remained flat since 2010, this board intentionally sought ways to improve mentorship and support for its faculty (Washington State Board for Community & Technical Colleges, 2018). Additionally, a generalizable model of mentoring excellence has been established for academic nurse educators. The model, "Best Practices in Academic Mentoring: A Model for Excellence," provides a schema that can be used to create programs of mentoring which, in turn, assist faculty members to better navigate the academic environment and more easily transition to new roles and responsibilities (Nick et al., 2012).

Implement

Along the mentorship continuum, there is ample opportunity for mentors to gain the skills that will promote them to become successful "implementors." A plethora of literature from well-known scholars accurately states that having a very capable and inspiring mentor is essential for success. For instance, Dr. Margaret Werner-Washburne from the University of New Mexico recently shared the details of a principle-based program that she developed, which involves facilitating the emotional and personal development of her mentees (Werner-Washburne, 2018). Through a recent evaluation of her principle-based program, it was determined that students from all backgrounds were equipped with tools for resilience and success that not only helped in their professional experiences, but their general life experiences as well. Likewise, the Maternal and Child Health Careers/Research Initiatives for Student Enhancement-Undergraduate Program (MCHC/RISE-UP) at the Kennedy Krieger Institute focuses on inspiring leadership and innovation through multiple mentored experiential public health learning opportunities (Belcher et al., 2015). In MCHC/RISE-UP, individual and small group faculty mentoring sessions guide undergraduate students in the development of personal statements, as well as drive academic planning, professionalism, and critical thinking actions. Following participation, their transformational leadership skills and knowledge in maternal and child health increased. Mentoring and peer support also intensified their motivation to pursue careers in public health.

Beyond individual implementation, it is critical that educational institutions take a systemic approach to support faculty advisors and their mentees. Institutional leadership must lead the way by creating safe spaces and mentoring policies to benefit all, especially those from groups underrepresented in behavioral and biomedical research. The Chief Scientific Workforce Diversity Officer from the National Institutes of Health, Dr. Hannah Valantine, recently announced the launch of an interactive resource to help institutions endorse mentoring relationships that promote inclusion and belonging (National Institutes of Health, 2018). Additionally, authors Vivian Louie and Alicia Wilson-Ahlstrom created a guide to foster lasting change and shape the professional mentoring climate at academic institutions, tailored specifically for decision makers and administrators (Louie & Wilson-Ahlstrom, 2018). Both of these tools aim to help institutions enable junior faculty and ESIs with resources for implementing effective mentorship practices. In addition to providing tangible tools and resources, representatives of institutional leadership should fully explore the provision of meritorious and/or financial incentives for effective mentoring to enhance system-wide sustainability.

Summarizing Thoughts

It is often said that through mentorship you touch the future. Effective mentorship is a component essential to individual success at all levels. It is especially critical in the context of mentoring students from groups underrepresented in the behavioral and biological sciences. With intentional mentorship, the ultimate goal is for mentors to be self-developed enough to implement "brave spaces" within their individualized mentoring practice. According to Arao and Clemens (2013), brave spaces are "learning environments that promote authentic engagement with respect to issues of identity, oppression, power, and privilege." Such environments support the attainment of balance between the mentee's current way of thinking and their ability to explore new ways of thinking. Achieving such balance inherently promotes higher levels of productivity, which is of direct benefit to the student, the mentor, and on a grander scale, the research enterprise as a whole.

There is a spirit of longevity that comes with intentional mentoring. It is both powerful and perpetual. A necessary and fundamental outcome of this process is exponential growth. The mentees themselves will, in turn, mentor others. Intentional mentors catalyze the ability to understand and tap into one's own power, promote awareness of individual strengths and limitations, and clarify personal vision. As the United States continues to compete in the global marketplace, it must be ready to activate and deploy a talented, diverse labor force motivated to continuously deliver innovation on all levels, especially scientific, economic, and social. Thus, it is absolutely critical for mentors to have an astute awareness of the cultural values and stereotypes that prevail among diverse groups, including first-generation students, immigrants, and persons with disabilities. If not acknowledged or understood, these beliefs, attitudes, and practices may weaken a mentee's path to success irrespective of actual academic talent or effort. Mentors are strongly encouraged to take a proactive role in raising such influences to the forefront as they intentionally develop and enhance their own individual mentoring process.

The necessity of intentionality is clear, as an intentional mentoring experience is beneficial and rewarding for both the mentor and mentee. As mentors identify their strengths and weaknesses, improve their cultural competency and interpersonal skills, and implement effective strategies, mentees reap the benefits of their mentor's studied efforts. The implementation of intentional mentoring strategies is not intended to force a "one size fits all" approach toward mentorship; but rather a series of actions that

provides an inviting space for all mentees to discover the joy of navigating their professional path, while simultaneously enabling them to unearth their own creativity and intelligence.

Keywords: mentoring; public health; behavioral and biomedical workforce; diverse groups; training

References

American Psychological Association. (2018). *Centering on mentoring*. Retrieved from http://www.apa.og/education/grad/mentor-task-force .aspx

Arao, B., & Clemens, K. (2013). From safe spaces to brave spaces: A new way to frame dialogue around diversity and social justice. In L. Landreman (Ed.), *The art of effective facilitation: Reflections from social justice educators* (pp. 135–150). Sterling, VA: Stylus Publishing.

Belcher, H. M., Stone, J. D., McFadden, J. A., Hemmingson, T. A., Kreutzer, C., Harris, L. G., . . . Turner-Musa, J. O. (2015). Evaluating maternal and child health and leadership competencies of emerging MCH leaders: The MCHC/RISE-UP experience. *Maternal and Child Health Journal, 19,* 2560–2567. http://dx.doi.org/10.1007/s10995-015-1796-9

Breslin, J., Cameron, P., Coolen, L., Freedman, V., Mathur, A., Schwartz, N., & Yellin, J. (2017). *Compact between biomedical graduate students and their research advisors*. Washington, DC: American Association of Medical Colleges. Retrieved from www.aamc.org/gradcompact

Center for the Improvement of Mentored Experiences in Research (CIMER). (2018). *Complete mentor curricula*. Retrieved from https://www.cimerproject.org/#/completeCurricula

Clark, R. A., Harden, S. L., & Johnson, W. B. (2000). Mentor relationships in clinical psychology doctoral training: Results of a national survey. *Teaching of Psychology, 27,* 262–268. http://dx.doi.org/10.1207/S15328023TOP2704_04

Dancy, T. E., II, & Brown, M. C., II. (2011). The mentoring and induction of educators of color: Addressing the impostor syndrome in academe. *Journal of School Leadership, 21,* 607–634. http://dx.doi.org/10.1177/105268461102100405

Dancy, T. E., II, & Jean-Marie, G. (2014). Faculty of color in higher education: Exploring the intersections of identity, impostorship, and internalized racism. *Mentoring & Tutoring: Partnership in Learning, 22,* 354–372. http://dx.doi.org/10.1080/13611267.2014.945736

Fleming, M., House, S., Hanson, V. S., Yu, L., Garbutt, J., McGee, R., . . . Rubio, D. M. (2013). The Mentoring Competency Assessment: Validation of a new instrument to evaluate skills of research mentors. *Academic Medicine, 88,* 1002–1008. http://dx.doi.org/10.1097/ACM.0b013e318295e298

Frey, W. H. (2018). *Diversity explosion: How new racial demographics are remaking America* (Rev. ed.). Washington, DC: Brookings Institution Press.

Gibbs, K., Jr. (2014, September 10). Diversity in STEM: What it is and why it matters. *Scientific American*. Retrieved from https://blogs.scientificamerican.com/voices/diversity-in-stem-what-it-is-and-why-it-matters/

Heinrich, K. T., & Oberleitner, M. G. (2012). How a faculty group's peer mentoring of each other's scholarship can enhance retention and recruitment. *Journal of Professional Nursing, 28,* 5–12. http://dx.doi.org/10.1016/j.profnurs.2011.06.002

Leider, J. P., Coronado, F., Beck, A. J., & Harper, E. (2018). Reconciling supply and demand for state and local public health staff in an era of retiring baby boomers. *American Journal of Preventive Medicine, 54,* 334–340. http://dx.doi.org/10.1016/j.amepre.2017.10.026

Louie, V., & Wilson-Ahlstrom, A. (2018). *Moving it forward: The power of mentoring, and how universities can confront institutional barriers facing junior researchers of color*. New York, NY: William T. Grant Foundation.

National Institutes of Health. (2018). *NIH scientific workforce diversity toolkit*. Retrieved from https://diversity.nih.gov/sites/coswd/files/images/SWD_Toolkit_Interactive-updated_508.pdf

National Research Mentoring Network (NRMN). (2018). *Welcome to the National Research Monitoring Network*. Retrieved from https://nrmnet.net/

National Science Foundation. (2018). *NCSES publications and data*. Retrieved from https://www.nsf.gov/statistics/showpub.cfm?TopID=2&SubID=27

Nick, J. M., Delahoyde, T. M., Del Prato, D., Mitchell, C., Ortiz, J., Ottley, C., . . . Siktberg, L. (2012). Best practices in academic mentoring: A model for excellence. *Nursing Research and Practice, 2012,* Article ID 937906. http://dx.doi.org/10.1155/2012/937906

Pfund, C., Branchaw, J. L., & Handelsman, J. (2015). *Entering mentoring* (Rev. ed.). New York, NY: Freeman.

Rockey, S. J. (2014). Mentorship matters for the biomedical workforce. *Nature Medicine, 20,* 575. http://dx.doi.org/10.1038/nm0614-575

Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology, 69,* 797–811. http://dx.doi.org/10.1037/0022-3514.69.5.797

United States Census Bureau. (2018). *Older people projected to outnumber children*. Retrieved from https://www.census.gov/newsroom/press-releases/2018/cb18-41-population-projections.html

Washington State Board for Community and Technical Colleges. (2018). *Faculty of Color Cross-Institutional Mentorship Program*. Retrieved from https://www.sbctc.edu/colleges-staff/programs-services/assessment-teaching-learning/faculty-of-color-mentorship/default.aspx

Werner-Washburne, M. (2018). Principles of intentional mentoring. *CBE Life Sciences Education, 17*(3), es8. http://dx.doi.org/10.1187/cbe.18-05-0074