A Virtual Pilot of a Multispecialty Group Mentoring Program for Underrepresented in Medicine (URiM) Trainees and Faculty

Jenny Ruiz ^(D) University of Pittsburgh School of Medicine, UMPC Children's Hospital of Pittsburgh; Natali Baner ^(D) Perelman School of Medicine at the University of Pennsylvania, Children's Hospital of Philadelphia; Hannah L. Anderson ^(D) Children's Hospital of Philadelphia; Madeline Chadehumbe ^(D) Endurabilities Healthcare; Nahla Khalek ^(D) Perelman School of Medicine at the University of Pennsylvania, Children's Hospital of Philadelphia.

Corresponding Author

Jenny Ruiz, ruizj2@upmc.edu Pediatrics, University of Pittsburgh School of Medicine Division of Hematology-Oncology, Children's Hospital of Pittsburgh https://orcid.org/0000-0001-5319-3852

ABSTRACT

Background: Underrepresented in medicine (URiM) trainees and faculty often face limited mentorship and an increased sense of isolation in academic medicine. The objective of this pilot study was to determine if transitioning the Mentoring in Inclusion and Diversity program, a group mentoring model for URiM physicians spanning career levels and specialties, from an in-person to a virtual format during the COVID-19 pandemic was feasible and acceptable.

Methods: MIND involves mentoring within multispecialty "families" composed of URiM medical students, residents, fellows, and faculty. A series of workshops comprises the formal program, which in 2020, transitioned to a virtual format. We applied the Context, Input, Process and Product (CIPP) evaluation model for continuous improvement of workshops. Through surveys, we elicited participants' perceptions of engagement and helpfulness for each workshop, general feedback, and suggestions for improvement. Survey responses were analyzed descriptively, and open-ended comments were content-analyzed.

Results: For the 2020-2021 academic year, the authors grouped 111 participants across 10 families and organized 6 virtual workshops on the following topics: How to be a Mentor, Meeting your MIND Family, Imposter Syndrome, Microaggressions, two Career Mentor Spotlights, and a book club. The CIPP model facilitated iterative improvements. Participants viewed workshops, on average, as being helpful (87%) and engaging (88%). Participants reported enjoyment of small groups, connecting with other URiM physicians, and desire for increased time for family discussions. *Conclusions*: The MIND group mentoring model was feasible and acceptable in a virtual format.

Keywords: Mentoring, Under-represented in medicine, Diversity and Inclusion

1. Background

The lack of diversity at all levels in academic medicine is a well-documented problem: Hispanic physicians represent less than 7% of the physician workforce¹ and African American/Black physicians represent less than 6% of the physician workforce, despite their respective populations in the United States being 19% and 13%.² The American Association of Medical Colleges (AAMC) defines underrepresented in medicine (URiM) as "those racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population.³" URiM trainees and faculty face unique challenges. As early as medical school orientation, students report tension between stated and perceived institutional values of diversity.⁴ Trainees report facing microaggressions and bias in the workplace.⁵ URiM faculty report workplace discrimination,⁶ inadequate mentorship and a decreased sense of belonging,⁷ an experience exacerbated by the COVID-19 pandemic.⁸ Although these challenges require systemic changes, mentorship programs for URiM individuals could mitigate some of these issues.⁹

Mentoring programs do exist in some institutions, but these typically use a dyad model (pairing of a mentor and mentee), often with mentors who are not URiM.¹⁰ There is some evidence to suggest that group mentoring models may be more beneficial than dyad models. In one study, medical students reported group mentoring models fostered more effective mentor-mentee relationships compared to dyad models.¹¹ Moreover, programs commonly target a specific training level and/or specialty or area of focus, or they focus on the near-peer mentorship experience as mentors.¹² Few examples exist¹³ of mentoring programs led by and for URiM physicians that involve a group model of mentoring participants at all levels of training from medical students to faculty. We found no examples in the literature of this type of model across multiple specialties. The lack of group models of mentorship for URiM physicians across career levels constrains the ability of academic spaces to foster belonging and inclusion for this group.

The University of Pennsylvania Health System (UPHS) and Children's Hospital of Philadelphia (CHOP) Alliance of Minority Physicians (AMP) adopted a group mentoring model for their Mentoring Families program in 2012. The overarching mission of Mentoring Families is to connect URiM medical students, residents, fellows, and faculty across a variety of adult and pediatric medical and surgical specialties and facilitate mentoring relationships with peers, near-peers, and more senior mentors. In March 2020, with the onset of the COVID-19 pandemic and the cancelation of inperson events, we were inspired to think creatively about sustaining community for URiM trainees and faculty and avoid exacerbating isolation. The objective of this pilot study was to determine if transitioning the in-person mentoring program to a virtual platform using Zoom (Zoom Video Communications, Inc., San Jose, California) was feasible and acceptable. We briefly describe the recent in-person program before the transition to a virtual format and report on feedback from participants and key stakeholders obtained by applying the Concept, Input, Process, Product (CIPP) evaluation model¹⁴ and lessons learned.

2. Methods

Setting and Participants

During the summer welcome reception hosted by AMP, invitations to the Mentoring Families program were extended to new and current self-identified URiM medical students, trainees, and faculty from UPHS, CHOP and the Perelman School of Medicine at the University of Pennsylvania. In 2020, the program was rebranded as the Mentoring in Inclusion and Diversity program. Participation was voluntary, and invitees could express interest in joining a MIND mentoring family at the AMP welcome reception or online through the reception invitation email. Invitations were also emailed to URiM trainees and faculty included in the AMP listserv and to medical students in the Latino Medical Student Association and the Student National Medical Association.

Upon receiving the invitations, participants who were interested in joining were instructed to complete a detailed REDCap sign-up survey via an attached link, which included questions about medical school, current specialty, hobbies, the person's path to medicine, previous experience with other mentoring programs, desired topics/content of the program, and scheduling preferences. Sign-up survey responses were used to thoughtfully assign members into mentoring "families" based on common interests, consistent with the Goodness of Fit model¹⁵ which posits that the quality of mentorship relationship is a function of the goodness of fit between mentors and mentees on preferences, incentives, and valuations. Additionally, we preserved existing relationships such as the medical school's URiM "buddy system" (pairing first-year students with more senior students) by placing these students in the same family. MIND mentoring families consisted of 10-12 members with an intentionally balanced selection of URiM attending physicians, fellows, residents, and medical students combined with representation from diverse specialties in each family.

MIND Workshops

The in-person version of the MIND program included a series of 3 core hour-long workshops distributed throughout the academic year which evolved in keeping with participant needs. Core workshop topics included: Meeting your MIND Family, Imposter Syndrome, and Microaggressions. In-person workshops were conducted in a large lecture room during late afternoon/evening hours and dinner was provided. Participants would join their mentoring families at their assigned tables and sessions would begin with establishing ground rules, ensuring a safe and supportive environment for participants to share personal experiences without concern for judgement, repercussion, or gossip. Participants would be introduced to the workshop topic by the program leaders (JR, NB) through an array of modalities including brief video clips, podcast excerpts, or recent articles. Participants were then asked to discuss the topic within their families and were

given printed materials, with a guided activity and/or guided questions to facilitate discussion. Additionally, participants were encouraged to discuss their own personal experiences. This time within families facilitated mentoring around the topic in a semi-structured setting and allowed participants to meet and connect with peers, near peers and senior mentors. With this model, participants could be both a mentee and a mentor. After the family discussion time, a representative from each family shared with the larger group salient themes from their individual family discussions. Finally, members were encouraged to connect outside of the scheduled workshops to further develop their mentoring relationships in an informal manner.

To enable continuing the MIND program in the fall of 2020, program leaders (JR and NB), with the support of AMP leadership, decided to transition all workshops to a virtual platform. In addition, based on feedback we received from members during the prior year, for the 2020/2021 academic year, we added 3 new virtual workshops: How to Be a Mentor (intended for fellows and attending physicians), Career Mentor Spotlight (intended for medical students and residents), and a book club.

In an attempt to mimic the in-person workshops, the virtual workshops also started with a review of the same ground rules to promote a safe virtual environment. This was followed by an introduction to the topic by program leaders. In addition to the aforementioned modalities used in the in-person workshop introduction, we also conducted polls using Poll Everywhere (Poll Everywhere, Inc., San Francisco, CA) and the polling feature within Zoom as an 'icebreaker' and to encourage active participation. Instead of within-family discussion around a table, we used the 'break-out' feature within Zoom to allow time for family discussion. We again had a guided activity and/or guided questions to facilitate discussion that were emailed in advance and provided in the Zoom chat box during the workshop. After 15-25 minutes of discussion, we would close the break-out rooms and bring everyone back together where representatives from 2-3 families presented salient points, just as in-person. In addition to the scheduled workshops, families were encouraged to meet informally in a socially distanced manner.

3. Analysis

To understand if we were continuing to meet the needs of our members in our completely virtual format, we applied Stufflebeam's CIPP evaluation model, a decision-making model that systematically collects information about program planning, structuring, executing, and evaluating activities for continuous improvement.^{14,16} The Context evaluation is particularly useful when an established program must adjust to new conditions. The Input evaluation provides information to help establish the appropriate model that meets participants' needs. The Process evaluation gathers ongoing data that will guide modifications for continuous improvement. Product evaluation provides information to evaluate program outcomes.

During the last 5 minutes of each virtual workshop, members were encouraged to complete an online REDCap survey prior to logging off to aid us in evaluating the program Product (workshops). The survey was created by authors (JR, NB) who sought internal feedback from medical education expert (HLA) on survey clarity and usability and incorporated this in the final iteration of the survey. In the survey, members were asked to rate each workshop by level of engagement and helpfulness on a 0-100 scale (0=very unhelpful, 100=very helpful) and to provide general feedback and suggestions for improvement.

Descriptive statistics were reported for the two quantitative questions asked in the post-workshop REDCap survey. Demographic information obtained during the sign-up survey was obtained from all participants, including level of academic training, racial and ethnic background, gender, generation status and specialty. Finally, two authors (JR, NB) independently reviewed, coded and content analyzed¹⁷ open-ended survey responses immediately after workshops and then jointly constructed themes in discussion with the study team. The CHOP Institutional Review Board and the University of Pennsylvania Institutional Review Board reviewed and determined this study be exempt.

4. Results

During the 2020/2021 academic year, 111 participants, (including 48 (43.2%) returning participants), across 15 specialties signed up for MIND, who were grouped across 10 families (Table 1). The most common specialties represented were pediatrics (including subspecialties), anesthesia, and pathology. Families consisted of 3 attending

physicians, 0-2 fellows, 2-3 residents, 2-4 upperclassmen medical students, and 1-2 first-year medical students. Workshop participation ranged from 12-51 participants and the average survey response rate was 59% (Table 2).

Table 1. Characteristics of MIND family participants in the 2020/2021 academic year.
--

Participants	No. (%)	Third (or higher)-generation American	26 (23.4)
Total number	111 (100)	(U.S. born with U.S. born parents)	
Academic year/training		Other	7 (6.3)
First year medical students	15 (13.5)	Specialties represented	
Upperclassmen medical student	32 (28.8)	Anesthesia	5
Residents	25 (22.5)	Dermatology	3
	. ,	Emergency Medicine	3
Fellows	7 (6.3)	Family Medicine	2
Attending physician	32 (28.8)	Nephrology	1
Race and Ethnicity a		Neurology	2
American Indian or Alaska Native	5 (4.5)	Obstetrics/Gynecology	3
Asian	6 (5.5)		
Black or African American	64 (58.2)	Orthopedics	1
Latinx	48 (43.6)	Otorhinolaryngology	1
Native Hawaiian or Other Pacific Islander White 43 (39.1)	Pathology	4	
		Pediatrics ^b	29
	45 (55.1)	Psychiatry	3
Gender		Pulmonary	1
Female	82 (73.9)	Radiology	3
Male	28 (25.2)	Trauma Surgery	1
Non-binary/ third gender	0 (0)		
Generation status			
First-generation American (foreign- born)	27 (24.3)	a Participants could select more than on b Includes the following sub-specia	
Second-generation American (U.S. born with at least one foreign-born	51 (45.9)		nergency n

born with at least one foreign-born parent)

city care. licine, general/hospital pediatrics, hematology/oncology, neonatology, nephrology, neurology, and psychiatry.

4.1 Application of Context, Input, Process, Product (CIPP) Model

Context

Given the pivot to a virtual platform, program leaders (JR, NB) reviewed previous data of the Mentoring Families programming to plan the transition to a virtual format. We discussed what went well and challenges faced with the inperson program with current and former leaders of MIND and AMP and brainstormed potential challenges and plans to overcome them with the virtual program. Finally, we gathered Context information about members using the preparticipation surveys.

Input

The program leaders (JR, NB) discussed and inventoried the Inputs of the program, including budget and technical resources like the Zoom and Poll Everywhere program accounts. Using responses to our sign-up survey as guidance, we selected dates and times for our events and topics for the whole academic year. To inform members of the schedule in advance, we sent calendar invites, and to avoid scheduling conflicts with other virtual AMP events, we used AMP's Google calendar. We asked for input on preferred duration of workshops from participants and based on their responses.

Table 2. Participation and Evaluations of virtual MIND Workshops, 2020/2021 academic year.

	, .		Work	shop			
	How to Be a Mentor	Meeting Your MIND Family	Career Mentor Spotlight #1	Micro- Aggressions	Impostor Syndrome	Career Mentor Spotlight #2	Book Club
Participation ^a	September	September	October	November	January	March	April
Total participated/ total invited no. (%)	29/39 (74)	51/111 (46)	16/72 (22)	28/111 (25)	25/111 (22)	8/72 (11)	12/111 (11)
Survey response rate no. (%)	21/29 (72)	35/51 (69)	10/16 (63)	13/28 (46)	16/25 (64)	2/8 (25)	9/12 (75)
Survey Questions (mean sco	vey Questions (mean score) ^b						
Helpfulness of session	84	79	96	80	91	93	86
Engagement during session	84	77	99	79	93	95	92

a Medical students and residents only were invited to "Mentor Spotlight" workshops; the "How to Be a Mentor" workshop included only fellows and attending physicians.

b Respondents were asked to rate how helpful and engaging each of the workshops were on a scale 0-100, 0=very unhelpful, 100=very helpful, with higher scores indicating a more positive experience.

Process

Given the novelty of virtual workshops and in alignment with the CIPP model that recommends iterative evaluations of both Process and Products, MIND co-leaders (JR, NB) debriefed immediately after workshops, reviewed survey responses, and discussed and documented areas of success and improvement for subsequent workshops.

We had anticipated that we would have partial family participation leaving some "break-out" rooms with small numbers of participants. We planned to respond by combining smaller families as needed to form groups of 4-5 individuals at a minimum to promote richer discussion of topics. Efforts were made to ensure that in combining families, groups included a range of career levels, in order to maintain the peer, near-peer and senior mentoring aspects of the program.

Product

Finally, we used the quantitative survey responses as well as the open-ended questions in the survey to inform us if we were meeting our program's objectives. Across the 6 workshops, the mean helpfulness score was 87% and the mean engagement score was 88% (Table 2). The Career Mentor Spotlights were our most highly scored workshops followed by Imposter Syndrome. Participants frequently used the open-ended survey questions to report their feedback. In general, participants enjoyed the sessions, commenting that they appreciated the space to connect with other URiMs. One fellow wrote "great meeting new people and connecting." Participants valued time discussing topics with their families and sharing personal stories. A medical student wrote: "As a med student I love hearing from residents and attendings about how they navigate situations like these 'in real life' so I enjoy the breakouts a lot. Thank you so much for putting these together!"

5. Discussion

The pilot virtual MIND group mentoring model was feasible and acceptable to facilitate connections with other URiM students, trainees, and faculty and provide mentorship opportunities for them. Workshops overall received high ratings in engagement and helpfulness. Additionally, the CIPP evaluation model allowed us to iteratively and holistically improve subsequent workshops to meet our participants' needs.

Providing this virtual space for group mentoring facilitated continued and new relationships and connections with other URiM students, trainees, and faculty across specialties and career levels. This type of mentoring program agrees with that of other interschool mentoring programs¹⁸ that allowed for larger interconnectedness and community-building. The virtual format promoted easy access to mentors from all levels and specialties who are committed to connecting to trainees. Access to faculty¹⁹ and efficient ways²⁰ to identify and meet with faculty mentors are important to mentees. Easy access to near-peer mentors is also beneficial to residents.¹² Our program was able to do both during our virtual workshops.

We intentionally encouraged sharing of personal experiences around the topics presented. This sharing of personal identities and not just professional identities is appreciated by mentees.¹⁹ We worried that we might lose some of the inperson intimacy in the virtual format, however, this was not the case. Participants commented that they were still connecting and able to be as candid as they had been during in-person events.

One of the major benefits of applying the CIPP model was the iterative evaluations that helped us improve the subsequent evaluations. From survey responses after our first two workshops, we learned that participants preferred having more time in break-out rooms. One medical student commented: "Having more time would be helpful so everyone can share their thoughts" and a resident wrote, "A little more time in breakout sessions would be nice." Thus, we increased the time in breakout rooms in subsequent workshops and noticed increased engagement scores in a subsequent workshop on Impostor Syndrome.

Although we anticipated some differences between in person and virtual workshops, we still had a fast-learning curve with the virtual format. Unexpected challenges of the virtual format included technical difficulties. Specifically, we encountered problems when we attempted to assign families in advance to individual "break-out" rooms. This was due to participants registering for the event with an email address that was not the same as their linked Zoom accounts. We troubleshooted this problem by having a co-leader sort participant into families during the initial 5 minutes of the session, while the other leader began introducing the topic for the workshop. Another issue that was brought up by participants was that sometimes no one stepped up to be lead in the 'break-out' rooms and so it would take some time for discussion to get going. We addressed this in subsequent workshops by assigning leaders immediately before the break-out time. Leaders could have been any participant of the group. For example, during one session, we said whoever's last name is at the end of the alphabet would lead and report back on the family discussion.

An unforeseen positive outcome included an increase in the number of attending physicians who participated, which we attributed to the virtual format and timing of sessions (early evening) facilitating their participation. Our virtual program also required less administrative planning. For example, previously, hosting in-person sessions required co-leaders to handle logistics including reserving adequate space to accommodate participants, printing materials, and arranging for catering. With virtual sessions, co-leaders could focus on updating and presenting workshop materials and using technology to keep participants engaged. An additional benefit was that participants could log on for workshops from anywhere. Finally, our program also ran on a smaller budget (<\$3,000).

The main limitation was attendance, as it hindered our ability to generalize our results. Although we had 111 participants sign up for our mentoring program, we did not expect all would log on to our pilot virtual workshops. For this pilot program, we were targeting 30% of those who signed up to consistently attend. Although our actual participation was, on average, less than this, we were still able to obtain useful pilot data. We also noticed participation declined as the year progressed. We speculate that this was due to fatigue with virtual platforms as well as the general racial and social unrest that was occurring during the winter/spring months as this was supported by several emails we received from participants. The decline in participation in the Spring was again noticed in the subsequent academic year. Other limitations included low response rate to the evaluation survey and limited longitudinal data on participation.

The pilot data we collected provided us with several ideas for next steps. While the 2021/2022 academic year's program remained virtual due to ongoing COVID restrictions, to encourage participation, we provided participants with a safe food pick-up option prior to sessions and added gift card raffles at the end of sessions. We also on-boarded a pre-medical student volunteer to help with evaluation reminders, attendance tracking, and virtual technical help. Finally, given that not all family members consistently attended workshops, we increased the family size from 10-12 to 15-18 members.

For the 2021/2022 academic year, we held 6 virtual events. Attendance was comparable to the previous year as were our survey response rate and mean scores on our REDCap survey.

We learned various lessons with this virtual pilot mentoring program. Firstly, URiM students, trainees and faculty appreciated the virtual format for continued connections and mentoring opportunities during the pandemic. Additionally, the CIPP evaluation model allowed for iterative improvements of subsequent workshops which was important in this new virtual format. Finally, having committed co-leaders open to incorporating feedback is essential for the program's continued improvements.

For the 2022/2023 academic year the MIND program transitioned back to in person. We do believe some of the workshops, for example meeting your MIND family for the first time, are more conducive in person. However, we also acknowledge the flexibility virtual sessions offer to participants and believe some sessions (e.g., Career mentor spotlight) could effectively continue virtually. Thus, we advocate for a mixed model, some workshops in person only and select workshops virtually, as this expands accessibility and may increase attendance moving forward.

In future evaluation work, we plan to explore in focus groups with members the fluctuation in attendance throughout the year. Additionally, we will explore how the multi-specialty aspect of our program fosters mentoring relationships outside of a participant's specialty. Finally, as a long-term evaluation, we plan to explore how MIND relationships influenced long-term retention of URiM physicians at our institutions.

In conclusion, the pilot virtual MIND mentorship model was feasible and acceptable. The multispecialty model facilitated positive relationships between individuals with different skill sets. During the COVID-19 pandemic, our program was able to create a virtual meeting space for personal and professional community-building, highlighting the importance of mentoring programs as a venue for buffering the effects of racism and the pandemic among URiMs.⁸ Other academic centers may explore using our model to promote mentoring communities for their URiM trainees and faculty, and future work should investigate remaining barriers and evaluate long-term impacts of group mentoring models such as MIND.

Acknowledgments: The authors wish to thank the many people who have supported MIND's development and implementation, including Iris Reyes, MD, Jessica C Fowler, MD, MPH, and George Dalembert, MD, MSHP. The authors also thank Kristin McNaughton, MHS for editing assistance.

Funding/Support: None.

Disclosure of Interest: The authors report no conflict of interest.

Data Availability Statement: The data that support the findings of this study are available from the corresponding author [JR], upon reasonable request.

Disclaimer: The views expressed in this paper are those of the authors and not necessarily of the authors' organizations or the National Hispanic Medical Association (NHMA). The paper is intended to help inform and stimulate discussion. It is not a report of NHMA. Copyright by the National Hispanic Medical Association. All rights reserved.

Authors:

Jenny Ruiz D https://orcid.org/0000-0001-5319-3852 Natali Baner D https://orcid.org/0000-0002-4974-8832 Hannah L. Anderson D https://orcid.org/0000-0002-9435-1535 Madeline Chadehumbe D https://orcid.org/0000-0002-4952-8127 Nahla Khalek D https://orcid.org/0000-0002-1510-7850

References

- 1. AAMC 2022 Physician Specialty Data Report Executive Summary; [accessed August 14th, 2023]. https://www.aamc.org/data-reports/data/2022-physician-specialty-data-report-executive-summary.
- United States Census Bureau: Quick Facts; [Accessed August 14th, 2023]. https://www.census.gov/quickfacts/fact/table/US/RHI725222
- 3. AAMC. 2004. Underrepresented in Medicine Definition [accessed August 14th, 2023]. https://www.aamc.org/what-we-do/equity-diversity-inclusion/underrepresented-in-medicine.
- 4. van Buuren A, Yaseen W, Veinot P, Mylopoulos M, Law M. Later is too late: Exploring student experiences of diversity and inclusion in medical school orientation. Med Teach. 2021; 43(5):538-545
- Osseo-Asare A, Balasuriya L, Huot SJ, Keene D, Berg D, Nunez-Smith M, Genao I, Latimore D, Boatright D. Minority Resident Physicians' Views on the Role of Race/Ethnicity in Their Training Experiences in the Workplace. JAMA Netw Open. 2018; 1(5):e182723.
- Filut A, Alvarez M, Carnes M. Discrimination Toward Physicians of Color: A Systematic Review. J Natl Med Assoc. 2020; 112(2):117-140.
- 7. Cora-Bramble D, Zhang K, Castillo-Page L. Minority faculty members' resilience and academic productivity: are they related? Acad Med. 2010; 85(9):1492-1498.
- 8. South-Paul JE, Campbell KM, Poll-Hunter N, Murrell AJ. Mentoring as a Buffer for the Syndemic Impact of Racism and COVID-19 among Diverse Faculty within Academic Medicine. Int J Environ Res Public Health. 2021; 18(9).
- Beech BM, Calles-Escandon J, Hairston KG, Langdon SE, Latham-Sadler BA, 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.
- 10. Bonifacino E, Ufomata EO, Farkas AH, Turner R, Corbelli JA. Mentorship of Underrepresented Physicians and Trainees in Academic Medicine: a Systematic Review. J Gen Intern Med. 2021; 36(4):1023-1034.
- 11. Barrow B, Meiman J, Davidson A, Simms T. Near-peer mentoring in medical school: Support for a group model. Med Educ. 2021; 55(11):1325-1326.
- 12. Polley C, Cisternino A, Gray A. A novel approach to medical mentoring. Clin Teach. 2021; 18(1):37-42.
- Harris TB, Mian A, Lomax JW, Scott-Gurnell K, Sargent JA, Phillips JL, Mao AR, Thompson B, Searle N, Folensbee-Eddins F et al. The Texas Regional Psychiatry Minority Mentor Network: a regional effort to increase psychiatry's workforce diversity. Academic psychiatry : the journal of the American Association of Directors of Psychiatric Residency Training and the Association for Academic Psychiatry. 2012; 36(1):60-63.
- 14. Stufflebeam DL. The CIPP model for evaluation. 2000; Evaluation Models Dordrecht: Springer.
- 15. Bozeman B, Feeney MK. Mentor matching: A "goodness of fit" model. Administration & Society. 2008; 40(5):465-482.
- 16. young Lee S, Shin J-S, Lee S-H. How to execute Context, Input, Process, and Product evaluation model in medical health education. Journal of Educational Evaluation for Health Professions. 2019; 16.
- 17. Kyngäs H. Inductive Content Analysis. In: Kyngäs H MK, Kääriäinen M, editor. The application of content analysis in nursing science research. Springer Nature; 2019; p. 13-21.
- Blanco MA, Qualters DM. Mutual mentoring: Effect on faculty career achievements and experiences. Med Teach. 2020; 42(7):799-805.
- Chen JJ, Kusner JJ, Saldaña F, Potter J. Development of a Novel Mentorship Platform to Foster Relational Mentoring, Empowered Vulnerability, and Professional Identity Formation in Undergraduate Medical Education. Acad Med. 2021, 96(11):1580-1585.
- 20. Guse J, Schweigert E, Kulms G, Heinen I, Martens C, Guse AH. Effects of Mentoring Speed Dating as an Innovative Matching Tool in Undergraduate Medical Education: A Mixed Methods Study. PloS one. 2016; 11(2):e0147444.

Appendix

a) Questionnaire

MIND workshop outlines

How to be a mentor

- I. Background work
 - \circ Invite: fellows and faculty.
 - \circ Format: virtual panel discussion.
 - Planning: Identify 2-3 senior faculty with mentorship experience to participate as panelists and provide them with questions ahead of time for the panel.
- II. Outline of workshop
 - Introduction to MIND, MIND leaders, events planned for the year.
 - Summary slides on what is a mentor, why mentorship is important especially for URIM physicians, and barriers to mentorship.
 - Poll Everywhere to solicit anonymous questions from participants for our panelists.
 - Discuss preplanned and audience questions.
 - o End with post-event REDCap survey.

Meeting your MIND family

- I. Background work
 - $\ensuremath{\circ}$ Invite: medical students, residents, fellows, and faculty.
 - Format: virtual presentation with breakout rooms for family time.
- II. Outline of workshop
 - Welcome slide with information on how to rename yourself (including name, training level, specialty), ice breaker question to be answered in the chat/zoom poll.
 - Overview of MIND leadership team, mission statement, events planned for the year, expectations of participants.
 - Prior to breakout rooms, review ground rules.
 - Breakout rooms (~30 mins)
 - Participants are assigned to their MIND family breakout rooms.
 - In the breakout room: Introduce yourself, why you joined MIND, group ice breaker (ex. Play 7 degrees of separation), assign 1- or 2-point persons in charge of communicating with your MIND family and planning a social event.
 - Close breakout rooms. Have 2-3 groups share how the icebreaker went.
 - End with post-event REDCap survey (include link in chat and QR code on last slide).

Career Mentor Spotlight

- I. Background work
 - o Invite: medical students and residents.
 - \circ Format: virtual panel discussion.
 - Planning: Identify 2 senior faculty to spotlight and provide them with expected questions as panelists.
- II. Outline of workshop
 - Introduction of event and format.
 - Have 2 breakout rooms, each with one of our senior faculty members who will share their stories into medicine highlighting challenges overcome, non-traditional paths, and provide general advice. Leave time for questions from participants either by unmuting themselves, putting questions in the chat or using

anonymous submissions through Poll Everywhere.

- 20 minutes in each breakout room. Flip the senior faculty member to the opposite breakout rooms and repeat the session. This will ensure intimate setting for students/trainees to ask questions.
- \circ Close breakout rooms and conclude session. End with post-event REDCap survey.

Microaggressions

- I. Background work
 - Invite: medical students, residents, fellows, and faculty.
 Format: virtual presentation with breakout rooms for family time.
 - Planning: co-leaders research articles, movie/show/YouTube clips, podcasts relevant to the topic and create power point presentation.
- II. Outline of workshop
 - Welcome slide with information on how to rename yourself (include: name and family number) and participate in zoom poll ice breaker.
 - o Review ground rules.
 - Play YouTube video: "How microaggressions are like mosquito bites"
 - (https://www.youtube.com/watch?v=hDd3bzA7450).
 - Participants to submit one word reaction via Poll Everywhere (replies to be displayed on next slide). Have 1-2 participants expand on their answer to the whole group.
 - Review key definitions (microaggressions, microinsults, microinvalidations, microassaults) and slide on impact of microaggressions.
 - o Breakout room (~25-30minutes)
 - Share the cases to discuss with family in breakout room and provide guiding discussion points.
 - Families also have option to discuss confidentially personal microaggressions experienced or witnessed.
 - Close breakout rooms and return as large group
 - 2-3 families share salient points from their family discussion.
 - Review common acronyms used to address microaggressions and tips for addressing these.
 - End with post-survey REDCap survey.

Imposter syndrome

- I. Background work
 - $\ensuremath{\circ}$ Invite: medical students, residents, fellows, and faculty.
 - Format: virtual presentation with breakout rooms for family time.
 - Planning: co-leaders research articles, movie/show/YouTube clips, podcasts relevant to the topic and power point presentation.
- II. Outline of workshop
 - Welcome slide with information on how to rename yourself (include: name and family number) and participate in zoom poll ice breaker.
- Review ground rules.
- Play YouTube video: "What is imposter syndrome and how can you combat it? –

Elizabeth Cox" (https://youtu.be/ZQUxL4Jm1Lo).

- Participants to submit anonymously one word reaction via Poll Everywhere (replies to be displayed on following slide).
- Breakout room (~30minutes)
 - Participants will take first 5 minutes to complete the Impostor Test (https://paulineroseclance.com/pdf/IPTestands)
 - coring.pdf) and self-score it.Spend rest of time discussing the Impostor Test
 - and/or other personal experiences related to the topic
- \circ Close breakout rooms and return as large group
 - 2-3 families share salient points from their family discussion.
 - Review tips to overcome imposter syndrome.
 - End with post-event REDCap survey.

Book club

- I. Background work
 - $\ensuremath{\circ}$ Invite: medical students, residents, fellows, and faculty.

b) Survey

MIND Survey:

MIND

Please complete the survey below. Your responses are being recorded for program evaluation and improvement purposes only. Your responses are anonymous and confidential: they will not be associated with your name or with a unique identifier.

Thank you!

)	How helpful was this session?	Very Unhelpful	Neither helpful or unhelpful	Very Helpfu
			(Place a mark o	n the scale above)
	How engaging were the activities?		Neither	
			Unengaging or	
		Very Unengaging	Engaging	Very Engaging
			(Place a mark of	n the scale above)
	How can we improve this session?			
	What level in view career are view?			
	What level in your career are you?			
	\bigcirc medical student			
	\bigcirc resident			
) fellow			
) attending			
	What MIND events have you attended this year (select all that a	apply):		
	How to be a mentor			
	☐ How to be a mentor ☐ Kickoff- family assignments			
	Kickoff- family assignments			

6) Is there anything else you would like to share?

- Planning: co-leaders will select book in advance and buy copies for members. For this book club we selected "Lead from the Outside" by Stacey Abrams. Provide copies of the book for participants.

 Co-leaders prepare discussion guide with list of questions.

 II. Outline of workshop

 Welcome slide with information on how to rename yourself (include: name and career level) and participate in zoom poll ice breaker.
 Review ground rules.
 Participants to share anonymously one or two words via Poll Everywhere
 - describing their initial reaction to the book (replies to be displayed on following slide).
 - Whole group discussion (~30minutes)

o Format: virtual book club.

- MIND co-leaders discuss guide and engage participants with preprepared questions.
 - End with post-event REDCap survey.