A Peer Led Program to Increase Diversity in Osteopathic Medical Schools: Three Year Update

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BACKGROUND

- According to the American Medical Student Association and a UCLA study, a diverse student body facilitates cultural competence in medical education and students are better equipped to serve diverse patient populations.[1,2]
- Jabbarpour et al.'s study reported that 13.4% of the US population identified as Black but only 9.1% of the family medicine residents identified as Black. Similarly, 18.5% of the US Population identified as Hispanic but only 7.8% of the family medicine residents identified as Hispanic.[3]
- Since an important focus of osteopathic medical schools is primary care, increasing URM representation would benefit medical education and patient care.
- The DREAM (Diversity Recognized Emphasized and Assimilated into Medicine) Program was developed in 2018 with a goal to increase diversity in medicine and has been continued annually. This is a 4-day intensive summer course for underrepresented minority (URM) pre-medical students consisting of workshops that were chosen to counter dis-empowering messages while equipping them with skills and understanding of the medical school application process.

OBJECTIVE

- To provide a 3-year update on the efficacy of a peer-led program for URM pre-medical students which addresses their perceived barriers and understanding of medical school and a career as a physician.

METHODS

Design: Cohort survey study.
Study Sample: From 2018-2021, 111 participants selected into the DREAM program based on a holistic review including URM pre-medical student status were invited to complete the survey study voluntarily.
Data Collection:
- Qualtrics was used to distribute the survey and collect data.
- The surveys measured the program's impact on their interest and barriers in pursuing medical school and gained insight into URM's perspective on their own health care experiences in the US.
- Participants were surveyed before and after the program as well as each consecutive year after their participation to determine if they matriculated to medical school; pre-survey included a total of 50 questions, post-survey had 25 questions, and follow-up survey had 19 questions (with branch logic questions).

Statistical Analyses:
- A Mann-Whitney U test and independent samples t-test were used for data analysis.
- An a priori level of ≤ 0.05 was used for statistical significance.

This study was approved by WesternU's IRB as an exempt project (IRB #1283154).

RESULTS

Figure 1. Comparison of perceived barriers to medical school vs barriers addressed in the 2021 DREAM program.
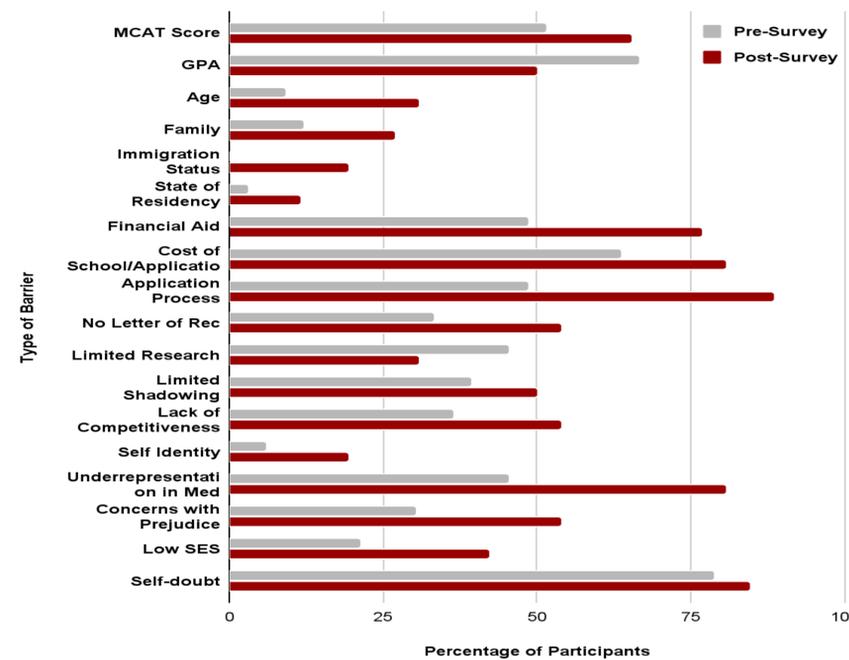

Table 1. Pre- and Post-Survey Comparison

Question	2019 (pre- n=21; post- n=23)	2020 (pre- n=23; post- n=18)	2021 (pre- n=33; post- n=26)
How familiar are you with the complete medical school application process?[A]			
Pre-survey, mean ± SD	3.05 ± 0.9	2.78 ± 1.1	2.94 ± 0.9
Post-survey, mean ± SD	4.26 ± 0.7	4.17 ± 0.5	3.96 ± 0.5
P-value	0.000	0.000	<0.001
What is your current level of understanding of what being a pre-clinical medical student entails?[B]			
Pre-survey, mean ± SD	3.14 ± 1.2	2.52 ± 1.3	2.52 ± 1.0
Post-survey, mean ± SD	4.35 ± 0.6	4.00 ± 0.8	3.69 ± 0.7
P-value	0.000	0.000	<0.001
What is your current level of understanding of what being a clinical medical student entails?[B]			
Pre-survey, mean ± SD	2.43 ± 0.9	2.35 ± 1.2	2.30 ± 0.8
Post-survey, mean ± SD	4.22 ± 0.7	3.78 ± 0.5	3.73 ± 0.5
P-value	0.000	0.000	<0.001
How familiar are you with the match and residency process?[A]			
Pre-survey, mean ± SD	2.14 ± 0.9	1.91 ± 0.8	2.27 ± 0.7
Post-survey, mean ± SD	3.87 ± 0.9	3.83 ± 0.6	3.42 ± 0.6
P-value	0.000	0.000	<0.001
What is your current level of understanding of what a physician does?[B]			
Pre-survey, mean ± SD	3.24 ± 0.6	3.00 ± 1.0	3.27 ± 0.9
Post-survey, mean ± SD	4.39 ± 0.7	3.89 ± 0.6	3.96 ± 0.6
P-value	0.000	0.001	0.001
What is your current level of understanding of the difference between allopathic and osteopathic physicians?[B]			
Pre-survey, mean ± SD	3.10 ± 1.1	2.91 ± 1.4	2.94 ± 1.0
Post-survey, mean ± SD	4.57 ± 0.7	3.94 0.8	3.85 ± 0.7
P-value	0.000	0.008	<0.001

A = Likert scale used. 1 = not familiar, 2 = somewhat familiar, 3 = moderately familiar, 4 = very familiar, 5 = completely familiar.
B = Likert scaled used. 1 = no understanding, 2 = some understand, 3 = moderate understanding, 4 = great understanding, 5 = completely understanding.

Table 2. Perceived Ethnicity Representation in Health Care

Question	2019 (n=21)	2020 (n=23)	2021 (n=32)	Total (N=76)
I feel that physicians of my race/ethnicity are well-represented in my current area of residence.				
Agree	0.0%	0.0%	3.1%	1.3%
Somewhat agree	14.3%	4.3%	9.4%	9.2%
Neither agree nor disagree	4.8%	4.3%	9.4%	6.6%
Somewhat disagree	19.0%	30.4%	25.0%	25.0%
Disagree	61.9%	60.9%	53.1%	57.9%
I feel that physicians of my race/ethnicity are well-represented in the United States.				
Agree	0.0%	0.0%	3.1%	1.3%
Somewhat agree	9.5%	8.7%	9.4%	9.2%
Neither agree nor disagree	14.3%	4.3%	6.3%	7.9%
Somewhat disagree	23.8%	34.8%	28.1%	28.9%
Disagree	52.4%	52.2%	53.1%	52.6%
I feel that a physician of the same race/ethnicity providing my care could be more empathetic towards me than a physician of a different race/ethnicity.				
Agree	47.6%	43.5%	40.6%	43.4%
Somewhat agree	42.9%	39.1%	37.5%	39.5%
Neither agree nor disagree	4.8%	17.4%	18.8%	14.5%
Somewhat disagree	0.0%	0.0%	3.1%	1.3%
Disagree	4.8%	0.0%	0.0%	1.3%
I feel that physicians of a race/ethnicity different from mine may not understand me as a patient well.				
Agree	28.6%	17.4%	15.6%	19.7%
Somewhat agree	28.6%	52.2%	40.6%	40.8%
Neither agree nor disagree	23.8%	26.1%	25.0%	25.0%
Somewhat disagree	14.3%	4.3%	15.6%	11.8%
Disagree	4.8%	0.0%	3.1%	2.6%
Having a physician mentor of my race/ethnicity would help me explore a career in medicine better than a physician mentor of a different race/ethnicity.				
Agree	66.7%	39.1%	28.1%	42.1%
Somewhat agree	23.8%	52.2%	37.5%	38.2%
Neither agree nor disagree	4.8%	8.7%	18.8%	11.8%
Somewhat disagree	4.8%	0.0%	3.1%	2.6%
Disagree	0.0%	0.0%	12.5%	5.3%

DISCUSSION & CONCLUSION

- The DREAM Program continues to successfully address perceived barriers in pursuing a medical education as well as an understanding of medical school and a career as a physician.
- Out of the 111 participants, 24 have applied, 6 have interviewed, and 5 have matriculated to COMP-Northwest.
- In 2018, 1.9% of the COMP-Northwest cohort identified as an URM, this has since increased to 7.7% in 2019 and 10.4% in 2020.
- The DREAM Program appears to be increasing URM applicants and diversity amongst recent matriculated cohorts at COMP-Northwest, meeting the program's goal of increasing diversity in medicine.

LIMITATIONS

- There is a potential for response bias due to the self-reported nature of the survey.
- The accuracy of reported medical school matriculation rate after the DREAM Program due to lack of follow-up survey response and/or participants are in early stages of pre-medical pathway.
- It is difficult to correlate the increase in URM applications at COMP-Northwest to the DREAM Program.

FUTURE DIRECTIONS

- Track participants over the next 5 years on medical school matriculation status to determine the long-term efficacy of the program.
- Continue to expand the DREAM program to include participants in other geographical areas and improve workshops to address all perceived barriers.

REFERENCES

1. *American Medical Student Association.* (2017). Enriching Medicine Through Diversity. Retrieved June 18, 2018 from https://www.amsa.org/wp-content/uploads/2015/03/Handout-AMSA-Mission-Priorites.pdf
2. Saha S et al. Student Body Racial and Ethnic Composition and Diversity-Related Outcomes in US Medical Schools. *JAMA.* 2008;300(10):1135–1145.
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