

Rapid expansion of direct-to-consumer telemental health during the COVID-19 pandemic: A case series

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BACKGROUND: The coronavirus disease 2019 (COVID-19) pandemic brought many challenges to patient care delivery. The need for social distancing and relaxing of federal and state telemental health regulations paved the way for widespread adoption of direct-to-consumer (DTC) ambulatory mental health video visits.

METHODS: We present cases that demonstrate the use of video visits across 6 clinical areas, each serving a unique population of patients, in a large behavioral health system. The benefits and limitations of this modality are illustrated in children, adults, and older adults with mood disorders, anxiety disorders, intellectual disability, substance use disorders, neurocognitive disorders, and schizophrenia.

RESULTS: Although telephone visits were acceptable and necessary to serve some patients, there are many advantages to video visits in providing best patient care. Education and support for telemental health—delivered to both patients and clinicians—is critical to the success of the DTC model.

CONCLUSIONS: DTC telemental health is a widespread clinical tool used during the COVID-19 pandemic. Because this model has many strengths and advantages compared with traditional telemental health delivered in a clinic, regulators and insurers should be open to its continued use post-pandemic when clinically appropriate.

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INTRODUCTION

As the international medical community steeled itself to continue outpatient services during the coronavirus disease 2019 (COVID-19) pandemic, behavioral health professionals across the United States faced increasing demand. In an era of widespread behavioral health shortages, few mental health services are elective. In the Commonwealth of Pennsylvania, Governor Tom Wolf closed all nonessential businesses on March 16, 2020, and although our UPMC Western Psychiatric Hospital Behavioral Health Clinics continued to see some patients in person, necessary social distancing required transformation of service provision. Before the current state of emergency, Medicaid, Medicare, and state regulations hindered direct-to-consumer (DTC) telemental health. Previously, telemental health had been delivered mostly to patients at licensed sites and with “telepresenter” staff providing face-to-face patient support for virtual appointments with psychiatrists or psychotherapists. Federal interpretation of the Coronavirus Preparedness and Response Supplemental Appropriations Act released on March 17, 2020 waived most restrictions that were preventing patients from receiving behavioral health care by video visit in their homes, paving the way for rapid growth of DTC care.^{1,2}

Working closely as a team of clinical, regulatory, and billing experts, we developed a series of clinical workflows that involved swift adaptations to our electronic medical records and expanded existing video visit platforms. We also provided multiple hours of staff and patient education and training to support deployment of DTC telemental health across >30 outpatient specialty departments. These departments exist within service lines serving distinct clinical populations, including general child and adolescent, intellectual and developmental disability, geriatric, general adult, addiction medicine, and psychotic disorders. By the third week of April 2020, this coordinated effort had supported nearly 4,000 video visits.

Telemental health provided into licensed clinics, facilitated by staff serving as telepresenters, is widely considered to be an effective way of delivering care across broad diagnostic and age groups.³ Clinical outcomes with telemental health are thought to be comparable to face-to-face care delivery,⁴ but less is known about DTC care. In DTC telemental health, patients access video visits with mental health providers through

their personal smartphones, computerized tablets, or computers. We present a series of clinical vignettes illustrating some of the rewards and challenges of providing DTC video visits to patients who had never before had access to such services.

CLINICAL VIGNETTES

Case 1: Child and adolescent intensive outpatient treatment

Jane, age 15, has been diagnosed with obsessive-compulsive disorder and major depressive disorder. She began an intensive outpatient program (IOP) for teenagers 1 week after COVID-19-related school closure. IOP consists of 2 to 3 hours of group treatment 3 times a week, family therapy, and weekly medication management with a child and adolescent psychiatrist. These appointments have been DTC video visits since the state of emergency was declared. Jane attended group all 3 days the first week, but appeared to log off the video platform several times, and even when her video was on, she rarely showed her face and almost never spoke. In the context of this behavior, and after technical difficulties were ruled out, the clinical team explored a tentative diagnosis of social phobia with Jane and her mother. Jane shared anecdotes from her school experience that supported this diagnosis and reported that she spent IOP group time worrying about what peers thought about her and waiting for the leaders to ask her to “bare her soul.” She admitted to hiding her face and turning off the camera to cope with these feelings. Her mother was struck by the intensity of Jane’s worry and fear, and recognized the level of impairment that Jane was experiencing.

Several interventions specific to managing group telepsychiatry visits were successfully implemented to engage Jane in group therapy and treat her social phobia through gentle exposures. “Orienting to the camera” activities, during which group leaders gave intermittent positive reinforcement while group members adjusted their cameras so that their entire face could be seen, were implemented. This engaged all group members so as not to single out Jane, and also helped orient and re-engage patients with physical impulsivity or disruptive behaviors. By the end of the second week, Jane was no longer turning off the camera to modulate her anxiety, described decreased anxiety with group engagement, and could identify newly learned skills to better

tolerate social phobia. Her mother also noted that Jane was using coping skills and had completed a significant amount of her schoolwork, which her mother attributed to decreased avoidance. If Jane had been present in an in-person group, she might have simply appeared withdrawn. Jane's actively turning off her camera in virtual groups lead to further exploration, a social phobia diagnosis, and successful treatment.

Case 2: General adult outpatient

Mr. G, age 25, has bipolar I disorder and severe Crohn's disease. He recently initiated a cross-titration of medications that required close psychiatric follow-up. However, when the national state of emergency was called, he expressed concern about face-to-face evaluation in the clinic because of his immunocompromised status. Although he initially had tolerated the medication changes, he began to report severe fatigue and sleeping up to 20 hours a day. During telephone outreach conducted by his psychiatrist, Mr. G denied upper respiratory symptoms, shortness of breath, fever, chills, muscle aches, cough, acute gastrointestinal symptoms, or other symptoms that raise suspicion for COVID-19. Mr. G sounded distressed, and because he was reluctant to see his primary care physician or report to a medical emergency department because of COVID-19 transmission risk, the psychiatrist requested that the phone call be transitioned to a video visit appointment to more fully assess Mr. G for medication adverse effects and signs and symptoms of medical and psychiatric illness. After a few minutes of the psychiatrist providing technical support to the patient, Mr. G successfully connected to the video visit platform. Although he appeared anxious, he did not appear diaphoretic and his respirations were normal. He was alert, oriented, and didn't appear confused. Because an Abnormal Involuntary Movement Scale assessment had not yet been done since Mr. G started taking the antipsychotic, this was completed, allowing for evaluation of gait and arm extension as a visual check for rigidity and tremor. Cogwheeling could not be assessed. The patient asked his mother to help position the camera for this examination, and she also assisted with checking his pulse, blood pressure, and temperature using home devices. After the psychiatrist provided psychoeducation regarding Mr. G's medications, the decision was made to slow the planned titration. The availability of a video visit allowed for a thorough medical evaluation, avoiding an unnecessary urgent care or emergency department visit.

Case 3: Addiction medicine outpatient

Ms. B, age 45, has been diagnosed with bipolar II disorder, posttraumatic stress disorder, and severe alcohol and cocaine use disorders. She was hospitalized for alcohol withdrawal during the initial stages of the COVID-19 outbreak, followed by a brief stay in a residential substance use treatment facility. She left the residential facility after 1 week to attend a court hearing for a driving under the influence charge, which she later learned was postponed because of COVID-19-related court closures. She agreed to a telephone follow-up session with a psychiatrist, during which she reported stable mood and minimal cravings for substances. The psychiatrist then suggested they switch to a video visit, explaining that this would better ensure accurate assessment and appropriate treatment. Although hesitant, Ms. B agreed. Through the audiovisual telehealth platform, the psychiatrist noted Ms. B's disheveled appearance, with mild facial edema, and notable scleral injection. Ms. B admitted she had been crying before the session, struggling with feelings of sadness and isolation after spending Easter without her mother, who had recently died, and feeling removed from other family members because of social distancing. She admitted that the loneliness had triggered intense cravings and a drive to a neighboring state that was still selling liquor in stores. She drank vodka over the next few days; her last drink was 3 days earlier.

Through the video visit, the psychiatrist was able to assess Ms. B for acute alcohol withdrawal by observing for tremor, flushing, and agitation, and by asking her about diaphoresis, nausea, vomiting, auditory/visual/tactile disturbances, headache, anxiety, and clarity of thought. The psychiatrist also was able to guide Ms. B in checking her own heart rate. The psychiatrist determined that although Ms. B did not require acute treatment for alcohol withdrawal, she would benefit from a more intensive level of care. Ms. B did not want to return to the residential treatment program, but she was willing to participate in a virtual IOP. She expressed relief that she had agreed to participate in the video visit and that the psychiatrist had noticed her distress, which initially she had been reluctant to disclose. Ms. B also mentioned that she probably would not have attended an in-person appointment that day because of her depressed mood, low energy, and feelings of shame about returning to alcohol use so soon after an inpatient hospitalization. Ms. B concluded the visit by saying she appreciated the opportunity to have a video check-in

and was hopeful that she would maintain abstinence with the help of IOP.

Case 4: Intellectual and developmental disability outpatient

Mr. K, age 30, has severe autism spectrum disorder, past traumatic brain injury, intense hyperactivity, anxiety, impulsive aggression, and severe verbal skill impairments. He lives in a group home and requires 24-hour supervision and assistance with most activities of daily living. Any changes in his day-to-day routine—including medical visits—trigger aggressive behavioral outbursts such that several caregivers must accompany him to appointments to assure patient and staff safety. During transport, Mr. K will attempt to open car doors, punch the windows, and hit the driver. Once inside the clinic, he becomes increasingly agitated with crowded waiting rooms, longer-than-expected waits, and loud noises. In the medical office, Mr. K obsessively rearranges anything perceived to be out of place, whether it's in a desk drawer or on an office shelf. Any redirection of this behavior is met with agitation, so caregivers carefully balance the sessions by managing Mr. K's needs and redirecting his behaviors while trying to relay important updates about his clinical symptoms. In the past, the team has attempted to minimize stressful in-person psychiatric appointments using phone consultations when appropriate. Because the patient is largely nonverbal, these calls were challenging as well as nonreimbursable. Although video visits would allow for more interaction and robust assessment of the patient's mental status, before the COVID-19 state of emergency, Medicaid and/or Medicare recipients such as Mr. K had to present physically at a licensed clinic for video visits, which limited the utility of such visits.

Early on during this state of emergency, while Mr. K was temporarily staying with his father, a video visit with his psychiatrist was arranged because it would not have been safe for the father to transport the patient without the help of other caregivers. The video visit allowed Mr. K and his father to be seen in the family home. When the video platform screen opened, the psychiatrist saw Mr. K quietly preparing his favorite afternoon snack at the kitchen counter. Mr. K briefly acknowledged her, smiled, and went about his routine. Basic components of the mental status exam, including Mr. K's physical appearance and mobility, were easily observed; his calm behavior and relaxed appearance were a striking contrast to that of his usual clinic presentations. Caretaker stress also

was mitigated so that the patient's father could gather his thoughts and more comfortably engage in treatment planning. Both the patient's father and psychiatrist agreed that this approach to care was safer and more productive than in-person visits.

Case 5: Geriatric outpatient

Mr. W, age 78, is a widowed man with a history of major depressive disorder and mild neurocognitive disorder who has been seen in a geriatric outpatient clinic for depression after the death of his wife 5 years ago. Mr. W lives by himself in the community, volunteers, and is active in his church. Over the last year, he has been developing worsening memory issues such that he sometimes misses appointments and forgets to take medications. With the help of his clinic and prescribed community support services, he has been able to maintain his independent activities of daily living so that he can continue to live in his own home. Difficulties with driving, however, have posed a particular challenge, leaving Mr. W stressed and anxious and wishing that "doctors could make house calls like in the old days." Although such services exist to a degree, referral criteria are rigorous, and the wait list for program entry is long. During the COVID-19 pandemic, clinic staff offered Mr. W a video visit with his psychiatrist. Although Mr. W expressed some concern that he wouldn't be able to successfully navigate the platform because of limited technological literacy, he ultimately embraced the idea. With his cognitive impairment in mind, staff decided to link him with an alternative Health Insurance Portability and Accountability Act (HIPAA)-compliant platform with a simpler interface than what is formally supported by UPMC. Before his scheduled psychiatry appointment, staff called Mr. W by phone and conducted a successful trial run of the virtual visit. On the day of the appointment, Mr. W remained a little anxious that he would struggle to connect, but with his psychiatrist's assistance, he completed the virtual visit with minimal difficulty, quipping, "I can get used to these video visits." Mr. W noted that he was pleasantly surprised by how efficient and seamless the process was, and given his ongoing transportation concerns, he expressed a preference for video over face-to-face visits even after social distancing measures were relaxed.

Case 6: Schizophrenia outpatient

Ms. P, age 53, has a long history of schizophrenia with mild residual positive symptoms with medication as well

as mild cognitive and negative symptoms. Lately, Ms. P also has been experiencing mild oral facial tardive dyskinesia, which her psychiatrist has been treating with slow medication reduction and careful monitoring for worsening positive symptoms. At baseline, Ms. P has difficulty trusting others and has few supports. She has not been able to maintain successful employment for many years and lives on a limited budget. Ms. P does not have wireless internet or access to a tablet or a computer, but she does use a smartphone. Although her technical literacy is limited, Ms. P agreed to a video visit to assess her tardive dyskinesia. Because she had difficulty following the scheduling staff's verbal prompts for installing the UPMC-approved video platform, during her appointment time Ms. P's psychiatrist called her and transitioned her to a smartphone-to-smartphone video visit. During the appointment, Ms. P expressed some concerns that the neighbors would hear the psychiatrist's questions and judge her, leading her to turn on the radio to increase ambient noise. This made it difficult for Ms. P to hear the psychiatrist's questions at times. She was able to sit in a well-lit room and orient the camera to her face and follow prompts to open her mouth and stick out her tongue. Both the psychiatrist and Ms. P voiced satisfaction with the encounter because the psychiatrist was able to evaluate the patient's oral facial tardive dyskinesia, which was slightly worse. With more support in the home or preparation time to properly position the patient's phone camera, the psychiatrist could have done a more complete examination for tardive dyskinesia, visually scanning the patient sitting, standing, walking, and performing activation movements. Based on the objective and subjective findings that were gathered, however, Ms. P and her psychiatrist agreed to decrease the antipsychotic dosage. The patient voiced satisfaction and noted appreciation with being able to see her doctor, concluding that it felt like a "real" appointment.

DISCUSSION

Rapid expansion of DTC video visits during the COVID-19-associated state of emergency was met with broad success across a spectrum of clinical populations and ambulatory settings. Show rates in many departments stayed the same or increased. Explanatory factors voiced by patients included patient stress and perceived need of services during a time of crisis. Patients also welcomed

TABLE 1
'Webside manner' tips for telemental health clinicians

Make sure the patient can see you clearly from the elbows up
Keep your background professional, simple, and neutral in color
Avoid having light directly behind you
Wear solid colors
Explain the purpose of the visit and your office set up
Remind the patient of the plan if you get disconnected
Look into the camera to give the appearance of eye contact
When averting your eyes from the camera, explain why (for example, "I'm looking at your labs")
Enunciate and make sure that the patient can hear you
Obtain and document informed consent in accordance with applicable regulatory guidelines. Elements may include patients' rights and responsibilities, grievance processes, and treatment benefits and risks (including information security)
Ask the patient for feedback throughout the session
Review plans for the next session, including if it will be a video or in-person visit, and how to contact you between appointments
Before ending the session, thank the patient for participating in the video visit, and alert them that you will be terminating the video connection

social interaction amid social distancing, and decreased economic and transportation burdens. We learned that many patients found benefit that would extend beyond the timeframe of a pandemic or other natural disaster. Patients explained that video visit options would be a welcomed alternative to the stress of traveling to appointments in clinics far from their home, in congested urban centers with limited parking and/or requiring multiple bus transfers. Patients who struggle with anxiety, low mood, trauma, memory impairment, or psychotic spectrum disorders found visits in their home to be less stressful, and those with physical disabilities also expressed satisfaction with the convenience. Families and caregivers who normally transport impulsive or severely cognitively impaired patients also noted satisfaction. These observations are largely consistent with those previously published in the literature.⁵

Staff using video visits reported substantial benefit with seeing patients in their home environments and appreciated the flexibility in scheduling. In working with children and individuals with developmental disorders, staff were able to provide real-time observation

TABLE 2
Clinical benefits of direct-to-consumer video visits vs phone visits

Promotes patient engagement and incorporation of caregivers
Allows for evaluation of physical symptoms, including signs of acute substance withdrawal
Enhances evaluation of abuse or neglect
Allows for assessment of home environment safety
Facilitates completion of Abnormal Involuntary Movement Scale (with the exception of detection of cogwheel rigidity) and examination for tremor, tics, akathisia, and other neurologic impairments
Improves ability to triage patients for appropriate level of care through more complete mental status examination

and coaching of patient supports during mealtimes, bedtimes, and other challenging times of transition when clinics normally are closed. This allowed for timely behavioral plan revision and implementation and minimized standard post-hoc analyses of behavioral events that usually are limited by family/staff recall. Family therapy or meetings also could be held despite physical separation of family members. Mobile staff also had more opportunities to connect with patients because less time was occupied by travel.

Many clinicians noted that compared with face-to-face appointments, video visits preserved or even enhanced aspects of psychotherapy that could not be maintained through telephone visits. Nonverbal expressions of empathy or listening by the clinician, which are integral to forming a therapeutic rapport, are largely preserved during video visits, allowing for maintenance or growth in patient relationships. While many clinicians stated that face-to-face visits felt more natural, with practice of good “websites manner” (TABLE 1), including looking into the camera, speaking slowly and clearly and with good enunciation, using appropriate lighting, engaging adequate technology support, and using communication techniques appropriate to the patient population, the sessions became increasingly satisfying, underlying the importance of telemental health training, including for specialty populations.^{6,7} One staff psychologist opined that seeing patients in their homes added a sense of intimacy to psychotherapy sessions. Not only can patients invite primary supports into video visits with more ease than during a phone call, they can present meaningful windows into their home lives that would not have been

evaluated in face-to-face visits. Cluttered and uncleaned bedrooms, hoarded objects, and signs of home neglect are exposed. Patients can introduce treasured family heirlooms, beloved pets, and homemade crafts, as well as children, older parents, and other supports that never would have come to a psychiatric clinic.

Although many noted that telephone visits were helpful for accessing some aspects of the mental status examination, video visits consistently allowed for a more robust assessment, including of patient appearance, behaviors, movements, and affect (TABLE 2). Patient behaviors observed via a video visit might be different from those that would have been observed during a face-to-face visit, but as illustrated by Cases 1 and 3, this can enrich the assessment. As described in Case 2, screening for withdrawal from substances can largely be done via video visit, although this might require patients to obtain their own vital signs. Examinations for abnormal movements, including tics, tremors, and dyskinesias, as noted in Cases 3 and 6, also can largely be done by video visit. With optimal camera set-up, gait and arm swing also can be assessed. Teaching patients about proper lighting, optimal dress for visual examination by staff, and room set up is critical to visit quality.

Many of the barriers related to telemental health visits, including licensure, credentialing, legal, and regulatory concerns, were relaxed or eliminated during the COVID-19 pandemic. Billing procedures and reimbursement are dependent on state regulation and individual insurance payor guidelines. Technology issues were a significant challenge for staff and patients alike,⁸ leading to broad use of phone calls when these issues could not be overcome. With the relaxation of HIPAA enforcement, video visits were delivered via a variety of platforms (TABLE 3) to promote patient access, although all staff were encouraged to first use platforms with which UPMC has a business association agreement to ensure quality, data security, and HIPAA compliance as well as maintenance of other privacy standards. Staff working from home sometimes did not have adequate hardware, which had to be ordered, thus delaying video visit implementation; many patients also did not have access to compatible devices or could not use them to the degree necessary to support telemental health. Furthermore, many patients did not have ready access to wireless internet, which limited platform access. Although several area internet providers expanded free wireless internet hotspots, these were often in public places to be avoided

TABLE 3
Types of video visit platforms^a

Platform type	Comments
Applications readily available to the public (eg, FaceTime, Google Duo, Facebook Messenger, WhatsApp)	Readily available and user-friendly Not designed for medical treatment and pose security concerns
Meeting applications (eg, Vidyo, Microsoft Teams, Zoom)	Readily available in many health care organizations, with available modifications for telehealth Adapt well to psychotherapy groups HIPAA compliance and security measures are not uniform among platforms or even versions of the same platform
Other virtual care platforms (eg, doximity, doxy.me)	Readily available to providers Patient-friendly interface Potentially tiered subscription levels HIPAA compliance and data security might not be uniform

^aCollaboration with legal, regulatory, malpractice, and/or compliance advisors is recommended.

HIPAA: Health Insurance Portability and Accountability Act.

in times of social distancing and would not have been appropriate locations for mental health visits regardless. Our workflows also promoted the use of patient/staff email to share web links to appointments; many patients did not have email, and staff were sometimes reluctant to share their business email addresses with patients because of privacy concerns. Sending appointment invites by text often was a workable alternative. As the use of sanctioned platforms expanded, both patients and staff worked closely with information technology supports to report errors and intermittent difficulty with access; many (but not all) of the reported problems were able to be addressed over time. Clinician confidence and enthusiasm in using new technology played a role in ease of adoption, as did consistency of manager support. Clinics with knowledgeable staff who had adequate time to support patient software installation and use had more video visits. In our adult clinics, empowered patients educated their peers, partnering with staff to make patient user guides that were disseminated for broader use. Patient family members and other primary supports also were recruited to help with technical support. As illustrated in Cases 5 and 6, some patients with technological access but lower technological literacy and/or cognitive impairment benefited when staff used more familiar technologies, such as FaceTime. Although many patients were supported in using video visits, telephone visits served as an adequate alternative for patients known to our clinics.

CONCLUSIONS

DTC telemental health increasingly has been deployed during the COVID-19 pandemic to support ambulatory mental health services. Our behavioral health service line was able to quickly expand existing telehealth services and platforms to adapt to this model. This allowed us to provide psychiatry visits, as well as individual and group therapy, across varying levels of outpatient care and for patients across the lifespan with a spectrum of psychiatric diagnoses. Further work could objectively delineate advantages and disadvantages of DTC compared to face-to-face visits and more traditional delivery models of telemental health, but these case reports illustrate clinical promise. In addition to its usefulness during pandemics and other disasters, DTC can facilitate care for patients who cannot easily get to a clinic because of severe psychiatric illness, acute or longstanding physical disabilities, distance from a clinic, or financial or transportation burdens. Considering the challenges that the post-COVID-19 world likely will present to mental health care, it would be sensible for regulatory and payor environments to remain friendly to expanded DTC telemental health delivery. ■

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