

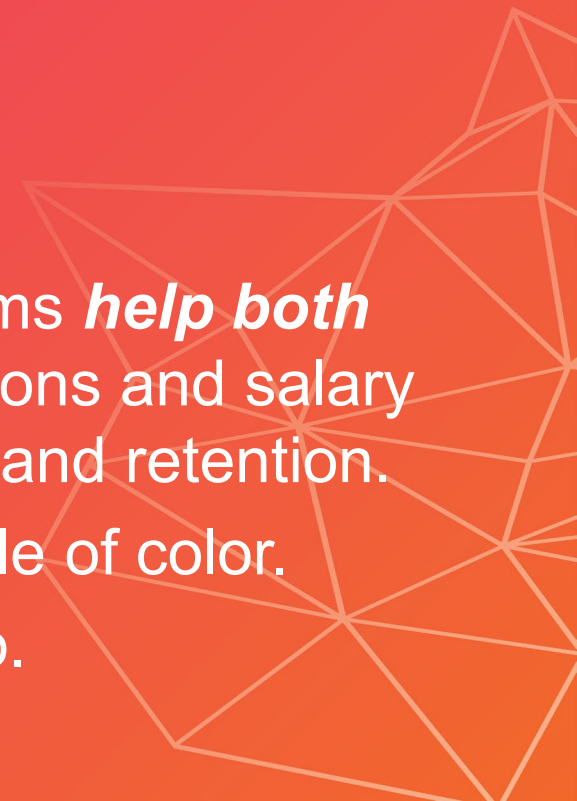
# Teach the Mentor: A six week intensive program universally improves mentorship skills among a diverse group of faculty

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# Background

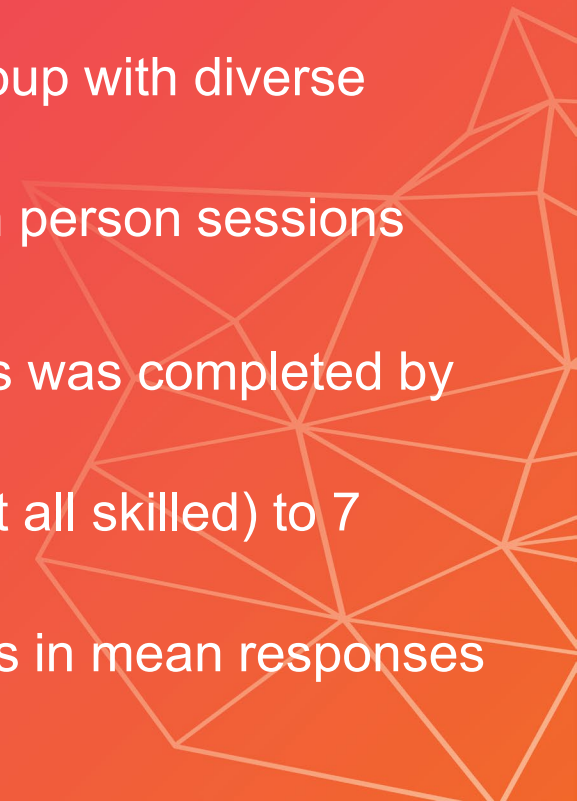
- Quality mentorship leads to:
    - Successful academic careers
    - Stronger clinical program development
    - Increased authorship and federal funding
  - Research shows that mentorship programs ***help both the mentee and the mentor*** get promotions and salary bumps and can increase job satisfaction and retention.
  - Mentorship is lower for women and people of color.
  - COVID-19 adversely affected mentorship.
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# Study Objective

Determine if an intensive, case-based, in-person mentorship teaching program would improve self-reported mentorship skills among a diverse group of faculty members at a large multi-site academic institution.



# Methods

- Faculty members volunteered to participate
  - Selection focused on creating a balanced small group with diverse backgrounds and levels of experience
  - Course included six weekly 2-hour seminar-style in person sessions
  - Food and drink were provided
  - A validated 19-question survey on mentorship skills was completed by participants before and after the course
  - Questions used a likert scale ranging from 1 (not at all skilled) to 7 (highly skilled)
  - Paired t-tests were performed to assess differences in mean responses to survey questions
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# Methods

- Each session was facilitated by a guest expert mentor within the department and covered the following themes:
  1. Promoting Professional Development
  2. Maintaining Effective Communication
  3. Fostering Independence and Wellness
  4. Prioritizing Equity and Inclusion
  5. Optimizing Trainee Experience and Giving Feedback
- The course curriculum was adopted from the W.H. Freeman Mentorship Series intended for clinician scientists\*
- New cases and topics were incorporated to make the course more applicable to clinical and administrative mentorship, in addition to research

# Methods

- After a short presentation by the session leader, the group was presented with a set of provocative mentorship dilemmas to stimulate discussion
- An interactive audience response tool was used periodically to gauge the sentiments of the group

## Examples:

### Scenario 1

Dr. Earth is a first-year assistant professor who has struggled to balance his clinical responsibilities and research productivity over his first year as an attending. However, he feels that in the last few weeks to months he has figured out a schedule that works well for him. Last week, his department chair asked Dr. Earth to take on an additional project. Though the project is interesting and has great publication potential, Dr. Earth cannot imagine fitting it in with his current research and clinical load. Dr. Earth fears he must say no to his chair but worries about repercussions in terms of his chair's opinion of him.



How would you advise Dr. E.?

- A. Support him in saying no even though it may affect the chair's opinion of him?
- B. Strongly suggest to him that he say yes to maintain the chair's positive opinion of him?

### Scenario 2

Your junior faculty member Dr. Good has been a productive and reliable member of your section, but over the last year Dr. Good's mother was diagnosed with and recently passed away from cancer. Prior to her illness, Dr. Good's mother provided substantial support to her family in the form of childcare, cooking and general support. This life event has really affected your mentee's productivity and flexibility.

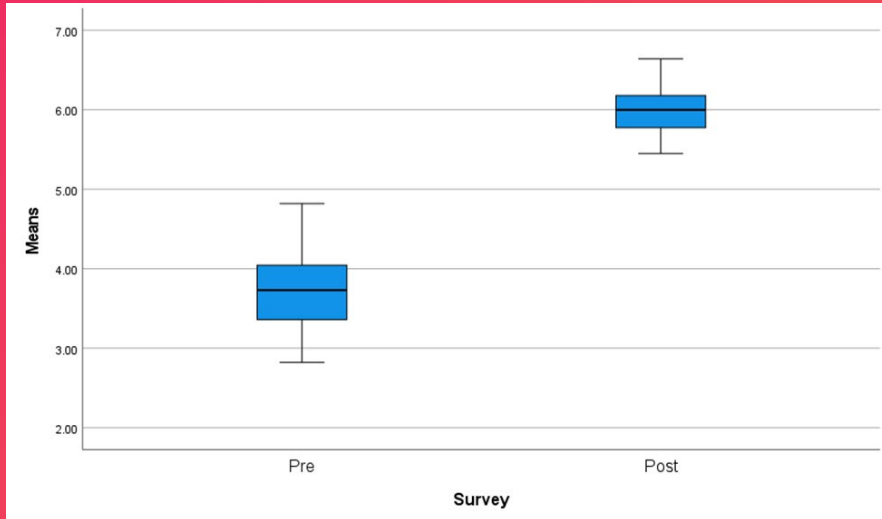


How would you approach your mentee's newly limited flexibility?

- A. Make no distinction from your other section members, that would be unfair
- B. Work with your mentee to figure out a temporary change to her schedule

# Results

- 11 participants completed the course
- Gender balanced (6 women, 5 men)
- Varied academic levels (5 Assistant, 2 Associate, and 5 Full Professors)
- 100% completion of Pre- and Post- surveys
- High reliability across all questions (Cronbach's alpha of 0.96)



Mean score for each of the 19 survey questions significantly increased on the post-test by an average of 2.22 points, from 3.78 - 6.00

# Results - Mean survey scores before and after Teach The Mentor Course

Questions #1, 2, and 3 had lowest score increase

Questions #7, 8, and 11 had greatest score increase

Mentorship Skills Survey Question	Pre-score Mean* (n=11)	Post-score Mean* (n=11)	Mean Difference	95% Confidence Interval (CI)	P-value
1. Active listening	4.64	6.09	1.45	0.64 – 2.27	.003
2. Providing constructive feedback	4.27	5.82	1.55	0.73 – 2.36	.002
3. Establishing a relationship based on trust	4.73	6.36	1.63	0.95 – 2.33	<.001
4. Identifying and accommodating different communication styles	3.73	5.91	2.18	1.34 – 3.02	<.001
5. Using strategies to improve communication with mentees	3.64	5.91	2.27	1.42 – 3.13	<.001
6. Coordinating effectively with your mentees' other mentors	3.27	5.73	2.46	1.59 – 3.32	<.001
7. Working with mentees to set clear expectations of the mentoring relationship	3.27	6.09	2.82	1.88 – 3.76	<.001
8. Aligning Your Expectations with Your Mentees	3.82	6.00	2.82	1.29 – 3.07	<.001
9. Considering how personal and professional differences may impact expectations	3.91	6.45	2.56	1.79 – 3.30	<.001
10. Working with mentees to set research goals	3.36	5.64	2.28	1.32 – 3.23	<.001
11. Helping mentees develop strategies to meet goals	3.36	6.18	2.82	1.88 – 3.76	<.001
12. Accurately estimating your mentees' level of scientific knowledge	3.36	5.64	2.28	1.42 – 3.13	<.001
13. Accurately estimating your mentees' ability to conduct research	2.82	5.45	2.63	1.85 – 3.90	<.001
14. Employing strategies to enhance your mentees' knowledge and abilities	3.36	5.64	2.28	1.42 – 3.13	<.001
15. Motivating your mentees	3.73	5.91	2.15	1.35 – 3.02	<.001
16. Building mentees' confidence	4.18	6.45	2.27	1.29 – 3.32	<.001
17. Stimulating your mentees' creativity	3.73	6.00	2.27	1.53 – 3.02	<.001
18. Acknowledging your mentees' professional contributions	4.82	6.64	1.82	0.79 – 2.85	.003
19. Negotiating a path to professional independence with your mentees	3.73	6.18	2.45	1.28 – 3.63	<.001

\*Likert scale ranging from 1 (not at all skilled) to 7 (highly skilled)



# Results - Differences in survey scores for senior vs junior faculty

Only one question (#10) where Professors showed less improvement than Assoc/Asst Professors

Mentorship Skills Survey Question	Full Professor (n = 4)		Associate & Assistant Professor (n = 7)		P-value
	Pre/Post	Mean Difference	Pre/Post	Mean Difference	
1. Active listening	5.50/6.25	0.75 (+/- 0.50)	4.14/6.00	1.86 (+/- 1.35)	.15
2. Providing constructive feedback	5.00/6.00	1.00 (+/- 1.16)	3.86/5.71	1.86 (+/- 1.22)	.28
3. Establishing a relationship based on trust	5.75/6.75	1.00 (+/- 0.00)	4.14/6.14	2.00 (+/- 1.16)	.06
4. Identifying and accommodating different communication styles	4.25/6.00	1.75 (+/- 0.96)	3.43/5.86	2.43 (+/- 1.40)	.42
5. Using strategies to improve communication with mentees	3.75/6.00	2.25 (+/- 0.50)	3.57/5.86	2.29 (+/- 1.60)	.97
6. Coordinating effectively with your mentees' other mentors	3.75/5.75	2.00 (+/- 0.82)	3.00/5.71	2.71 (+/- 1.50)	.41
7. Working with mentees to set clear expectations of the mentoring relationship	3.75/6.25	2.50 (+/- 0.58)	3.00/6.00	3.00 (+/- 1.73)	.60
8. Aligning Your Expectations with Your Mentees	4.50/6.00	1.50 (+/- 1.00)	3.43/6.00	2.57 (+/- 1.40)	.21
9. Considering how personal and professional differences may impact expectations	4.75/6.75	2.00 (+/- 0.82)	3.43/6.29	2.86 (+/- 1.22)	.25
10. Working with mentees to set research goals	4.50/5.50	1.00 (+/- 0.82)	2.71/5.71	3.00 (+/- 1.16)	.01
11. Helping mentees develop strategies to meet goals	4.25/6.25	2.00 (+/- 1.41)	2.86/6.14	3.29 (+/- 1.25)	.15
12. Accurately estimating your mentees' level of scientific knowledge	4.25/6.25	2.00 (+/- 0.816)	2.86/5.29	2.43 (+/- 1.51)	.62
13. Accurately estimating your mentees' ability to conduct research	3.75/6.00	2.25 (+/- 0.500)	2.29/5.14	2.86 (+/- 1.35)	.42
14. Employing strategies to enhance your mentees' knowledge and abilities	4.00/5.75	1.75 (+/- 1.258)	3.00/5.57	2.57 (+/- 1.27)	.32
15. Motivating your mentees	4.25/6.00	1.75 (+/- 1.258)	3.43/5.86	2.43 (+/- 1.27)	.42
16. Building mentees' confidence	4.50/6.50	2.00 (+/- 1.633)	4.00/6.43	2.43 (+/- 1.62)	.68
17. Stimulating your mentees' creativity	4.75/6.25	1.50 (+/- 1.000)	3.14/5.86	2.71 (+/- 0.95)	.08
18. Acknowledging your mentees' professional contributions	5.00/6.75	1.75 (+/- 0.500)	4.71/6.57	1.86 (+/- 1.95)	.92
19. Negotiating a path to professional independence with your mentees	3.75/6.25	2.50 (+/- 1.732)	3.71/6.14	2.43 (+/- 1.90)	.95

# Conclusions

- This “Teach The Mentor” Program led to a significant improvement in self-reported mentorship skills among a diverse group of radiology faculty with all levels of experience at a large academic institution.
- The course curriculum, focused on in-person, case-based learning led by experienced leaders and mentors in radiology, may serve as a model for other institutions in a post-COVID era.
- Further study is needed to assess the long-term impact of the course in terms of elevating individual faculty success and overall job satisfaction, narrowing gender and race disparities in radiology, and improving departmental collegiality.

THANK YOU