



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

# Telemedicine in a Post-COVID World: How eConsults Can Be Used to Augment an Allergy Practice



Justin Greiwe, MD<sup>a,b</sup> Cincinnati, Ohio

As allergy practices across the country deal with the clinical and financial consequences of COVID-19, there is a growing reliance on technology to effectively care for patients and provide a much-needed revenue source to keep practices solvent. It is becoming increasingly apparent that the care provided using these platforms can be just as effective and meaningful as an in-person visit. Although we have had the technology to perform telemedicine visits for years, patients' indifference, technological acumen and access, and poor insurance reimbursement have been barriers for widespread acceptance. In response to the pandemic, the Centers for Medicare & Medicaid Services relaxed many requirements for Medicare patients and the states soon followed suit for Medicaid patients. Insurance companies also loosened restrictions giving health care providers increased flexibility to provide remote patient care, although not to the extent of Medicare/Medicaid as new patients cannot be seen by live video telemedicine visits and out of state established patients also are not permitted to be seen unless the physician has a license in that state. Currently, the Office for Civil Rights (OCR) at the Department of Health and Human Services is exercising its enforcement discretion to not impose penalties for noncompliance with the Health Insurance Portability and Accountability Act (HIPAA) Rules in connection with the good faith provision of telehealth using such nonpublic facing audio or video communication products during the COVID-19 nationwide public health emergency.<sup>1</sup> With better reimbursement and loosening of HIPAA requirements by OCR, telemedicine and telehealth technologies went from fringe to mainstream in a matter of weeks. The learning curve during this time period has been steep and fraught with challenges as practices and patients struggle to use these tools effectively. Portnoy et al's<sup>2</sup> recent prediction that "the use of telemedicine will be simply seen as how health care is done" has come true much faster than expected.

Although real-time (live video) telemedicine visits have helped augment struggling practices during nationwide stay-at-home orders, what other telehealth options are there to supplement income and provide better care for patients relegated to their homes? Telemedicine is generally defined as synchronous or asynchronous, with synchronous "real-time" patient visits taking center stage right now. Asynchronous or "store-and-forward" applications can also be used to complement a practice and have the added benefit of providing care to a wider range of patients over a larger geographic area without the aforementioned restrictions on state medical licensure. Electronic consultations (eConsults) are delayed communications sent through a secure email or messaging service to a cloud-based platform where specialists can review patient charts and other pertinent patient data including diagnostic images, lab reports, or videos in preparation for a consult.<sup>3</sup> eConsults provide a convenient way for specialists and primary care providers (PCPs) to collaborate on difficult cases despite differences in locations or time zones. Although not suitable for emergency care, store-and-forward technology eliminates the complex process of specialty referral, especially in remote areas where local specialists might not be available. There are several companies that provide these services, connecting PCPs to specialists to reduce unnecessary referrals, improve care coordination, reduce costs, and enhance patient care.

After personally becoming involved with an eConsulting service 1 year ago, I have gleaned meaningful insights about this evolving industry. First, eConsults are primarily from practices in California (78%) and initiated by registered nurses (65%) followed by medical doctors (19%), nurse practitioners (13%), and physician assistants (3%). Secondly, eConsults can be specialty specific depending on the platform used ranging from simple questions about rhinitis to more complex questions about immunodeficiency and often provide supporting documentation for review. Finally, and probably most importantly, the reimbursement for this service is a fixed amount ranging from \$35 to \$40 per eConsult regardless of the time required to answer the question(s), and although most could be completed within 10-15 minutes, others could take up to 40 minutes without additional compensation. Thus, similar to the pre-COVID 19 live telemedicine visits, these consultations are not currently very lucrative and could be serving to marginalize the value of specialty health care in the United States. With the increasing reliance on telehealth services, it is essential that future telemedicine compensation structure is commensurate with the clinical knowledge being provided.

Importantly, eConsults attempt to address the alarming lack of access to specialty expertise, especially in underserved and geographically isolated regions. Furthermore, they offer many advantages including reduced waiting times for appointment scheduling, reduced travel time to and from the physician's office

<sup>a</sup>Bernstein Allergy Group, Inc., Cincinnati, Ohio

<sup>b</sup>Division of Immunology/Allergy Section, Department of Internal Medicine, The University of Cincinnati College of Medicine, Cincinnati, Ohio

No funding was received for this work.

Conflicts of interest: J. Greiwe has received an honorarium for serving on advisory boards and speakers bureaus for AstraZeneca, Regeneron, and Sanofi Genzyme and has received consulting fees from AstraZeneca.

Received for publication April 26, 2020; accepted for publication May 4, 2020. Available online May 11, 2020.

Corresponding author: Justin Greiwe, MD, Bernstein Allergy Group, 8444 Winton Road, Cincinnati, OH 45231. E-mail: [jcgreiwe@gmail.com](mailto:jcgreiwe@gmail.com).

J Allergy Clin Immunol Pract 2020;8:2142-3.  
2213-2198

© 2020 American Academy of Allergy, Asthma & Immunology  
<https://doi.org/10.1016/j.jaip.2020.05.001>

and patient waiting time once in the office, reduced missed work, and costs associated with childcare that are often required when going to see a physician. All of these benefits translate into cost significant cost savings to the patient, and if physicians are reimbursed properly, it can lead to more efficient office systems with reduced practice overhead. For example, in a retrospective cohort study, Naka et al<sup>4</sup> provided evidence that telemedicine improved access to dermatologic care in a large-scale primary care network while reducing wait times. Before the implementation of eConsults, access to dermatology was limited to only 11% (139/1258) of patients obtaining a referral leading to an appointment with a median wait time of 77 days. After the implementation of eConsults, this number significantly increased to 44% (499/1127) of patients evaluated, which resulted in only 16% requiring a face-to-face visit with a median wait time of only 28 days.<sup>4</sup> Phadke et al<sup>5</sup> similarly reviewed eConsult data from 306 encounters and compared them with in-person consult data at an academic allergy/immunology practice to determine consult volume, outcomes, indications, and timing. eConsults were increasingly used in this practice, particularly for adverse drug reactions and immunodeficiency, and resulted in decreased in-person wait times despite an increase in overall consult volume, supporting this model's ability to provide expedited, problem-focused care.<sup>5</sup> Thus, eConsults can help to streamline the referral process by determining whether a face-to-face specialist referral is required or whether it is appropriate for the PCP to treat the patient with specialty guidance. However, all of the potential advantages of eConsults are predicated on proper reimbursement; otherwise, our broken health care system will continue to flounder along with rising wasteful health care costs.

The challenges of COVID-19 have forced the medical community to pivot from the standard in-person visit to a telemedicine-focused structure to provide patient care. This pandemic has exposed many weaknesses in our health care system that need to be addressed, but it has also highlighted how effective and valuable telemedicine services can be used to improve these deficiencies. Telemedicine and telehealth technologies have helped prevent the collapse of our health care system during this pandemic by providing safe, accessible, cost-effective, and convenient health care. Although this system is still wrought with many technologic problems such as poor access by the end user to the necessary software and hardware, telemedicine is an integral step in the right direction as health care providers attempt to navigate the new world of medicine in the post-COVID-19 era.

#### REFERENCES

1. Office for Civil Rights. Notification of enforcement discretion for telehealth remote communications during the COVID-19 nationwide public health emergency. U.S. Department of Health & Human Services. 2020. Available from: <https://www.hhs.gov/hipaa/for-professionals/special-topics/emergency-preparedness/notification-enforcement-discretion-telehealth/index.html>. Accessed April 20, 2020.
2. Portnoy JM, Pandya A, Waller M, Elliott T. Telemedicine and emerging technologies for health care in allergy/immunology. *J Allergy Clin Immunol* 2020; 145:445-54.
3. Greiwe J. Using telemedicine in a private allergy practice. *J Allergy Clin Immunol Pract* 2019;7:2560-7.
4. Naka F, Lu J, Porto A, Villagra J, Wu ZH, Anderson D. Impact of dermatology eConsults on access to care and skin cancer screening in underserved populations: a model for teledermatology services in community health centers. *J Am Acad Dermatol* 2018;78:293-302.
5. Phadke NA, Wolfson AR, Mancini C, Fu X, Goldstein SA, Ngo J, et al. Electronic consultations in allergy/immunology. *J Allergy Clin Immunol Pract* 2019; 7:2594-602.