Promoting Awareness, Diversity, & Inclusivity:

Accessibility in Medical Education

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Abstract

This project explores both previous and current limitations of medical education accessibility and their consequential impacts on the growth of medical diversity, innovation, and understanding. The high cost of applications, travel, and tuition associated with medical school limit the number and range of candidates that can truly pursue higher education, and both the cost and time associated with travelling for interviews further limit candidates in their pursuit of a medical career; these issues could be addressed by making cost-effective use of online tools and communicative platforms, many of which have been used throughout the COVID-19 pandemic. Societal standards also play an important role here, as disabled individuals are often seen as less-than and are thus more discouraged and even less trusted in high-power positions; although this is a multi-faceted issue, raising community awareness and initiating open conversations about the stigma and falsities around the disabled community is an important first step towards creating a more open and inclusive medical field. Furthermore, there are several outdated principles outlined by medical schools themselves that prevent some disabled individuals from pursuing a medical career such as physical and psychological requirements that are either vaguely outlined or that could be resolved through the use of new technological advancements and understandings. Finally, it is essential that medical schools refine their current systems and policies with inclusivity at the forefront, which includes considering disabled individuals and their needs as a priority rather than as an afterthought.

Purpose

While over 26% of U.S. adults have a disability, only 2% of them are practicing physicians and less than 1% are medical students (LeverageRx, 2019). This divide in representative healthcare leaves a wide gap in medical understanding between patients and physicians and allows for the perpetuation of the outdated medical model of disability - the idea that disability is a condition to be cured or treated rather than accepted and appreciated (Art Beyond Sight**)**. By creating opportunities to form more diverse and inclusive medical classes and communities, we can not only provide more effective medical support and care for all patients through a greater understanding of their issues but also encourage greater trust and honesty in patient-doctor relationships through inclusivity and genuine representation (Wainapel 2015). As a result of this project, I hope to inspire University of Michigan and other medical schools to adopt more inclusive policies in their application and educational processes in order to build the most compassionate and knowledgeable medical community for the future.

Required Testing

Medical school is a long and arduous journey, its entry protected by intense applications and lengthy exams, namely the Medical College Admissions Test, or MCAT. The MCAT is a comprehensive multiple-choice exam that explores a student's understanding and analysis of several science-based topics. The exam is quite long, spanning over 7 hours, and requires copious amounts of study and review tactics. For example, several current U-M undergraduate students heading to

medical school in the fall have cited spending anywhere from 3 to 6 months and hundreds of dollars on reviewing preparatory materials before ultimately taking the MCAT, this extra time and cost presenting as a limit towards accessible medical education. There is a desperate need amongst students to gain access to free, comprehensive MCAT resources; although this was once provided by Khan Academy, a global leader in educational equity, these resources are to be removed in September 2021 due to limited resources and funding (Khan Academy, 2020). Thus, medical schools and testing companies must come together to fill this gap in revision materials to better meet the needs of all students and continue to provide equitable access to resources for the creation of a well-informed and limitless medical class. This change could be as simple as having the Association of American Medical Colleges, or AAMC, continue to fund or provide Khan Academy's lecture videos and practice questions for all students or as expansive as creating an entirely new network of resources that eliminates the need for costly resources that unfairly provide wealthier students with greater preparation.

To add on, the accommodations offered by both the MCAT and the Computer-Based Assessment for Sampling Personal Characteristics (CASPer) test are stigmatized and limited in their benefits. Although the AAMC encourages students to make use of accommodations on the MCAT if necessary, many preparatory websites that provide prospective applicants application tips heavily debate the value in disclosing one's disability by asking for accommodations for the MCAT, citing certain fears and confusions around whether a student's disability will hinder their acceptance into a medical program (Eaton). And building on that, the CASPer test is a psychological exam aimed at

assessing a student's situational judgement skills, and although an accommodation form is available, its most highlighted statement emphasizes the importance of a five-minute cap on each question, limiting the types of accommodations that can be requested by students (CASPer). In both situations, disability continues to be portrayed as a hindrance to acceptance, education, and performance, and it is the responsibility of medical schools themselves to emphasize their inclusive principles to better assure and encourage students to make use of accommodations without fear of negative consequences in the review process. Furthermore, although quick response time is essential in the medical field and thus justifies the time caps set out by the CASPer exam, it is the responsibility of the testing sites to both make the accommodations offered more readily known and revise their testing standards to better define and meet the needs of students and the medical field.

Applications & Interviews

The medical school application process is incredibly costly, with many students spending $100 per round of applications per school and upwards of $5000 overall for all written applications and interview travels. This degree of cost creates an imbalance in the medical field as lower-income students may not have the same means as their peers to spend towards application and tuition costs, and this phenomenon worsens when considering disabled students as disabled individuals may have to reserve more funds for medical care expenses, leaving greater strain on other financial concerns and application spending. Although AAMC has an Fee Assistance Program to help manage the high

costs associated with each school's application, this program bases financial aid on overall household income with no room to account for a family's additional medical expenses, thus limiting the effectiveness of this program's provisions (AAMC). Thus, AAMC and other university-based scholarship programs should revise their financial forms and requirements to provide a space to elaborate on other expenses and concerns that significantly impact a student's expendable income, including large medical expenses or emergency costs to provide greater transparency and financial accessibility to students of all backgrounds and needs.

Medical school interviews also prove to be an important and expensive aspect of the application process as students must travel to the universities themselves for in-person interviews as well as find a place to rest during their stay. However, these processes present many challenges to students as some may not be able to travel easily, whether that be due to an individual's disability or work or family commitments, or may not be able to afford the expenses that come with medical school interviews. To resolve this issue, medical schools should consider keeping online interviews, as used during the COVID-19 pandemic, as a viable option for students to make the process more affordable and accessible to students. Furthermore, for students who must continue to travel across the country for their interviews, some schools have begun offering applicants low-cost to free stays by having them stay with current medical students while visiting the campus, allowing for greater envelopment into the medical community at the university and lessened financial strain.

Education

The cost of medical school has continued to exponentially increase over the years, with the average debt per medical student today adding up to over $200,000 (Education Data, 2017). Although federal loan programs and university-sanctioned scholarships are regularly offered to students, the funds offered are often insufficient in providing true financial security for students. As a result, not only are some students unable to pursue their medical education due to financial constraints, but also those who receive their medical degree are sent into the workforce with greater uncertainty and financial woe.

Furthermore, current methods of information dissemination are inefficient and costly, preventing students from taking full advantage of the lessons and resources presented to them. These issues range from the accessibility of lecture content, including captioning and lecture speed, to the cost-effectiveness of in-person lecture courses, which includes money spent to power buildings and heat classrooms.

In order to address both accessibility of lecture content and affordability, it would be beneficial for universities to take advantage of the teaching methods used during the COVID-19 pandemic. By making greater use of recorded lecture videos to relay class content, students are able to engage with classes in a more flexible manner and may be more comfortable participating in a home-based educational setting. For example, closed captioning allows deaf students to better understand class content in comparison to in-person learning, and the ability to change the speed of lectures as well as pause in the middle of videos allows students to better learn content at their own

pace and in their own way, both techniques paving the way for greater student engagement from a more diverse and inclusive class. To add on, by moving towards online learning, universities can lower their spending on building maintenance. As fewer classrooms and teaching spaces are in use, universities would have more funds to dedicate towards scholarship opportunities or student needs, and U-M in particular would move closer to their 2025 sustainability goal to further reduce greenhouse gas emissions (U-M Facilities & Operations, 2020). Although in-person classes are essential for certain topics, the push towards online learning allows students greater comfort and accessibility towards a classroom setting and allows for a more diverse range of students to truly engage with class content in a more customizable fashion.

Academic Ableism

Many schools place their own limits on how much they believe disabled students can do, whether that be due to implicit biases or a lack of past communication with disabled individuals. One particular issue that has become more apparent in the media is academic ableism. Social media has been able to highlight growing instances of academic ableism, or instances of discrimination aimed at disabled students, across the world, and has been an essential tool in both having conversations and spreading information related to ableist practices in society. Academic ableism is incredibly harmful to students as it creates an environment of disrespect and hostility that undermines student learning and ultimately enforces the incredulous notion that disabled students are less-than and unworthy of their education.

In order to combat academic ableism and its harmful effects, universities must first establish more accessible accommodation requests. According to the Disability Visibility Project, many disability services offices present students in need with "bureaucratic hurdles" to accommodation, the plethora of precise information required adding greater strain and time pressure on students (Ramírez, 2019). And after the forms have been filed, there are still instances in which the office can reject a student's required accommodations for not fitting their strict guidelines, or a professor can disregard a student's needs to better fulfill their own. Though U-M is very open about creating inclusive conditions and easy accessibility for students by including disability services office information in every course's syllabus, the information is often presented as an inconvenience and afterthought that can shame disabled individuals. Therefore, professors should express the importance of requesting accommodations at the forefront of their respective courses to create an environment in which disability is both accepted and appreciated. Finally, universities should go beyond foundational diversity training to require university staff to explore their implicit biases. By testing and understanding one's implicit views and standards of different student populations, professors and other staff may be more cognizant of their implicit behavior and actions towards different groups and actively work towards change and inclusivity.

Student Standards

When offered admission to a medical school, students are often required to sign a document outlining the essential functions and technical requirements of the university, including physical

and mental functions. However, according to a U-M study of 161 medical schools, over 50% of these universities have vague disability-based policies, with only ⅓ of the schools explicitly stating that they would provide accommodations if necessary (Joy, 2017). For example, Rutgers University's technical requirements state that a medical student must be able to "execute motor movements reasonably required" to provide essential medical care, a sentiment shared by University of Michigan's requirements (Rutgers NJMS). However, though Rutgers University's policy has remained both vague and unchanged over the years, U-M recently revised this technical standard in 2016 to accommodate for students with physical disabilities bearing that "alternative or supplemental means" are available to help students complete the required coursework (Joy, 2017). To continue, University of Michigan's technical standards also require "sufficient maturity and emotional stability" (U-M Medical School, 2020). Although these standards have again remained vaguely outlined, U-M administrators have stated that they can accommodate students with "learning disabilities", "mental health conditions", and "attention deficit hyperactivity disorder", a crucial change that all universities should implement to begin the process of medical inclusivity (Joy, 2017).

One large issue shared by universities with explicit disability policies is the ambiguous idea of "reasonable accommodations" (U-M Medical School, 2020). Although this policy that reasonable accommodations are available is theoretically functional, its lack of substance or expansive details in providing guidance to prospective students renders greater stress and harm than good. What is the defining line of reasonable, and how can students easily determine whether their accommodations

meet university requirements when there are no other provisions? To remedy this issue, universities must provide a more comprehensive guide on reasonability, including expansive lists of both offered and unavailable accommodations, and acknowledge the idea of alternative means of performing medicinal tasks. Although disabilities and conditions largely vary from person to person, students require greater insight into how their needs and accommodations are assessed in order to make well-informed decisions about their future and success, and by developing a comprehensive guide to student accommodations and making the most of alternative methods of completing course requirements, universities would project an image of transparency and understanding that is largely conducive to accessibility and the academic success of all.

Social Perception

Despite the disabled community's best efforts to spark conversations about disability rights and freedoms, many people still view disabled individuals as inept and unable to fully participate in daily tasks, let alone conduct medical procedures. Although continuing to share resources and openly communicate about social constructs of disability are essential towards securing greater disability rights and spreading activism, social perception in the medical field can begin to shift by placing greater focus on the many technological advancements that have been made to allow disabled individuals to successfully take part in performing medical processes. For example, Molly Fausone is a U-M medical student whose paralysis only permits limited use of her hands; thus, in order to conduct patient examinations, Fausone uses a device consisting of a "long, flexible wire"

and “camera at its tip” to examine a patient’s eyes, nose, and ears rather than the traditional stethoscope or other device. Although paraplegics are rarely accepted as medical students today, Fausone’s story demonstrates that disabled individuals are fully capable of working in medicine as well as the importance of inclusive design in formulating open communication and effective healthcare, beginning with student medical education (Thomas, 2018). By implementing these innovative technologies into medical schools and practices as well as open communicating to prospective and current students that these technologies are available, universities create a disability-first environment that exposes all students to the usability of these devices and consequently formulates an inclusive medical class and future staff.

Conclusion

In conclusion, there are many opportunities within the medical application and educational process to create a more accessible and inclusive program, beginning with open acknowledgement and communication about the inequalities and pitfalls that currently exist. Moving forward, it is essential to create policies with the idea of inclusivity first, which includes providing clear definition in policies and making room to account for technological innovations that allow disabled individuals to further envelop themselves into the world of medicine. As we continue to pursue avenues of accessibility, all communities must engage in conversation and action motivated towards building the most diverse and welcoming medical class and future medical staff for the betterment of the public.

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