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## Medical schools must do more to open the door to first generation and low income students

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For first generation and low income (FLI) students the path to medical school does not run smooth. Students who are the first people in their family to obtain a college degree and who are on low incomes start their pre-medical journey with fewer resources<sup>1</sup> and less time for accomplishments that will burnish their medical school application than their more privileged peers. Yet admissions committees consistently fail to take this into consideration and mitigate against the resulting inequities.

In the US, the Association of American Medical Colleges (AAMC) has made efforts to diversify medicine, for example by implementing a socioeconomic indicator status (SES-EO) on application forms to give this context during admissions decisions. Despite this, FLI students still face overwhelming hardships in their efforts to become a physician, which are exacerbated by a lack of support from the medical profession. As first generation college students who are now studying medicine, we know how these barriers can hold FLI students back from applying to medical school and being accepted.

In the US the composition of medical school classes by income has remained static for the past 30 years, with only 9-13% of medical students coming from families in the lower income quintiles.<sup>2</sup> These income disparities in medicine are apparent worldwide: a Canadian study found that the median neighbourhood income of applicants was an independent predictor of medical school acceptance.<sup>3</sup> In the UK, systemic disadvantages continue to limit opportunities for FLI physicians in training.<sup>4</sup> Yet, the need for FLI physicians is clear: they are more likely to enter primary care specialties that are beset by workforce shortages.<sup>4</sup> They are also more likely to care for underserved communities, with their experiences often making them more interested in advocating for patients from low income backgrounds.

To apply for medical school in the US, a four year bachelor's degree is required, along with experience volunteering and exposure to clinical environments. Most FLI students balance multiple jobs while attending college, but are still expected to accrue significant volunteer hours to apply for medical school, a sacrifice that isn't always taken into account by those reviewing their application. We both worked multiple jobs while in college, which limited our ability to participate in activities that would have strengthened our medical school application. Data pooled from 130 US medical schools show that most of the experiences admissions officers rank of "highest importance" are unpaid.<sup>5</sup> These valued roles include volunteer work, community service, and

shadowing physicians. This enormously disadvantages FLI pre-medical students who are supporting themselves and often even their families. An applicant's comparatively fewer unpaid experiences may be incorrectly attributed to a lack of passion when it is an economic imperative.

Perhaps the most difficult barrier FLI students face is an inherent lack of social capital. They have limited access to physicians to shadow, research opportunities, or mentors from similar backgrounds. Without family connections or close networks in medicine, FLI students can struggle to find meaningful experiences and mentorship within medicine. Many FLI students also attend community college so that they have smaller student loans and aren't as burdened by debt. The financial benefit is indisputable, but it is accompanied by a lack of opportunities, guidance, and networking. Furthermore, admissions committees often do not regard community colleges in the same rank as most four year institutions, even though the quality of education is comparable and, in our experience, prepared us well to be physician-scientists.

After gaining the education and experiences they need to apply to medical school, FLI students must then find a way to afford the Medical College Admission Test (MCAT) and the cost of applying. While the AAMC provides a fee assistance programme to reduce some of the application fees, unfortunately, this programme does not cover the costs of attending an interview, nor does it bridge the gap between applicants in the resources they've had to prepare for the MCAT. The free study material provided for the MCAT does not compare to the live classes, private tutoring hours, or extensive question banks that those who can afford to pay thousands of dollars on test preparation courses will have access to. Additionally, the critical analysis and reasoning section of the MCAT is biased towards affluent students whose education and upbringing gave them more exposure to the ornate verbiage favoured in this section.

After applying to medical schools, applicants may be given interviews with little notice, requiring them to take time off from work or travel across the country. The covid-19 pandemic has shifted these interviews to a virtual format for now, but FLI students should continue to be offered the option of virtual interviews and/or travel assistance beyond the pandemic.

In our experience, applying to medical school was a mysterious and frustrating process, where the door often felt closed to us. While a growing number of mentoring programmes (such as free, student-led programmes like [Prescribe it Forward](#)) have started trying to tackle the inequities that FLI students face, limited awareness of these programmes prevents

them from becoming as widely accessible as we might hope. To tackle this, community colleges, universities, and medical schools should actively fund, advertise, and collaborate with these innovative programmes of peer mentorship to directly support FLI students. Better promotion and awareness of these programmes may also increase the number of doctors who volunteer and offer their mentorship.

Although research studies have yet to compare the patient outcomes of FLI physicians to non-FLI physicians, growing evidence supports the idea that diverse healthcare teams deliver better outcomes for their patients.<sup>6</sup> Supporting FLI medical professionals is therefore an act of advocacy for our patients too, which helps wider efforts to reduce healthcare disparities. As physicians, FLI students will enrich medicine for both their peers and patients throughout their careers. Universities, their admission teams, and the wider medical community must do all they can to make the path to medical school a truly equitable one, understanding the particular challenges that FLI students have to overcome and removing them where they can.

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