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Authors

Chirch, Lisa M
Armstrong, Wendy S
Balba, Gayle P
et al.

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REVIEW ARTICLE

Education of Infectious Diseases Fellows During the COVID-19 Pandemic Crisis: Challenges and Opportunities

Lisa M. Chirch,[1] Wendy S. Armstrong,[2] Gayle P. Balba,[3] Prathit A. Kulkarni,[4] Constance A. Benson,[5] Victoria Konold,[6] Vera P. Luther,[7] Obinna N. Nnedu,[8] Sarah Perloff,[9] Raymund R. Razonable,[10] Wendy Stead,[11] George R. Thompson III,[12] and Michael T. Melia[13]

[1]Division of Infectious Diseases, Department of Internal Medicine, The University of Connecticut School of Medicine, Farmington, Connecticut, USA, [2]Emory University School of Medicine, Atlanta, Georgia, USA, [3]Division of Infectious Diseases, Georgetown University Hospital, Washington, DC, USA, [4]Infectious Diseases Section, Department of Medicine, Baylor College of Medicine, Houston, Texas, USA, [5]Division of Infectious Diseases and Global Public Health, University of California, San Diego, California, USA, [6]Section of Infectious Diseases, Department of Pediatrics, The University of Chicago, Chicago, Illinois, USA, [7]Department of Internal Medicine, Section of Infectious Diseases, Wake Forest School of Medicine, Winston-Salem, North Carolina, USA, [8]Infectious Disease Department, Ochsner Clinic Foundation, New Orleans, Louisiana, USA, [9]Infectious Disease Fellowship Program, Internal Medicine Residency Program, Einstein Medical Center, Philadelphia, Pennsylvania, USA, [10]Division of Infectious Diseases and Internal Medicine, Mayo Clinic College of Medicine and Science, Rochester, Minnesota, USA, [11]Division of Infectious Diseases, Department of Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts, USA, [12]Division of Infectious Diseases, Department of Internal Medicine, University of California – Davis, Sacramento, California, USA, and [13]Division of Infectious Diseases, Department of Medicine, Johns Hopkins University, Baltimore, Maryland, USA

One of the many challenges that has befallen the Infectious Diseases and Graduate Medical Education communities during the coronavirus disease 2019 (COVID-19) pandemic is the maintenance of continued effective education and training of the future leaders of our field. With the remarkable speed and innovation that has characterized the responses to this pandemic, educators everywhere have adapted existing robust and safe learning environments to meet the needs of our learners. This paper will review distinct aspects of education and training of the Infectious Diseases fellows we believe the COVID-19 pandemic has impacted most, including mentoring, didactics, and wellness. We anticipate that several strategies developed in this context and described herein will help to inform training and best practices during the pandemic and beyond.

Keywords. COVID-19; fellowship training; medical education; program directors; wellness.

The coronavirus disease 2019 (COVID-19) pandemic has presented the Infectious Diseases (ID) community with daunting challenges in the realms of patient care and fellow education. As educators, our responsibility to ensure a robust and safe learning environment for our fellows has never been greater. While much has been thrust upon us as providers, teachers, and role models, so much has been asked of our fellows, who also have stepped up and served in frontline clinical roles. While continuing with the core ID training necessary to ensure their readiness for independent practice, they have been asked to keep up with the rapidly emerging literature around severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)/COVID-19, and many have served as leaders and references for colleagues. Many fellows have had to postpone or abandon prior plans for research projects, electives, and other endeavors and have taken on pandemic-related projects in the hopes that their work will make a tangible difference in real time. Of course, this has occurred on a background of immense stress, challenging fellows' ability to maintain physical and emotional wellness.

In an effort to assist program directors (PDs) with assessing various areas of their programs, this paper will review distinct aspects of the education and training of the ID fellows we believe the COVID-19 pandemic has impacted most, including clinical training and teaching, didactics, scholarship, and wellness, and suggest strategies to address those areas. Notably, these are not all unique to ID, and many are relevant to other graduate medical training programs. We anticipate that several strategies developed in this context will help inform training and best practices during the pandemic and beyond.

In the Era of COVID-19, What Strategies Represent Clinical Training Best Practices?

One of the most important concerns among PDs during the upheaval of a pandemic is whether fellows continue to receive adequate training, see a diverse and heterogeneous patient mix, and move toward independent practice. Strategies that address these issues while ensuring adequate coverage for clinical services include clinical service restructuring. For example, adding a rotating schedule of 1 fellow per week covering a COVID service can maintain the same rotation structure while allowing

for a sense of normalcy for others. In this scenario, the possibility of downstream schedule disruption should be anticipated, reinforcing the need for flexibility. Another strategy has been deploying other personnel such as faculty and advanced practice providers to staff COVID clinical services, allowing fellows to maintain their prepandemic schedules. Other strategies include creating nonteaching services to keep the fellows' workloads and education as "normal" as possible. As with any clinical rotation, fellows should be queried about their experiences and clinical performance measured to determine the impact of such practices.

Increases in patient volume and disease severity required some institutions to operate at Accreditation Council for Graduate Medical Education (ACGME) Pandemic Stage 3, in which "routine care education and delivery must be reconfigured to focus only on patient care" [1]. Despite these circumstances, fellows need to continue to learn from the clinical practice of ID, and teaching remains integral to our role as educators. Telemedicine has emerged as a critical tool for safe delivery of health care and clinical training across inpatient and outpatient care settings in the context of the COVID-19 pandemic. Trainees are able to safely gain clinical competency as they continue to see a wide variety of patients. While the benefits to patients have been clearly described, opportunities and challenges related to training ID fellows via telemedicine and in relevant competencies are novel [2, 3] and should be investigated further.

What Strategies Provide Effective Inpatient Consultations While Minimizing Exposure and PPE Use?

With the exception of the physical examination (PE), the process for performing inpatient consultations is largely unchanged when using telemedicine. Trainees collect relevant historical, laboratory, and radiographical data from careful review of the electronic medical record. If a face-to-face (FTF) interview is not feasible, patients may be interviewed either by telephone or video. Depending on individual circumstances, trainees may then perform a modified PE and review with an attending via virtual platform or FTF. If only the attending is able to examine the patient, the attending should explicitly discuss relevant findings with the fellow to reinforce the value of the PE. Alternative innovative modalities to bring fellows into the room while the attending examines the patient should be considered. One such innovation utilizes a headset fashioned with a cell phone camera that fits under personal protective equipment (PPE), allowing the attending physician to enter the room to examine the patient, with fellows or other learners observing via camera (personal communication from Dr. Lee Goeddel: https://vimeo.com/401415129).

What Strategies Optimize Outpatient ID Care During a Pandemic?

Outpatient telemedicine has been rapidly employed by most institutions and offers opportunities for excellent patient care and education. As described by 1 first-year ID fellow, "The rise of virtual outpatient visits is an unexpected silver lining to an otherwise grim situation. The pandemic forced us to start using existing technologies to their fullest potential and reduce barriers to medical and mental health care for many low-income patients."

Despite widespread use of outpatient telemedicine, logistic differences exist in its implementation. In 1 approach, the attending and trainee are each physically present in different rooms within the outpatient clinic; in another, all 3 parties are in different locations. After completing the initial televisit, the trainee discusses the case with the attending, then the fellow and attending return to complete the televisit, with the fellow outlining the plan. The attending then has an opportunity to provide the fellow with feedback regarding communication skills. Alternatively, the attending could be present for the entire visit (with a midvisit break for the fellow and attending to confer), providing further opportunity for the attending to observe the fellow's history-building and communication skills. This kind of direct observation is a potential benefit of the telemedicine environment, as the attending's presence is not as physically obtrusive as it might be during FTF visits. Patients may not have the impulse to talk directly to the attending, thereby permitting a cleaner assessment of fellow performance. Common strategies to optimize virtual care should be assessed and reviewed with the trainee as well [4].

Opportunities to assess history-gathering and communication skills via teleheath align well with fundamental components of competency-based medical education, including patient care, interpersonal and communication skills, and faculty feedback [5]. If the virtual platform, patient, and institution allow session recording, attending physicians can provide feedback via post hoc review of fellow-delivered care as an alternative miniclinical examination (CEX); fellows may gain new insights into their care delivery by viewing a video of themselves engaged in real-world virtual patient care.

What Strategies Can Be Used to Preserve Fellows' Clinical Teaching Activities?

In the process of practicing consultative medicine, fellows serve as clinical teachers to primary teams—communicating recommendations and explaining their rationale. Fellows also routinely serve as teachers to residents, medical students, and other learners rotating on ID services. Under routine conditions, a number of barriers may hinder effective Fellow As Clinical Teacher (FACT) interactions, including team structure, the consult requesting process, the culture of the subspecialty division, and personal factors [6]. The COVID-19 pandemic has posed additional challenges to FACT activities, as many clinical teaching services have been restructured to reduce exposures and preserve the resident workforce. Additionally, the need for physical distancing has led to many teams conducting a portion of clinical rounds in new formats. For example,

rounds and huddles may be conducted with only part of the clinical team at a time, resulting in some trainees potentially missing out on teaching and learning opportunities, and many institutions have implemented "virtual" rounds. Furthermore, previously identified barriers to effective FACT interactions such as high resident and fellow workload remain important considerations, as primary teams and ID consult services deal with increased patient volumes and the stress associated with surges of cases.

Fortunately, many of the aforementioned challenges can be mitigated or overcome. First, when service restructuring and/or physical distancing does not allow learners to be present in traditional team configurations, fellows can be coached on being intentional about sharing teachable moments with learners, incorporating physically distanced learners using videoconference technologies, and structuring conversations with primary teams using strategies such as the PARTNER framework (Table 1) [7]. Second, when a portion or all of clinical rounds are conducted remotely, fellows can be coached on engaging all participants and facilitating small group learning through questioning, listening, responding, incorporating thinking time, and paying attention to the group dynamic [8]. Similarly, fellows can be trained to optimize videoconferencing technology to facilitate small group teaching (Table 2). Lastly, fellows can be introduced to clinical teaching techniques that can be incorporated when time is limited such as the 1-minute preceptor model of clinical teaching [9].

WHAT STRATEGIES CAN HELP PROVIDE HIGH-QUALITY DIDACTIC SESSIONS AND ENSURE SCHOLARLY OPPORTUNITIES DURING THE COVID-19 PANDEMIC?

A broad range of didactic activities is a core component of fellowship training curricula [10]. These include lectures, case conferences, grand rounds, simulations, case-based teaching, and journal clubs. The suspension of large group FTF interactions has forced many experiences to be suspended or converted to

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Table 1.   PARTNER Approach to Teaching in the Setting of Consultation

*P*artners with the learner	• Create learning contract/expectations (eg, "I saw Mr. A and have recommendations, but first I wanted to discuss the case with you and do some teaching. Do you have 5 minutes to talk?")
*A*ssess the learner	• Determine what the learner knows about the patient • Determine what the learner knows about the disease • Ask higher-order questions (eg, "What does your team think is going on?"; "What were the factors that led you to that conclusion?"; "What would you do if…?")
*R*einforce positives/give feedback	• Focus on the positives • Incorrect assumptions/facts/synthesis can be corrected here or during the teaching phase
*T*eaching objectives	• Determine teaching objectives—don't feel like you have to teach everything about the disease (eg, if you have 5 potential teaching points but you find out during the assessment phase that the learner knows 3 of them, focus on the other 1–2) • Take time into account—aim for no more than 2–3 teaching points
*N*ew knowledge— this is the teaching phase	• Teaching points should be short • Share thought process about your approach to the patient • Address learner's knowledge gaps • Teach general concepts when able • Give the learner the tools needed for critical reassessment of the patient
*E*xecute recommendations	• Give or recap consult recommendations
*R*eview	• Allow time for learner to ask questions • Invite further collaboration

Adapted from Chen et al. [7].

Table 2. Tips for Small Group Facilitation and Teaching Using Videoconferencing Platforms

Before the session	• Make a plan for your topic and how you will use the videoconferencing technology
	• Consider using screen share features during your discussion
	  ◦ PowerPoint presentations
	  ◦ Real-time literature searches
	  ◦ Sharing illustrative images (eg, key physical exam findings, gram stains, path specimens)
	• Consider using virtual whiteboard
	• Consider using polls or quizzes
	• Consider using breakout rooms
	• Share the topic, general organization/plans, and any prereading with attendees
	• Make sure attendees have received an invitation for the videoconferencing session that includes date, time, and instructions for joining the session
	• Ask attendees to plan to use their video function

Starting the session	• Log on 5 minutes before the session start time • Make sure attendees are familiar with functions of the platform ◦ Consider pointing out: grid view vs speaker views, location of the mute button, chat box and any other features you plan to use • Ask attendees to mute their lines when not speaking • Set expectations for how you would like attendees to contribute to the conversation • Explain how you will be using the chat function during your session • Consider assigning an attendee or co-presenter to monitor the chat box while you are speaking • If you are recording the session, let attendees know

During the session	• Reiterate your agenda/plan and stick to it
	• Start off with introductions and icebreakers
	• Be intentional with facilitating the conversation
	  ◦ Make sure everyone gets a chance to contribute
	  ◦ Pay attention to the group dynamic
	  ◦ Ask for thoughts/reflections from participants who have been less verbal
	  ◦ Ask questions, actively listen, and respond
	  ◦ Incorporate "thinking/reflecting time" when participants are learning new information

After the session	• Send an email with important teaching points and dates of future sessions (if applicable); consider including the following in your email:
	  ◦ Recap of take-home points
	  ◦ Pertinent articles for additional reading
	  ◦ A recording of the session, if applicable

virtual platforms, requiring programs to rethink the delivery of high-quality education.

Virtual platforms allow programs to continue structured educational curricula while complying with physical distancing directives and have been met with varying levels of satisfaction due to inherent advantages and disadvantages (Table 3). Anecdotally, many PDs have observed an increase in conference attendance, as faculty members, emeritus staff, community physicians, public health experts, and others traditionally unable to attend have engaged with learners bringing different perspectives and expertise that strengthen discussions. Virtual platforms have accelerated the adoption of alternative teaching methods, like team-based learning, that promote active learning. "Breakout room" features facilitate team-based learning by allowing learners to be pushed electronically to smaller groups and then back together to the same larger virtual room instantaneously. We have found that the time investment required to learn and master the basic and advanced features of virtual platforms pays substantial dividends by enabling active learning during teaching sessions. In fact, more meticulous preparation in advance of virtual didactic sessions may result in more effective and well-delivered and -received presentations.

Virtual learning does have significant drawbacks (Table 3). It is particularly difficult for presenters to recognize nonverbal cues in an audience that is often muted and not seen, leading to the analogy of a "blindfolded speaker." For fellows at earlier stages of teaching and presentation abilities, this can be especially challenging. We encourage PDs to coach fellows through this process and provide feedback. Online formats also limit the culture-building and comradery essential to the well-being and mental health of faculty and learners. Increased mindfulness around and incorporation of morale-building activities may help overcome this reality. In addition, for individuals who are not technologically adept, inevitable frustration and avoidance of participation ensues, and even the more skilled have a steep learning curve to utilize the full capabilities of various platforms. Some training programs have adopted a hybrid approach of limited in-person attendance based on institutional policy, combined with real-time video streaming of the interactive educational activity [11].

Online simulation materials, such as the one available through the *New England Journal of Medicine,* have been developed to prepare fellows to address COVID-19-related questions [12]. In-person simulation exercises can be implemented using a role-play activity between 2 faculty members, one playing a provider with questions (the caller) and the other the expert providing answers (the provider carrying the pager). Fellows then engage in a pair-share activity to discuss their approach to the caller's questions, followed by debrief and feedback. The pandemic also lends itself to dynamic "tabletop" simulation exercises examining outbreak responses as participants make decisions about restricting airline travel, quarantines, case identification and contact tracing, testing strategies, etc. Several of these tabletop simulation exercise packages have been developed by the World Health Organization and are downloadable in different languages [13].

Challenges posed by the pandemic on large didactic activities have also created opportunities for guided self-directed learning. Using this approach, fellows identify areas of educational need in conjunction with PDs or other faculty. The fellow independently researches the topic and discusses their synthesis and conclusions with a faculty supervisor. Fellows have been motivated to utilize this learning format during the COVID-19 pandemic given the explosion of literature coupled with the urgency to critically review and immediately apply relevant findings. Not only has this led to a better understanding of the basic science, pathophysiology, epidemiology, and implementation science of SARS-CoV-2 and COVID-19, but close reading of preprint publications has improved appraisal of findings. Learning to generate and maintain enthusiasm for literature review when the pandemic has subsided represents an exciting opportunity. Further, these opportunities can serve as the foundation for conferences and journal clubs, thereby providing another venue for community building. Links to conferences could be shared with other divisions, departments, or training programs, thereby providing fellows with additional opportunities to teach faculty, peers, and more junior learners.

Table 3. Advantages and Disadvantages of Online ID Didactics

Advantages (Examples)	Disadvantages (Suggested Approaches)
Flexible learning (asynchronous and synchronous)	Requires self-motivation and discipline (promote personal responsibility)
Creative teaching techniques (online team-based learning, simulation exercises)	Limited networking and social interaction (encourage members to build professional relationships)
Individualized learning (self-directed learning)	Asynchronous learning does not allow for real-time faculty–fellow interaction (provide online summary statements to address questions from learners)
Accessibility (all members can participate)	Limited nonverbal communications (partner with a moderator to facilitate interactions)
Convenience (no commute/travel to campus)	Perception that virtual education is not as effective as traditional didactic teaching (gather real-time feedback for improving the virtual educational platforms)
Equal participation (limits monopoly from more vocal participants)	Traditional instructors may be challenged and uncomfortable with technology (provide tutorials on various technological platforms)
Anonymity (anonymous online chat/ messaging)	
Cost savings (food budget for meetings)	

Just as feedback and evaluation remain important in the clinical arena, as traditional didactic education adapts to the "new normal," evaluation of novel educational programming by fellows and faculty is critical. Real-time high-quality assessment and feedback on the effectiveness of new strategies are essential to identify opportunities for improvement, reinforce strengths, and further enhance the educational process.

As with didactic activities, the pandemic has presented new challenges and opportunities in research and other scholarly activities. While many research laboratories scaled down, limiting fellows' productivity in bench research, the pandemic also paved the way for opportunities in clinical and translational research. Expanded access or other clinical trials at programs linked to academic centers yielded a wide array of possibilities in which fellows could participate. Many fellows were also able to develop original research projects related to SARS-CoV-2 and COVID-19, from observational studies on laboratory data to pilot projects on diagnostic testing and investigational therapies. The unusually large number of abstracts authored by trainees from institutions across the country presented at IDWeek 2020 is testament to the successful efforts of PDs and other faculty to encourage and involve trainees in these scholarly efforts, while simultaneously tackling the pandemic on the clinical front lines.

WHAT STRATEGIES CAN SUPPORT FELLOW WELLNESS DURING A PANDEMIC?

As we innovate to address fellow educational needs, we must acknowledge that effective learning is hindered by high levels of stress [14]. Unhealthy stress in medicine, or "burnout," is defined as the "combination of emotional exhaustion, depersonalization, and low personal accomplishment caused by the chronic stress of medical practice" [15]. Burnout affects many physicians [15, 16], and trainees are among those most affected; a 2014 study showed that residents and fellows were statistically more burned out (60.3%) and depressed (50.8%) with lower quality of life markers and higher levels of fatigue compared with early career physicians [17]. Furthermore, burnout is well known to negatively affect quality of patient care, increase health care costs, and worsen physician health [18]. Physician wellness efforts seek to address this crisis by prioritizing positive mental well-being and freedom from stress and emphasizing the importance of quality of life across physical, mental, and social domains to allow for physician self-actualization [19]. More recently there has been an explosion in wellness literature in the 2000s, the creation of the National Academy of Medicine Action Collaborative on Clinician Well-Being and Resilience in 2016, and, notably, the addition of well-being requirements to the ACGME Common Program Requirements in 2017 [20–22]. In order to fulfill our educational mission, it is imperative that we address trainee burnout and wellness.

While a significant burnout problem already faced physicians, COVID-19 has introduced enormous new challenges. Unique burdens carried by ID physicians during this crisis include fear for one's personal health, concern for family and coworkers, feelings of helplessness as we struggle to provide optimal care with inadequate resources, and the inability to escape constant intrusions at work and at home. Evidence from prior epidemics shows that burnout, psychological distress, and post-traumatic stress frequently manifest in health care workers (HCWs) who care for affected patients [23, 24]. Importantly, HCWs with fewer years of experience are at higher risk. Underrepresented in medicine (UIM) trainees may also be at higher risk given evidence that they feel more socially isolated and less satisfied with academic learning environments, which often still lack quality curricula in health care disparities [25, 26]. These challenges may be further magnified as UIM trainees are asked to care for patients from the same minority groups so disparately affected by the pandemic. Early studies of negative mental health impacts of the COVID-19 pandemic on HCWs in China have already revealed that depression, anxiety, and insomnia are common [27]. Even HCWs not working in high-incidence areas are unlikely to escape the risk for negative psychological impact; nonfrontline staff suffered from quasi–"survivor's guilt" during the 2003 SARS outbreak in Canada, experiencing a "sense of isolation, lack of efficacy and feelings of frustration about not contributing" [28]. As we strategize about how to address these concerns, it is important to recognize that HCWs are often self-reliant and may be reluctant to participate in discussions about the emotional impact of caring for patients or to proactively seek professional help [23, 29]. Therefore PDs must remember that avoidance may be a symptom of trauma rather than resilience and to check in with trainees who may not be sharing concerns or engaging in group wellness activities [30].

We must endeavor to support colleagues and fellows through this. While there are many evidence-based wellness interventions, the limited literature available from prior epidemic/disaster situations suggests that we prioritize interventions that address basic physical and mental health needs, provider safety, and professional respect. Modeled on Maslow's Hierarchy of Needs, Shapiro and colleagues developed a "Physician Burnout and Wellness Hierarchy" that directs leaders to rank wellness initiatives, starting with basic interventions such as easy access to healthy food and mental health support before moving on to "higher-order" interventions like group debriefing sessions and resiliency training [31]. The reason behind this prioritization is simple: No one can engage in yoga classes and meditation when they are scared, hungry, and psychologically traumatized. In a time of tremendous psychological threat to HCWs, focusing first on basic wellness interventions is crucial. Table 4 lists a selection of wellness interventions recommended in the literature.

Mentoring programs offer another mechanism for personal and professional support. While considered an integral component of graduate medical education [32–34] in nonpandemic times, mentoring relationships are even more important during times of crisis. Not only are mentoring relationships important

Table 4. Wellness Interventions

The Basics	Intermediate	Higher Level
Food/Hydration - Set up a mini popup grocery with staple dried goods - Ensure healthy snacks are in workrooms; make sure trainees have access to water through water coolers - Distribute lists of open on-campus food access, donated meals - Give trainees electronic "on-call money" via funded dining hall/food court cards to be used at on-campus dining - Ensure there is a place to eat (while socially distanced) and store food close to work areas (fridge, microwave) Mental Health - Provide self-screening tools for burnout, mental health, and substance use [39, 40]; ensure these are distributed during virus surges - Distribute contact numbers for on-campus mental health support for employees (such as Employee Assistance Program) - Allow trainees to attend appointments during work hours - Create programs with your psychiatry department to give trainees priority access to mental health providers Sleep - If on-campus call while deployed to cover other services, ensure there is a place to sleep - Protect trainees from unnecessary off-hours calls/pages - Educate trainees on fatigue Breastfeeding - Ensure there is protected time and a hygienic space for pumping - Make sure there is storage for breastmilk Safety - Send out contact info for Security, on-campus Public Safety - Be transparent about safety policies, especially when it comes to PPE, patient contact, etc. - Share your hospital's Patient Safety Event Reporting link or hotline - Be transparent about health insurance benefits, paycuts, furloughs, layoffs	Connection and Inclusion - Create buddy system for peer support [28] - Host virtual departmental happy hour/nonclinical "hangouts"; scavenger hunts, trivia, online games, recipe exchange - Program leadership should schedule recurring meetings with fellows to check in, especially when COVID volume is high - Facilitate the doctor–patient connection by including trainees in patient face-time, via video if necessary Facilitated Reflection - Hold virtual debrief sessions in a safe space (see ID Fellowship Training Program Directors Resources—Teaching Fellows in the Time of COVID[a]) - Reach out to colleagues in Palliative, Ethics, Social Work, Psych to help moderate/take advantage of existing infrastructure - Acknowledge the emotional toll caused by the disproportionate burden of COVID-19 in communities of color Professional Respect - Host: virtual townhalls, staff forums, or group meetings on policy/decision-making, especially for COVID-19; actively include the fellows - Collaborate on COVID-19 research opportunities; include the fellows - Address concerns (regarding exposures, safety, etc.) in a timely manner; always close the loop - Identify and quickly address technological barriers to work productivity; no camera for video visits, billing concerns, etc. - Troubleshoot work from home and childcare issues without judgment [41] - Ask for and give feedback	Training and Planning - Emotional intelligence training [42, 43] - Resiliency training [44, 45] - Plan for the second wave: How do we do better next time? - Incorporate equity and antiracism teachings into curricula to educate on health care disparities - Make space for "return to normality" - Plan for return to research, mentorship, etc. Appreciation - Virtually celebrate shared wins (Patient extubated? Make a HIPAA-compliant and socially distanced TikTok) - Express appreciation/gratitude for deserving team members (recognize a fellow floating to the MICU, etc.) Resources - Keep a running list of free stuff, free services, discounts - Provide childcare resources, such as links for virtual education or emergency childcare services - Provide temporary housing resources for employees who do not want to expose their family - Encourage virtual group exercise, meditation, gratitude journaling, etc. - Take advantage of wellness initiatives run by others online or at your institution (GME office or Chiefs) [41]

Adapted from Shapiro et al. [31].

Abbreviations: COVID-19, coronavirus disease 2019; ID, Infectious Diseases; MICU, medical intensive care unit; PPE, personal protective equipment.

[a]https://urldefense.com/v3/__https://www.idsociety.org/professional-development/fellows-in-training-career-education-center/id-fellowship-training-program-director-resources/__;!!N0rdg9Wt14VyLLb2Virell-aQyGORQB_qvVcqffb00pOcBs_uvdWR31puYs4-CbCGsjrribl$.

in fostering professional and psychosocial growth [35, 36] and in preparing fellows for independent practice, mentorship programs enhance mentee performance and job satisfaction [37, 38] and have benefits for mentors, including improved problem-solving and communication skills [34]. Peer and near-peer mentoring can help decrease anxiety, particularly during times of transition or stress, and can positively impact the mental health and overall wellness of incoming fellows.

Time for mentoring and for mentees to seek out mentors may be impacted during a pandemic, as many institutions are dealing with high clinical volumes and physicians are managing both professional and personal obligations. However, given the professional benefits of mentoring and career advising on preparing fellows for a transition into independent practice, training programs should devote attention to preserving these experiences. Similarly, peer and near-peer mentoring can positively influence wellness and morale and should be prioritized.

CONCLUSIONS AND RECOMMENDATIONS

We are witnessing the necessary restructuring of educational practices at all levels—from elementary to postgraduate—in real time and across the globe; much of this restructuring may be for the better. As cases wane in some areas and surge in others, it is clear that this crisis is far from over and that we have much to learn as providers and educators. We will need to continue to adapt to a changing health care landscape, maintaining educational strategies that have worked and replacing those that have not. It is our contention that many of the virtual tools and methods developed and implemented in this context will be valuable additions to ID fellow education in a postpandemic era. Some examples may include fostering active and self-directed learning, implementing precepting strategies using telemedicine that result in effective and efficient patient care and fellow education, utilizing virtual didactic techniques that lead to more robust participation, and augmenting faculty mentoring meetings with peer mentoring. A careful assessment of the educational elements introduced during this time to determine which aspects most enhance fellows' educational experience will be critically important. Maintaining and adjusting these elements as needed will allow for flexibility and better preparedness when such crises arise in the future.

As ID PDs during a pandemic that continues to disproportionately affect certain demographic groups, highlighting social injustices and determinants of health, we must above all function as role models to our trainees. We must gracefully adapt to these constantly changing new circumstances of quarantine, isolation, physical distancing, and remote care and instruction, while maintaining the utmost quality and compassion for our fellows to observe, emulate, and ultimately model themselves.

Acknowledgments

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