

Trainee Experiences During COVID-19

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The COVID-19 pandemic is a generation defining, history-altering event whose impact is still being felt today.

One group significantly affected by the pandemic is medical trainees. Peri-COVID trainees have unprecedented experiences in this brave new post-COVID world, exacerbated by policies and proceedings in terms of how the hospital system functioned in the early post-COVID timeframe, quarantines, utilization of virtual and telemedicine modalities not only for patient care but also for trainee education. With COVID – and perhaps future endemic/pandemic events to come – drawing from these experiences can serve to guide educators and mentors alike on how best to address future challenges to foster trainee growth into competent, fulfilled physicians.

For this commentary, I invited three medical students I had worked with to reflect on their experiences training during COVID-19. Their accounts are of particular interest as these students are in the class of 2024 and, thus, have received all of their medical train-

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ing post-March 2020 when the pandemic truly took hold in Wisconsin.

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COVID-19 has had a vast impact on my medical school experience; in fact, I don't know what medical training is like without it. I entered medical school in 2020, just around when the disease was nearing its

students-- myself included--became close with our assigned learning groups as they were a place to talk and decompress. They also offered an avenue to meet in real life. I also was fortunate because I lived with many roommates who provided friendship and support as I transitioned into medical school.

Although online education was burden-

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peak. As a student originally from California, it was surreal moving across the country to attend medical school in Wisconsin at this time. During our first year of preclinical curriculum, teaching was done almost solely over Zoom, Blackboard, or WebEx where faculty would have to deliver lectures to a lot of blank screens or silent faces. As a learner, it was easy to get distracted when listening to hours upon hours of online lectures all day. Additionally, former in-person activities, such as anatomy and case-based small-group learning, were modified to be online, which made it tough to visualize anatomic structures spatially or participate in quality discussions. During clinical skills sessions with standardized patients, we were told to not perform certain respiratory exam procedures to prevent further risk.

However, as a byproduct of COVID, many

some, one positive aspect of COVID-19 learning was the more efficient use of online meetings and workflow. The summer after my M1 year, I did research in the Department of Human Oncology where many things were streamlined to be virtual. Because of this, I was able to travel back home to California and had time to visit Milwaukee and Chicago. As COVID was finally dwindling and cities were fully reopening, one of my fondest memories will always be watching the Milwaukee Bucks win the NBA championship in person with hundreds of thousands of other fans. It reminded me of the beauty of the human experience and why we needed social interaction, pride, and passion in our lives after COVID.

My medical school journey continued as I entered my second year, and our preclinical studies started transitioning to in-person. It was

a breath of fresh air to be able to interact with more of our classmates in a physical setting and to see all of my peers at once. The lecturers and professors were more enthusiastic and charismatic in person, and it was nice to have more opportunities to interact, spend time, and have fun with my colleagues.

Once we started our clerkships, our education became almost identical to a pre-COVID clinical rotation. One change was that we had to remember COVID-19 as an additional differential diagnosis and vaccine suggestion. We also had to recall certain testing policies and various rules and regulations on COVID precautions. I had never had medical school clerkships before COVID, so masks became a very normal part of the hospital for me. Now that mandates are slowly being lifted, it feels very peculiar but also exciting that we are transitioning to a new era.

As I am writing this, I recently finished STEP 2 and am continuing more clinical rotations before applying for residency. COVID-19 has had a huge impact on my medical school experience, making an already tough curriculum even less forgiving. However, even despite COVID, my time in medical school has been one of the best experiences of my life – meeting, collaborating, and socializing with some of the most intelligent people I’ve ever met. Bonding through the hardship of medical school has made me grow both professionally and emotionally and there is certainly nothing I would change about it. Even more so, because of COVID, I’ve learned more about what it means to be human and have found further meaning into why I am excited to eventually be a physician.

–Anthony Bui



It’s hard to describe the differences in studying medicine during the COVID-19 pandemic when you didn’t have the opportunity to experience it pre-pandemic, but the biggest overarching theme I felt over the course of my time in medical school has been loneliness. On my first day, I met my classmates through masks—unable to see what their faces looked like—and when I spoke to them about study techniques, everyone truly seemed a bit lost. At first there were some in-person events and

classes; however, as COVID cases rose later in our first semester, those brief moments of contact with my peers decreased. Many libraries were closed, and peer study groups were established in secret. I frequently struggled to keep focus in the online learning environment, which was often disturbed by issues with tech-

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nology. I began watching lectures from previous years to learn material, so I could consume it with higher quality audio, better resolution, and fewer distractions. Being stripped of study environments and peer groups made me fail to realize the volume of medical knowledge I truly needed, and the impact on my first few exams and semester grades was devastating. Over Thanksgiving break, I barely saw my family, instead choosing to study for those 4 brief days in an effort to pass my final exams. Over the following semesters, my grades improved—especially as libraries, coffee shops, and other study locations began to open. But even outside of classes, my medical education was stunted in many ways as I was deprived of nonclinical volunteering experiences and opportunities to connect with attending physicians and mentors in our respective fields of interest.

There were, however, some advantages to this experience. During this time, I was able to train for a half ironman 15 hours a week or more, which was aided by scheduling long indoor bike rides during lecture time. This flexibility was something I took for granted early in my career, but it soon changed.

Over my M1 summer, I participated in the Shapiro research experience at the University of Wisconsin-Madison and was able to generate research that led to two publications and several presentations. At the same time, I was able to meet regularly with my peers and, along with my friend Ryan, helped to teach a group of medical students to become better at tennis. My final semesters of my preclinical

year were much easier than the first, aided by the ability to study with my friends and learn what external resources they used to be successful.

As I transitioned into my clinical year, the loss of the flexibility I had come to cherish due to COVID restrictions ended. I was now round-

ing on the wards at 6 am and grinding out practice questions after work until I passed out from exhaustion. I had to learn work-life balance quickly. I felt like I was chasing a car that was always getting further away, unable to truly understand the clinical nuances of the patients I was caring for. At this point, I again found myself always on opposite schedules from my closest friends. To make matters worse, the OMICRON variant emerged and ripped through the clinicians where I was completing my family medicine rotation. I finally contracted the COVID-19 virus and was absolutely wiped out and exhausted for 10 days. I was pulled off of clinical rotations and lost out on a large chunk of learning. During that time, I participated in telehealth appointments while feverish and sick. However, for some of my classmates on inpatient rotations, a COVID absence meant having to repeat coursework and the possibility of delayed graduation; so, on the whole, I felt lucky.

However difficult COVID has made my medical school experience, I have never let it defeat me or my desire to become a physician. In some ways, it strengthened my resolve, and, in other ways, I found unique ways to adapt and overcome. I believe the biggest impact to my education was the loss of meaningful peer and mentor connections, which would have strengthened my educational experiences and allowed me to feel like a full part of the medical community earlier in my career.

–Samuel Tesch



I began medical school at the University of

Wisconsin School of Medicine and Public Health (UW SMPH) in August 2020, amid the chaos and uncertainty that accompanied the initial wave of the COVID-19 pandemic. Whether this unsteady start affected our overall success and match rates remains to be seen, as the majority of us are submitting residency applications this fall. What is certain, however, is that—as for most people—the effects of the pandemic permeated nearly all aspects of our personal lives, schooling, and work.

Our classes were almost entirely virtual for the first year of medical school. We had once weekly in-person sessions for case discussion groups and one or two monthly clinical skills sessions to prepare us for Observed Structured Clinical Examinations. All other didactic courses, including our anatomy labs, were held online. Courses transitioned to being held entirely in person in my third semester of school. There was a bit of a catch-up period in anatomy lab, as many of us had not previously worked with cadavers and required instruction on dissection techniques. Although I plan to apply into a nonsurgical residency, several peers applying into surgical fields expressed concern over the impact this course structure had on their anatomy learning prior to starting surgical clerkships.

Meetings for student organizations, including our initial student organization fair, were also held virtually, which contributed to significant social challenges for new medical students hoping to connect with their peers and faculty. Despite this, I, along with many others, joined and led student organizations. It was difficult, however, to form any substantial relationships with peers—including upperclassmen, who previously would have provided guidance about topics such as course selection, test preparation, and tips for residency applications.

Faculty mentorship suffered for the same reason. Informal meet-and-greets between student organization faculty mentors and participants were hindered significantly by the virtual environment. As such, opportunities for students to get to know faculty and develop mentor-mentee relationships were few and far between. Having to seek out these opportunities through setting up a virtual meeting cer-

tainly limited my one-on-one and small-group interactions with faculty, and I don't feel that I experienced much in the way of faculty mentorship—especially in my chosen field—until I began clinical rotations. Each student was, however, assigned to a faculty member who served as a “longitudinal teacher-coach” and directed our clinical skills sessions and competency review meetings. In my case, this meant working with Susanne Seeger, MD, an adult neurologist, who both advised her students on academic matters and consistently checked in

Hippocrates' famous oath reverberates a call to arms to the medical community to foster meaningful relationships—to uphold and support our community and society of medicine.

on our mental health and well-being despite the challenges of virtual meetings. Her stable and caring presence in the lives of her students was (and still is) sincerely appreciated.

Most of the friendships I developed during my first two semesters were sustained largely by group chats and text messages, and I socialized only sparingly in person with a group of 3 to 5 peers. I was lucky to live with my younger brother during this time and, therefore, did not experience too much loneliness, but multiple friends shared how much they struggled emotionally during that first year due to the combined effects of the significant stress of a rigorous medical school curriculum and their social isolation. Several friends required inpatient and/or outpatient behavioral health services for worsening anxiety and depression. Although it is entirely possible that they would have required this support even prior to the pandemic, their stories are a testament to the degree of psychological stress many students experienced during those first few years. The UWSMPH administration made a point of repeatedly communicating the mental health resources available to students, which was a helpful and appreciated effort on their part to mitigate these stressors.

Overall, I don't feel that my medical knowledge or interpersonal skills with patients were significantly affected by beginning medical

school in a pandemic, nor have I gathered from faculty that the abilities of our class differ significantly from those prior. But I do feel that my class has, to some degree, been flying by the seat of our collective pants through this whole ordeal. I suspect the faculty and administrative leadership feel much the same, as it was certainly challenging for lecturers and content directors to adjust to virtual teaching. It's frustrating to be the first group to go through any sort of curriculum change, as there are bound to be bumps along the road, and this was a

larger change than most. In this case, I really do think the school mostly did the best it could under difficult circumstances. In the end, I'm confident the members of our class will emerge as competent, caring physicians prepared to tackle the challenges of residency despite our rocky start.

—Margaret Zwick

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These three learners have described their experiences as medical trainees during the COVID-19 pandemic. In doing so, several themes/motifs are identifiable – technologic and logistical challenges of virtual medical school curriculum, social isolation, the blessing/curse of virtual engagement, and the impact on work-life balance, as well as resiliency and perseverance.

As we collectively move past the peak of the COVID-19 pandemic, we cannot help but look back and evaluate. Did we miss something? What else ought to have been done? With medical student safety as a priority, options on prevaccination approaches were limited. However, with adherence to guidelines from the Centers for Disease Control and Prevention for masking and social isolation, one could consider having had hybrid medical training in the postvaccination timeframe. Moreover, taking advantage of the low risk of outdoor transmission for community-building events, for exam-

ple, could have been utilized early and often to stave off isolation and improve wellness. In my own experience as a medical student, I found being part of a creative writing group to be a breath of fresh air and opportunity to connect with my peers outside of studying. Hopefully, social groups (eg, interest groups, friend groups) will be nimbler and more adaptable to virtual/hybrid or safer meeting styles in future pandemics.

Are we ready as a medical education community to face a new pandemic? Have our experiences in COVID-19 taught us how to better support medical trainees during pandemics? Though specifics regarding transmissibility, virulence, mortality/morbidity are all important considerations for the next pandemic, COVID-19 has identified core issues faced by medical trainees and ought to guide us in the future. Rapid, clear communication, curriculum adaptability across various media/approaches, and multidisciplinary mental health/wellness initiatives will all serve to support medical trainees in their already arduous journey towards becoming health care professionals. In a report of their 2021 survey of 14 medical schools from the Medical Student Well-being Research Consortium, Dagher et al¹ noted that despite vaccination availability and other efforts, the rate of burnout was about the same in 2021 as in 2020 (50% vs 53%, $P=0.06$) and loneliness was actually higher (55% vs 50%, $P<0.001$). Similar to COVID-19, the next pandemic is unlikely to have a panacea or quick fix. Furthermore, as we all know, medical students, let alone the medical community at large, is at high risk for burnout, loneliness, stress independent of pandemics.

In my opinion, healthy relationships are fundamental to building resilience and overcoming the challenges brought on by medical training. Thriving diverse relationships, such as those with peers, upper and underclassmen, mentor-mentee, family and/or friends, as well as a community outside of medicine are vital for support, belonging, and wellness. In a society that has grown ever digitized with various social media platforms, we are engaged in a collective loneliness whereby community and connection give way to façade and illusion.

Kurt Vonnegut, in his work, *Palm Sunday*:

An Autobiographical Collage, charges us to be bold: “What should young people do with their lives today? Many things, obviously. But the most daring thing is to create stable communities in which the terrible disease of loneliness can be cured.”²

As a medical education community, we are called to shepherd and guide. While this is understood as competency training, it should extend beyond this domain holistically. Hippocrates, in his oft-cited and quoted oath, said this well:

“To hold my teacher in this art equal to my own parents; to make him partner in my livelihood; when he is in need of money to share mine with him; to consider his family as my own brothers, and to teach them this art, if they want to learn it, without fee or indenture; to impart precept, oral instruction, and all other instruction to my own sons, the sons of my teacher, and to indentured pupils who have taken the Healer's oath, but to nobody else.”³

Historical qualifier and quibbles aside, Hippocrates is talking about the practice of the art of medicine beyond competency, evaluations, and test scores. He is talking about a deeper humanistic commitment of relationships and connection. It is like comparing a live orchestral performance to an artificial intelligence-generated quantized song file – though both “play the right notes at the right time,” the orchestra ebbs and flows, organic and alive, creating the art of music that captures the mind, body, and soul that notes on a page or digital time signatures cannot. Hippocrates' famous oath reverberates a call to arms to the medical community to foster meaningful relationships – to uphold and support our community and society of medicine.

These three trainees bore their souls and I am grateful to them for sharing their experiences training during COVID. From their stories, I hope we can gain insight into ways we in the field of medicine can adapt in these times to foster strong trainee-mentor relationships – strong relationships that can welcome them into the fold and guide them in their pursuits and growth from trainees to physicians practicing in Wisconsin and beyond.

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