

Using a Patient Safety/Quality Improvement Model to Assess Telehealth for Psychiatry and Behavioral Health Services Among Special Populations During COVID-19 and Beyond

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Telehealth has been rapidly deployed in the environment of the Coronavirus 2019 (COVID-19) pandemic to help meet critical mental health needs. As systems of care use telehealth during the pandemic and evaluate the future of telehealth services beyond the crisis, a quality and safety framework may be useful in weighing important considerations for using telehealth to provide psychiatric and behavioral health services within special populations. Examining access to care, privacy, diversity, inclusivity, and sustainability of telehealth to meet behavioral and psychiatric care needs in geriatric and disadvantaged youth populations can help highlight key considerations for health care organizations in an increasingly electronic health care landscape.

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Telehealth has been described as a “virtually perfect” solution for addressing health care needs during the Coronavirus 2019 (COVID-19) pandemic.¹ Accordingly, telehealth has been rapidly deployed in behavioral health settings to provide continuity of services as physical distancing and shelter-in-place guidelines have been implemented to reduce the spread of infection.²⁻⁴ Key changes to payment and policy, led largely by the Centers for Medicare and Medicaid Services (CMS), have also facilitated this urgently needed adoption. Namely, CMS broadened payment options and expansion of coverage for telehealth services for psychiatric and behavioral health needs, including the capacity for providers to leverage both audio-only as well as video-based services to meet the needs of their patients. CMS also expanded the 1135 Waiver to

reimburse services in health care locations beyond rural settings and included payment for telehealth in office-based, hospital-based, and other sites (eg, the patient’s home).^{2,5,6}

These changes in federal payment policy directly impacted the delivery of care for older Americans, since Medicare is the primary insurance source for many individuals 65 years of age and older. Children and youth have also been impacted by payment changes at the federal and state levels. According to the 2018 US Census Bureau Report, nearly 36% of children were covered by Medicaid or by the Children’s Health Insurance Program (CHIP), both programs that target low-income children, as their primary insurance.³ Taken together, these shifts in federal-level and state-level decisions on payment for telehealth services, alongside the urgency of adoption, are likely to lead to a rapid increase in telehealth adoption across the United States. Indeed, rapid telehealth implementation as a tool to reduce the infectious spread and improve access to health care has already been described throughout the COVID-19 pandemic.^{4,7-10}

SPECIAL SUBPOPULATIONS

Undoubtedly, there are many special subpopulations and clinical contexts to consider in

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TABLE 1. Health Care Settings in Which Older Adults and Disadvantaged Youth Receive Telehealth

Emergency department
Inpatient
Psychiatric consult service
Psychiatric hospitalization
Ambulatory
Specialty clinic with psychiatric outpatient consultation
Partial hospitalization program/intensive outpatient program
Outpatient mental health clinic
Integrated primary care provider/mental health clinic
Nursing home
Group home
Home health

relation to telehealth delivery. The implications of the electronic delivery of health care services will necessarily differ from setting to setting and from population to population. To illustrate this issue, in this article we highlight special considerations related to 2 key subpopulations, geriatric individuals and disadvantaged youth, focusing on the use of telehealth services within the psychiatric and behavioral health context in these 2 populations (Table 1). The use of telehealth to provide psychiatric and behavioral health services has previously been investigated—before the pandemic—as an option to address severe shortages in the psychiatric workforce and as a means of addressing barriers to care access in these 2 underserved populations.^{11–15} Older adults and disadvantaged youth may have amplified mental health needs in the context of the COVID-19 pandemic, giving rise to additional considerations as to how to best meet the needs of these groups using telehealth.

For instance, given the risk for more severe COVID-19 illness with increasing age and comorbid medical conditions, older adults have routinely been cautioned to take more restrictive precautions to prevent infection, including physical distancing and restricting movements within their communities and among social circles. In their efforts to align with public health guidance, geriatric populations may become more socially isolated and this isolation may negatively impact mental health in these individuals.^{16,17} Disadvantaged youth, who

are already at increased risk for psychiatric and behavioral problems and poor health outcomes, grapple with a cascade of disruptions to their lives across multiple domains from family, to home, to school, to the community.^{18–21} Disadvantaged youth are disproportionately youth of color and are members of communities who have suffered significantly and differentially within the pandemic.²² Much like their adult counterparts, children hospitalized with the COVID-19 virus have been documented as more likely to be racial/ethnic minority youth.^{23,24} Minority youth also represent a large proportion of individuals likely to develop the multisystem inflammatory syndrome associated with the disease.^{25,26} When taken together with vulnerability to the virus, the weight of psychosocial challenges is no doubt amplified in the COVID environment, increasing the potential for psychiatric distress and the need for behavioral health services.

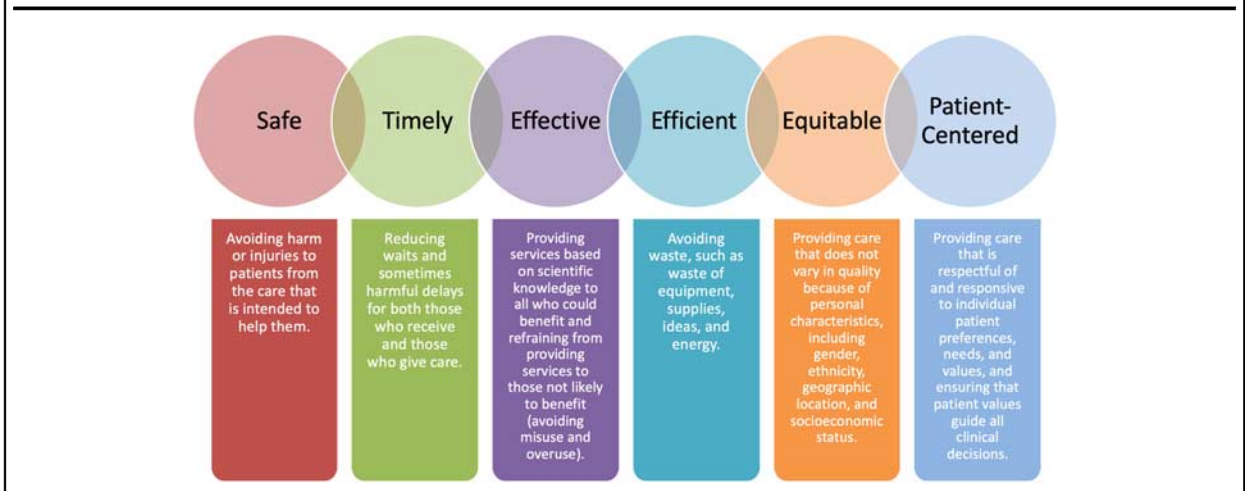
While the pandemic is far from over, as evidenced by a resurgence of cases in a growing number of states in the United States, care systems must begin carefully weighing the future of telehealth services within their organizations.⁸ Although payment and policies have shifted favorably toward telehealth adoption and point toward the use and implementation of telehealth to improve access to mental health services, further reimbursement considerations loom large as health care systems await potential changes to the emergency expansion in coverage.²⁷ As organizations seek to preserve the clear gains and benefits associated with telehealth, a strategic approach to maintaining telehealth during the pandemic and beyond needs to include examination of quality and safety, especially as they relate to differential effectiveness of audio-only, video, and in-person services.

THE SIX DOMAINS OF HEALTH CARE QUALITY

The Six Domains of Health Care Quality, which is a set of guidelines for optimizing patient care captured by the STEEEP (Safe, Timely, Effective, Efficient, Equitable, and Patient-Centered) Care Model,²⁸ can be used to evaluate telehealth in the COVID-19 environment for benefits and opportunities for improvement. Figure 1 visually displays the STEEEP model which is characterized by 3 overarching aims: improving population health,

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FIGURE 1. STEEEP Care Model.²⁸



enhancing the patient care experience, and reducing costs of care delivery.

In this article, we outline considerations for assessing the quality of care for telehealth adoption to address mental health care needs in 2 special populations, geriatric individuals and disadvantaged youth. A quality and safety framework is critical in evaluating the impact of telehealth delivery in relation to access to care, privacy concerns, diversity and inclusion, and rapid changes in telehealth policies.

Safe

Safety has been described as an important component of care delivery.^{7,27,29-31} Many of the systematic reviews in telehealth for psychiatry focus on usability, feasibility, acceptability, sustainability, and efficacy, with fewer studies focusing on safety.^{15,29,30} Review articles have also described the accessibility benefit of using telehealth for psychiatric care. This is especially important in the older adult population, as many older adults have difficulty with mobility and have improved access through home-based services.^{12,32-34} In addition, benefits of telehealth for psychiatric and behavioral care in child and adolescent populations include a baseline increase in access to mental health services, particularly in underserved youth, which is critical given the significant deficits in providers in this area identified in the literature.¹⁴ Of note,

underserved youth may have difficulties accessing care because of limited and/or unreliable access to the Internet and technological tools. As telehealth implementation occurs on a larger scale, studies are needed to focus on specific safety concerns related to psychiatric care.

In the following discussion, we use an example related to suicide care to highlight safety-related aspects of telehealth use. During the COVID-19 pandemic, it became necessary to treat individuals at high risk for suicide who did not meet strict requirements for inpatient psychiatric care as outpatients.³⁵ Reports are also emerging in the literature in direct response to the pandemic to give providers tools for managing suicide risk on the telehealth platform.³⁶ However, on the whole, acute safety concerns and risk mitigation models in telehealth have not been studied sufficiently to allow for robust comparisons with standard care.^{12,32,37-40}

Technology may be one useful option to support the safe delivery of telehealth services in psychiatric care. Measurement tools for patient symptoms and safety planning can be used to monitor safety. For example, the Columbia Suicide Severity Rating Scale (CSSRS)⁴¹ and other depression symptom scales can be embedded in the electronic medical record to track symptoms across time and clinical locations. Similarly, validated suicide safety planning tools, such as the Stanley-Brown Patient Safety Plan,^{42,43} can be adapted for electronic use.^{14,44} Both the CSSRS and the Stanley-Brown Patient Safety Plan can be digitally incorporated

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into the electronic medical record as measurement tools and can be viewed by psychiatric providers in different clinical settings. For organizations that do not have electronic versions of symptom measurement scales or standardized tools for suicide assessment and safety planning, digitizing tools to allow for easy accessibility and evaluation of safety is an important consideration for telehealth.

Operational workflows within the organization should be carefully considered if a patient has escalating safety concerns that indicate the need to move to the next higher level of intervention, such as inpatient care. For instance, when receiving telehealth for mental health needs in the ambulatory setting, a patient may report suicidal ideation or self-harm ideation during a virtual individual or group psychotherapy session. The need to escalate care and the safety of care is especially important for older adults and disadvantaged youth. For example, older adults who live alone in an apartment may describe suicidal ideation while on the phone and the phone line then cuts off during the session. Similarly, youth may display self-injurious behaviors during a video session while on camera. Institutions need to identify triage and operational workflows to evaluate the patient to determine referral for emergency evaluation and, potentially, inpatient admission. Ensuring the availability of a caregiver to help mitigate risk in youth and older adults receiving treatment from home may also be considered, including leveraging care coordination resources and agency supports, as these populations may already place unique demands on familial resources and similar supports (eg, a caregiver who works in a position that does not allow for remote work, limiting his or her availability to offer continuous in-home support).

Timely

For many patients, telehealth has been an important option to facilitate continuity of psychiatric service from home during the pandemic, although pathways to this timely access can present significant challenges requiring careful management. The timely adoption of technology in psychiatric settings can be challenging, as exemplified by delays in the adoption of electronic medical records.⁴⁵ Although many hospitals and clinical

settings may be eager to adopt telehealth to preserve their provider workforce (eg, allowing for home-based work and lower chances of exposure), deficits in information technology infrastructure to deploy services via telehealth have posed major challenges. Telehealth requires that both patients and providers are familiar with (or can learn) the needed technology and have access to devices with stable and reliable internet connectivity. Patients, providers, and clinical support staff have undergone rapid training in the use of technology to facilitate these needed services. As guidance changes and shifts with respect to acceptable platforms for psychiatric and psychotherapy telehealth services, these groups will necessarily need to learn how to interface with institutionally accepted software. Opportunities for education and guidance on how to utilize and obtain access to appropriate technology to receive services will be critical both during the pandemic and beyond.

Effective

Many studies have established the benefit of telehealth, using both video and audio-only methods, in providing effective care for the treatment of depression and other psychiatric conditions.^{12–14,38,40,46–48} However, pragmatic studies are needed to assess the recent broader adoption in less controlled settings that has occurred due to the pandemic crisis, and in settings with less a priori technology infrastructure. For example, in clinical settings that are newly deploying telehealth for psychotherapy services, guides will need to be developed to translate evidence-based treatment modalities (eg, cognitive behavioral therapy and dialectal behavioral therapy) to digital settings. An examination of the efficacy of audio-only interventions, which may be more heavily utilized by older populations, is especially needed. In addition, safety and privacy are important aspects to consider in the study of effective telehealth delivery, especially in behavioral health, as individuals may be in the same physical space as other individuals when care is being delivered. One important example involves the situation in which a minor with a history of trauma suffered from an abusive caregiver is receiving telehealth care in the home where the abusive caregiver is present, which can manifest in safety and access concerns for the minor. The

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processes by which telehealth is adopted and implemented across broad communities can vary, so that rigorous evaluation is needed to study the effects of dissemination and implementation, especially to address the feasibility and fidelity of evidence-based mental health models being used through telehealth.⁴⁹ In addition, evaluation of behavioral health safety interventions translated into the virtual environment (as recommended above in Safety) are needed to assess their efficacy in improving safety and outcomes.

Measurement-based care (MBC) is the evidence-based practice of using systematic and routine measurement of patient-reported outcomes to inform treatment decisions,⁵⁰ and it may be a helpful tool in evaluating the efficacy of telehealth services. MBC supports high-quality, patient-centered, collaborative care by eliciting patient self-report of clinical symptoms and other markers of meaningful treatment progress (eg, quality of life) at regular intervals throughout treatment and using this information to guide the course of treatment. MBC has been shown to be effective in improving patient outcomes, including faster and greater symptom reduction and increased patient engagement.^{51,52} Although it is not a primary function of MBC, data from MBC can be aggregated across patients to help systems evaluate the quality of services,⁵³ and, in the case of telehealth, whether there is equivalence in patient-reported outcomes when patients are treated via telehealth compared with in-person care. Because MBC may be a way to gauge patient engagement, systems can evaluate whether there is equivalency in overall patient engagement by evaluating patterns of completion of MBC measures and usage in patients receiving telehealth compared with in-person services. Beyond MBC, future research will necessarily include an evaluation of patient satisfaction and experience with telehealth services to fully examine whether telehealth serves as a patient-centered approach to care.

Efficient

Telehealth can involve a variety of modalities, including consultation-based telehealth, in which providers engage with other providers without providing direct patient care; synchronous care, in

which a provider connects with a patient in real time through either video or audio-only visits; and asynchronous care, in which providers and patients connect via messaging or recorded videos and messages, but not directly in real time. Given these various possible modalities, telehealth is likely to support increased efficiency of clinical services for psychiatric care.

A major area of efficiency includes a reduction in overall time commitment, including travel time and coordination of needed supports to attend appointments. The lack of travel alone may also remedy a number of other structural and economic barriers to receiving optimal care in both geriatric and disadvantaged youth populations. In geriatric populations, the potential need for assisted travel in individuals who have concerns about ambulation may be alleviated through telehealth service delivery. In youth, the participation of caregivers is a fundamental element of psychiatric treatment. Caregivers who are under-resourced and lack reliable transportation may work multiple jobs and have childcare responsibilities. Individuals with limited childcare support may be better able to participate in telehealth than in-person appointments, given the reduced travel burdens and thus the reduction in the time required to receive treatment. Finally, telehealth may allow for more efficiency in routine coordination of care for youth who are being served by multiple social systems, such as child protective services, as these providers may be better able to attend necessary family and care coordination meetings with patients and providers when these are held online. However, these gains in efficiency for patients and families may increase the time involved for providers, whose need to monitor asynchronous electronic communications with patients and other stakeholders in the patient's care may potentially increase. Future research will need to evaluate whether the efficiency gains afforded to patients help to balance these potential increased demands on providers.

In addition, despite these gains in efficiency, telehealth may have a further impact on loneliness and social isolation among both disadvantaged youth and geriatric individuals.^{16,17,54} For instance, the ritual of attending in-person provider visits may be organizing, containing, and helpful to patients in creating a predictable structure. Although telehealth appointments can address

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some structure-related issues, the element of being greeted by front office staff and informal connections established during in-person visits with the ancillary staff may not be possible to recreate with telehealth. This may be felt especially strongly among geriatric and youth populations receiving group-based psychiatric treatment on telehealth, as the efficiency gained may result in some diminished milieu benefits.

Equitable

It is not clear to what extent the availability of telehealth services among older adults and disadvantaged youth is equitable. Indeed, there are perceptions that older adults have significant barriers to utilizing telehealth for psychiatric care, including a perceived lack of knowledge of technology, mental illness itself, and inability to access the necessary devices.⁵⁵⁻⁵⁷ Within geriatric psychiatry, older adults with depression, especially older African American individuals, are less likely to seek care due to stigma.^{56,58-60} Stigma associated with mental health care and lower rates of seeking services are equally well documented among young populations of color.⁶¹⁻⁶⁷ As shifts in the use of telehealth occur, epidemiological studies are needed to track utilization and any disparities that occur on the basis of age, to track equitable access in terms of racial differences, and receptivity to obtaining care due to stigma. The COVID-19 pandemic has highlighted the existence of particularly vulnerable geriatric and youth populations, including those who are homeless and those with limited socioeconomic support for obtaining a communication device to access mental health on telehealth platforms. For some individuals, factors such as preference, knowledge, and access may result in audio-only devices being more readily available or in fact being the only tool available for telehealth delivery, especially given the limited availability of hardware and broadband technology in disadvantaged settings.^{4,68}

In addition, individuals may experience exacerbations in their clinical presentations due to the presence of multiple comorbidities, including medical, substance use, and psychiatric conditions. These individuals may have less access to supportive services, as many programs have closed and

group therapies are becoming virtual. Less social contact with family, close providers, and peers can lead to a potential deterioration in health and psychological distress from self-quarantine.^{19,69} Many individuals with multiple morbidities, especially those with mental health conditions, faced challenges obtaining needed care even before the pandemic.^{70,71} Thus, as organizations plan for services beyond the crisis, they will benefit from future investigations that seek to understand whether telepsychiatry can be equitably implemented among older adults and disadvantaged youth with psychiatric needs, especially considering differential patterns of use on the basis of age, socioeconomic and housing status, and the presence of multiple comorbid conditions, as all of these factors can have an impact both on access to and use of technology for accessing care.

Patient-centered

Older adults are disproportionately affected by COVID-19. This age quartile has suffered the most severe impacts and the highest mortality rates from COVID-19.⁷² Nursing homes and hospitals have developed specialized units for COVID-19 patients, to group patients with a positive test into cohorts and use telemedicine to treat them to minimize provider exposure. As many of the patients who need hospital-based care or long-term care are those who have a more severe illness, the older adults who are in hospitals and long-term care can be especially challenged by this mandated social isolation. Specifically, older adults are isolated in a hospital room with limited ability to interact with others, which likely perpetuates loneliness and anxiety symptoms. Given the restrictions on family and caregiver visits to minimize exposure, patients may be especially lonely during times of critical illness and especially during end-of-life care. Health care organizations should consider providing older adults with opportunities to connect with family members and care providers digitally, especially if they are in isolation. In addition, providers might consider more frequent and proactive outreach to older adults who may be struggling with isolation precautions. Many older adults in hospital-based or long-term care, for whom telemedicine is the only option to

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receive care from a provider, may need additional support to facilitate patient-centered care.

Another important factor in the patient-centered use of telemedicine involves the perceptions of providers and patients concerning security and privacy.⁷³ Notably, CMS shifted its policy to waive penalties for violations of the Health Insurance Portability and Accountability Act (HIPAA) for providers using FaceTime or Skype for daily communications with patients during the COVID-19 pandemic.⁵ Although HIPAA violations were waived in the context of an urgent need to transform in-person health services to telehealth during the pandemic, providers and health care organizations should still try to safeguard patients' privacy when patients access care through telehealth, such as conducting telehealth in private rooms and office spaces with limited other distractions. In addition, providers and health care organizations should consider minimizing the security risks of the software that is being used. For example, for audio-only visits, organizations should consider partnering with a HIPAA-compliant consumer-based Voice over Internet Protocol (VoIP) service, since not all VoIP services comply with HIPAA's Privacy and Security Rule.⁷⁴ In addition to provider-patient-related privacy concerns, patients who live in space-limited settings with other individuals (such as family members), which may be especially salient among populations of disadvantaged youth, may find it difficult to achieve privacy for telehealth visits. Toward that end, qualitative studies are needed to gather data on patient experiences as technologies are deployed for psychiatric services delivered via telehealth during COVID-19.

CONCLUSIONS

The STEEEP framework is a helpful tool for reviewing the quality and delivery of telehealth services among geriatric and disadvantaged youth populations receiving behavioral health care. Telepsychiatry has been rapidly deployed in the COVID environment to help meet critical mental health needs. As care systems use telehealth during the pandemic and evaluate the future of telehealth services beyond the crisis, a quality and safety framework may be useful in weighing important considerations for using telehealth in special populations. Given the vulnerabilities associated with

both geriatric and disadvantaged youth populations, it is important to consider the implications for these populations in terms of access to care, privacy, diversity and inclusivity, and sustainability associated with rapid changes in telehealth policies. Although in this article we have highlighted special considerations in 2 subpopulations to demonstrate the utility of the STEEEP framework in reviewing telehealth, further research is needed to evaluate the impact of telehealth delivery of psychiatric services on the basis of key demographic variables such as race, ethnicity, socioeconomic status, and potential correlates (eg, private physical space, technology access including broadband internet and device access).

Ongoing work is necessary to better understand health care disparities, to quantitatively track the impact and effectiveness of care, and to qualitatively gather data on the patient experience of care delivered by telehealth. Similarly, future research and practice should evaluate specific metrics to gain a better understanding of realized efficiency in telehealth, including changes in appointment volume, no-show rates, and modality of care chosen by patients (and their rationale for doing so) when given the option.

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