

Telemedicine, PPE, and COVID-19: A New Paradigm for the Patient-Physician Relationship

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Abstract

The COVID-19 pandemic has altered multiple aspects of healthcare delivery. Both the ubiquitous use of personal protective equipment (PPE) and the rise in virtual telemedicine visits have challenged the ability for healthcare providers to communicate effectively, which could in turn impact the patient-physician relationship. That being said, each of these changes to traditional healthcare delivery have been necessary in providing safe and effective health care throughout the pandemic. Likewise, the vast benefits of telemedicine are now recognized more than ever and indicate that virtual healthcare will be here to stay. One challenge for clinicians is understanding how to maintain effective communication, both verbally and nonverbally, as well as a strong patient-physician relationship. This piece assesses some of the strengths and limitations of these changes to healthcare and what clinicians can do to maintain effective communication.

Without a doubt, the delivery of medical care has changed since the onset of the COVID-19 pandemic. In order to prevent the spread of the virus, healthcare workers have begun wearing masks and other personal protective equipment (PPE) in essentially every patient encounter (Schlögl & A Jones, 2020). Additionally, telemedicine, which typically consists of providers visiting with patients over a webcam, has dramatically increased in popularity (U.S. Department of Health and Human Services, 2020). While the necessity for ubiquitous PPE usage may change as the pandemic subsides, telemedicine has proven to be beneficial in so

many ways that it is likely here to stay. However, telemedicine and the ubiquitous usage of PPE are not without drawbacks. In regard to telemedicine, some of these drawbacks pertain to logistics in the delivery of telemedicine services and have fairly straightforward solutions, such as improving the security of the platforms used to provide virtual care (Basen, 2020; Sunyaev, Dehling, Taylor, & Mandl, 2015). However, other aspects within the subjective experience of a telemedicine visit require continued attention from clinicians in order to remedy. Specifically, the loss of the actual physical examination of patients may weaken the patient-physician relationship if attention is

not given to maintaining effective communication and rapport. Likewise, the necessity for extensive PPE usage by healthcare providers and patients has introduced a physical barrier between the patient and physician that was not previously the standard in every patient interaction.

Although necessary, ubiquitous mask wearing by patients and physicians, has challenged the ability for facial expressions to be utilized as a mode of nonverbal communication (Schlögl & A Jones, 2020). Multiple studies have found nonverbal communication to be important in almost every aspect of healthcare delivery (Lorié, Reiner, Phillips, Zhang, & Riess, 2017). The use of emotionally expressive behaviors by physicians has been found to improve numerous facets of patients outcomes, such as patient satisfaction, health services utilization, appointment keeping, and functional status (Roter, Frankel, Hall, & Sluyter, 2006). Obviously, the solution for the lack in communication efficacy is not to abandon mask wearing. Instead, physicians can improve the patient-physician relationship by developing a greater understanding of the components of nonverbal communication like eye contact, body language, hand gestures, and tone of voice, and then consciously using techniques that aid in strong communication during patient interactions (Schlögl & A Jones, 2020).

The rise in popularity of telemedicine during the COVID-19 pandemic is evident in the increased utilization by Medicare recipients over the first half of 2020.

According to a report released in July of 2020 by the U.S. Department of Health and Human Services, utilization of telehealth services by Medicare recipients increased from about 14,000 beneficiaries per week prior to COVID-19, to roughly 10.1 million beneficiaries during the period from mid-March through early-July of 2020 (U.S. Department of Health and Human Services, 2020). This increase in utilization does not come as a surprise though. Telemedicine provides a means of access to patient-oriented care without the risk of exposure to communicable disease. Since telemedicine often occurs via webcam, it has been valuable in providing “forward triage,” where patients are screened and triaged before actually coming to an Emergency Department (Kichloo et al., 2020). Telemedicine could also help resolve the reduction in nonverbal communication brought about by mask wearing, as the patient and physician could conduct the visit from locations that do not require masks to be worn.

Furthermore, one example of how telemedicine is an attractive modality for healthcare delivery even in the post-pandemic world is the convenience that it affords to patients. Through the use of telemedicine, patients can now visit with a healthcare provider from the comfort of their home and avoid the annoyance of having to sit in a waiting room. In some sense, it is a return to the era of the house call, where physicians would travel to the patient’s home to provide care. Additionally, patients who are disabled or lack a means for

transportation can gain access to a healthcare provider through telemedicine services.

For physicians, telemedicine can help to provide medical care to patients in rural and underserved populations, reduce the incidence of “no-shows,” and provide better adherence to treatment plans (Lando & Samson, 2020). The Association of American Medical Colleges (AAMC) predicts that there will be a shortage of roughly 122,000 physicians by the year 2032 (Association of American Medical Colleges, 2019). Because the number of primary care physicians in rural areas is approximated to be 39.8 per 100,000, while the number of primary care physicians in urban areas is 53.3 per 100,000, it can be assumed that the physician shortage will impact access to healthcare more in rural regions (Hing & Hsiao, 2014; Kichloo et al., 2020). Since telemedicine does not require the patient and provider to be in the same geographical location, it will be a critical tool for bridging this gap in healthcare until the physician shortage is ultimately resolved.

Another factor that will contribute to the continuation of telemedicine utilization post-pandemic is the potential for healthcare cost reduction. A recent study by Nord et al. (2019) found that the net cost savings to the patient or payer was \$19-121 per telemedicine visit. Additionally, each telemedicine visit that successfully diverted a visit away from an emergency department produced an on average cost savings of \$309-1,546 (Nord, Rising, Band, Carr, & Hollander, 2019). These cost savings may help incentivize patients to seek out care when they would have otherwise refrained

due to financial constraints and could aid in patient adherence to follow up appointments or treatment regimens. The additional money that would have been spent on a single in-person visit may now be spread out to cover more components of the patient’s overall care. Moreover, should a future pandemic occur, the ability to use telemedicine as a means of diverting patients, who do not require the full services of an emergency department, to another form of healthcare delivery will help reduce the patient load at hospitals that may be approaching capacity limits (Kichloo et al., 2020).

With all of these benefits in mind though, there are some potential disadvantages to the use of telemedicine. Namely, concerns exist regarding the security and privacy of personal health information. One study by Sunyaev et al. (2015) assessed the security of 600 of the most commonly used mobile health apps available for iOS and Android. The researchers found that privacy policies were only present in 30.5% of the apps (Sunyaev et al., 2015). Although this study was conducted roughly 6 years ago, these concerns for privacy still exist. In March of 2020, the U.S. federal government eased HIPAA restrictions on telehealth, which allowed providers to conduct visits on unsecured connections at home (Basen, 2020). The massive increase in telemedicine usage during the COVID-19 pandemic has outpaced the development of cybersecurity within healthcare apps (Basen, 2020). Addressing and resolving the potential for health information to be stolen will be essential to the longevity and success of

telemedicine post-pandemic. Healthcare providers play a role in ensuring the security of health information by utilizing secure internet connections and avoiding the usage of consumer-based products such as Zoom or FaceTime. Likewise, policymakers will need to enact regulation and oversight in order to ensure the security of telehealth data (Basen, 2020).

It is also important to consider that the practice of medicine is not homogenous. Each specialty of medicine possesses unique characteristics that may be more or less applicable to a telemedicine platform. In fact, research has found that radiologists, psychiatrists, and cardiologists utilize telemedicine to interact with patients the most, while allergists/immunologists, gastroenterologists, and Ob/Gyns utilized telemedicine for patient interaction the least (Robeznieks, 2019). Because some specialties rely on physical examination techniques that are not conducive to a telemedicine platform, there will inherently be some specialties that will not be able to incorporate telemedicine to the same degree as others. Psychiatry has been shown to be capable of being effectively conducted via telemedicine and with a high degree of satisfaction from both patients and providers (Schubert, Backman, Bhatla, & Corace, 2019). Conversely, the auscultation required for cardiopulmonary examination and palpation required for abdominal examination are difficult to achieve without direct physical contact from the provider (Kichloo et al., 2020). Beyond these limitations in actually performing the assessment of a patient, the argument can be

made that the physical exam is an essential component to establishing a strong physician-patient relationship.

In his TED talk titled, "A Doctor's Touch," Abraham Verghese describes the physical exam as a ritual that involves a transformation, similar to how the rituals of a baptism, funeral, or marriage signify a transformation. He states that:

"The ritual of one individual coming to another and telling them things that they would not tell their preacher or rabbi, and then incredibly on top of that, disrobing and allowing touch...is a ritual of exceeding importance. And if you shortchange that ritual by not undressing the patient, by listening with your stethoscope on top of a nightgown, by not doing a complete exam, you have bypassed on the opportunity to seal the patient-physician relationship." (TED, 2011)

Although modern technology may often provide for more accurate and detailed diagnoses, it does not allow for the same cultivation of trust and rapport between the physician and patient. While telemedicine affords numerous advantages to the delivery of care to patients, it also strips away some degree of humanness and depth from the interaction.

In an article written by Costanzo and Verghese (2018), the authors claim that the anthropological concept of embodiment highlights the importance of the physical examination in that the concept replaces the mind/body binary with the notion that bodies, and our perceptions of them, are a product of the history, culture, and politics of power that have brought us to this point in time. In medicine, this framework allows us

to better understand the ways in which illness and pain influence the lived experiences of our patients in the backdrop of their race, gender, sexuality, and socioeconomic status (Costanzo & Verghese, 2018). The authors state that:

“For example, in a diverse society, it is not possible to care for, or be a provider who is, a person of color without some deep understanding of how colonialism has led to a hierarchy around skin color in American society, and that hegemony and power often operate in subtle ways to neutralize which types of bodies and identities are entitled to social and political power. The ghost of Tuskegee lingers in the minds of many patients and physicians.” (Costanzo & Verghese, 2018)

Thus, when we conduct the physical exam, we are not just attaining an understanding of the disease processes objectively but are also presented with an opportunity to gain insight into the intersections of identities and how the lens of culture shapes our perceptions and biases (Costanzo & Verghese, 2018).

In the same article, Costanzo and Verghese highlight the potential positive effects of placebo on the physical exam. They discuss how studies that investigate the placebo effect have shown that it is not just the act of taking a placebo pill that can have a positive result but also the words and rituals surrounding the therapeutic act. This psychosocial context surrounding the event may have neurobiological effects that contribute to the positive outcome of the placebo. Similarly, negative expectations and social stimuli may result in a nocebo effect.

The authors then postulate from these findings that a well-performed physical examination can in and of itself help a patient begin to feel better, as if it is a sort of “placebo without placebo.”

With this in mind though, the completion of a thorough history and physical exam is not always feasible or warranted for every patient. What is important to remember is the true potential for value in the cultivation of the patient-physician relationship. Both the sacredness of the physical exam and the full spectrum of the role physicians serve in guiding patients back to health must not be forgotten. Further evidence of the value of the physical exam can be seen in how it is a central component of pre-clinical medical education. The physical exam is expected to be practiced and performed with proficiency prior to the reinforcement that occurs during clinical years. This learning is not simply an academic exercise but rather a broader education on what it means to be a physician. The criteria medical students are graded on pertains to the quality of the techniques utilized in the performance of the physical exam and the degree of empathy, sincerity, and attentiveness conveyed to the patient by the student. Thus, medical students learn both the art of utilizing physical assessments to formulate diagnoses and treatments, as well as how the patient-physician relationship can be strengthened by thoroughly understanding the ailments that have brought their patients to them.

It is clear that telemedicine will be here to stay in the post-pandemic era.

Likewise, ubiquitous mask-wearing and other PPE precautions may need to be continued for quite some time. Therefore, healthcare providers will need to continue increasing awareness of how these changes impact their ability to communicate deeply and effectively with patients. One study by Zulman et al. (2020) utilized literature searches, clinical observations, and interviews with both medical and non-medical professionals to identify five practices that physicians can implement to foster presence and meaningful connection with patients (Zulman et al., 2020). These practices not only highlight the utility of the physical exam in facilitating presence and meaningful connection but also provide guidance on the aspects of communication that patients value most. Thus, when utilized in telemedicine or clinical settings where PPE usage alters the capacity for nonverbal communication, these practices can help bolster the patient-physician relationship. Specifically, the practices include preparing with intention, listening intently and completely, agreeing on what matters most, connecting with the patient's story, and exploring emotional cues (Zulman et al., 2020).

Preparing with intention may include components such as reviewing the patient's chart or responses to pre-visit questionnaires prior to the encounter, as well as taking some time to pause and clear one's mind from distractions. The latter component again highlights the importance of the physical exam in effective patient-physician communication in that the authors state that

the ritual of handwashing may be a time that is used to remind physicians that they are entering into hallowed space (Zulman et al., 2020). Even in the setting of virtual healthcare visits, the physician can still take a moment for mindfulness and to home in focus on the upcoming encounter.

Moreover, the authors describe how listening intently and completely can be achieved through practices like sitting down during the encounter, facing one's body towards the patient, utilizing open body posture, and avoiding interruptions. Agreeing on what matters most and connecting with the patient's story involve taking the time to actually learn what is most important to patients and putting the patient's current health status in the context of the life events and personal circumstances that have influenced it. Lastly, exploring emotional cues can be achieved by utilizing questions to explore the patient's emotions, as well as reflecting on and validating those emotions (Zulman et al., 2020).

From a health policy standpoint, both policy makers and individual healthcare providers should begin to further analyze the aspects of communication that are most important to creating a strong patient-physician relationship and implementing them in practice. While some of the techniques may be easy for clinicians to adopt, others may require some rehearsal in applicable, real-life scenarios (ie. through a simulated telemedicine visit or while the patient and physician are wearing PPE). Therefore, medical schools and healthcare systems should consider implementing

realistic training scenarios to help providers increase awareness of the components of communication that would not otherwise be at the forefront of consciousness.

Healthcare delivery has shifted in a multitude of ways since the onset of the COVID-19 pandemic. Although necessary for ensuring safe and efficacious access to clinicians, the extensive usage of PPE and masks have challenged traditional modalities of nonverbal communication, and increased telemedicine usage has the potential to alter the patient-physician relationship through the loss of the physical exam. Nonetheless, telemedicine possesses numerous advantages that will incentivize its continued use once the pandemic has ended. In order to address some of the drawbacks of telemedicine, clinicians can utilize communication practices that have been shown to help foster meaningful connections with patients. Likewise, the barriers to communication that have resulted from the usage of masks and PPE in every patient encounter can be addressed by giving greater consideration of the nonverbal aspects of communication that will help to maintain empathy, sincerity, and humanness in patient interactions.

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