Opportunities for education during the COVID-19 pandemic

Khang D. Nguyen, MD,[a] Tyler Enos, MD,[a] Travis Vandergriff, MD,[a] Rebecca Vasquez, MD,[a] Ponciano D. Cruz, MD,[a] Heidi T. Jacobe, MD,[a] and Melissa M. Mauskar, MD[a,b]
Dallas, Texas

The rapid spread of coronavirus disease 2019 (COVID-19) around the globe has necessitated implementation of social distancing measures to slow disease dissemination and conserve personal protective equipment. These actions have changed how we live and work. The COVID-19 pandemic has challenged our mission to teach the next generation of dermatologists. In this moment, we have been dealt new obstacles, which demand flexible solutions. We wish to share our experiences with continuing residency education on a virtual platform.

During this international disaster, some may ask, why bother with education? Physicians from a variety of specialties, including dermatology trainees, are contributing to front-line patient care in COVID-19 hot spots.[1] In places where there is not an immediate demand for dermatologists to serve alongside our colleagues in acute patient care, education can continue and may serve as a way to maintain normalcy. The duration of this pandemic is unknown, and delays in reengineering education may result in long-lasting deficits in resident training. Virtual education can also establish a sense of camaraderie and connection when many are experiencing social isolation.

Recent technologies have made virtual resident education accessible to all training programs. High-quality camera technologies and high-speed Internet have made group-meeting software a feasible replacement for traditional learning experiences (Table I). We have sought to ensure that these technologies supplement rather than distract from the fundamental goals of our teaching, which are to help trainees gain knowledge, improve critical thinking, and facilitate dialogue among residents and attending physicians. Our basic and clinical science lectures, grand rounds conferences, and image sessions are now broadcast live and recorded for future viewing with Microsoft Teams (a Health Insurance Portability and Accountability Act–compliant platform, Microsoft, Redmond, WA). Dermatopathology lectures, delivered throughout the week, are taught with live-broadcast sessions; with self-paced review of glass slides, whole scanned slides, and photomicrographs, followed by instructor-led review; and with live streaming at the microscope with an attending dermatopathologist. Overall, we have increased lectures and conferences to supplement the loss of direct patient care caused by postponement of nonurgent visits and procedures.

As we have transitioned patient care to teledermatology, we have maintained resident involvement in outpatient visits and inpatient consultation services despite physical separation. Teledermatology has been shown to be an effective, efficient way of treating and triaging patients.[2] However, formal teledermatology curricula are lacking.[3] We have taken this opportunity to revitalize our teledermatology education, beginning with incorporation of the American Academy of Dermatology teledermatology curriculum. Residents also receive individual feedback about patients they care for

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COVID-19: coronavirus disease 2019

From the Department of Dermatology[a] and Department of Obstetrics and Gynecology,[b] University of Texas Southwestern Medical Center, Dallas.
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Correspondence to: Melissa M. Mauskar, MD, 5323 Harry Hines Blvd, Dallas, TX 75390-9069. E-mail: melissa.mauskar@UTsouthwestern.edu.

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Table I. Advantages and disadvantages of digital platforms for medical education

Advantages of digital format	Disadvantages of digital format
Allows social distancing necessary during pandemic	Lack of inherent aspects of interactivity during live encounters
Convenience of access obviating commute to site of live session	Potential for distraction during lecture by primary speaker
Real-time virtual visits allow faculty to witness trainee-patient interactions and provide feedback for improvement	Potential for technical limitations/interruptions (eg, faulty connections)
Potential for greater number of participants	Limitations on hands-on activities (eg, suturing skills sessions)
Potential for economy (eg, obviates travel expense for imported guest speakers)	Hacking by malevolent sources
Automatic archival of presented material and content	
Use of archived material for review and improvement	
Allows chats during lecture of primary speaker	

via teledermatology. In outpatient clinics, residents primarily treat patients through the use of the EPIC electronic medical record and the BlueJeans videotelephony platform for live-interactive teledermatology. On inpatient services, we use both store-and-forward teledermatology and live-interactive interfaces as needed. In-person visits with patients are reserved for high-acuity cases that require direct evaluation.

Challenges presented by COVID-19 have highlighted our collective resilience and creativity. Meaningful learning is not easy, and the present circumstances have transformed us into new learners as both our residents and attending physicians have adapted to novel ways of education and of caring for patients.

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