Career Development Considerations for Academic Physician Mentees and Mentors in the Time of COVID-19: Jump in or Just Dip a Toe?

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Abstract

The COVID-19 pandemic has disrupted medical research, pushing mentors and mentees to decide if COVID-19 research would be germane to the early career investigator's developing research portfolio. With COVID-19 halting hundreds of federal trials involving non–COVID-19 research, mentors and mentees must also consider the broader moral calling of contributing to COVID-19 research. At the time of writing, the National Institutes of Health had responded to the pandemic with significant funding for COVID-19 research. However, because this pandemic is a new phenomenon, few mentors have expertise in the disease and relevant established resources. As a result, many mentors are unable to provide insight on COVID-19 research to early career investigators considering a pivot toward research related to this disease. The authors suggest 4 ways for mentees and mentors to respond to the changes the pandemic has brought to research funding and opportunities: (1) include COVID-19 research in existing portfolios to diversify intellectual opportunities and reduce funding risks; (2) negotiate the mentor–mentee relationship and roles and expectations early in project discussions—considering, as relevant, the disproportionate burden of home responsibilities often borne by early career faculty members who are women and/or from a minority group; (3) address any mentor limitations in content expertise; and (4) if the decision is to pivot to COVID-19 research, select projects with implications generalizable beyond this pandemic to other infectious outbreaks or to the redesign of health care delivery. Mentors and mentees must weigh the relevance of COVID-19 research projects to the postpandemic world and the amount of available funding against the developing interests of early career investigators. Academic medical centers nationwide must enable seasoned and early career researchers to contribute meaningfully to COVID-19 and non–COVID-19 research.

Mentorship is a bidirectional process between mentor and mentee, essential to the career development and satisfaction of both. Early career investigators, including junior faculty, research fellows, and postdoctoral trainees who have formally committed to a long-term research-focused career in academic medicine, benefit from the expert guidance of the more established investigator. The mentor–mentee relationship often leads to increased research productivity and faster academic promotion for both parties. Research has shown that characteristics of effective mentees include openness to feedback, taking responsibility for “driving the relationship,” and paying attention to timelines, all particularly pertinent during the COVID-19 pandemic. Traditionally, mentors have also benefited from the relationship through greater career satisfaction and more frequent retention as faculty members than those who don’t serve as mentors. Effective mentors in academic medicine identify what is in the best interest of the mentee and are adept at cultivating the mentee’s interests while remaining accessible and providing support with activities and resources that facilitate securing grants and publishing. Straus et al found that successful mentoring relationships rely on the key features of reciprocity, mutual respect, clear expectations, personal connection, and shared values. The mentorship process, like much of the health care delivery and biomedical research enterprise, has been disrupted by COVID-19, leaving both mentees and mentors searching for the recipe for academic success in a world where the ingredients have fundamentally changed.

Traditionally, mentors often engage early career investigators in an existing research program. This form of apprenticeship enables mentees to help plan future projects while building a formative research project and publication portfolio that showcases their developing niche. Answers to these key questions (given in no particular order) can guide the mentor and mentee in selecting a project:

- What interests the mentor and the mentee?
- What is relevant to society?
- What is fundable?
- What interests the mentor and the mentee and draws on the mentor’s existing resources?

Answering these 3 questions during the pandemic has forced mentors and mentees to decide if they should jump into COVID-19 research or just dip a toe. They must determine how to structure their research portfolios, balancing their own interests with what is needed in the medical research world. In this article, we offer 4 suggestions for mentors and mentees to help in this determination, which we developed using our experience as a mentor–mentee team.

Relevance of COVID-19 Project to Society

In March 2020, researchers in the United States ceased all nonessential research activities to mitigate the possibility of spread of COVID-19 within labs. More than 3 months later, on June 22, the first
organized research efforts contributing new knowledge about COVID-19. 

Once funds were appropriated, agencies within the U.S. Department of Health and Human Services announced new funding opportunities for investigators evaluating the responsiveness of health care delivery systems, health care professionals, and the overall U.S. health care system to the COVID-19 pandemic.

In addition, COVID-19 research funding opportunities have been announced by federal agencies, foundations, and the private sector, such as the U.S. Department of Defense, the Patient-Centered Outcomes Research Institute, the Bill and Melinda Gates Foundation, and even Amazon Web Services. For early career investigators directed to focus on a niche, COVID-19 research—against a backdrop of declining, inflation-adjusted federal funding for research—is not only attractive but may also be necessary. The famous bank robber Willie Sutton allegedly gave this response to a question about why he robbed banks, now known as Sutton's Law: "Because that's where the money is." With COVID-19 research being "where the money is" or may be for the foreseeable future, mentors and mentees will need to discuss upcoming project opportunities and the incentives favoring COVID-19 research alongside the long-term career goals of the early career investigator.

**Team Interests and Resources**

When identifying opportunities for career and professional development in the early investigator's trajectory, mentor and mentee are likely to take a reflective pause at the third question, assessing the team members' areas of interest. Early career investigators and their mentors must ask themselves if they should continue on their investigative path of a population- or disease-focused area of expertise, such as cardiac arrest or stroke, or instead pivot to COVID-19 research. This question was the impetus for this article, as the mentor–mentee relationship of the authors, like that of many others, has veered from the standard career-development road map. We both feel uncertain about our own careers and, in turn, our ability to maintain a successful mentorship relationship as we identify and conduct new lines of investigation in health services research. Mentors, many of whom are tenured professors, may feel uncertain about transitioning from their well-established area of interest toward COVID-19 research; such a step is akin to starting anew. Within their niche, many mentors have established relationships with funding agencies focused on topics that the rapid reorganization of federal, state, and philanthropic resources caused by the pandemic may have disrupted or upended. Additionally, mentors may worry that prior seminal work (e.g., outcomes studies, emergency department use) may no longer be relevant in the pandemic's new normal in which health care delivery in numerous settings has been transformed.

Research findings from the first months of the pandemic suggest that early career investigators, lacking the established reputation of mentors, may have to divert more time and energy to initiating pandemic-related research than their mentors do. Established researchers and their teams at academic institutions, on the other hand, have pivoted successfully to COVID-19 research. Some of these teams have experience in shifting research efforts from other disease outbreaks, including severe acute respiratory syndrome, avian influenza, and the Ebola virus disease. Mentor and mentee will need to address the capabilities of the mentee to meaningfully perform high-impact investigations: Because of their junior status, early career investigators will likely have fewer resources and less time and financial backing than more established senior researchers if they transition to COVID-19 research.

In deciding whether to pivot, investigators face a dilemma: The scientific community accesses COVID-19 research more frequently than non-COVID research, and the news media emphasize COVID research more than non-COVID research. Investigators are aware of the push to pivot toward COVID-19 research: The BMJ has received more than 600 research manuscript submissions per month during the pandemic, more
Suggestions for Mentors and Mentees

Mentors should primarily strive to understand the short- and long-term goals of the mentee and how COVID-19 research projects may be incorporated into a developing portfolio. While broad recommendations are likely premature and not generalizable to all investigators given the unique goals of each mentor–mentee relationship, we suggest 4 ways to navigate this challenge: (1) include COVID-19 research in existing portfolios to diversify intellectual opportunities and funding risks; (2) negotiate the mentor–mentee relationship and roles and expectations early in project discussions—considering, as relevant, the disproportionate burden of home responsibilities often borne by early career faculty members who are women and/or from a minority group; (3) address any mentor limitations in content expertise; and (4) if the decision is to pivot to COVID-19 research, select projects with implications generalizable beyond this pandemic to other infectious outbreaks or to the redesign of health care delivery.

Diversify intellectual opportunities and funding risks

Mentoring is invaluable in helping the early career investigator balance competing priorities and the possibility of a change in research focus. Mentors should consider advising mentees not to spread themselves too thin by initiating new COVID-19 research projects if their other clinical or nonclinical investigations are in key phases. Early career investigators must take into account the time investment needed for COVID-19 research and the significant competition in this potentially short-lived area of interest. The need for non-COVID research has not diminished, so mentees could focus on strengthening their areas of investigation while projects are on hold to ensure work can quickly resume when research restrictions are lifted. For example, mentors could encourage mentees to write up the current state of research in their area so that future investigators could pick up where the early career investigator left off.

If pursuing COVID-19 collaborations, the mentee and mentor will also need to discuss academic credit for work, as both mentors and mentees may seek to demonstrate expertise in COVID-19 research and the higher visibility associated with COVID-19 research in the media and in policy work. While varied intellectual opportunities and funding risks were already considerations in some non–COVID-19 environments with limited funding, the pandemic has increased the need for mentees to strategically consider all possible lines of investigation and funding mechanisms.

Negotiate roles and expectations in the mentor–mentee relationship

Mentors and mentees will need to explicitly define their roles in the COVID-19 project timeline, identifying the project lead early on. Because of other professional obligations, the mentor may not be able to be the lead for COVID-19 research. In such situations, the team must consider the risks of having the mentee serve as the project lead, such as the absence of translatable research expertise, a less-established reputation and network of collaborators, and a smaller likelihood of securing grant funding than the mentor.

The mentor role also includes key actions with respect to the mentee, including providing career guidance, offering emotional support, and focusing on the work–life balance.2 These suggestions for mentor actions are not specific to the COVID-19 pandemic but offer a chance for the team to get back to basics, centering them on effective techniques to get through this difficult time.

Mentors should be aware of unique challenges some early career investigators face: racial and gender inequities in academic medicine that the COVID-19 pandemic has exposed.29 Because many Black health care workers entered the field to care for underserved populations, they often work in settings with inadequate access to COVID-19 testing and personal protective equipment. Thus, the burden of the pandemic has fallen disproportionately on their shoulders, creating greater physical and mental dangers for these academic physicians than for their White colleagues.9,30,31

In addition, the mentor–mentee negotiation of roles and expectations must take into account the juggling of home responsibilities, including caring for dependent older family members and children. This burden falls disproportionately on female faculty and has been shown to disrupt their productivity more than that of their male counterparts. Efforts have been made to ensure equity by setting the due dates of grant proposals, reports, and renewal requests with the reality of family life in academics in mind.29,32,33 Mentors can adopt similar frameworks and efforts when collaborating with mentees to determine roles in COVID-19 research and beyond to ensure equal opportunities for all early career investigators.

Address any mentor limitations

Because this pandemic is a new phenomenon, few mentors are expert in the disease. While intellectual bias may favor the continuation of current projects, mentees and mentors should not let their inexperience keep them from trying to secure funding or to expand their research. While identifying roles and limitations, mentees and mentors may rethink the traditional relationship, and in this time of disruption, consider the advantages of mentoring networks, professional societies, peer mentoring, and virtual mentoring (i.e., via phone or an interface with a video component, like Skype). Virtual interactions are not new but, lacking adequate infrastructure, were not as popular in the past as they have become since the onset of social distancing and widespread teleworking. In a rapid response to the pandemic, academic medical centers have invested in teleconferencing tools, collaboration software, and virtual data management platforms, so early career investigators may want to consider new and evolving professional and mentorship networks.
Pivot toward projects with generalizable implications

Finally, if the early career investigator prefers a partial pivot, mentor and mentee must rethink the recruitment, enrollment, and study protocols of traditional research conducted in brick-and-mortar sites. The team should consider how their COVID-19 research protocol will be applicable in future COVID-19 waves, other disease outbreaks, or broader health care delivery. In particular, research into telehealth services has received significant congressional funding, and progress in this area will be valuable beyond the COVID-19 pandemic. In addition to the possibility of providing translatable research findings, COVID-19 research could serve as a launching pad to take early career investigators beyond research in disease outbreak, particularly if they develop skills in public health or health services research, contact tracing research, bench procedures supporting diagnostic technologies, or epidemiological applications, such as geographic information system analyses, which could easily be transferred to research of other diseases.

Furthermore, mentors can learn from mentees and, like their mentees, use the upheaval of the pandemic as an opportunity to pivot to new areas of research, develop new skill sets, or reconsider previous scholarly interests whose funding was less “safe” even before the pandemic. Mentors can also work with mentees to test new areas of research without the risk of needing to reconfigure or shift the direction of an entire lab or team. For example, a team researching the intersection of older adults and acute care could build on this research when pivoting to identify the impact COVID-19 has had on older adults presenting to the emergency department for other conditions.

Conclusions

Mentors are crucial in helping early career investigators build a professional identity in academic medicine. We need sound science with innovative thinking for research, including COVID-19 research, now and in the future. Mentors and early career investigators must weigh the relevance of COVID-19 research projects against how much funding is available and how interested they are by the topics. Ultimately, COVID-19 and non–COVID-19 research portfolios and career plans do not have to be mutually exclusive: Mentees and mentors can work together to ensure that our nation’s best minds are brought to bear on the seminal challenge the pandemic presents as well as on other critical areas of research.

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References

Even over the phone, I could hear the tears.

I was working with the Minnesota Department of Health making COVID-19 contact-tracing calls as part of a new remote elective. Specifically, I was working on the Hospital and Deceased Queue, calling the loved ones of hospitalized patients acting as a proxy for those who were too sick to talk or had died. Interviews punctuated by tears were not unusual; by its very nature, the work was emotionally charged.

When COVID-19 hit, I had been poised to start my third year of medical school. After 2 grueling years, primarily in the lecture hall, I had been so excited to get to the clinic—to see patients! Because of safety concerns and personal protective equipment shortages, my third year had started as a letdown, with a lot more Zoom sessions and a lot less interaction with actual patients than I had anticipated. This contact-tracing elective presented a unique opportunity for patient contact.

In medical school, we were taught strategies to facilitate making a personal connection with patients during interviews. I tend to be more formal and a little stiff, especially when I feel nervous, so making that connection had been difficult for me then. It was even more difficult now. However, over the weeks of making contact-tracing calls, I began moving away from filling out questionnaires and toward having real conversations. And I started talking about feelings—not symptom-pursuit “How are you feeling?” Feelings either. Emotions. It felt uncomfortable at first. Emotions? My job here was to record facts. But I discovered the 2 can go hand-in-hand. Taking time to acknowledge emotion gave the people on the other end of the line space, which facilitated the information gathering I was so myopically focused on. And so I started paying attention: What were people saying? When were they saying it, and how? What were they not saying?

My current interview had started with laughter, which was uncommon. The woman I was speaking to was hospitalized with COVID-19 and in the background of the call, I could hear a mesh of machine beeps and nursing staff bustle. Despite being hospitalized in the midst of a global pandemic, she initially seemed brimming over with enthusiasm, even cheerfully informing me at one point that she had put me on speakerphone because her nurse was giving her a shot! It was in describing a visit from her grandson that she grew quiet. Since she was required to socially distance, she told me, she had not been able to hug him. I listened to her voice choke off, swallowed into the ambient beeping and background murmuring—and I could hear the tears. As she silently cried, I froze, wondering what to do.

Yes, I had more questions. We would get to them. Yes, I felt unsure of what to say. That uncertainty had grown familiar. The silence stretched 1 heartbeat, 2. Then, I said, “Tell me about your grandson. It sounds terribly hard to see him but be unable to come physically close.” And she did. Talking seemed to lighten the weight of sadness for her. After, we circled back and completed the interview, laughing once more.

My contact-tracing interviews were completely patient-driven, in the sense that I had no time limit. In the future, I will not have the luxury of unlimited time. I hope to have the luxury of face-to-face contact. Whatever variables differ, I will keep as a constant the necessity to acknowledge emotion. To my future patients I say this: When you give me face-to-face contact, whatever variables differ, I will keep as a constant the necessity to acknowledge emotion. To my future patients I say this: When you give me a chance to acknowledge your feelings, I may still freeze up for a moment, wondering how to best show that I care. But I will take this lesson that a global pandemic taught me and give space and significance to your emotion—and we will look at it, together.

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