

Title: Middle School to Medical School (M2M): An outreach program developed and implemented on the Anschutz Medical Campus encouraging underrepresented in medicine (URM) middle school students to pursue careers in medicine

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Background/Problem statement:

Despite Affirmative Action Health Care Policy efforts, the diversity of the U.S. population is not reflected in the composition of the student body, medical school faculty, or physician workforce. Minority groups make up 30% of the U.S. population, but only 13% of medical students, 6% of physicians, and 3% of medical school faculty are members of an underrepresented minority groups.¹ Research studies demonstrate that increasing the number of URM medical students and practicing physicians, enhances learning outcomes, improves cultural competency, and helps eliminate healthcare disparities.^{2,3} Many of the existing medical school pipeline and mentoring programs are focused on high school and undergraduate students, while little research has been done on the impact of these programs on middle-school students.^{4,5}

Methods:

In the summer of 2017, then-second year medical students Mario Hernandez and Josten Overall approached stakeholders at Skinner Middle School to propose a partnership in developing an outreach program at their school that would aim to increase URM student interest and self-efficacy in pursuing careers in medicine. Through shared-decision making, the students helped design a one-day curriculum for middle school students that incorporated the following elements: (1) hands-on activities, (2) teaching materials that were appropriate for the middle-school level, (3) storytelling, and (4) diverse representation amongst program leadership and student volunteers. The inaugural Middle School to Medical School (M2M) event took place in January 2018, during which pre- and post-evaluation surveys were used for program improvement. The second annual M2M occurred in February 2019 after which IRB exemption was obtained. Using quantitative (including 5-point Likert scales) evaluation methods, the program creators were able to assess the impact of the M2M program on participants' interest in medical careers and their sense of self-efficacy in achieving their medical career of interest. Participant feedback on various workshops, lessons learned, and overall takeaways from the program were also gathered through qualitative questions and analyzed using a manual coding and thematic analysis process. The results of the 2019 iteration of the program are summarized in this paper.

Results:

There were a total of 18 students who participated in the February 2019 program, the majority (88%) of whom were from underrepresented minority backgrounds. After participating, the students expressed increased agreement with the statement that they are interested in becoming a medical doctor (3.3 pre vs. 3.6 post). The students also expressed significantly greater interest in becoming health care providers other than doctors (3.1 pre vs. 3.4 post, $p < 0.05$), and showed improved self-efficacy in possessing the knowledge needed to become a

medical doctor (3.5 pre vs. 3.9 post, $p < 0.05$). Overall, the majority of participants expressed enjoyment of the program with 77% stating that they would recommend the program to a friend.

Future Direction:

The M2M outreach program was designed to spark interest in health professions for middle school students. The first two iterations of the program were held in 2018 and 2019 and were shown to be effective in increasing middle school students' interest and sense of self-efficacy in pursuing health care careers. In the midst of ongoing limitations created by the COVID-19 pandemic, the program leads are hoping to deliver a modified, virtual program in Spring 2021 and will gather pre- and post-evaluation data accounting for these curricular changes from prior iterations of the M2M Program. While data from the third iteration remains to be collected and evaluated, the efforts of this program and similar programs that engage URM youth within health professions are promising initiatives in increasing the number of URM individuals within health fields. Over time, programs that significantly increase diversity within medicine have the great potential to bridge the gap between racial and ethnic minorities and healthcare disparities.

References

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