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Opinion & Special Articles: Examining the Hidden Curriculum of Medical School From a First-
Generation Student Perspective

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Abstract

With the incorporation of pass/fail outcomes into the curricula of many medical schools, a greater premium is being placed on leadership, research, and other extracurricular pursuits. These activities, as well as the cultivation of social capital, represent a “hidden curriculum” which offers significant benefits to career development that are not often explicitly stated. The hidden curriculum benefits students with generational knowledge of the medical school infrastructure and harms first-generation and/or low-income (FGLI) students, who take longer to integrate into the professional environment and experience more challenges along the way. FGLI

students show increased persistence, and they offer diverse perspectives, but poor representation and lack of a clear pathway narrow their entry into several medical specialties, including neurology. As neurologists and educators, we play a role during a critical time of medical student professional development and can help bring the hidden curriculum into the light.

Recognition of student backgrounds should guide policies to arm all students with knowledge to make the most of the limited timeframe of medical school. To reduce the lag phase of less enfranchised students, several effective practices can be instituted with minimal modification to existing medical school infrastructure. Efforts to support FGLI students by increasing transparency of the hidden curriculum, formalized FGLI mentorship groups, and centralization of key information and resources will pay dividends with greater realization of promise and increased diversity and inclusion across more specialties.

“Education, then, beyond all other divides of human origin, is a great equalizer of conditions of men—the balance wheel of the social machinery.”

- Horace Mann

Introduction

In the United States, the share of the population with a complete college education has grown over the past decade. Although this has been touted “the great equalizer,” the wealth gap has also continued to widen.¹ In some families, a college education is the norm. In others, a new matriculant also faces the uncertain pressures of a trailblazer. This dichotomy is particularly apparent in medical school, where parental education is heavily skewed toward graduate education and thus economically privileged backgrounds.²

Fortunately, trends of increased college education in the last decade have precipitated more awareness of the “first generation” identity. In 2017, the AAMC introduced the first-generation

category into its application, allowing students who are the first in their family to receive a 4 year degree to identify themselves.³ Based on correlation with lower socioeconomic status, the AAMC also recognizes the broader category of “first-generation and/or low-income,” or FGLI.⁴ FGLI status also intersects with race, gender, and sexual orientation, meaning that FGLI students are more likely to have multiple marginalized identities.⁵ To date, most research has centered on FGLI undergraduates, with little data pertaining to graduate students.⁶

Medical schools have outlines for the competencies and knowledge they expect students to garner. However, there are other skills that must be cultivated to utilize the full resources of medical school and position oneself for residency. This “hidden curriculum” has previously been defined as the “unspoken or implicit values, behaviors, procedures, and norms that exist in the educational setting.”⁷ These factors help socialize students into medicine and build their professional identities, and they include but are not limited to: fitting into clerkship teams, navigating the hierarchy of medicine, networking with faculty in specialties of interest, obtaining effective letters of recommendation, optimizing clinical/elective scheduling, balancing high impact extracurriculars and research, seeking awards and leadership positions, and framing residency applications or interviews. These pursuits are not always promoted efficiently or explicitly. They are more readily visible to students with guidance from family that have completed higher education. Furthermore, there are financial barriers that create additional challenges for FGLI students. This commentary will discuss actions that medical schools and faculty can take to serve students of all backgrounds more equitably (Table). These recommendations are particularly relevant to the field of neurology, since formal exposure to the field often occurs later in medical school, providing additional time for the advantages of more enfranchised students to accumulate.

Exposure to the hidden curriculum varies between medical students

Medical school is an environment where success begets more success over a finite course of time. Students who know how to make productive use of their time from the onset reap a tremendous and compounding advantage, frequently certified by acceptance into honors societies such as AOA or by recognition with school specific awards. Underrepresented students, including FGLI students, may have less certainty choosing a specialty, less mentorship, and greater feelings of “imposter syndrome.”⁶ Additionally, these students are likely to have increased financial stress, poorer mental health, more difficulty fitting in with their peers, and greater difficulty relating their experiences to friends and family. As such, they often experience more trial and error along the way. Some trials can be wonderfully instructive. Others are simply inefficient.

In medical school, the non-academic pursuits of the hidden curriculum are required to build a compelling CV. The exigency of these pursuits is often not as immediately apparent to FGLI students, who are frequently raised with the mentality that hard work and good grades are the only currency of success.⁸ In my case, a chance cultural connection prior to medical school gave me a mentor who introduced me to these additional pursuits. However, without institutional focus on preparing FGLI students, first exposure to the hidden curriculum will remain stochastic.

Early mentorship is the best way to illuminate the hidden curriculum

Greater institutional acknowledgment and proactive measures are needed to clarify the hidden curriculum in the pre-clinical and clinical environments. Undergraduate FGLI students have been shown to have more difficulty accessing mentorship and finding research opportunities, which

likely extends into medical school.⁹ The growth in pass/fail curricula may open doors to specialties that historically match or are pursued by fewer underrepresented students.¹⁰ However, without strong mentorship relationships, FGLI students may be less likely to consider these careers, due to an incomplete sense of each specialty and/or wariness that they would be out of place.¹¹

One of the most effective measures to demystify the path through medical school will be to establish robust peer and faculty mentorship structures for FGLI students at an early timepoint. At the most basic level, simple awareness of FGLI faculty can lower the activation energy to finding mentorship among less frequently pursued specialties such as neurology. Many neurologists also come from FGLI backgrounds, but this is an invisible identity not evident on faculty profiles. Recognition of FGLI faculty is an important action that departments can take to demonstrate representation, facilitate mentorship, and help recruit students into neurology. Identification as FGLI should be left to the individual discretion of faculty, but many would be eager to provide an approachable shared perspective.

Steps to establish mentorship at an institutional level

Beyond simple exposure, medical schools should consider a more concerted approach to connect FGLI students with faculty mentors and other support structures. Mentorship can be built into existing educational programs. Since student doctoring groups are some of the earliest experiences of medical school, these programs can be additionally used to pair FGLI students and faculty, providing an avenue for longitudinal and personalized guidance, support, and professional development.

Other steps can be taken to provide mentorship outside of the classroom. In recent years, many medical schools have developed FGLI student groups.³ These groups provide an additional opportunity for mentorship pairings and can help students leverage a multi-mentorship model. One such initiative is modeled by the STRIVE group at Northwestern, a near-peer program which pairs underrepresented medical students and residents.¹² In this structure, the mentor has recently been in the shoes of the mentee, a simple but effective means for closely-tailored guidance. Near peer mentorship can improve student persistence, academic outcomes, and well-being, based on similar interventions in the undergraduate population.^{13,14}

Steps to connect students with additional support

There are additional steps that institutions can take to improve outcomes for FGLI and underrepresented students beyond the realm of mentorship. Formalized FGLI groups constitute an organized front for student advocacy which can best represent needs that vary over time and with societal factors. For example, shortly after fellow students and I established the First in Family group at Michigan, the COVID-19 pandemic began. Thus, our first actions were to conduct a student needs assessment, build an emergency fund, and share food pantry resources. Formalized groups can also keep track of the needs of their constituency and provide an avenue to access medical school leadership to address such concerns.

Many great resources already exist both within and external to medical institutions. The AAMC recently established a website for FGLI students and advisers focusing on professional development, emotional support, and financial support.⁴ Medical schools frequently have their own materials too. Simply consolidating these resources into a clear central location can

dramatically improve the utilization of preexisting infrastructure. Institutions should consider creating FGLI-specific webpages dedicated to highlighting existing resources.

Steps to address the financial component of FGLI status

Finally, medical schools should examine their financial programs and commit to changes that improve access to the hidden curriculum. For example, many students use external subscription-based resources in their pre-clinical years. These resources focus on high-yield topics favored by board exams and are used by students to optimize scores and free up time for non-academic pursuits. However, the cost of these services can be a barrier.

Medical schools and departments should consider establishing general funds to subsidize or reimburse FGLI students who seek opportunities that present unexpected or prohibitive costs. Some of these costs are mandatory, such as board exam fees, professional dress for clinical elective and interviews, and transportation to clinical sites. These costs add thousands of dollars in unanticipated expenses on top of medical school tuition. Other costs, such as those required for conference attendance, participation in away rotations, or research opportunities, may seem elective and thus disincentive FGLI student participation, but they are key aspects of the medical education. If medical schools are not transparent about these costs and do not consider internal funding opportunities to support these endeavors, it is likely that they will see unequal participation by FGLI students.

Within the neurology community, the AAN offers the Medical Student Diversity Program to support attendance at the national meeting.¹⁵ Many institutions offer away rotations for students

interested in neurology, with stipends to cover expenses for underrepresented students. Away rotations are not required in neurology, but there are clear efforts underway to support students interested in neurology and increase diversity in the field. These opportunities should be further advertised and highlighted.

Conclusion

Residency programs are currently shifting towards a more holistic review, aiming to identify individuals that can enhance overall cultural competency.¹⁰ With the deemphasis of grades, social capital will play an increasing role. Working hard will always matter, but the efficiency of effort is modulated by connections and mentorship. Thus, it will become critically important to provide the script of the hidden curriculum to FGLI and underrepresented students at the earliest possible stages. Medical schools should aim to establish formalized mentorship, support, and resource infrastructure to pursue this goal. Students cannot find what they do not know to seek. As neurologists and educators, we have an opportunity to serve as mentors and advocates for students of all backgrounds, because they will be our residents and peers of tomorrow.

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Barriers	Strategies to Demystify the Hidden Curriculum
Invisible disadvantages	<ul style="list-style-type: none"> • Early identification of FGLI students • Early professional development with all students
Learning hidden curriculum	<ul style="list-style-type: none"> • Integration into student body • Near peer mentorship with fellow students and faculty mentorship
Fewer models of professionalism	<ul style="list-style-type: none"> • Established faculty mentorship opportunities
Less exposure to medical specialties	<ul style="list-style-type: none"> • Increasing visibility of FGLI faculty in each department
Student advocacy	<ul style="list-style-type: none"> • Institutional FGLI groups to address unmet needs • Creating centralized resources, e.g., FGLI specific web page
Financial barriers	<ul style="list-style-type: none"> • Transparency on additional expenses besides tuition • Emergency funds • Subsidization of commercial resources • Board exam fees • Interview clothing • Away rotation stipends/costs • Research and conference funding

Table: Considerations and opportunities to promote FGLI medical student success

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