



# Telehealth in Trans and Gender Diverse Communities: the Impact of COVID-19

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## Abstract

**Purpose of Review** This paper synthesizes current knowledge regarding telehealth and the impact of the SARS-COV2 pandemic on transgender and gender diverse (TGD) patients. We discuss the benefits and challenges of telehealth for patients, providers, and trainees. **Recent Findings** Mental health of TGD populations has been disproportionately challenged in the context of SARS-COV2, and telehealth interventions focused on gender affirmation and mental health are desired and acceptable by TGD populations. **Summary** Telehealth in the era of SARS-COV-2 has a mixed impact on TGD patients and families, increasing access, decreasing travel time, and allowing for comfort and safety during care while also leaving gaps in care for patients without web/phone access and/or without a confidential place to participate in appointments, or to manage health concerns that require in-person evaluation. Providers have benefitted from the ability to reach TGD patients that are far from practice sites and to provide remote consultation for procedures and other interventions. Trainees have challenges as a result of telehealth practice which can impair the ability to learn in-person care, but have benefitted from remote training opportunities, including surgical training. Alterations in compensation structures have allowed sustainable telehealth practice to be an option for providers and health systems. As telehealth evolves, quality improvement and research efforts aimed at resolving known challenges and expanding beneficial uses of telehealth should consistently include and consider not only the beneficiaries of telehealth but also those who may struggle with access.

**Keywords** Transgender · LGBT · Sexual and gender minorities · Telehealth, COVID-19

## Introduction

The onset of the COVID-19 pandemic required healthcare providers and systems to rapidly adapt to address COVID-related precautions, to care for their existing patients, and to

respond to the needs of the acutely ill. Many health systems rapidly increased telehealth solutions in response to these changes. Transgender and gender diverse (TGD) patients require a range of population-focused healthcare including medication management, behavioral health support, and surgical care; all of which require competent and well-trained providers [1]. This review synthesizes the extant scientific literature that characterizes the impact of the increased use of telehealth services for TGD populations.

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## The Context: worsening Disparities in a Marginalized Population

SARS-COV2 has had a disproportionate impact on marginalized communities worldwide [2–6]. TGD communities are no exception to this [7, 8••]; multiple explanations exist for these inequities—some include that TGD workers are economically marginalized and thus more likely to participate in front line work (and the economic insecurity

created from such work), along with having fewer economic resources to cover for loss of work [9]. TGD population COVID-19 disparities also include a greater degree of homelessness and unstable housing, food insecurity [10], decreased social support [11•], and interruption in medical care [12••] (Table 1). These disparities compound in TGD communities of color. [8••, 13, 14] TGD communities face concerns related to decreased access to medical care [15•] as a result of the aforementioned social and structural concerns, along with the availability of care from health systems, which increased already-existing

access disparities. [16] These disparities are not only in the context of the COVID-19 pandemic but also in the context of political pressure (prevalent in the USA, but also reflected elsewhere) to restrict access to care for TGD persons, particularly children and the clinicians that support their care. [17] A survey of 5267 TGD patients from 63 upper-middle and high-income countries from Koehler et al. [18•] found that 65.7% had accessed TGD-related care during the survey period and that 49.3% had experienced restrictions in TGD care, including 15.6% who had surgeries cancelled or postponed, and 56.4% who were

**Table 1** Recent impactful publications regarding TGD communities and telehealth

Authors, pub year [citation #]	Type of study	Sample size	Findings
Koehler et al. [18•]	Online Cross-sectional Survey	5267	-65.7% accessed TGD-affirming care -49.3% had reductions in care -61.9% had reduced access to mental health
Kidd et al. [15•]	Online Longitudinal Survey	208	Reduced TGD community support led to: - increased psychological distress - increased depression - increased anxiety
Xue et al. [19•]	Thematic Analysis	1,015,874 tweets	Increased LGBTQ+ family violence related tweets
Restar et al. [11•]	Online Cross-sectional Survey	849	Significant associations: - COVID-19 pandemic and socioeconomic loss impact ( $\beta=0.62, p<0.001$ ), -socioeconomic loss and reduction in gender-affirming services ( $\beta=0.24, p<0.05$ ) -reduction in gender-affirming services and poor mental health ( $\beta=0.19, p<0.05$ )
Brownstone et al. [20]	Qualitative Interview study	13	Increased symptoms and manifestation of disordered eating as a result of COVID-19 pandemic
Lock et al. [24]	Retrospective Chart review	1828	Significant increase of new patient visits (from 22.7 to 27.8%) of new patient visits, 60% by telehealth
Sequeira et al. [27]	Online Cross-sectional Survey	204	-80% of patients reported interest in receiving telehealth by gender specialists - 44% of patients reported wanting to receive care from primary care physicians. This number increased to 85% if the PCP was “participating in regular trainings about trans health - Time travelled to the clinic did not impact the analysis
Sequeira et al. [28]	Online Cross-sectional Survey	57	-79% of patients preferred in-person visits for the initial visit. Additionally, telehealth was acceptable for ongoing management, mental health care and social work services, sub specialists of fertility preservation and initial survival consultation
Apple et al. [31•]	Online Cross-sectional Survey	21 patients 38 caregivers	86.5% of patients and 95.4% of caregivers were satisfied with telehealth and 94.3% and 93.3% were satisfied with behavioral health with patients and caregivers -Time, cost reduction, and convenience were an advantage for telehealth -Concerns of lack of privacy and challenges of technological access
Hedrick et al. [32•]	Retrospective Chart review	NA	- Similar number of patients during COVID-19, increase in proportion of telehealth, proportion of new patients, and more patients from further away from clinic site
Wamsley et al. [36•]	Retrospective Chart review	41,823 Appointments	-Telehealth benefits: remote training, the ability to consult with remote patients, presurgical evaluations and post-surgical follow-up/aftercare

challenged in access to surgical aftercare. 61.9% reported limitations in access to mental healthcare, and another similar portion was concerned about access to gender-affirming healthcare.

Disparities in mental health access and worsened mental health outcomes existed prior to the COVID-19 pandemic; however, the events surrounding the pandemic appear to have worsened the already-existing need. [15•] Kidd et al. conducted an online survey among an existing longitudinal cohort of TGD patients examining healthcare needs in the context of the pandemic and their findings described a marked increase in clinically significant psychological distress (41.8% vs. 31.75% pre-pandemic), depression (41.3% vs. 28.4%), and anxiety (41.3% vs. 31.3%). These concerns parallel what we have seen in our practice throughout the pandemic. In a thematic analysis of 1,015,874 tweets regarding family violence using machine learning, Xue and colleagues [19•] appreciated a specific theme of increased interpersonal violence in sexual and gender minorities as a result of COVID-19 restrictions and housing changes. Worsening anxiety and depression in the context of pandemic stress, economic loss, and worsening mental health directly connected to the loss of access to gender-affirming care were similarly described in a structural equation modeling analysis of an online survey of 849 TGD persons. [11•] A notable qualitative report from Brownstone et al. suggests that TGD communities, which have previously-documented disparities related to disordered eating, have had worsening symptoms and manifestations as a result of the pandemic, which we have also observed in clinical practice, along with decreased access to TGD competent treatment for disordered eating. [19•] This exploration, alongside the information that food insecurity is also a disproportionate concern in TGD communities [21], is a critical reminder to clinicians to screen for and address disordered eating and food insecurity in TGD patients before discussing body size and eating.

### Telehealth Offers One Opportunity to Provide Patient-Centered Care to TGD Communities

As the pandemic loomed, TGD communities experienced multiple disruptions in care. [22•] Patients had crucial affirming surgeries cancelled and were concerned that they would lose access to medications and support due to COVID-19 mitigation strategies. [7] Remote care through telehealth for TGD communities had been established prior to COVID-19's emergence. In 2014, the US Department of Veterans Affairs expanded the scope of their SCAN-ECHO intervention to increase access to gender-affirming care for TGD veterans in rural locations, which had a positive impact on the veterans' health and quality of life [23].

Lock et al. reviewed patient and visit data for 1828 visits from TGD persons from 10 family planning clinics in Arkansas, Kansas, Missouri, and Oklahoma. [24] Comparing data from visits that took place from October 1, 2019, to March 31, 2020, with visit data from April 1 to September 30, 2020, they found no difference in the total number of visits from TGD patients, but a significant increase (from 22.7 to 27.8%) of new patient visits, 60% conducted by telehealth, during this time. This increased demand for new patient visits may reflect the increased accessibility created by telehealth and may also reflect the relative safety of accessing affirming care in a telehealth environment vs. an in-person clinical site. Informally, many patients in our practice have explicitly discussed the internal reflection that led to the conclusion that gender-affirming care would support their livelihood and wellbeing and thus became ongoing patients in our gender-affirming clinical environment.

Convenience and accessibility are repeated findings of studies looking at diverse patient attitudes regarding telehealth. The US Air Force members accessing gender-affirming care [25] agreed that telehealth was a convenient and effective strategy for providing healthcare. [26] Sequeira and colleagues [27] surveyed 204 TGD patients age 12–26 in a gender-affirming clinic regarding telehealth practice. They found that 80% of patients reported interest in receiving telehealth by gender specialists, and 44% described wanting to receive care from primary care physicians. This number increased to 85% if the PCP was “participating in regular trainings about trans health,” suggesting that provider competence is a critical concern for TGD youth rather than the provider's specialty. Interest in receiving care via telehealth remained consistent among patients regardless of time travelled to the clinic, affirming that access to this choice is an important option for care of this population. This same group surveyed 57 TGD youth regarding telehealth [28] which showed that most of their sample (79%) preferred in-person visits for the initial visit, but that telehealth was acceptable for ongoing management, mental healthcare, social work services, consultation with subspecialists for fertility preservation as well as initial surgical consultation. Youth identified ease and convenience as particular strengths (including lack of travel time) along with ease of conversation (particularly when they could elect to turn cameras off as needed), but noted some challenges including technological and logistical challenges (poor connections, lack of ability to send paperwork or access blood draws).

Gava et al. [29] surveyed 108 patients in Italy from May to June of 2020 and showed that mental health scores were significantly improved on the SF-12 when patients had received telehealth for gender-affirming care. A study in a community health center echoes this positive impact on

behavioral health management as a result of televisit options, but suggests that these decisions be made with both the provider and the patient agreeing on the mode of care [30].

Apple et al. [31•] reflected similar findings regarding telehealth for TGD youth, with patients and caregivers agreeing that time, cost reduction, and convenience were an advantage for telehealth, with youth noting occasional concerns about lack of privacy in the home, and caregivers noting challenges with technological access. Hedrick [32•] conducted a chart review and distributed an anonymous survey to TGD youth and caregivers that noted similar benefits (access, ease); their survey noted heterogeneity in the responses regarding preference for telehealth vs. in-person care, suggesting that hybrid care as currently practiced in many gender-affirming clinics may be a useful model regardless of COVID-19 impacts.

Currently published papers offer perspectives from patients currently engaged in care or those that have the capacity to respond to online surveys or post-visit questionnaires. However, some TGD persons experience additional marginalization due to race, disability, class, immigration status, etc. These individuals are more likely to be houseless, not engaged in care, accessing hormones and procedures in an informal way, resulting in a significantly higher risk of impact from COVID-19 and poorer health outcomes. To respond to the violence and marginalization that has been often perpetuated in healthcare, these critically important members of TGD communities should receive community-led and centered responses to healthcare. Magnus [33••] and colleagues report on their work tailoring a telehealth intervention to the needs and concerns of TGD women of color living with HIV in Washington, DC. Via structured interviews with patients, providers, and several participants that identified themselves in both categories, the authors discovered that telehealth strategies would be most acceptable if they utilized phone/text technology, included social media, centered patient interests (particularly ensuring access to gender-affirming hormonal therapy as a central part of HIV management), if they increased allotted time for patients with multiple and complex health concerns, and if the telehealth was not just focused on medication management, but also with connecting patients to peer support and material resources like food and housing. Because of the significant stigma that TGD patients face, comprehensive culturally competent telehealth interventions may offer marginalized TGD patients some solace and support which were previously unavailable. Clinicians working with TGD communities should keep this insight front of mind, particularly in practice with multiply marginalized TGD populations, and financial and research support for the development of community-led telehealth interventions should be a critical part of the ongoing growth of telehealth that serves TGD communities.

## Virtual Strategies Can Improve Access and Training for Healthcare Providers

The most obvious challenges of telehealth are bound up in the need for in-person examination. A 2008 expert panel [34] suggested that clinicians were divided about the need for genital examination before prescription of gender-affirming hormonal therapy—we believe that there has been change in the intervening years, with more providers aligned with the notion that genital appearance will not change management of affirming hormones in post-pubertal patients. Decisions regarding Tanner staging for GnRH inhibitors are less amenable to this approach, but as telehealth video conferencing gains capacity, there may be approaches that increase patient privacy and allow for clinicians to work accurately. A student-run clinic offering gender-affirming care [35] noted that trainees found multiple insights from care in a telehealth realm but that opportunities for teaching and precepting were more limited secondary to distancing requirements.

A recent article about outcomes and benefits for surgical care (including gender affirmation surgeries) compiled over 41,000 telehealth visits [36•] suggests that telehealth consults have multiple applications in a surgical context, including remote training during operative procedures, the ability to consult regarding patients in remote locations, and the ability for providers and patients to assess both presurgical evaluation and post-surgical follow-up/aftercare in a convenient and confidential setting. Hamidian et al. [37] affirmed this and offered several strategies employed to increase the effectiveness of surgical training in telehealth, including using texting and other technologies to engage learners throughout the day (to discuss and describe concerns from rounds and to encourage self-directed learning), along with allowing surgical subspecialists to offer technical support and expertise regarding surgical procedures, particularly gender affirmation surgeries. They also mention the critical importance of telehealth as a strategy for connecting trainees with mentorship for career building and isolation reduction. Isolation and disconnection from trainees are a challenge in this pandemic, and so, preceptors and medical schools should continue to expand opportunities for informal support and mentorship of trainees. Their group advocates for expansion of telehealth-focused training in response to pandemic circumstances and to create standards of care focused on telehealth integration.

Echoing these themes, a recently published evaluation of a web-based urological training lecture series during COVID-19 [38•] surveyed 657 clinicians and found that > 50% of respondents practiced in locations where reconstructive urologic procedures were occurring, and 37% of those procedures were being offered by providers without formal fellowship training. There is a significant need for subspecialty expertise and dissemination to those



outside of large academic centers. The videos in this report were viewed over 12,000 times on YouTube, suggesting that trainees, clinicians, and community members are interested in learning about TGD patients' surgical needs. These data show that there is an opportunity to modernize educational content in a way that increases access to this information beyond that of subspecialty surgical trainees.

## Conclusion

We join the call for healthcare providers and systems to conduct outcomes research on ongoing telehealth strategies [39, 40]. The general acceptability of telehealth interventions is established. What is unknown are the long-term outcomes from telehealth interventions, how to identify patients that are poorly or insufficiently served by telehealth approaches, and to creatively expand support to respond to community-specific needs. Educators have the opportunity to work with trainees to imagine new frameworks of mentorship and how to engage each other in a socially distanced environment. Resources, funding, and support should be made available to adapt and design interventions that respond to populations experiencing health disparities, especially those patients that have been lost to care or who remain challenged in keeping up with care requirements. Hamnvik [41] offers a series of concrete and practical strategies for implementing telehealth in the context of gender-affirming care, and we encourage clinicians and researchers to continue to develop innovative, scalable, and accessible telehealth approaches to meeting healthcare needs for TGD communities.

## Compliance with Ethical Standards

**Human and Animal Rights and Informed Consent** This article does not contain any studies with human or animal subjects performed by the authors.

**Conflict of Interest** The authors declare no competing interests.

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