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High School Medical Pipeline Programs: Challenges and New Opportunities in the Virtual Environment

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To the Editor: A diverse medical workforce improves health outcomes. Yet, despite efforts to increase diversity in U.S. medical schools, underrepresentation of students from historically marginalized groups persists.¹ These groups face inequities throughout their entire academic journey, which may affect enrollment in medical school. For example, the enrollment of Black males in U.S. medical schools dropped from 1978 to 2014.²

Medical pipeline programs are an important tool to combat the lack of diversity in medicine. Doctors of Tomorrow (DoT), a medical student-led pipeline and mentorship program between the University of Michigan Medical School and high schools in neighboring Detroit, traditionally hosts in-person, hands-on medical education events. In response to the COVID-19 pandemic, we created a fully virtual curriculum for the 2020-2021 school year. To improve access to equitable remote learning, we provided scholarship funds to support participating students needing electronic devices.

For DoT Foundations students (9th and 10th grades), our virtual programming included organ-based anatomy, physiology, and pathophysiology, incorporating short lectures followed by problem-based small group sessions. For DoT Rising students (11th and 12th grades), our programming focused on college preparation, public health, and clinical skills. We utilized students’ survey responses to choose session topics, such as “the effects of COVID-19 on your community” and “the path to college and medical school.” Additionally, students were mailed suture kits for video-based skill development.

The virtual environment came with challenges: Mentorship and teaching modalities were limited by the lack of in-person interaction; class cohesion took longer to achieve; and the virtual platform led to learner fatigue. However, virtual programming eliminated logistical difficulties that had previously capped enrollment, permitting DoT to accept twice the number of students...
and expand to a new high school. Furthermore, the virtual environment fostered connections between faculty, medical students, and high school students from different institutions across the country, thus creating a national network of DoT programs. For the 2021–2022 academic year and moving forward, DoT will adopt a hybrid model of in-person and virtual programming. We must act now with intentionality and urgency to address disparities and inequities in the medical workforce through organized pipeline programs and individual outreach efforts. Medical students, physicians, and members of allied health professions have the power and great responsibility to improve representation in medicine and serve as change agents and mentors in our communities—ultimately building the diverse health care leaders of tomorrow.

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