

Asynchronous teledermatology in medical education: Lessons from the COVID-19 pandemic



To the Editor: The coronavirus disease 2019 (COVID-19) pandemic has spurred an unprecedented response from governments and health care systems to curb its spread. As part of this response, dermatology practices have dramatically reduced in-person visits.¹ These changes pose a significant challenge to maintaining dermatology education for residents and medical students. Furthermore, consistent with interim guidance from the Association of American Medical Colleges,² many medical schools have also restricted medical student participation from direct patient contact. Dermatology practices have converted to telemedicine (reimbursed on a limited scale before COVID-19) to care for patients. This shift in care delivery has created opportunities for engaging trainees in virtual visits for continued education.³

We propose participation in asynchronous teledermatology as a complementary educational experience for medical students that will remain valuable when direct patient contact resumes. Whereas “virtual visits” occur synchronously and require patient and provider coavailability, eConsults (provider-to-provider) and eVisits (provider-to-patient) use “store-and-forward” technology to allow specialist review at a separate time with greater efficiency (Table I). Asynchronous teledermatology holds promise to expand access to dermatologic care,⁴ is a viable adjunct to in-person dermatology,⁵ and in our experience, augments trainee education.

We designed a teledermatology rotation in which medical students participate in both synchronous and asynchronous patient care. Students have autonomy to preview eConsult cases in a self-directed manner to formulate a differential diagnosis and document a preliminary note within the electronic medical record (Epic Systems, Verona, WI). Staffing of the eConsults in conference format with an attending provides short-interval feedback and solidifies initial learning. After making any necessary revisions, the attending attests and finalizes the note.

Unlike patients in the dermatology clinic who will continue with the specialist, eConsult patients most often follow-up with the referring provider, not dermatology.⁴ Consequently, students learn to develop a prescriptive treatment plan understandable to the nonspecialist. Students focus on a broad differential to educate referring providers about stepwise management and different referral

Table I. Types of telemedicine categorized by participants and timing

Category	Synchronous	Asynchronous
Provider-to-patient	Virtual visit	eVisit
Provider-to-provider	Virtual consult	eConsult

decisions based on a range of possible clinical responses. Furthermore, eConsults are particularly well suited for medical students—even those not pursuing dermatology—because they feature dermatologic conditions commonly encountered by ambulatory providers (eg, eczema, seborrheic keratoses, and during the pandemic, “COVID toes”).

Our institution’s pilot dermatology eVisit program currently focuses on patients with chronic stable disease (eg, acne and psoriasis). Through eVisits, medical students learn the importance of longitudinal monitoring and thoughtful adjustment of therapies for chronic dermatologic conditions based on both clinical response and adverse effects. Students also quickly gain perspective on the broad spectrum of disease severity and response to therapy. As direct care asynchronous teledermatology gains traction, we anticipate expanding eVisits to more patients and dermatologic conditions.

The COVID-19 pandemic has required dermatologists to adopt innovative methods to provide patient care and continue trainee education. Our experience highlights the value of asynchronous teledermatology in medical student education. Although a return to in-person visits will be a welcome return to our routine, telemedicine will remain an important component of future dermatologic care. We believe that engaging medical students in asynchronous teledermatology provides complementary learning experiences that will enhance medical student education in dermatology.

Mack Y. Su, PhD, Evelyn Lilly, MD, JiaDe Yu, MD, and Shinjita Das, MD

From the Department of Dermatology, Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts.

Funding sources: None.

Conflicts of interest: None disclosed.

IRB approval status: Not applicable.

Correspondence and reprint requests to: Shinjita Das, MD, Department of Dermatology, Massachusetts General Hospital, 50 Staniford St, Room 292, Boston, MA 02114

E-mail: sdas4@mgb.harvard.edu

REFERENCES

1. Kwatra SG, Sweren RJ, Grossberg AL. Dermatology practices as vectors for COVID-19 transmission: a call for immediate cessation of nonemergent dermatology visits. *J Am Acad Dermatol*. 2020;82(5):e179-e180.
2. Association of American Medical Colleges. Guidance on Medical Students' Participation in Direct Patient Contact Activities. Available at: <https://www.aamc.org/system/files/2020-04/med-ed-April-14-Guidance-on-Medical-Students-Participation-in-Direct-Patient-Contact-Activities.pdf>; 2020. Accessed May 10, 2020.
3. Oldenburg R, Marsch A. Optimizing teledermatology visits for dermatology resident education during the COVID-19 pandemic. *J Am Acad Dermatol*. 2020;82(6):e229.
4. Seiger K, Hawryluk E, Kroshinsky D, Kvedar JC, Das S. Pediatric dermatology eConsults: reduced wait times and dermatology office visits [e-pub ahead of print]. *Pediatr Dermatol*. 2020. <https://doi.org/10.1111/pde.14187>. Accessed May 10, 2020.
5. Keller JJ, Johnson JP, Latour E. Inpatient teledermatology: diagnostic and therapeutic concordance among a hospitalist, dermatologist, and teledermatologist using store-and-forward teledermatology. *J Am Acad Dermatol*. 2020;82(5):1262-1267.

<https://doi.org/10.1016/j.jaad.2020.06.033>