In the shadows: medical student clinical observerships and career exploration in the face of COVID-19

Dans l'ombre : stages d'observation et exploration des possibilités de carrière pour les étudiants en médecine face à la COVID-19

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The COVID-19 pandemic has disrupted medical education, including shadowing (or clinical observerships) for pre-clerkship students. Shadowing is a common avenue of career exploration.[1] However, due to learner and patient safety considerations, as well as limited supervision capacity, schools have prioritized access to hospitals for clinical clerkships and residents,[2] with some schools prohibiting shadowing for pre-clerkship learners. The value of pre-clinical physician shadowing in career exploration prompts special consideration given pandemic-dictated restrictions. Students experience tensions caused by the pandemic's impact on equitable access to shadowing, resulting in lost time for career exploration and clerkship preparation.

Inequitable access to learning and career exploration opportunities is a longstanding issue in medical education. For instance, shadowing in suburban settings is distinct from shadowing in large cities due to differences in demographics and socioeconomic climate, ultimately determining the patient population from which students learn.[3] The availability of tertiary hospitals and specialists similarly contributes to educational access. Social capital also influences the ability of students to access shadowing experiences. Many medical students are from privileged socioeconomic backgrounds.[4] Such students often have physician relatives or friends through which to arrange shadowing opportunities.

While geography and social capital are not novel, additional constraints on shadowing in the face of COVID-19 have brought them to the forefront. Learner anxiety is exacerbated when the professional imperative of adhering to shadowing restrictions is at odds with a desire to overcome personal inequities by seeking shadowing experiences. Variable COVID-19 caseloads around the nation have forced medical schools to adopt region-specific educational policies, resulting in discrepancies. Specifically, areas with higher incidence have opted for an entirely virtual curriculum that precludes shadowing, thus eliminating the benefits of shadowing for medical students. We have observed that students with greater social capital can offset this perceived opportunity gap by leveraging personal connections to engage in "underground shadowing," particularly in areas with lower caseloads or more access to clinical sites.

Pre-clerkship students often perceive shadowing as essential for exploring specialties of interest.[1] For students pursuing highly competitive residency programs, some see shadowing as an avenue to improve their competitiveness. Students' perceptions of lost opportunities for career exploration and networking amidst the pandemic contributes to a fear of missing out, which is exacerbated by hearing about the underground shadowing experiences of some of their peers.

Besides career exploration, shadowing is seen by students as a means to better prepare for clerkship,[5] likely because it is a low-stakes, non-evaluative opportunity to become more comfortable within clinical environments. By removing this chance to learn implicit rules of clinical culture, students are concerned that their transition to the high stakes learning environment of clerkship may be more difficult.

In the wake of changes imposed by COVID-19, we learned through our institution that traditional strategies employed by schools to help students navigate the murky waters of their career exploration journey may now be inadequate in addressing student anxieties which are exacerbated by the pandemic. The mystique of residency matching, insufficient understanding of the actual value of shadowing, and lack of knowledge about a medical school's plans to address these evolving needs all add to students' uncertainty and anxiety. During uncertain times, transparency and frequent communication from faculty must be prioritized.

The initial inclination may be to reassure students that they will eventually be ready. However, this may not assuage students' anxieties and fear of falling behind in their professional development. One potential solution to help resolve these tensions is virtual shadowing, which has recently been implemented at our institution. While some aspects of in-person shadowing cannot be easily replicated in a virtual milieu (e.g., observing the interprofessional, clinical, and social environment or culture; learning technical skills), online conversations with physicians for career exploration can help expand students' potential access to a wider variety of clinical practices that geographic or socioeconomic barriers (e.g., remote practices) would otherwise restrict. Unfortunately, patient care areas such as in-patient, emergency, and surgical medicine are logistically less conducive to virtual shadowing. Furthermore, given the limited supply and high demand for virtual shadowing, our institution uses a lottery system to provide equitable access, granting one-time shadowing opportunities to a portion of the class per month based on availability.

In parallel with virtual shadowing, alternative activities can help students close the perceived gap in learning and career exploration. Mentorship programs and interest groups can facilitate connections between students, residents, fellows, and staff physicians to learn more about specialties and career paths. Interactive "career chats" sessions with physicians individually or as a panel offer students an informal space to ask questions about specialties and learn strategies for career exploration and development. Faculty can also encourage students to pursue "informational interviews" with physicians to foster one-on-one conversations to explore different professional journeys and lifestyles. Finally, inviting students to join virtual teaching or grand rounds previously not available to preclinical students but enabled due to technology can provide insight into the collaborative and multidisciplinary nature of patient care and a contextual understanding of the specialty as well as the residents' experiences. Although these initiatives address some gaps, further consideration of new approaches to clinical experience is needed to ensure safe and equitable access to valuable career exploration in these unprecedented times.

The persistence of shadowing restrictions increases students' need to have avenues to connect with peers over their shared worries and frustrations about limitations to career exploration and clinical exposure. Possibilities include informal class-wide virtual events, formal virtual town hall meetings with student leaders to discuss and relay feedback to faculty, and student-run podcasts to normalize these unprecedented changes to shadowing and anxieties created by the pandemic. Lastly, we encourage researchers to further explore students' perceived values of pre-clinical shadowing and advance our understanding of its utility as a career exploration and learning activity.

Accessibility constraints on shadowing during COVID-19 have stifled traditional avenues of career exploration and learning, brewing anxiety in medical students as a result. Virtual shadowing, mentorship programming, career panels, informational interviews, social events, and frequent student-faculty communication show promise in lifting some of these barriers while preserving student morale and confidence.

Potential solutions to replace in-person shadowing

- Virtual shadowing opportunities assigned by a lottery system
- Online conversations and informational interviews with physicians for career exploration
- Mentorship programs and interest groups
- Interactive 'career chats' sessions with panel of physicians
- Participation in virtual teaching or grand rounds

References

1. Gharahbaghian L, Hindiyeh R, Langdorf MI, et al. The effect of emergency department observational experience on medical student interest in emergency medicine. *J Emerg Med*. 2011;40(4):458-62. https://doi.org/10.1016/j.jemermed.2010.02.020

2. Association of American Medical Colleges. *Checklists of principles and considerations for medical students in the clinical learning environment during COVID-19.* 2020. Washington (DC): Association of American Medical Colleges. https://www.aamc.org/media/48251/download

3. Strasser R, Worley P, Cristobal F, et al. Putting communities in the driver's seat: the realities of community-engaged medical education. *Acad Med*. 2015;90(11):1466-70. https://doi.org/10.1097/acm.0000000000000765

4. Khan R, Apramian T, Kang JH, Gustafson J, Sibbald S. Demographic and socioeconomic characteristics of Canadian medical students: a cross-sectional study. *BMC Med Educ*. 2020;20:1-8. https://doi.org/10.1186/s12909-020-02056-x

5. Turner SR, White J, Poth C, Rogers WT. Preparing students for clerkship: a resident shadowing program. *Acad Med.* 2012;87(9):1288-91. https://doi.org/10.1097/ACM.0b013e3182623143