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Authors

Gandhi, Monica
Fernandez, Alicia
Stoff, David M
et al.

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Development and Implementation of a Workshop to Enhance the Effectiveness of Mentors Working with Diverse Mentees in HIV Research

Monica Gandhi,[1] Alicia Fernandez,[1] David M. Stoff,[2] Swathi Narahari,[3] Michael Blank,[4] Jonathan Fuchs,[1,5] Clyde H. Evans,[6] James S. Kahn,[7] and Mallory O. Johnson[1]

Abstract

A growing body of evidence highlights the importance of competent mentoring in academic research in the field of HIV, particularly for early stage investigators from diverse, underrepresented backgrounds. We describe the development and implementation of a 2-day intensive workshop to train mid-level and senior-level investigators conducting HIV-related clinical and translational research across multiple academic institutions on more effective mentoring, with an emphasis on techniques to foster mentees of diversity. The workshop was focused on training mentors in techniques designed to improve the effectiveness of the mentor–mentee relationship, and included didactic presentations, interactive discussions, and small-group problem-based learning activities. Mid-level or senior-level faculty involved or planning to be involved in significant mentorship activities related to HIV research were eligible. Surveys and formal actions plans allowed for workshop evaluation and laid the groundwork for subsequent workshops. Twenty-six faculty from 16 U.S.-based institutions participated, with good representation across discipline, gender, and race/ethnicity. The sessions were highly rated and discussions and evaluations revealed important barriers and facilitators to mentoring, challenges and solutions related to mentoring mentees from diverse backgrounds, and specific tools to enhance mentoring effectiveness. The Mentoring the Mentors training program for HIV researchers focusing on early career investigators of diversity was the first of its kind and was well attended, was rated highly, and provided guidance for improving the program in the future. This training program fills an important gap in the HIV researcher community and offers guidance for training mentors interested in diversity issues in settings outside of HIV.

Introduction

A GROWING BODY OF EMPIRICAL EVIDENCE supports the importance of strong mentorship in the development and success of trainees and early career investigators in academic research settings.[1–5] For example, a recent study found that institutions with strong mentoring programs demonstrated greater research productivity among early career faculty than institutions without such programs.[2] Successful mentoring programs require skilled mentors. Despite a growing understanding that faculty can benefit from training on mentoring,[6,7] there are few formal mentorship training programs for

academic researchers in any field in the United States or elsewhere that offer faculty the opportunity to develop skills and incorporate best practices.

The urgency and benefits of effective mentoring for early career investigators from underrepresented backgrounds seem particularly self-evident.[8–15] Historically, there has been a disproportionately low number of faculty members from racial and ethnic minorities in U.S.-based academic institutions, with retention rates of minority faculty falling at higher levels of academic rank.[16] Moreover, there is evidence that scientists from underrepresented groups experience significantly lower success rates in obtaining funding from

[1]Department of Medicine, University of California, San Francisco (UCSF), San Francisco, California.
[2]Division of AIDS Research, National Institute of Mental Health, National Institute of Health, Bethesda, Maryland.
[3]Scripps College, Claremont, California.
[4]Department of Psychiatry, University of Pennsylvania, Philadelphia, Pennsylvania.
[5]San Francisco Department of Public Health, San Francisco, California.
[6]Academy for Academic Leadership, Boston, Massachusetts.
[7]Department of Medicine, Stanford University, Palo Alto, California.

the National Institutes of Health (NIH),[17,18] despite controlling for possible confounders to this finding. For example, African American investigators were 10% less likely to be awarded NIH research funding than white investigators even when controlling for educational background, country of origin, training, previous research awards, publication record, and employer/university characteristics.[18] These data launched an NIH initiative to increase diversity in the biomedical research workforce[19] and underscore the need to train mentors to employ tailored and effective mentoring approaches that take into account the background, strengths, and needs of each individual to help enhance the chances of academic success.

Potential barriers to NIH-funding success rates and academic progress of racial/ethnic minorities have been identified and include inadequate research training and development, personal barriers to research development, inadequate mentoring, institutional biases, and insufficient support of research topics or methods relevant to studying minority populations.[17] A sophisticated analysis involving concept mapping identified deficient mentoring as the third most likely impairment to racial/ethnic minorities seeking and successfully competing for NIH research funding.[17] As there is good evidence that trained mentors, as opposed to untrained mentors, are more likely to consider issues of diversity and work more effectively with their mentees,[7] inadequate mentoring may be a ''modifiable risk factor'' in the disparate patterns of academic progress observed for racial/ethnic minorities. Robust mentorship training programs geared specifically toward training mentors in the skills and practices that cultivate effective mentoring relationships with diverse early stage investigators could improve biomedical workforce diversity.

There is a dearth of empirical data on the relative efficacy of mentor training methods. While graduate and health profession programs often provide some content related to overall teaching skills, most graduates are expected to eventually perform mentoring activities without any formal training in the area. Often, these mentors perform the role ad hoc or may mimic (intentionally or not) mentors they have interacted with in their own careers; the results are naturally mixed in terms of effectiveness and mentee-reported satisfaction with the mentoring relationship.[14,20,21] Some programs designed to systematically provide training in mentoring that are theory based and reinforce standard approaches that can be tailored to individual needs have been highly effective.[7,22] However, no training programs to date are specifically centered on fostering investigators from diverse backgrounds, despite a call from the public health perspective for such trainings,[9] especially in HIV research settings.[14,23] Furthermore, the evaluation of mentor training programs that do exist is limited mainly to pre- and post-surveys; randomized or longitudinal studies focused on mentee outcomes have not been conducted.

The field of HIV/AIDS research is one in which mentoring may be particularly critical to the success of the next generation of clinical and translational researchers. HIV infection has transformed from a devastating terminal diagnosis to a chronic condition that can be well-managed with effective lifelong antiretroviral treatment. At present, despite significant advances in the field of treatment, there are remaining challenges to testing, linkage and retention into care, and antiretroviral adherence,[24] all of which require multidisciplinary research collaborations to address. In addition, further research is needed to elucidate the basic mechanisms of HIV infection while the race toward an HIV vaccine and a possible cure continues. The urgency in maintaining and advancing the momentum achieved in HIV-related clinical and translational research mandates a focus on the mentoring needs of early career HIV investigators entering the field, a process that will require effective mentoring training to achieve optimal results. Many have called for greater diversity among HIV-focused researchers, clinicians, and leaders given the diversity of the population infected by HIV.[14,23] Therefore, the particular significance of mentoring investigators from minority groups in HIV/AIDS research, given the diversity of infected and affected patient populations, is of paramount importance.

The purpose of this article is to describe our development and implementation of a 2-day intensive workshop to train mid-level and senior-level investigators conducting HIV-related clinical and translational research across multiple academic institutions in the United States to be more effective mentors. A primary theme that ran throughout the curriculum was an emphasis on working with mentees from diverse backgrounds typically underrepresented in academic research. The development, implementation, and survey results of the program are described, along with plans to hold an annual mentoring training workshop for HIV researchers to enhance mentoring skills and the eventual enrollment of a cohort of HIV mentors that will yield longitudinal evaluation data, including mentee outcomes. Our *Mentoring the Mentors* training program for HIV researchers focusing on early career investigators of diversity is the first of its kind described in the literature and holds promise for expanding the pool of expert and peer mentors well trained to provide robust academic mentorship in the field of HIV research.

Materials and Methods

Background of the program

The current Mentoring the Mentors (MTM) initiative was born out of a call for the development of mentoring networks funded through the National Institute of Mental Health (NIMH). The MTM program was paired with an academic skill-building program for early career investigators from diverse backgrounds to synergistically bolster the entrance and retention of underrepresented minorities into HIV research. Further impetus of the MTM program at University of California, San Francisco (UCSF) stemmed from strong mentoring initiatives and mentoring the mentor programs already being conducted at UCSF through other NIH-funded initiatives.[6,25–27]

The UCSF Center for AIDS Research (CFAR) had established a strong mentoring program in the years prior to the development of this initiative that had already launched initiatives to mentor early career investigators in HIV research[27] and provide mentoring training programs for UCSF-based HIV researchers.[26] Moreover, the UCSF-based Clinical and Translational Science Institute (CTSI) launched a robust Mentor Development Program (MDP) in 2006[25] where faculty are intensively trained over a year in mentorship techniques and provided with tools to enhance mentee success. This program helped define a set of core competencies for

mentors in clinical and translational research[28] and a recent evaluation of the program demonstrated a sustained impact on mentoring skills, techniques, and focus.[6] These two programs at UCSF represent the main mentoring training programs at our institution and have been generally synergistic, with the HIV-focused program drawing on materials and expertise from the more established CTSI-sponsored MDP, while maintaining a focus on diversity. This article will focus on the first annual MTM workshop for mentors interested in mentoring early career investigators of diversity held at UCSF in September 2012.

Focus of the program

Our program was designed for mid-level faculty across multiple academic institutions who are responsible for (or soon to be responsible for) mentoring scholars with interests in mental health HIV-related research and other social and behavioral aspects of HIV prevention and treatment. There was an overarching theme of identifying and addressing mentoring challenges that may emerge when mentoring scholars from underrepresented backgrounds. The mentoring workshop was focused on training mentors in techniques designed to improve the effectiveness of mentor–mentee relationships.

Format of the program

Our 2-day workshop included didactic presentations, interactive discussions, and small-group problem-based learning activities. Table 1 includes an outline and description of the agenda, along with a footnote listing the 16 U.S.-based academic institutions where the workshop participants are based. In general, the theme of day 1 was around the concept of diversity and providing a summary of potential barriers and solutions to addressing academic success rates among racial/ethnic minorities, including insufficient or poor-quality mentoring. The second day was focused on highlighting successful mentoring programs in HIV research from around the country as an impetus for individual participants at the meeting to help design similar programs at their institutions.

We invited speakers to discuss key elements of the curriculum, including a keynote address on mentoring for diversity and descriptions of successful mentoring programs. Local experts were called upon to lead sessions on approaches to mentoring, tools for mentoring that could be downloaded from publicly accessible sites, and interactive discussions of high-profile reports related to diversity in academia. For example, the presentations of tools for mentoring by the UCSF CTSI group included examples of Individual Development Plans (IDPs) and team approaches to mentoring (Mentoring Development Program materials). Further highlighted was the use of rich databases to support the work of mentees interested in HIV-related research, such as the CFAR Network of Integrated Clinical Systems (CNICS)[29] or NIH-funded HIV-related clinical trial networks.

A Mentor Consultation Clinic was performed in small groups with a strict structure in which one person presented a mentoring challenge (2–3 min), followed by an information-gathering/question period from the group (5 min), ultimately leading to recommendations from the group for addressing the challenge (5 min). At the end of each day, participants completed a Mentor Action Plan (MAP), which anonymously solicited their self-reported individual strengths and areas of improvements as a mentor, learning points from that day's activities, and action plans for implementing material covered in the MTM workshop in their individual mentoring activities.

Call for participants

Our workshop was advertised through several networks of scientists, including those affiliated with the NIH-funded CFARs around the country and the related Social and Behavioral Science Research Network (SBSRN). Further dissemination of invitations for interested HIV researcher mentors was enacted through the Office of HIV/AIDS Network Coordination (HANC) funded by the Division of AIDS (DAIDS) at the NIH. Given the desire to host an intensive and intimate meeting that promoted sharing of ideas and experiences, registration was capped at 25–30 mid-level or senior-level faculty involved or planning to be involved in significant mentorship activities.

Results

Participant composition

Eventually, 26 faculty from 16 U.S.-based institutions were accepted into the program and attended our 2-day workshop. While the program did not collect systematic demographic data on participants during this first workshop, there was good representation across gender (14 men, 12 women), discipline (medicine, social and behavioral sciences, epidemiology, nursing), geography (Table 1 footnote), race, and ethnicity. Specifically, 7 out of 26 faculty participants in the program were either African American or of Latino descent.

Program evaluation

At the end of each day of the 2-day workshop, participants completed confidential evaluations of the activities for that day. Each activity was rated along the following three dimensions: (1) whether it was of value, (2) whether it would likely have a positive impact on the participant's mentoring practices, and (3) whether the activity should be repeated. Using a Likert scale from 1 to 5 with 5 being strongly agree, all activities were rated favorably, with mean scores between 4.1 and 4.7 for each activity along the three rating dimensions. In general, there was a trend for more favorable ratings for those activities that involved interactive discussions or provided specific mentoring tools and resources that the participants could immediately incorporate into their mentoring practices. For example, one participant described the Personal Stories of Diversity and Mentoring discussion as the "best part of the day," adding a wish that there had been more time for additional interactive discussion sections. Another participant offered that "it was great to learn about online resources that can be used to strengthen mentoring and engage other mentors." Of note, the seven faculty participants from underrepresented minority groups all rated the program highly, with a mean score of 4.8 for each activity, and were extremely enthusiastic in their comments with one minority faculty noting, "I am always the 'token' mentor for minority mentees at my institution and this program gave me the tools to manage and refine that great responsibility."

TABLE 1. AGENDA OF 2-DAY INTERACTIVE MENTORING THE MENTORS WORKSHOP

	Day 1
8:15–9:00 am	**Welcome and Introductions**
9:00–10:15 am	**Keynote Address:** Mentoring the Next Generation of Diverse HIV Investigators: *Déjà Vu* All Over Again or Brave New World?
10:15–10:30 am	**Break**
10:30–12:00 pm	**Mentoring Perspectives Panel Discussion:** Discussion of mentoring benefits and challenges by senior established mentors
12:00–12:45 pm	**Lunch**
12:45–1:30 pm	**Presentation and audience discussion of journal articles on diversity in academic research.** • Ginther DK *et al.*, Race, Ethnicity, and NIH research awards, Science 2011 • Pololi LH *et al.*, Why Are a Quarter of Faculty Considering Leaving Academic Medicine? A study of their perceptions of institutional culture and intentions to leave at 26 representative U.S. medical Schools. Acad Med 2012
1:30–3:00 pm	**Personal stories of diversity and mentoring:** Audience discussion of (1) personal stories of challenges faced as either a mentee or a mentor, with specific relevance to diversity and (2) prepared case studies • Case studies on diversity
3:00–3:15 pm	**Break**
3:15–4:00 pm	**Introduction to resources and tools of mentoring:** Discussion and demonstration of web-based, publicly available mentoring tools, materials, and lectures developed by the UCSF CTSI including a discussion of the individual development plan • Mentoring Development Program materials
4:00–5:00 pm	**Audience goal discussion:** Participants filled out survey of their mentoring goals, what they hope to change about their mentoring as a result of this conference, lessons from today
	Day 2
8:30–9:00 am	**Introduction and Overview of Day 2:** Summary of Action Plans from Day 1
9:00–10:00 am	**Presentation by NIH program officer:** Mentoring in HIV Mental Health Research for Diverse Early Career Investigators and Funding Opportunities
10:00–10:45 am	**Introduction to the Social and Behavioral Sciences Research Network (SBSRN) of the Center for AIDS Research (CFAR) National Programs, a Focus on Mentoring**
10:45–11:00 am	**Break**
11:00 am–12:00 pm	**The CFAR Network of Integrated Clinical Systems (CNICS) Platform as a Research Tool and Mentoring Opportunities within CNICS**
12:00–1:00 pm	**Lunch**
1:00–2:00 pm	**Use of internet resources as a mentoring/mentee networking tool**
2:00–3:00 pm	**Mentoring Program Demonstration Projects and Panel Discussion.** **Speakers provided overviews of model mentoring programs in HIV research** • HIV Prevention Trials Network (HPTN) Minority Scholars Program • Mentoring Minority Undergraduates and Medical Students in HIV Behavioral Research: the SHARP and RAMP Scholar Initiatives • Mentoring Early Career Investigators in Health Disparities
3:15–4:15 pm	**Mentoring Consultation Clinic** Participants split into 4–5 person focus groups for a discussion of barriers and solutions to mentoring early career investigators of diversity at their own institutions
4:15–5:00 pm	**Action points and summary:** Audience discussion of goals revisited, what do we take back to our institutions, generation of a report, future plans and reconvening for the second annual MTM workshop in October 2013

Sixteen U.S.-based institutions represented at the September 2012 MTM workshop: University of Pennsylvania; University of California, San Diego; Albert Einstein University; University of California, San Francisco; University of Alabama at Birmingham; University of North Carolina; Cook County Hospital, Chicago; San Francisco Department of Public Health; University of Massachusetts, Boston; University of Illinois at Chicago; Stanford University; University of Texas Health Sciences Center at Houston; George Washington University; University of Washington, Seattle; NIH Division of AIDS Research; and Loyola University Chicago.

Mentor action plans (MAPS)

Copies of the Mentor Action Plans (MAPs) were retained for qualitative analysis. Twenty-two participants completed MAPs for day 1 and 15 completed MAPs for day 2 (of note, several participants had to leave early for travel-related reasons). Members of the project team conducted thematic analysis of the MAPs, and these results are summarized in Table 2 and described below.

Barriers to mentoring

Specific to issues of diversity. Participants identified a number of potential barriers to effective mentoring at their institutions, especially for diverse early stage investigators (ESI). In terms of the theme explored in the diversity keynote and ensuing discussions around the many ''microinsults'' or ''microaggressions''[30] experienced by early career investigators of diversity, the phrase ''a ton of feathers'' (which can enact substantial damage, even though each individual feather is insubstantial enough to go unnoticed) emerged as an appropriate metaphor. In general, microaggressions are brief, subtle, everyday exchanges that send denigrating messages to a person perceived to belong to a particular group defined by race/ethnicity, gender, sexual orientation, etc. Like a ''ton of feathers,'' a lifetime of microaggressions can erode spirit and sap energy of the victim, even if the perpetrators are completely unaware of the impact of their verbal or nonverbal behavior.[31] These negative messages can erode a person's sense of belongingness, self-perceptions of intelligence or creativity, reinforce stereotypes, or denigrate values. These missives are often unconsciously delivered and glossed over as innocuous—''invisible'' to everyone except the person on the receiving end. Recipients are often left confused, angry, or hurt, but with little hard evidence that an offense has occurred. The psychological impact is corrosive, blocking one's access to his or her innate abilities, resulting in impaired performance.

The discussion during the MTM workshop stressed that having an appreciation for the microaggression phenomenon and cultivating a capacity for dealing with it are of paramount importance for diverse early-career investigators and their mentors. This concept was visited several times by participants through each day of the program, who used it to describe personal experiences or experiences recounted by mentees. Unconscious bias was also discussed, particularly in reference to promotions, awards, and other markers of favor in the academic environment.

Independent of issues of diversity. Barriers identified for effective mentoring by various faculty independent of issues of ESI diversity were a lack of an institutional mentoring culture, institutional failure to acknowledge or ''give credit'' for mentoring activities in the promotions process, a general lack of time or time management strategies to balance mentoring with other academic pursuits, and a lack of support for mentoring challenges. Other barriers identified were the lack of an organized structure of mentoring relationships (including frequency of meetings, documentation of expectations, goal monitoring), unclear expectations of a mentor–mentee relationship, lack of comfort with difficult conversations, and a lack of training on how to provide feedback. Some cited a lack of institutional structure to the mentoring process as a barrier to effective mentoring, with mentor–mentee rela-

tionships being created in an ad hoc manner without institutional oversight or attention to balancing the number of mentees per mentor.

Solutions

Specific to issues of diversity. A variety of solutions were proposed by participants to mitigate the diversity-associated challenges identified for ESIs from underrepresented groups that may pose barriers to academic progress. Specific and focused training on increasing awareness of issues faced by mentees from diverse backgrounds, as provided by this workshop, was cited as a solution that should be disseminated more widely throughout the HIV researcher community. Issues of support for minority faculty, support/recognition for mentorship, and the need for structured mentoring programs were all discussed.

Independent of issues of diversity. A variety of solutions were proposed to improve the effectiveness of the mentor–mentee relationship more generally, including the implementation of a formalized structure of the mentoring process as developed by the UCSF CTSI. Faculty participants stated that they planned to establish a regular meeting schedule with their mentees and implement IDPs to be filled out at least annually by mentees to identify expectations and goals, as well as monitor progress and troubleshoot impasses. As provided in the workshop materials, faculty planned to infuse their mentor–mentee relationships with greater clarity in delineating expectations, including establishment of meeting agendas and follow-up procedures following regular meetings. Many faculty planned to approach their Division Chiefs, Department Chairs, or Deans to suggest mentoring training programs such as this workshop at their institutions and to aid in the establishment of a greater culture of mentoring, including funding of mentoring efforts and adding mentoring to the criteria for academic rank promotion. Participants all cited a need for more formalized mentoring workshops such as this one and suggested topics such as time management and how to support time and priority management for mentees, conflict resolution techniques, how to provide and receive feedback, self-awareness, work-life balance, and emotional intelligence. As discussed below, these ideas were incorporated into the structure of the second annual ''Mentoring the Mentors'' workshop for HIV researchers held October 7–8, 2013 at UCSF http://cfar.ucsf.edu/cfar?page=education-mentoring-mentors-2013.

Discussion

This article describes a robust Mentoring the Mentors workshop designed to train mid-level and senior faculty in HIV research across the United States on techniques and tools to improve mentoring practices for early career investigators from underrepresented groups. This workshop and the establishment of an annual MTM workshop for this purpose fills a gap in the HIV research community to establish best practices in mentoring the next generation of diverse ESIs, a particularly urgent need for a disease state disproportionally affecting diverse communities.

We identified a number of barriers through our evaluations and action plans to effective mentoring; issues specific to mentoring diverse investigators and those independent of mentee diversity were identified. The most consistent

TABLE 2. MENTOR ACTION PLAN THEMES

Strengths as a mentor	*Areas for improvement*	*Learning points and action plans*
Interpersonal Attributes Good listening skills Patient, compassionate, generous, supportive style Open-minded, nonjudgmental Caring, passionate, and advocate for mentees	**Communication** Unclear expectations Lack of comfort with difficult conversations Not consistent with clear, constructive feedback	**Structured Mentoring** Establish criteria for selecting mentees Use available tools (e.g., IDPs) Improve follow-up from meetings Identify each mentee's needs and expectations Monitor and document progress Consistent, standing mentoring meetings Monitor health of each mentoring relationship
Skills, Knowledge, and Resources Good at settings goals and expectations Content expertise Available time and resources for mentoring Strong mentoring and research experience Strong networks and collaborations Grant-writing and reviewing experience Available data/opportunities for authorship Awareness of available resources and collaborators Experience with issues of diversity	**Organization** Unstructured mentoring (e.g., frequency of meetings) Not good at setting and monitoring goals, timelines, productivity Lack of timeliness of feedback to mentees	**Networking** Establish networks of mentors Explore/implement team mentoring
	Setting Limits/Boundaries No deliberate selection of mentees Lack of emotional balance/distance in mentoring Poor balance of time mentoring and other responsibilities Failure to limit number of mentees Difficult to balance patience with accountability ("tough love")	**Institutional/Structural Challenges** Acknowledge institutional challenges Develop mentoring seminar Structured approach to training mentors Identify and access resources to support/ fund mentors and mentees (internal and external) Encourage home institution to take a formal approach to support/fund mentoring
	Diversity-Related Issues Limited awareness of unconscious bias Poor facility in discussing diversity-related issues (e.g., microinsults, discrimination) Limited diversity among mentees	**Diversity-Related Issues** Continue to increase awareness of issues faced by mentees from diverse backgrounds Increase awareness and mitigate microinsults experienced by underrepresented mentees

solution proposed to effective mentoring was the establishment and replication of mentoring programs such as this one, dissemination of these training materials, and the formalization and recognition of the mentoring process within academic institutions.

Lessons learned, limitations, and future directions

Although we used a standard program evaluation tool, in future implementations of this Mentor the Mentors Program, it would be beneficial to have a more robust, mentoring-specific evaluation of changes in mentoring confidence, skills, and effectiveness. In recent years, there has been substantial progress in the measurement of such constructs. For example, the Mentoring Competency Assessment is a newly developed, reliable, and valid instrument that measures competencies along six dimensions: communication, aligning expectations, assessing understanding, fostering independence, promoting professional development, and addressing diversity.[17] Likewise, it will be important to document other relevant outcomes of the program, which may include adoption and consistent use of mentoring tools presented in the training, number of individuals mentored by participants in the program, number and success rates of mentees' funding applications, seeding of participants' home institutions with mentor training programs inspired by the MTM program, incorporation of mentoring as a criterion for academic promotion, and long-term engagement and satisfaction with research mentoring.

The evaluation data provided in the first meeting provided direction for modifying the program in future iterations. For example, participants indicated an interest in more time for discussion and interaction with each other. It is likely that this desire reflects a lack of opportunity to share mentoring experiences and obtain input from others on mentoring challenges. This is consistent with prior work that has identified that mentors may perceive themselves as working in isolation without the opportunity for interaction with and support from other mentors.[1] Participants also gave high ratings to those activities that focused on specific, immediately employable tools for mentoring, such as the use of IDPs. Thus, future renditions of the program should aim to balance interactive sessions that allow for discussion of mentoring perspectives with the practical provision of mentoring tools. Finally, there was high interest and engagement in the topic of diversity and barriers for diverse ESIs in the mentoring relationship, which indicates that such a focus is lacking in other mentoring support resources. Continuing a focus on identifying and addressing diversity-related aspects of the mentor–mentee relationship in future programs is warranted.

One limitation to this analysis is that it is primarily descriptive and cross-sectional; data on longitudinal outcomes on mentoring style changes and success of mentees were not collected. Pending the availability of funding, the investigators plan to design a robust longitudinal mentoring program for HIV researchers with prospective evaluation and monitoring of mentor and mentee outcomes to address this gap in the mentoring literature.

Of note, this mentoring program and most other mentoring initiatives at UCSF have generally been NIH sponsored through a variety of grant mechanisms. These include the R24 funding mechanism (through which NIMH funded this particular program); the R25 research education grants, which allow for the development of specialized training and research education programs relevant to mentoring; the institutional K12 awards (including the CTSI-sponsored K12 "Roadmap" Multidisciplinary Clinical Research Scholar Program); and a variety of T32 training grants.[10] Despite current budget constraints, the NIH recently issued a new round of funding opportunity announcements (FOAs) aimed at enhancing diversity in the U.S. health research workforce with a strong emphasis on mentorship programs. The new FOAs established three new programs and initiatives: (1) The Coordination and Evaluation Center for the NIH Enhancing the Diversity of the NIH-Funded Workforce Program (RFA-RM-13-015) will coordinate, oversee, and evaluate the activities of all the new initiatives; (2) the NIH Building Infrastructure Leading to Diversity (BUILD) initiative (RFA-RM-13-016) is designed to engage undergraduate students in research through innovative training and mentorship programs and strategies; and (3) the NIH National Research Mentoring Network (RFA-RM-13-017) is a nationwide consortium to enhance training and career development at all levels for individuals from diverse backgrounds.

Despite these new NIH initiatives, a recent systematic review of mentoring programs for underrepresented minority faculty in academic medical centers showed that programs sustainability is increasingly threatened by the fact that programs are typically supported via external funds, with minimal institutional support.[32] As the NIH budget tightens, the application of institutional funds to develop and maintain mentoring programs, especially those relevant to minority early career faculty, is critical.

Conclusions

As the HIV epidemic continues to evolve, the pipeline of talented scientists addressing key scientific questions must be nurtured. To do so, resources, support, and training must be directed to those best positioned to mentor them. The first *Mentoring the Mentors* training program for HIV researchers focusing on early career investigators of diversity was well attended, highly rated, and generated fruitful feedback for refining and extending the scope of future implementation of the program. The first workshop launched the second workshop in October 2013 at UCSF where more robust evaluation tools employed in a longitudinal manner were utilized; the mentoring training program will be held annually every fall. This novel mentoring program fills an important gap in the HIV researcher community and should be adapted to other research communities to engage and maintain ESIs of diversity within the academic enterprise.

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References

1. Straus SE, Johnson MO, Marquez C, and Feldman MD: Characteristics of successful and failed mentoring relationships: A qualitative study across two academic health centers. Acad Med 2013;88(1):82–89.
2. Cohen JG, Sherman AE, Kiet TK, et al.: Characteristics of success in mentoring and research productivity—a case-control study of academic centers. Gynecol Oncol 2012; 125(1):8–13.
3. Stamm M and Buddeberg-Fischer B: The impact of mentoring during postgraduate training on doctors' career success. Med Educ 2011;45(5):488–496.
4. Hoover EL: Mentoring women in academic surgery: Overcoming institutional barriers to success. J Natl Med Assoc 2006;98(9):1542–1545.
5. 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.
6. Feldman MD, Steinauer JE, Khalili M, et al.: A mentor development program for clinical translational science faculty leads to sustained, improved confidence in mentoring skills. Clin Transl Sci 2012;5(4):362–367.
7. Pfund C, Maidl Pribbenow C, Branchaw J, Miller Lauffer S, and Handelsman J: Professional skills. The merits of training mentors. Science 2006;311(5760):473–474.
8. Mkandawire-Valhmu L, Kako PM, and Stevens PE: Mentoring women faculty of color in nursing academia: Creating an environment that supports scholarly growth and retention. Nurs Outlook 2010;58(3):135–141.
9. Jeste DV, Twamley EW, Cardenas V, Lebowitz B, and Reynolds CF, 3rd: A call for training the trainers: Focus on mentoring to enhance diversity in mental health research. Am J Public Health 2009;99(Suppl 1):S31–37.
10. Forsyth AD and Stoff DM: Key issues in mentoring in HIV prevention and mental health for new investigators from underrepresented racial/ethnic groups. Am J Public Health 2009;99(Suppl 1):S87–91.
11. Brown AJ, Seils DM, and Thompson PM: Access and diversity in academic mentoring. JAMA 2007;298(7):739; author reply 739.
12. Kosoko-Lasaki O, Sonnino RE, and Voytko ML: Mentoring for women and underrepresented minority faculty and students: Experience at two institutions of higher education. J Natl Med Assoc 2006;98(9):1449–1459.
13. Lewellen-Williams C, Johnson VA, Deloney LA, Thomas BR, Goyol A, and Henry-Tillman R: The POD: A new model for mentoring underrepresented minority faculty. Acad Med 2006;81(3):275–279.
14. Ambrose L: Mentoring diversity. Serving a diverse patient population calls for diverse leadership. Healthc Exec 2003; 18(5):60–61.
15. Thomas DA: The truth about mentoring minorities. Race matters. Harv Bus Rev 2001;79(4):98–107, 168.
16. Koenig R: U.S. higher education. Minority retention rates in science are sore spot for most universities. Science 2009;324(5933):1386–1387.
17. Fleming M, House S, Hanson VS, et al.: The Mentoring Competency Assessment: Validation of a new instrument to evaluate skills of research mentors. Acad Med 2013;88(7): 1002–1008.
18. Ginther DK, Schaffer WT, Schnell J, et al.: Race, ethnicity, and NIH research awards. Science 2011;333(6045):1015–1019.
19. NIH: Working Group on Diversity in the Biomedical Research Workforce, http://acd.od.nih.gov/dbr.htm.
20. Lee JM, Anzai Y, and Langlotz CP: Mentoring the mentors: Aligning mentor and mentee expectations. Acad Radiol 2006;13(5):556–561.
21. Huskins WC, Silet K, Weber-Main AM, et al.: Identifying and aligning expectations in a mentoring relationship. Clin Transl Sci 2011;4(6):439–447.
22. Pfund C, House S, Spencer K, et al.: A research mentor training curriculum for clinical and translational researchers. Clin Transl Sci 2013;6(1):26–33.
23. Gaston GB: African-Americans' perceptions of health care provider cultural competence that promote HIV medical self-care and antiretroviral medication adherence. AIDS Care 2013;25(9):1159–1165.
24. Vital signs: HIV prevention through care and treatment—United States. MMWR Morb Mortal Wkly Rep 2011; 60(47):1618–1623.
25. Johnson MO, Subak LL, Brown JS, Lee KA, and Feldman MD: An innovative program to train health sciences researchers to be effective clinical and translational research mentors. Acad Med 2010;85(3):484–489.
26. Kahn J, Des Jarlais CD, Dobkin L, Barrs SF, and Greenblatt RM: Mentoring the next generation of HIV prevention researchers: A model mentoring program at the University of California San Francisco and Gladstone Institute of Immunology and Virology Center for AIDS research. J Acquir Immune Defic Syndr 2008;47(Suppl 1):S5–9.
27. Kahn JS and Greenblatt RM: Mentoring early-career scientists for HIV research careers. Am J Public Health 2009;99(Suppl 1):S37–42.
28. Abedin Z, Biskup E, Silet K, et al.: Deriving competencies for mentors of clinical and translational scholars. Clin Transl Sci 2012;5(3):273–280.
29. Kitahata MM, Rodriguez B, Haubrich R, et al.: Cohort profile: The Centers for AIDS Research Network of Integrated Clinical Systems. Int J Epidemiol 2008;37(5):948–955.
30. Sue DW, Capodilupo CM, Torino GC, et al.: Racial microaggressions in everyday life: Implications for clinical practice. Am Psychol 2007;62(4):271–286.
31. Caplan PJ: Lifting a Ton of Feathers: A Woman's Guide to Surviving in the Academic World, 2nd rev. ed. University of Toronto Press, Toronto, 1993.
32. Beech BM, Calles-Escandon J, Hairston KG, Langdon SE, Latham-Sadler BA, and Bell RA: Mentoring programs for underrepresented minority faculty in academic medical centers: A systematic review of the literature. Acad Med 2013;88(4):541–549.

Address correspondence to:
Monica Gandhi
Department of Medicine
University of California, San Francisco
995 Potrero Avenue, 4th Floor
San Francisco, California 94110

E-mail: monica.gandhi@ucsf.edu