

Teledermatology after COVID-19: key challenges ahead

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Abstract

Teledermatology has been leveraged during the COVID-19 pandemic as a means of adopting novel ways to treat patients while reducing the risk of viral transmission. Although teledermatology offers benefits related to patient convenience and improved access to care, key challenges in the areas of reimbursement, licensure, and diagnostic accuracy remain. In this commentary, we discuss these three obstacles and potential solutions.

Keywords: COVID-19, technology, teledermatology, telemedicine

Introduction

The COVID-19 pandemic has prompted healthcare providers to adopt novel ways to treat patients while reducing the risk of viral transmission; chief among these has been telemedicine. Teledermatology has proved an effective means of extending the reach of care in the United States, where fewer than 3.4 dermatologists practice per 100,000 persons. The routine use of teledermatology has seen a marked boost in the pandemic's wake, as some dermatology groups reported moving up to 95 percent of visits to a virtual platform earlier this year [1].

Teledermatology offers many benefits, including patient convenience, fewer no-show visits, and an extended reach of care to underserved and rural areas in the United States. In this regard, reimbursement, licensure, and diagnostic accuracy

impede a widespread use of pathological examination in teledermatology. In this commentary, we discuss these three obstacles and briefly suggest possible remedies.

Discussion

Reimbursement

Inconsistencies in both obtaining and ensuring fair reimbursement for medical services offered make for a pressing concern in teledermatology. Reimbursement varies with consultation type; live video commands better reimbursement than store-and-forward services, despite the convenience of the latter for providers and patients. Reimbursement also varies by state: by 2016, there were only 11 states in which fees for store-and-forward teledermatology were reimbursed. Although a provider in California—one of these 11 states—would be reimbursed, providers in Connecticut would not be reimbursed unless a real-time videoconference took place [2]. As of February 2020, Medicaid will reimburse face-to-face visits in all fifty states and the District of Columbia, but store-and-forward services in only sixteen states. Although the COVID-19 pandemic has prompted temporary waivers of telehealth reimbursement policies, these exemptions constitute no permanent changes to state-level telehealth policy [3].

As payment models for telehealth services are relatively new, it may take time to determine how to transition to value-based healthcare optimally. Still, the variable reimbursement by consultation type is

exacerbated by an outmoded regulatory environment. Although Medicaid has incorporated expansions of telemedicine reimbursement in recent years, billing modifiers (GT and GQ for live video and store-and-forward, respectively), [4] are still required and coverage applies only to a limited number of services in determined areas of need. Worse still, differences in state-level policies demand time to ensure proper reimbursement [5]. Service type (inpatient or outpatient), provider type (physician or mid-level provider), and patient location also affect payments [2].

These complications raise the opportunity cost for dermatologists who decide to provide telemedicine services as opposed to conventional practice settings in which procedures—a major driver of compensation—can be easily performed and charged. Although directly billing a patient for a telemedicine visit appears to be one solution, most patients will expect their insurers to pay for covered visits. Future research should characterize cost savings of telemedicine and pilot studies to help in developing a standardized payment model.

Licensure

The sudden surge in teledermatology visits related to the COVID-19 environment raises concerns of increased malpractice risk, the liability for which has not been clearly defined within telemedicine. The majority of U.S. state medical boards require that physicians have licensure in the patient's state. To facilitate telehealth coverage in multiple states, the Interstate Medical Licensure Compact (IMLC) expedites license issue in member states for all telemedicine services, not only teledermatology [4]. As of July 2020, twenty-nine states, the District of Columbia, and Guam have joined the IMLC and five further states have proposed legislation to join [6].

Many states, such as Alabama, Colorado, and Florida [7], have waived the in-state requirement to facilitate telemedicine visits and avoid unnecessary exposure during the pandemic. These licensure waivers are significant, as a physician practicing medicine with only an out-of-state license can be subject to criminal charges and medical malpractice claims, especially as it is highly unlikely that the physician's malpractice

insurance would cover a claim outside the licensing state.

Image quality

By necessity, a dermatologist must visually examine a patient; teledermatology can satisfy this demand with clear, high-quality digital images provided over an encrypted channel. In a live interaction, the patient sends such images; in the store-and-forward paradigm, a referring provider provides the images and medical history to assist in the dermatologist's diagnosis [2]. When handling patient images, the provider must comply with the Health Insurance Portability and Accountability Act (HIPAA) guidelines so as not to risk patient privacy or incur liability. In this respect, poor image quality often proves a major obstacle to effective treatment.

Because an in-person examination becomes impossible, a dermatologist might rely unduly on the patient's medical history and less on skin findings. An implicit assumption regarding virtual communication is that patients are tech-savvy with access to a smartphone and stable internet connection, which may not always be the case. The use of teledermatology for pediatric patients adds another layer of complexity to the medico-legal issue. Pediatric practice brings with it an additional obligation and responsibility to the patient's legal guardian. A practitioner must communicate effectively with both the patient and the guardians to obtain the medical history, especially where the prenatal and perinatal history are concerned [5].

Potential solutions

With the need for patient care that minimizes physical proximity between patient and provider, telemedicine has rapidly come to the forefront of technologically driven care. At the same time, we must move beyond the "hype" of telemedicine and focus our attention on solving the three key limitations of reimbursement, licensure, and image quality.

To address issues surrounding reimbursement, many insurance companies have already started covering virtual dermatology visits, such as Medicare, Tricare, Humana [8]. The main question insurance providers grapple with is: "Is this service medically necessary?"

During the pandemic, virtual visits that were once considered a convenience are now a necessity, particularly for patients who are elderly or immunocompromised. In regard to the elderly, a survey from 2019 showed that only 4% of older Americans (aged between 50 and 80) had ever had a virtual visit with their provider. When the same survey was given to Americans in the same age group in June 2020, the number increased to 26% with the onset of the coronavirus pandemic in the United States in March 2020 [9]. Medicare and thirteen other public and private insurance groups offered coverage for telemedicine in April, with more providers likely to follow suit as popularity increases [8]. For teledermatology to thrive post COVID-19, it is important that more providers adjust the details of their coverage plans to include virtual visits as services they cover.

To address liability, a provider using telemedicine services must first obtain consent from the patient before capturing images and explain for what purposes the images will be stored and transmitted. Ideally, the solution for issues of licensure requires the passage of legislation that can clarify what state a provider is in and allow doctors to see patients across multiple states. Minimizing the licensure process for additional states will ease this process. There are downsides to this, as different states having different health regulations may be an issue, but it is possible that with the assembling of a task force in Congress dedicated to standardizing protocols among states for teledermatology patients, interstate practice may succeed.

To ensure high image quality, one possible solution is training a referring provider or patient themselves to capture high-quality images to make sure the dermatologist has all the best diagnostic information to practice telemedicine [5]. This has been shown to be successful in certain settings. For example, a study of 6 patients with psoriasis submitted 240 pictures on their own over a course of 59 tele-visits with their providers. The pictures submitted by five out of the six patients were considered of "high quality" by dermatologists and the sixth patient's photos saw steady quality increases once taught how to use the autofocus feature [10].

In addition, the referring provider or patient/patient family can learn to use dermatoscopes to take photographs for teledermoscopy evaluation. For a case that requires frequent lesion-monitoring, a dermatoscope smartphone attachment may be sent by mail to the patient and more importantly recommend to patients how to take quality photos on their own. For long-term care, a patient can consider purchasing an affordable dermatoscope for personal use [4]. A dermatologist rendering telehealth services must maintain good communication with the referring provider to ensure a thorough medical history.

Furthermore, the patient/patient family must be familiarized with HIPAA security guidelines so as to store and forward images to the dermatologist securely utilizing data encryption, login controls, and other features listed in the American Telemedicine Association Practice Guidelines. This was made easier when the Department of Health and Human Services (HHS) Office for Civil Rights issued a statement allowing all HIPAA-covered health care providers to provide telehealth services to patients using common remote communication technologies such as FaceTime, Facebook Messenger, Zoom, or Skype, even if the application does not fully comply with HIPAA regulations. However, it was emphasized that the remote communication technology must not be any public-facing platform, such as TikTok, Facebook Live, or Twitch [11].

Conclusion

The eased regulations and increased demand for telemedicine from both providers and patients during the pandemic may fundamentally change how remote health services are provided. In an open letter to Congress sent on June 29, 2020, 340 healthcare organizations and companies called for permanent telehealth legislative reforms [12]. The COVID-19 pandemic has made it clear that telemedicine is an essential component of medicine in the modern era.

Even an external environment conducive to teledermatology will still require surmounting

internal challenges, such as poor image quality and the still-unsustainable cost of remote care. Although this commentary is not an exhaustive examination of issues in teledermatology, we believe the points raised are among the most important. We hope this discussion furthers the push for national standards of teledermatology in relation to reimbursement, liability, and other administrative issues. With the

possibility that some of the flexibilities in COVID-19 will remain beyond the pandemic, it is not a matter of *if*, but *when* dermatology adapts to the future of healthcare.

Potential conflicts of interest

The authors declare no conflicts of interest.

References

- Zarefsky M. Teledermatology paved way for Permanente's telehealth transformation 2020. 2021. <https://www.ama-assn.org/practice-management/digital/teledermatology-paved-way-permanente-s-telehealth-transformation>. Accessed on January 1, 2021.
- Campagna M, Naka F, Lu J. Teledermatology: An updated overview of clinical applications and reimbursement policies. *Int J Womens Dermatol*. 2017;3:176-9. [PMID: 28831431].
- Policy CfCH. Current State Laws & Reimbursement Policies: Center for Connected Health Policy; 2020. 2020. <https://www.cchpca.org/telehealth-policy/current-state-laws-and-reimbursement-policies?jurisdiction=All&category=128&topic=4#>. Accessed on July 7, 2020.
- Chuchvara N, Patel R, Srivastava R, Reilly C, Rao BK. The growth of teledermatology: Expanding to reach the underserved. *J Am Acad Dermatol*. 2019;82:1025-33. [PMID: 31811880].
- Naka F, Makkar H, Lu J. Teledermatology: Kids are not just little people. *Clin Dermatol*. 2017;35:594-600. [PMID: 29191350].
- Terry K. Docs Can Work Across State Lines in COVID-19 Crisis: White House. 2020. https://www.medscape.com/viewarticle/927282#vp_2. Accessed on July 10, 2020.
- "Telehealth Guidance by State during COVID-19." <https://www.apaservices.org>, n.d. <https://www.apaservices.org/practice/clinic/covid-19-telehealth-state-summary>. Accessed on July 10, 2020.
- "Will My Insurance Cover Online Dermatology Visits? – U.S. Dermatology Partners | Blog." *U.S. Dermatology Partners*. www.usdermatologypartners.com/blog/will-my-insurance-cover-online-dermatology-visits/. Accessed on July 10, 2020.
- "Telehealth Use Among Older Adults Before and During COVID-19." *National Poll on Healthy Aging*, www.healthyagingpoll.org/report/telehealth-use-among-older-adults-and-during-covid-19. Accessed on September 10, 2020.
- Schreier, Gunter, et al. "A Mobile-Phone Based Teledermatology System to Support Self-Management of Patients Suffering from Psoriasis." *Annu Int Conf IEEE Eng Med Biol Soc*. 2008:5338-41. [PMID: 19163923].
- Rights (OCR), Office for Civil. "Notification of Enforcement Discretion for Telehealth." HHS.gov. 2020. <https://www.hhs.gov/hipaa/for-professionals/special-topics/emergency-preparedness/notification-enforcement-discretion-telehealth/index.html>. Accessed on July 10, 2020.
- News A. Post-COVID Telehealth Priorities Letter to Congress. 2020. americantelemed.org/policy/post-covid-telehealth-priorities-letter-to-congress/. Accessed on July 10, 2020.