EVIDENCE-BASED RESOURCE GUIDE SERIES

Telehealth for the Treatment of Serious Mental Illness and Substance Use Disorders

SAMHSA

Substance Abuse and Mental Health Services Administration

Telehealth for the Treatment of Serious Mental Illness and Substance Use Disorders

Acknowledgments

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FOREWORD

Evidence-Based Resource Guide Series Overview

The Substance Abuse and Mental Health Services Administration (SAMHSA) and the Office of the National Mental Health and Substance Use Policy Laboratory (Policy Lab) are supporting the implementation of the 21st Century Cures Act to disseminate information on evidence-based practices and service delivery models to prevent substance misuse and help people with substance use disorders (SUDs), serious mental illness (SMI), and serious emotional disturbances (SEDs) get the treatment and support they need.

Treatment and recovery for SUD, SMI, and SED can vary based on several factors, including geography, socioeconomics, culture, gender, race, ethnicity, and age. This can complicate the delivery and use of services, treatments, and supports. Despite these variations, however, there is substantial evidence to inform the types of resources that can help reduce substance use, lessen symptoms of mental illness, and improve quality of life.

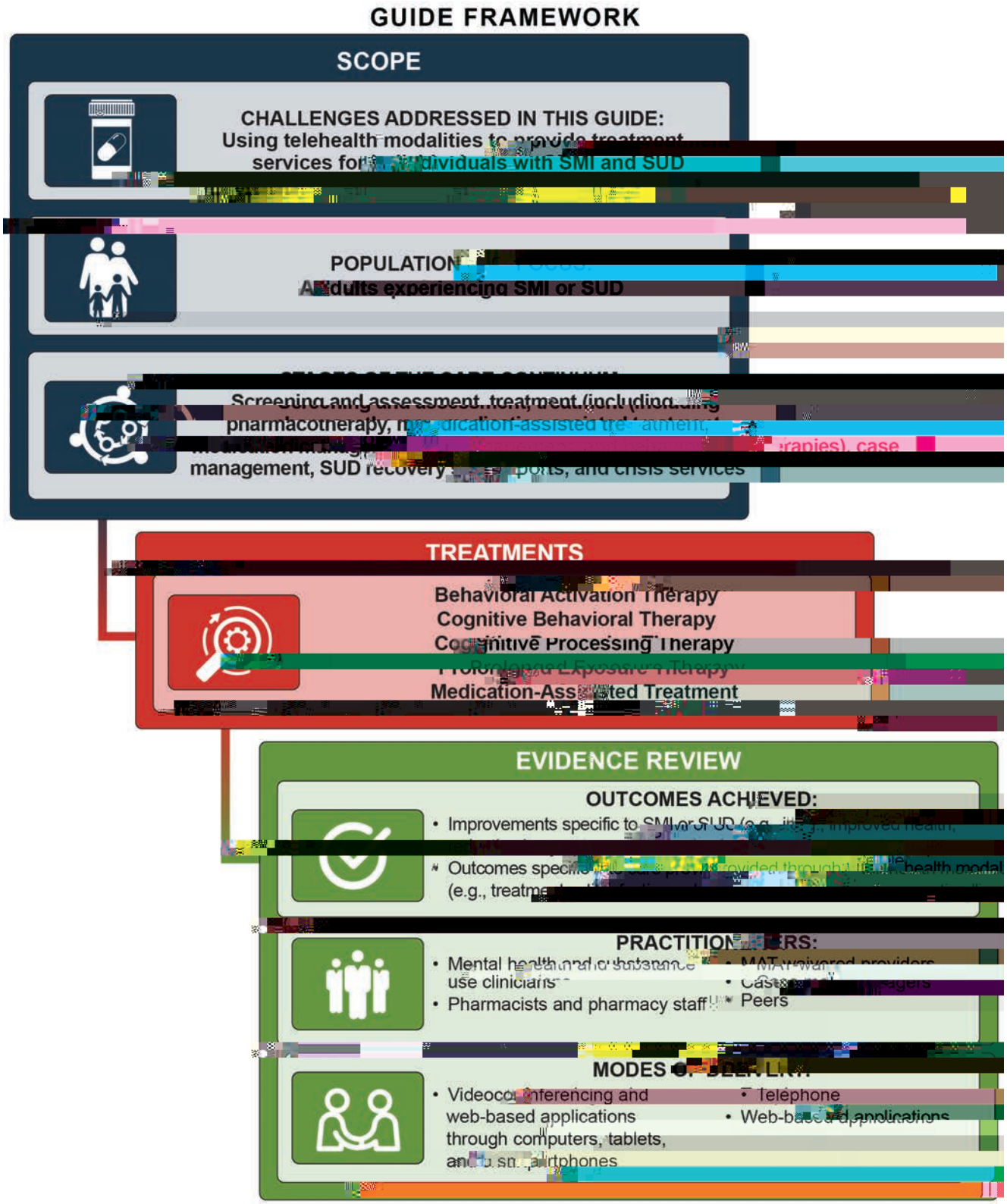
The Evidence-Based Resource Guide Series is a comprehensive set of modules with resources to improve health outcomes for people at risk for, experiencing, or recovering from SMI and/or SUD. It is designed for practitioners, administrators, community leaders, and others considering an intervention for their organization or community.

A priority topic for SAMHSA is increasing access to treatment for SMI and SUD using telehealth modalities. This guide reviews evidence, examines emerging practices, and describes challenges and strategies for implementation. While this guide is focused on the needs of people experiencing SMI and SUD, readers can broadly apply its resources and lessons from the field for mental illness.

Expert panels of federal, state, and non-governmental participants provided input for each guide in this series. The panels included accomplished scientists, researchers, service providers, community members, tribal leaders, federal and state policy makers, and people with lived experience. Members provided input based on their knowledge of healthcare systems, implementation strategies, and

Content of the Guide

The framework below provides an overview of this guide. The guide addresses the use of telehealth to provide SMI and SUD treatment. The review of these treatments in Chapter 3 and modes of delivery.



CHAPTER

1

Issue Brief

Telehealth is the use of telecommunication technologies and electronic information to provide care and facilitate client-provider interactions. It is comprised of two forms:

1. Two-way, synchronous, interactive client-provider communication through audio and video equipment (also referred to as telemedicine)
2. Asynchronous client-provider interactions using various forms of technology (further described in the chart below)[1, 2]

Serious mental illness (SMI) is defined as a mental, behavioral, or emotional disorder among adults aged 18 and older resulting in serious functional impairment, which substantially interferes with or limits one or more major life activities.[3]

Substance use disorder (SUD) is a diagnosis that applies when the recurrent use of alcohol or drugs causes clinically significant impairment, including health problems, disability, and failure to meet major responsibilities at work, school, or home.

%HQH¿WV RI 7HOHKHDOWK

Telehealth supports team-based care and its interrelated care objectives. The Quadruple Aim is a conceptual IUDPHZRUN WR XQGHUVWDQG PHDVXUH DQG RSWLPL]H KHDOWK V\VWHP SHUIRUPDQFH 7KH 4XDGUXSOH $LP RUJDQL]HV EHQH¿WV RI WHOHKHDOWK LQWR IRXU FDWHJRULHV[30]

- Improved provider experience
- Improved client experience
- Improved population health
- Decreased costs

1. Provider experience. Providers may improve the quality of care they provide and experience the IROORZLQJ EHQH¿WV IURP LPSOHPHQWLQJ WHOHKHDOWK methods:
   - Provision of timely client care. Providers PD\ KDYH LQFUHDVHG ÀH[LELOLW\ LQ VFKHGXOLQJ WR RIIHU FOLHQW LQIRUPDWLRQ scheduling by using telehealth. They can extend care beyond a clinic's normal operating hours and its four walls and leverage "virtual walk-in YLVLWV´ ,QFUHDVHG ÀH[LELOLW\ FDQ KHOS FOLQLFV WR PRUH HuHFWLYHO\ PDQDJH FOLHQW ³QR VKRZV´ DQG cancellations.[34-37]
   - (uHFWLYH DQG HvFLHQW FRRUGLQDWLRQ RI FDUH estimated 40 to 60 percent of civilian clients (not inclusive of military populations) with mental and substance use disorders are currently treated LQ SULPDU\ FDUH RvFHV UDWKHU WKDQ VSHFLDOW\ care settings.[31] Providers can use telehealth methods for tele-consultation, tele-supervision, and tele-education to coordinate, integrate, and improve care (e.g., through the "hub and spoke" model).[11, 38-40]
   - 5HGXFWLRQ LQ ZRUNIRUFH VKRUWDJHV. This is especially true for underserved and rural areas.[7-8, 41]
   - $EOLW\ WR DVVHVV FOLHQW¶V KRPH HQYLURQPHQW Rather than rely on a client's report of their home and living conditions, telehealth makes it possible for providers to see, with appropriate permission, inside a client's home, meet family support systems, and determine if an in-person visit at a person's home is needed.[42]

2. Client experience. Clients may experience many EHQH¿WV UHFHLYLQJ PHQWDO KHDOWK visual or hearing impairments and clients who are isolated (e.g., older adults) or incarcerated are able to access needed health care through use of telehealth.[43, 44]
treatment by telehealth:

- ,QFUHDVHG DFFHVV WR H[SHULHQFHG SURYLGHUV DQG KLJK TXDOLW\ FDUH Through telehealth, clients can access experienced providers that may be geographically distant from their homes. Through telehealth modalities, clients can access providers with expertise in their particular conditions and treatment plans that can provide care appropriate for their culture, race, gender, sexual orientation, and lived experience.[20, 47, 48]
- ,PSURYHG DFFHVV WR DQG FRQWLQXLW\ RI FDUH Telehealth provides a mechanism to increase access to quality care and reduce travel costs for clients, increasing the likelihood that clients will see their provider regularly and attend scheduled appointments.[36, 49]
- ,QFUHDVHG FRQYHQLHQFH WKDW UHGXFHV WUDGLWLRQDO EDUULHUV WR FDUH *HRJUDSKLF (e.g., transportation and distance to providers). Telehealth increases the opportunity for individuals in remote locations to access the care they need.[8, 9, 50-55]
  3V\FKRORJLFDO Clients who experience anxiety about leaving their homes to access treatment (e.g., clients experiencing panic disorder or agoraphobia) are able to receive care in a safe environment.[56, 57]
  Accessibility. Individuals with physical, Employment. The use of telehealth allows clients to receive care while not requiring them WR WDNH VLJQL¿FDQW OHDYH other essential activities.[37, 38]
  &KLOGFDUH DQG FDUHJLYHU Receiving home-based telehealth can help to UHGXFH WKH EXUGHQ RI ¿QG family caregivers, telehealth technologies, such as remote monitoring, can relieve some caregiver responsibilities, thereby decreasing stress and improving quality of life.[59, 60]
  7HDP EDVHG VHUYLFHV DQG interventions. Team-based and coordinated care is critical to high-quality client treatment. However, geographic distances between providers and clients can limit communication. Telehealth enhances team-based care across geographic barriers by remotely connecting multiple providers with a client, promoting provider collaboration and the exchange of health information.[61] Similarly, telehealth improves access to group-based interventions, which demonstrate similar treatment outcomes as in-person groups.[62]

Health Equity and Telehealth

:KLOH WHOHKHDOWK KDV PDQ\ EHQH¿WV FRQFHUQV DURXQG DFFHVV W for those with low technology literacy or disabilities, remain.[71-73]

- Americans aged 65 and older (18 percent of the population) are most likely to have a chronic disease, but almost half (40 to 45 percent) do not own a smartphone or have broadband Internet access.[71]
- People experiencing poverty report lower rates of smartphone ownership (71 percent), broadband Internet access (59 percent), and digital literacy (53 percent) compared to the general population.[74, 75]
- People who are Black or Hispanic report having lower computer ownership (Black: 58 percent; Hispanic: 57 percent) or home broadband Internet access (Black: 66 percent; Hispanic: 61 percent) than White respondents (82 and 79 percent, respectively), although smartphone access is nearly equal (Black: 80 percent; Hispanic: 79 percent; White: 82 percent).[76]

'XH WR WKHVH OLPLWDWLRQV VRPH FOLHQWV PD\ QRW EHQH¿W IURP W

5HGXFWLRQ LQ VWLJPD DVVRFLDWHG ZLWK H[SHULHQFLQJ 60, DQG 68' DQG DFFHVVLQJ treatment. Through telehealth, clients can disclose their SUD and/or SMI from the privacy of their own home.[63] In rural communities with fewer behavioral health providers, telehealth can connect clients with providers in other geographic locations, which can increase their privacy and protect their anonymity when accessing care.[38,64-66]

6DWLVIDFWLRQ ZLWK FDUH FRQVLVWHQW ZLWK LQ SHUVRQ WUHDWPHQW Despite some initial client hesitancy towards using telehealth, clients often report comparable satisfaction between telehealth and in-person care.[67-70]

3. Population health.Treatments delivered through telehealth have been shown to improve health outcomes, including improved quality of life and access to health care. For people experiencing SMI, telehealth has the potential to improve quality of life and general mental health, reduce depressive V\PSWRPV EXLOG PRUH FRQ¿GHQFH LQ PDQDJLQJ depression, and increase satisfaction with mental health and coping skills (when compared to treatment RuHUHG LQ SHUVRQ RQO\).[3,79-83] For people experiencing SUD, treatments delivered through telehealth have resulted in reductions in alcohol consumption, increased tobacco cessation, and increased engagement and retention in opioid use disorder treatment.[84]

4. Costs. In rural communities in particular, implementing telehealth services reduces RUJDQL]DWLRQDO FRVWV E\ UHSODFLQJ WKH EXGJHW IRU D full-time, onsite behavioral health provider with as needed hourly fees.[36]

While the use of telehealth as a mode of service delivery is increasing, providers, clients, and healthcare settings

Individual client and provider	x Increasing access to and comfort using telehealth
Interpersonal client-provider relationships	x Preparing clients to use telehealth
	x Building a therapeutic relationship
Organizational	x Assessing organizational needs
	x Increasing organizational readiness and workforce capacity to participate in telehealth
	x (QVXULQJ VHFXULW\ DQG FRQ¿GHQWLDOLW
Regulatory and reimbursement environments	x Complying with federal, state, and local regulations

Future of Telehealth

The use of telehealth has increased substantially in recent years and has accelerated rapidly with the &29,' SDQGHPLF :KLOH WKH ODQGVFDSH RI WHOHKHDOWK is continually evolving, and provider, client, population x

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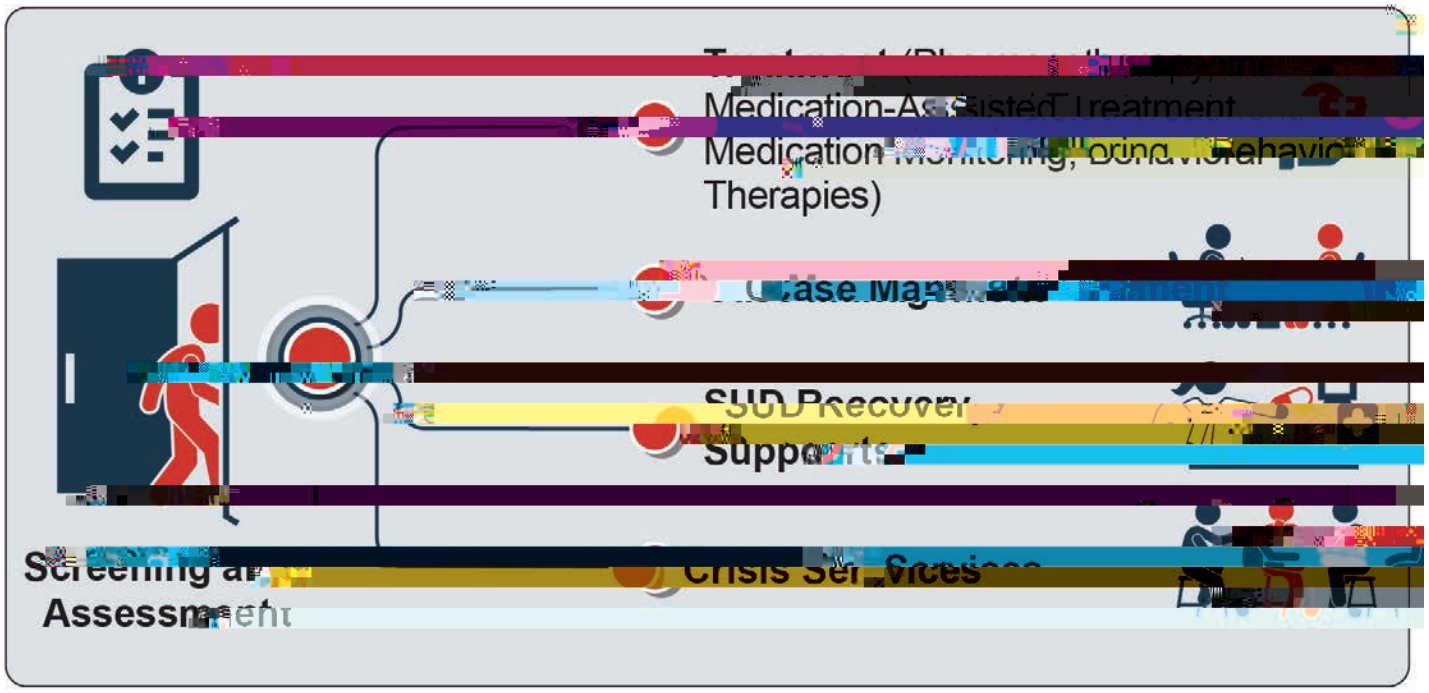
CHAPTER

2

What Research Tells Us

Telehealth is the use of two-way, interactive, video and/or audio technology to provide health care to individuals experiencing serious mental illness (SMI) or substance use disorder (SUD). The goal of this chapter is to present the evidence for specific telehealth delivered treatments for individuals with SMI, SUD, and co-occurring disorders (CODs). While telehealth modalities for SMI or SUD may be synchronous (real-time) or asynchronous (non-urgent communication between clients and providers), the evidence review in this chapter focuses on synchronous interventions to treat SMI or SUD. In addition to treatments via telehealth modalities, this chapter also provides information on ways programs can provide telehealth-delivered services along the continuum of care for SMI and SUD, which includes screening and assess61 ac medication manage61 ac case manage61 ac recovery support, and crisis services.

Evidence Review and Rating Process



Screening and Assessment

Screening and assessment for SMI and SUD are the first steps to receiving treatment and can be conducted using synchronous and asynchronous telehealth modalities.

- SMI: Synchronous screenings and assessments for mental disorders conducted via videoconferencing modalities have similar reliability and accuracy to in-person screening and assessment. Asynchronous tools that are completed by a client and later reviewed by and discussed with a provider can increase access to screening and assessment when no clinician is available.[1]
- SUD: Providers can administer screening tools to assess risk of SUD using telehealth.[2] Early evidence suggests computer-based assessment tools for SUD may increase engagement in the screening process, as well as response accuracy.[3] However, confirmation and diagnosis of SUD through telehealth has limited evidence. This is largely due to the Ryan Haight Online Pharmacy Consumer Protection Act, which, prior to the COVID-19 pandemic required in-person evaluations before providing medication-assisted treatment (MAT).[4] To access to

Designing and updating the care plan is a collaborative and iterative process between client and provider, and involves a conversation on client comfort, preferences,

Medication-Assisted Treatment using a hybrid telehealth and in-person approach

Strong Evidence

Health outcomes	• Reduction in rates of positive urine drug screens over course of study[22] DQG QR VLJQL¿FD GL‡HUHQFH LQ SRVLWLYH XULQH VFUHHQV EHWZHHQ LQ SHU[22, 23]
7HOHKHDOWK VSHFL¿F outcomes	When compared to in-person treatments: • 1R VLJQL¿FDQW GL‡HUHQFH LQ UHWHQWLRQ[22] and counseling attendance rates[23] • 1R VLJQL¿FDQW GL‡HUHQFH LQ DQG[23] KLJK OHYHO RI FOLHQW • 1R VLJQL¿FDQW GL‡HUHQFH LQ FOLHQW DQG[23] SURYLGHU UDWL
Populations that EHQH¿W IURP WKH treatment	• People living with opioid use disorder[22, 23] • Pregnant women living with opioid use disorder[22]
Providers who can R‡HU LQWHUYHQWLRQ services	$ UDQJH RI SURYLGHUV FDQ LPSOHPHQW 0$7 DFWLYLWLHV GHS FRQGXFW WKH ORFDWLRQ RI WKH SUHVFULEHU DQG WUHDWPH The care team can include: • Waivered prescribers at buprenorphine[18, 24] and opioid treatment programs[25] • Social workers, peer recovery counselors, addiction counselors, outreach workers, and nurses • Pharmacists[26]
Technology used	• Videoconferencing and web-based applications[22, 27]
Intensity, duration, and frequency	• 0$7 LV GHVLJQHG WR PHHW FOLHQWV¶ FOLQLFDO QHHGV VR intensity and duration of the program • Clients may vary in the types of supports they need and those needs may change over the course of treatment and recovery[11] • 0$7 EHJLQV ZLWK WUHDWPHQW LQLWLDWLRQ IROORZHG E\ Z monitoring, and counseling sessions that taper to monthly depending on response to treatment[22, 23] • 0HGLFDWLRQV DUH RIWHQ DGPLQLVWHUHG JUDGXDOO\ DQG adjust the dosage between initiation and stabilization[28]
Lessons learned from transitioning from in-person care to telehealth	• Telehealth can be used to integrate care and extend the reach of specialty providers to make 0$7 DYDLODEOH WR XQGHUVHUYHG SRSXODWLRQV[22] • Although some clients experienced technical problems, most enjoyed the convenience of telehealth services[23] • 3URYLGLQJ 0$7 YLD WHOHKHDOWK LV OLPLWHG E\ UHJXODWL FRQVXOW VWDWH DQG IHGHUDO SUHVFULELQJ SURJUDPV[29] SULRU V
Four studies met criteria for review (one RCT, two QEDs, and one single sample pre-post), resulting in a rating of Strong Support for Causal Evidence.	

0 H G L F D W L R Q P D Q D J H P H Q W via telehealth ranges from D X W R P D W H G Q R Q V S H F L ¿ F W H [W P H V V D J H V W R E D V L F H O H Q H counseling conducted over the telephone.[30] Examples of telehealth modalities for conducting medication management are described below:

- 7 H [W P H V V D J H interventions, designed to remind clients to take their medication, have been found W R E H H Q H U H F W L Y H I R U S H R S O H H [S H U L H Q F L Q J 6 0 H Y H Q L I W K H P H V V D J H V Z H U H Q R W F X V W R P L] H G R U V S H F L ¿ F W R W K H G R V D J H W L P L Q J R U P H G L F D W L R Q prescribed.[31, 32]
- 6 P D U W S L O O F R Q W D L Q H U V remind clients to take their medication, provide alerts about taking the wrong medication, and are linked to programs I R U W K H F O L H Q W W R U H S R U W V L G H H] H U H Y Used together with telephone support, smart pill F R Q W D L Q H U V K D Y H V K R Z Q V W D W L V W L F D O O \ V L J Q L ¿ F D Q W improvement in medication adherence.[33]
- P + H D O W K D S S V have been used in combination with smart pill containers, in-home dispensing devices, or other systems to dose medications. These apps remind clients to take medications and communicate medication use information to their healthcare provider through a client portal.[34]
- 7 U H D W P H Q W V X S S R U W R Y H U W K R Q H from case managers, nurses, or other health professionals R u H U V F O L H Q W V S U H V F U L E H G P H G L F D W L R Q V I R U 6 0 and SUD information and adherence support. These approaches have shown statistically V L J Q L ¿ F D Q W L P S U R Y H P H Q W V R Q P H G L F D W L R Q adherence rates.[35-37]

Medication monitoring, including both support for medication adherence of the prescribed treatment and prevention of non-prescribed or illicit substance use that may cause dangerous interactions, is an essential component of MAT. Clinics or other agencies without a local, trained MAT provider have used telehealth to link clients to a remote MAT provider. The local clinic and agency can provide in-house medication monitoring and urine toxicology screening while providing space for the client to meet with the MAT provider using telehealth technology.[25] In some treatment models, monitoring visits are conducted using telehealth, but the client is required to report in-person for regular urine toxicology screening.[20, 23, 38]

Behavioral Therapies

Practitioners can implement psychotherapy and behavioral therapies through synchronous telehealth P U R G D O L W L H V Z K L O H D G K H U L Q J W R producing clinical improvements similar to treatment outcomes from in-person care.[39, 40]

7 K L V H Y L G H Q F H U H Y L H Z L G H Q W L ¿ H met evidence review criteria (described above and in Appendix 2) and improved health outcomes for people experiencing SMI, including Behavioral Activation (BA) Therapy, Cognitive Behavioral Therapy (CBT), Cognitive Processing Therapy (CPT), and Prolonged Exposure (PE) Therapy. Each behavioral therapy is described below, including associated health outcomes, S R S X O D W L R Q V W K D W P D \ E H Q H ¿ W information for implementing these therapies using telehealth.

Behavioral Activation (BA) Therapy via telehealth

BA is a treatment component based on changing behavior to change one's mood. It involves identifying, scheduling, and completing positive reinforcement activities.[41, 42] Behavioral Activation-Therapeutic Exposure (BA-TE) is an integrated, H Y L G H Q F H E D V H G W U H D W P H Q W I R U 3 R V W 7 U D X P D W L F 6 W U H V V ' L V R U G H U 3 7 combines BA with exposure-based therapy. It involves weekly BA activities along with situational exposure to clients' avoided stimuli and imaginal exposure to past traumatic events.[42, 43]	
Health outcomes	x Reduction in depression[41] and major depression[42, 43] symptoms x Reductions in PTSD symptoms[42, 43] x Reduction in anxiety[42]
7 H O H K H D O W K W Similar or Improved outcomes	When compared to in-person treatments: x 5 H G X F W L R Q L Q 9 H W H U D Q ¶ V $ ‡ D L U V K H D O W K X W L O L] D W L R Q x Similar rates reduction in PTSD symptoms (e.g., disturbing memories/thoughts about military experience, avoidance of external stimuli, nightmares, and re-experiencing)[43, 45]
Populations that E H Q H ¿ W I U R P W K H treatment	3 H R S O H H [S H U L H Q F L Q J 0 ' ' L Q F O X G L Q J x Older veterans (58+)[41] x Rural veterans[41] x

Cognitive Behavioral Therapy (CBT) via telehealth

Cognitive Processing Therapy (CPT) via telehealth*

CPT is a trauma-focused cognitive therapy aimed at reducing symptoms of PTSD.[52] & 3 7 K D V E H H Q I R X Q G W R E in reducing symptoms of PTSD developed as a result of experiencing traumatic events, such as child maltreatment, sexual assault, and military-related stressors.[53-55] CPT consists of four main components: 1) Education; 2) Processing; 3) Challenging thoughts about the trauma to restructure thought patterns; and 4) Focus on trauma-related themes of safety, trust, power and control, esteem, and intimacy.[55-57]	
Health outcomes	x Greater or equivalent reduction in severity of PTSD symptoms [55, 58-60] x Reduction in symptoms of depression[59, 60]
Telehealth- V S H F L ¿ F R X W F R P H V	

While this review focuses on synchronous interventions, providers can use asynchronous tools to complement, support, and reinforce synchronous client-provider interactions. Examples of asynchronous tools can be found through online repositories such as the [Mental Health Index and Navigation Database](#) or the [9$ $ S S 6 W R U H](#).

Case Management

2 Q J R L Q J F D V H P D Q D J H P H Q W P D \ L Q F O X G H U H P L Q G H U V F K H F N L Q V D Q G I R O O R Z X S V X S G D W H V D Q G U H G H V L J Q V W R F D U H D Q G W U H D W P H Q W S O D Q V L G H Q W L ¿ F D W L R Q R I D Q G D F K L H Y L Q J W K H J R D O V R I D Q L Q G L Y L G X D O L] H G F D U H S O D Q These ongoing conversations are readily adapted to synchronous telehealth modalities and Health Insurance Portability and Accountability Act (HIPAA) compliant asynchronous messaging platforms, including texting and messaging through a clinic electronic health record (+ 5 V \ V W H P 6 S H F L ¿ F V W X G L H V [70,71] ongoing case management interventions using W H O H K H D O W K D U H H u H F W L Y H I R U S H R S O H Z L W K G H S U H V V L R Q D Q G V F K L] R S K U H Q L D [72]

SUD Recovery Supports

Practitioners can provide ongoing recovery support for people in SUD treatment through synchronous telehealth methods. Peer recovery support services use peers (people who have similar lived experiences as the client, such as someone who is in SUD recovery themselves) to provide support for clients while in treatment and recovery.[73] Some peer recovery support services use technology-assisted peer support to engage clients, conducting regular check-ins over telephone or videoconference.[74]

Crisis Services

Telehealth modalities can increase the availability of needed crisis services, ensuring these services are available to anyone, anywhere, at any time, and that there is a “no-wrong-door” approach for entry into services.[75] & U L V L V V H U Y L F H V D U H D Q H u H F W L Y H V W U D W H J \ I R U suicide prevention and resolving acute mental health and substance use crises, as well as for reducing psychiatric hospital bed overuse, inappropriate use of emergency departments, inappropriate use of law enforcement resources, and the fragmentation of mental health care.[75]

Cited by the [National Guidelines for Behavioral Health Crisis Care](#) as an essential element of an integrated crisis system, regional crisis call centers provide synchronous telephonic crisis services, text, and online chat technology to triage needs, assess for additional needs and preferences, and coordinate connections for additional post-crisis support. In addition to telephone calls and live online chats or texts, regional crisis call centers can also make use of the following technologies to support an individual’s well-being:

- 24/7 outpatient scheduling
- Crisis bed registry
- GPS-enabled mobile crisis dispatch
- Real-time performance outcome dashboards

Asynchronous tools such as [My Mental Health Crisis Plan](#)[76] (designed by SAMHSA) can be used to create a personal advance directive, a legal document outlining an individual’s preferences during a mental health crisis should the individual not be able to determine or communicate their own decisions.

Suicide Screening and Assessment

7HOHKHDOWK PRGDOLWLHV SURYLGH DQ H‡HFWLYH DOWHUQDWLYH WR LQ[77] The following suicide screening and assessment tools can be implemented through telehealth modalities:

- The Ask Suicide-Screening Question Toolkit (ASQ) IURP WKH 1DWLRQDO ,QVWLWXWH RI an evidence-based, 20-second, four-question suicide screening tool.[78]
- The &ROODERUDWLYH $VVHVVPHQW DQG 0DQDJHPHQW RI 6XLFLGDOL is an evidence-based intervention to assess, treat, and manage clients with suicidal ideation in a range of clinical settings.[79-87]
- Columbia-Suicide Severity Rating Scale (C-SSRS),

- Positive outcomes are dependent on the provider and client having the necessary resources to conduct telehealth well, including training and technology (more information on supporting telehealth implementation can be found in Chapter 3).

Additionally, several conclusions related to healthcare access and utilization can be made from this evidence-review:

- Use of telehealth modalities increases individuals' and communities' access to trained providers and evidence-based practices that may otherwise be unavailable to them.
- When geographic and other access barriers (e.g., transportation, mobility, and obligations like employment and caretaking responsibilities) prevent individuals from accessing services, telehealth alleviates many of these barriers, which has shown positive health outcomes.
- Some clients may prefer to receive services wholly or partially by telehealth, and any of the treatment practices presented in this chapter may be part of an overall treatment plan that includes a hybrid of telehealth and in-person services.

However, research on the telehealth application of evidence-based practices has been limited for the following reasons:

- Evidence review limitations. While there may be innovative behavioral therapies currently delivered via telehealth for specific conditions within this evidence review, only studies of published research to determine the strength of evidence. Included studies must be either randomized controlled trials, use a quasi-experimental design, or use a pre-post design with a strong counterfactual; therefore, innovative treatments and interventions that have not been studied with such rigorous methods are excluded.
- Limitations of the literature. While telehealth has been used for numerous other conditions, individuals experiencing SMI and SUD have traditionally been regarded as having complex conditions and therefore excluded from telehealth research. With limited implementation of telehealth for people with SMI and SUD, little research exists on effective treatment to treat those conditions. Some providers have been reluctant in the past, in part due to negative views towards the modality and perception of clients' experiences with telehealth,[88] which has slowed access to telehealth for individuals experiencing SMI or SUD.
- Need examination of asynchronous forms of treatment. This evidence review demonstrated strong evidence to support synchronous interventions to support telehealth-delivered, evidence-based treatments. However, more research is needed to

19 'Xu - Opioid treatment programs and related federal regulations: Congressional Research Service. https://fas.org/sgp/crs/misc/IF10219.pdf

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Individual-Level Considerations

Client-Level

&OLHQWV KDYH GLuHUHQW OHYHOV RI

- Comfort or willingness to engage with telehealth
- Access to technology or high-speed Internet
- Apprehension about using technology or concern about the privacy risks involved

The recent proliferation of smartphones provides a convenient way for many to engage in telehealth. Access to smartphones allows for both synchronous videoconferencing for telehealth-based therapy, as well as asynchronous apps to support medication monitoring, symptom recording, and messaging between the client and provider.

Provider-level

Provider reticence to adopt telehealth can occur for several reasons, including concerns related to poor therapeutic relationship, less commitment from the FOLHQW WR WKHUDS\ DQG WHFKQRORJLFDO GLvFXOWLHV DuHFWLQJ the therapeutic experience.[15-17] However, acceptability VWXGLHV KDYH IRXQG PDQ\ EHQH¿WV WR WKHUDS\ XVLQJ telehealth.[5, 13, 15, 18-20]

Strategies to increase provider comfort with telehealth

- 5HYLHZ WKH OLWHUDWXUH RQ WKH HvFDF\ DQG HuHFWLYHQHVV (see Chapters 1 and 2 of this guide).
- 3URYLGH WUDLQLQJV – Increase digital literacy through trainings to increase comfort and familiarity with various digital platforms. Use training time to get input from providers on what works and what can be improved.[21, 22]
- ,GHQWLI\ LQGLYLGXDO SURYLGHU OHYHO EHQH¿WV – ,QGLYLGXDO SURYLGHUV PD\ ¿QG WKDW WKURXJK WHOHKHDOWK WKH\ DUH DEOH WR FUHDWH ÀH[LEOH ZRUN schedules, expand the number and kinds of clients they work with, and reduce provider

- 'HYHORS D WHOHKHDOWK FKHF WR XVH SULRU WR HDFK YLVLW a convenient way to ensure the provider has followed appropriate procedures and shared relevant information with the client.[26]
- 'LVFXVV ZD\V WR HQVXUH FOLH sessions – To guarantee privacy, consider making it a practice to clarify the client's location and ZKR LV LQ WKH YLUWXDO URRP FDPHUD 7KLV DFWLRQ FDQ DvU to the client's privacy.

Special Considerations

6RPH FOLHQWV PD\ KDYH GL FXOW\ HQJDJLQJ LQ WHOH health, including those with hearing loss, disabilities, or language barriers.[26]

- The National Association of the Deaf has resources for accessibility for clients who are deaf and hard of hearing.
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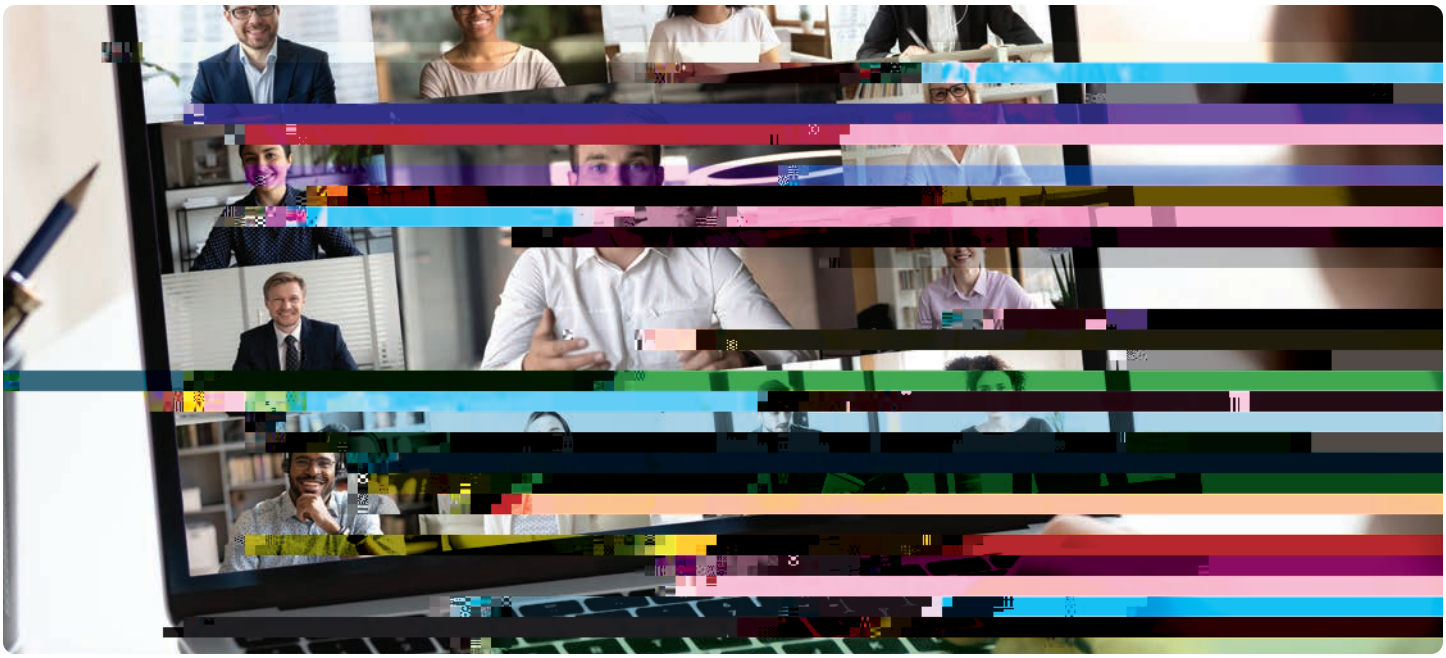

Organizational-Level Considerations

7HOHKHDOWK UHTXLUHV RUJDQL]DWLRQ OHYHO FKDQJH WR be sustained. Before a treatment program or clinic implements telehealth services, it is important to assess the appropriateness of the services for the setting, the clients being served, and the providers who will be using WHOHKHDOWK WR GHOLYHU WUHDWPHQW VHUYLFHV $Q RUJDQL]DWLRQ must ensure there is appropriate space, technology, WUDLQLQJ ¿QDQFLDO DQG KXPDQ UHVRXUFHV DQG VXSSRUW WR implement telehealth.

Strategies to assess organizational needs and readiness

Prior to implementing telehealth practices, each program RU RUJDQL]DWLRQ VKRXOG FRQGXFW D QHHGV DVVHVVPHQW WR explore the following factors:

- 7KH RUJDQL]DWLRQ¶V UHDGLQHVV IRU WHOHKHDOWK
  Review existing protocols and procedures (e.g., intake procedures, scheduling) that could facilitate or impede implementation using a readiness assessment tool. The American Psychological Association has an R v F H D Q G technology checklist for telepsychological services that is a tool for checking client and

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Regulatory and Reimbursement Environment

Before initiating a telehealth program, practitioners should consider regulatory issues, including licensing, prescribing laws, and reimbursement policies. Health

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regulations before launching a telehealth program. Live video is reimbursed in all states; however, some asynchronous telehealth modalities (e.g., store-and-IRUZDUG VHUYLFHV DUH RQO\ GH¿QHG DQG UHLPEXUVHG E\ some state Medicaid programs. Geographic restrictions also exist in some states.

7KH 6833257 $FW ORRVHQHG VRPH UHLPEXUVHPHQW UHVWULFWLRQV IRU WUHDWLQJ LQGLYLGXDOV ZLWK 68' RU &2' 8QGHU WKH 6833257 $FW WKH &HQWHUV IRU 0HGLFDUH and Medicaid Services (CMS) issued guidance on state options for Medicaid reimbursement of telehealth-delivered services and treatment for SUD.[53]

0HGLFDUH only reimburses for limited telehealth services where certain parameters are met. There are limits on the type of professional who can provide services, and services must be delivered via live video. Eligible Medicare-reimbursed telehealth services related to treatment of SMI and SUD include[54]:

- Individual and family psychotherapy
- Alcohol and/or substance (other than tobacco) use structured assessment and intervention services
- Face-to-face behavioral counseling for alcohol misuse
- Annual alcohol misuse screening
- Annual depression screening
- Smoking cessation services

Based on the client's location, Medicare also has limits on telehealth provided by certain facilities and in certain geographic locations. Telehealth services have been restricted to clients located in a Health Professional Shortage Area (HPSA) or in a county that is outside any Metropolitan Statistical Area (MSA). As of 2020, CMS removed the geographic requirements for telehealth services for treating individuals with SUD RU &2' DV ZHOO DV VSHFL¿HG WKH KRPH DV DQ HOLJLEOH facility for purposes of treating these individuals.[54] The Health Resources and Services Administration (HRSA) maintains a tool for providers to determine if a location is eligible for Medicare telehealth reimbursement.[54]

Forty-three states and DC have laws that regulate private payer telehealth reimbursement policies.[55]

State policies requiring private payers to reimburse for telehealth services to the same extent as face-to-face services have been associated with greater adoption of telehealth.[47]

Resources for tracking current regulations and policies at the federal and state levels

- &HQWHU IRU &RQQHFWHG +HD 1DWLRQDO 7HOHKHDOWK 3ROL maintains a map of telehealth-related laws, regulations, and reimbursement policies for all 50 states and the District of Columbia. They have also developed a report of state telehealth laws and reimbursement policies.[35,55]
  - Current State Laws and Reimbursement Policies, an interactive policy map
  - Telehealth Legislation and Regulation, an interactive map
  - Changes in national policy related to telehealth and Medicare, a website
- The $PHULFDQ 0HGLFDO $VVRFL a quick guide with resources on licensure and payment policies to assist providers in implementing telehealth programs.[56,57]
- In 2018, the 'HSDUWPHQW RI 9HWHU 9$ published a ¿QDO UXOH DOORZLQJ 9$ SURYLGHUV WR SURYLGH WHO EHQH¿FLDULHV UHJDUGOHVV RI WKH KHDOWKFDUH SURYLGH[58]
- State-level licensure and prescribing requirements
  - The Federation of State Medical Boards
  - The American Counseling Association
  - Association of Social Work Boards
  - American Association of Marriage and Family Therapy
  - Substance use disorder counseling
- Interstate Medical Licensure Compact is an agreement across participating states to simplify licensing across state lines; Psychology Interjurisdictional Compact (PSYPACT) allows psychologists in PSYPACT states to practices telepsychology in other PSYPACT states.[58]
- The &HQWHUV IRU 0HGLFDUH DQ 6HUYLFHV &06 website maintains that lists ZDLYHUV DQG ÀH[LELOLWLHV

[38] Uscher-Pines, L., Sousa, J., Palimaru, A. I., Zocchi, M., . D S L Q R V . $ 2 E H U $ -

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Black, 6.2 percent unknown, and 3.1 percent Hispanic).

Citywide Case Management Program

San Francisco, CA

The Citywide Case Management Program (Citywide) is a division of the University of California San Francisco's (UCSF) Department of Psychiatry and operates under direction of Zuckerberg San Francisco General Hospital (ZSFG). Citywide has been in operation since 1981 and became part of ZSFG in 1983.

&LW\ZLGH KDV VWDu DQG LV WKH ODUJHVW SURYLGHU RI intensive case management (ICM) services in San Francisco. Citywide's mission is to support the recovery of adults with SMI in San Francisco, reduce their use of institutional and acute care (e.g., psychiatric emergency VHUYLFHV KRVSLWDO FDUH MDLOV DQG KHOS PD[LPL]H WKHLU DELOLW\ WR PDLQWDLQ VWDEOH SURGXFWLYH DQG IXO¿OOLQJ OLYH in the community.

Citywide is located outside the academic medical setting in the community it serves and engages individuals who receive regular care from the medical system. Citywide programs are fundedthrough the San Francisco Department of Public Health and other governmental resources.

Citywide ICM teams are interdisciplinary teams of social workers, nurses, psychiatrists, employment specialists, and peer counselors, providing services to around 100 to 200 clients per team.

To appropriately meet the clients' needs, Citywide has four culturally and linguistically focused ICM teams:

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Most clients experience poverty, with approximately 90 percent of clients subsisting on social security or county general assistance. Most clients also experience unstable housing and cycle in and out of homelessness, living in single-room occupancy hotels or shelters. Many clients have experienced extensive trauma from their housing instability and often persistent and lifelong encounters with child welfare and justice system institutions.

Citywide clients are disproportionately racial minorities; for instance, while San Francisco's Black or African American population is below 5 percent, Citywide's client population is 30 percent Black or African American.

Form(s) of Telehealth

Citywide uses synchronous forms of telehealth, including phone and video calls between clients and providers.

6HUYLFHV 2‡HUHG 7KURXJK 7HOHKHDOWK 0RGDOLWLHV

7KH &29,' SDQGHPLF ZDV WKH FDWDO\VW IRU &LW\ZLGH WR RuHU WHOHKHDOWK GHOLYHUHG VHUYLFHV 3ULRU WR WKH SDQGHPLF &LW\ZLGH VWDu RFFDVLRQDOO\ KDG V\QFKURQRXV phone visits for care coordination and case management but did not have video appointments with clients.

LQ D 6XEVWDQFH 7UHDWPHQW 2XWSDWLHQW 3URJUDP 6723 JURXS DW &LW\ZLGH

- Citywide was able to notify a client of his HSRVXUH WR &29,' YLD WKH GRQDWHG SKRQH Contact tracers were unable to locate the client since they did not have a number on record for him, so they contacted Citywide case managers who were able to notify the client using the donated phone.

Lessons Learned

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7UHDWPHQW VWDELOL]DWLRQ L H IROORZ XS DSSRLQWPHQWV with providers once a client has initiated MAT) is done by medical providers, and the timing of these visits varies by clients' individual needs. Typically, newer clients check-in with a medical provider via a real-time, synchronous video connection every one to two weeks, ZKLOH D FOLHQW ZKR LV IXUWKHU VWDELOL]HG RQ WKH PHGLFDWLRQ will check in every 4 to 12 weeks.

Additional services, including case management, recovery coaching, and support groups, are voluntary, and a client's access to MAT is not linked to their willingness to receive additional services. If a client has needs related to mental health treatment or social determinants of health (e.g., income or housing supports), REACH tries to engage them and link them to the needed services. A visit with a social worker or community health worker can be made at the same time as a check-in with a medical provider, thus providing a KDQGRu WR QRQ PHGLFDO VHUYLFHV IRU IXUWKHU HQJDJHPHQW

Findings and Outcomes

Client engagement in care decreased at the start of the &29,' SDQGHPLF VLJQDOLQJ WKH QHHG WR H[SDQG methods for service delivery. When REACH expanded LWV RuHULQJV YLD WHOHKHDOWK PRGDOLWLHV LQ 0DUFK client engagement in telehealth appointments steadily increased. By shifting to telehealth, REACH initiated 407 new clients on MAT and has continued to provide necessary healthcare services to people with SUD. The clinic reports high client satisfaction with telehealth, as it increases access to individuals who would otherwise be unable to attend the clinic in-person, whether due to ZRUN GHPDQGV WUDQVSRUWDWLRQ GLVFXOWLHV RU WKH VWLJPD of seeking support for substance use.

Lessons Learned

- 7HOHKHDOWK UHVSRQGV WR WKH FKDQJLQJ ODQGVFDSH RI FDUH IRU PHQWDO LOOQHVV DQG 68' Prior to the pandemic, REACH adapted to clients' varied and HYROYLQJ QHHGV WKXV ÀH[LELOLW\ LV D ODUJH SDUW RI the clinic's foundation. In the switch to telehealth, REACH relied on its strong commitment to avoiding any interruption of care to their clients, who depend on access to care. Sudden VKXWGRZQV RI LQ SHUVRQ FDUH GXULQJ &29,' required the program to transition quickly to providing telehealth; therefore, services were not implemented in planned stages. Some clinicians initially stopped providing services but transitioned to telehealth as they were brought back on board to see patients. Eventually all providers were able to switch to telehealth.
- 7HOHKHDOWK UHVSRQGV WR FK 5($&+¶V PRGHO HPSKDVL]HV SU services for clients at the moment they express need. Using telehealth to deliver care has allowed REACH to continue to provide low-threshold, accessible services to clients throughout New <RUN 6WDWH GHVSLWH &29,' restrictions.
- &RPPXQLFDWLRQ FKDQQHOV D SURYLGLQJ HuHFWLYH FDUH A REACH's care model is being easily reachable and accessible to clients by providing multiple modes of communication. Telehealth has been central to expanding mechanisms for continuous communication between client and provider.
- 6XSSRUWLQJ SURYLGHUV LV NH LPSOHPHQWLQJ WHOHKHDOWK 5($&+ EXLOW RQ L existing commitment to professional development DQG WHDP FROODERUDWLRQ E\ trainings on adapting to changing technology. The trainings were led by REACH's Director RI 2SHUDWLRQV ZKR VHUYHV D point-person and technical support. The Director RI 2SHUDWLRQV ZDV DYDLODEO WURXEOHVKRRW DV IURQW GHV providers (both medical and non-medical) switched to telehealth. Through this process, the guardians learned to support providers and clients with technology needs during telehealth appointments.
- 'LYHUVH IXQGLQJ VRXUFHV FDQ implementation. A large portion of telehealth equipment needs were covered by community partner Care Compass Network, and REACH provided additional funds. Diverse funding sources helped to facilitate implementation and will support long-term sustainability.

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CHAPTER

5

Resources for Evaluation and Quality Improvement

Evaluating an intervention can answer critical questions about how well a practice has been implemented and determine what may or may not be working. Evaluation FDQ DOVR VKRZ KRZ FOLHQWV EHQH¿W IURP D SUDFWLFH
This information can be helpful in making practice adjustments, if necessary, and demonstrating the value of a practice or program to justify its continuation and secure additional funding. In addition, stakeholders can use information gathered through evaluation to encourage implementation of that practice in other settings or communities.

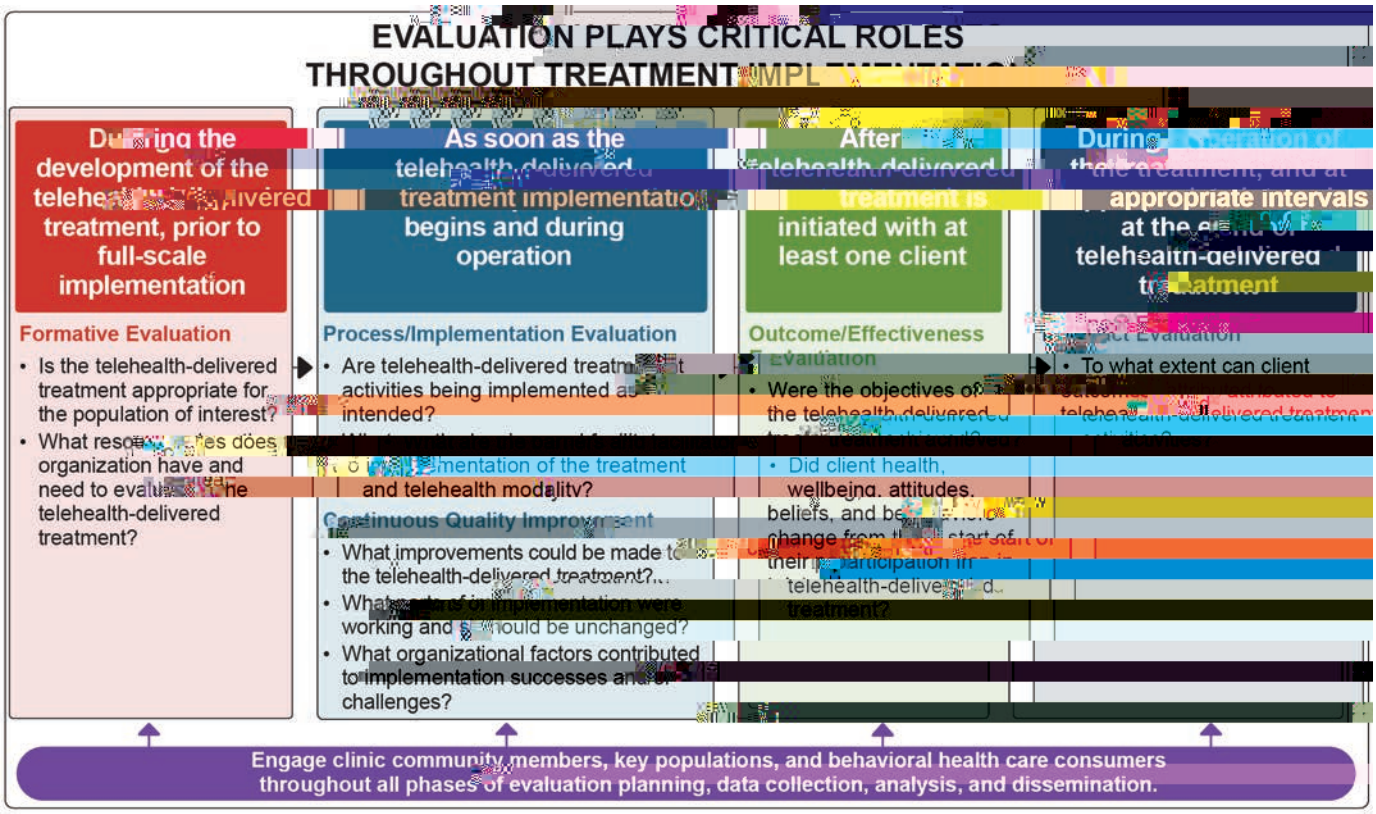
This chapter provides an overview of approaches to evaluate implementation of and results from treatments for clients with serious mental illness (SMI) and substance use disorder (SUD) delivered using telehealth modalities. People with SMI and SUD have often been excluded from telehealth research studies, but, as demonstrated in Chapters 1 through 4 of this guide, WHOHKHDOWK LV HuHFWLYH IRU SHRSOH ZLWK 60, DQG 68'

To evaluate telehealth-delivered practices and programs, both the treatment (e.g., cognitive behavioral therapy) and the modality (e.g., synchronous telehealth videoconference) need to be evaluated. Ideally, patients would see a reduction in symptomology because of the practice, and a high level of retention, acceptability, or satisfaction with the modality. Additionally, both treatment providers and clients should be engaged in the generation of evaluation tools and plans to ensure data collection tools are appropriate for the evaluated FRPPXQLWLHV DQG WR VHFXUH EX
EDFN WR SURYLGHUV DQG FOLHQW
promote transparency and inform care choices.

This chapter focuses on evaluation strategies for WUHDWPHQWV RuHUHG YLD WHOHK
in Chapter 2. The chapter also includes information on implementing a continuous quality improvement (CQI) process and an outcome-focused evaluation. Further, LW SURYLGHV VSHFL¿F HYDOXDWL
potential outcomes to track.

Types of Evaluations

Researchers typically conduct evaluation before a treatment is implemented to determine its feasibility (formative evaluation), during implementation (process evaluation and CQI), and after the treatment has been delivered to at least one client (outcome and impact evaluations). All four types of evaluation are necessary WR DVVHVV D WUHDWPHQW¶V HuHF



Preparing to Collect Data

The following steps can help clinics and practitioners SUHSDUH WR FROOHFW DQG DQDO

1. 'HWHUPLQH LI WKH SXUSRVH R FROOHFWLRQ LV HYDOXDWLRQ

   Qualitative and quantitative evaluation and research enable managers and clinicians to learn from clients and obtain the perspective of those with lived experiences. Both evaluation and research can also involve collecting data from VWDu ZKR GHOLYHU WKH WUHD to obtain their perspectives on facilitators and challenges to telehealth implementation.

   Where program evaluation supports program improvement, research systematically follows study SURWRFROV WR GHYHORS JHQH Research requires protocol and procedure approval by an Institutional Review Board (IRB) to adhere to human subject research protections. Most evaluations and quality improvement projects do not require IRB approval, but researchers should consult with their institutions during evaluation design to ensure they are following appropriate data collection procedures.

Qualitative and quantitative data are complementary. Each provides critical insight into if and how the intervention is operating and achieving the intended objectives.

Qualitative data include any non-numeric, text-based information, such as verbal, visual, or written data. Qualitative data collection methods include interviews, focus groups, clinical observations, gathering data from documents and images, and open-ended survey questions and polling responses.

Quantitative data are any numeric data that can be processed by mathematical or statistical analysis. Quantitative data collection includes close-ended survey questions and polling responses, services and utilization data, and claims and encounter data

2. 'HWHUPLQH RXWFRPHV RI LQW

   A challenging step in the process of implementing new practices is to determine whether they have yielded desired outcomes. An outcome is the change a program plans to accomplish through the implementation of a practice. Evaluations exist across a continuum,

IURP WUDFNLQJ VWDu DFWLYLWLHV Programs need to identify team members who no-shows, and payments to conducting client satisfaction surveys to comparing results EHWZHHQ FOLHQWV UHFHLYLQJ GLIIHUHQW options. Engage stakeholders (within the clinic and the community) to identify both appropriate outcomes and the metrics used to assess outcomes.

can conduct evaluation activities and secure funding for evaluation trainings, data collection, and data analysis WUHDWPHQW

3. ,GHQWLI\ WHDP PHPEHUV WR FRQGXFW HYDOXDWLRQ DFWLYLWLHV DQG FDSDFLW\ WR FRQGXFW HYDOXDWLRQV Regardless of the type of evaluation conducted, FROOHFWLQJ DQG DQDO\]LQJ GDWD WDNHV WLPH

Conducting Continuous Quality Improvement

Treatment of SMI and SUD using telehealth modalities PD\ EH QHZ WR DQ RUJDQL]DWLRQ of telehealth and treatment is continually evolving. Continuous Quality Improvement (CQI) can be used to V\VWHPDWLFDOO\ LGHQWLI\ GRFX and facilitators to implementation for the purposes of improving implementation.

CONTINUOUS QUALITY IMPROVEMENT (CQI)

What is CQI?

CQI involves a systematic process of assessing program or practice implementation and short-term outcomes and WKHQ LQYROYLQJ SURJUDP VWD‡ LQ LGHQWLI\LQJ DQG LPSOHPHQWLQJ L V\VWHPV WR DFKLHYH EHWWHU WUHDWPHQW RXWFRPHV &4, KHOSV DVVH delivers a practice as intended. There are many potential CQI models and approaches (e.g., https://www.healthit.gov/faq/what-are-leading-continuous-quality-improvement-strategies-health-care-settings).

&4, GL‡HUV IURP SURFHVV HYDOXDWLRQ LQ WKDW LW LQYROYHV TXLFN D LGHQWL¿FDWLRQ RI SUREOHPV DQG SRWHQWLDO VROXWLRQV DQG LPSO TXDOLW\ &4, LV XVXDOO\ FRQGXFWHG E\ LQWHUQDO VWD‡ 3URFHVV HYD best conducted by an external evaluator.

The Network for Improvement of Addiction Treatment (NIATx) D SURMHFW RULJLQDOO\ IXQGHG E\ 6XEVWDQFH $EXVH 7UHDWPHQW R‡HUV WRROV WR FRQGXFW &4, DQG LPS settings. NIATx is based on the principle of program improvement through a series of small changes, tested and LPSOHPHQWHG RQH DW D WLPH WKDW LQ WKH HQG KDYH D FXPXODWLYH

The ,QVWLWXWH IRU +HDOWKFDUH ,PSURYHPHQW LGHQWL¿HV D VHULHV RI small-scale changes in an action-oriented, cyclical manner. The stages are: planning it (Plan), trying it (Do), observing the results (Study), and acting on what is learned (Act).

Why use CQI?

CQI takes a broader look at the systems in which programs or practices operate. Because of the pivotal role it plays in performance management, organizations implementing telehealth-delivered services with people H[SHULHQFLQJ 60, DQG RU 68' DUH HQFRXUD W &4, procedures.

What are the steps involved in CQI?

Although steps in the CQI process may vary based on objectives, typical CQI steps include:

- Identify a program or practice issue needing improvement and a target improvement goal
- Analyze the issue and its root causes
- Develop an action plan to correct the root causes of the problem, LQFOXGLQJ VSHFL¿F DFWLRQV WR EH WDNHQ
- Implement the actions in the action plan
- 5HYLHZ WKH UHVXOWV WR FRQ¿UP WKDW WKH LVVXH DQG LWV URRW long-term treatment outcomes have improved
- Repeat these steps to identify and address other issues as they arise

Institute for Healthcare Improvement (n.d.). Science of improvement: Testing changes. http://www.ihi.org/resources/Pages/HowtoImprove/ScienceofImprovementTestingChanges.a

New Jersey Department of Children and Families (n.d.). Five Stages of Continuous Quality Improvement. https://www.nj.gov/dcf/about/divisions/opma/cqi.html

8QLYHUVLW\ RI :LVFRQVLQ 0DGLVRQ (n.d.). What is SIAT? https://www.uwmadison.edu/siat/what-is-siat

8 6 'HSDUWPHQW RI +HDOWK +XPDQ 6HUYLFHV (2011). Continuous Quality Improvement Part 1: Basic Information and Overview. KWWSV ZZZ KKV JRY DVK RDK VLW

Outcome Evaluations

The table below provides a list of potential outcomes, illustrative outcome indicators, and qualitative and quantitative data sources that program managers, clinicians, and others may use to evaluate practices implemented in Chapter 4.

In Chapter 1, we introduced the Quadruple Aim Framework, which examines the impact of interventions with the goal of improving patient experience, improving provider experience, improving population health, and decreasing costs.[1] Using the Quadruple Aim Framework, we identified specific outcomes, illustrative indicators, and illustrative data sources.

Patient health outcomes may be tracked at baseline and throughout the treatment period. Telehealth-related patient outcomes, such as engagement and retention in telehealth, or therapeutic alliance may be obtained through administrative data, surveys, or interviews. Provider outcomes may be captured through surveys or interviews. Population health outcomes may be tracked through administrative data and interviews. Finally, cost-related outcomes can be captured through administrative data.

Outcome	Illustrative Indicators	Illustrative Data Sources
Client Experience		
Clinical Outcomes		
Reduction in Depression Symptoms	x Days of symptoms in the prior 30 days x Severity of symptoms	x Structured scales and assessments (e.g., Beck Depression Inventory – 2nd Edition, Geriatric Depression Scale, 6WUXFWXUHG &OLQLFDO ,QWHUYLHZ module),

Outcome	Illustrative Indicators	Illustrative Data Sources
Provider Experience		
Provider Satisfaction	x Lack of burnout x Well-being at work	x Qualitative interviews (providers) x Structured scales and assessments (e.g., Telehealth Usability Questionnaire)
Therapeutic Alliance (Provider)	x Client relationship with provider x Emotional safety	x Qualitative interviews (providers) x Structured scales and assessments (e.g., Working Alliance Inventory short form)
Clinician Well-being	x Lack of burnout x Well-being at work	x 6WUXFWXUHG VFDOHV DQG DVVHVVPHQW Wellbeing Index, 0LQL =6XUYH\)
Population Health		
Access	x Number of people using telehealth	x Administrative data x Intake/enrollment data x Qualitative interviews (clients)
Equity	x Percentage of clinical encounters delivered via telehealth in communities with low and high income, with GL‡HUHQW UDFHV and across zip codes	x Administrative data DQG HWKQLFLWLHV ReA/Lbl <</MCID 140 290.15 61Q EMC BT /Lbl <</MC</MCID 4
Costs	Low and high income, with x	

Appendix 1: Acknowledgments

7KLV SXEOLFDWLRQ ZDV GHYHORSHG ZLWK 3KJQL¿FDQW [FRQWUEDFW 7KH JXLGH LV EDVHG RQ WKH WKRXJKWIXO LQSXW RI 6$0+6$ VWDu DQ WR WUHDW VHULRXV PHQWDO LOOQHVV DQG VXEVWDQFH XVH GLVRUGHU development meetings was held virtually over a period of several months. Three expert panel meetings were convened during this time.

6$0+6$ 6WD‡

5REHUW %DOOLHX, Center for Substance Abuse Treatment*

&KULVWLQH &LFKHWWL, National Mental Health and Substance Use Policy Laboratory

7KRPDV &ODUNH 3K', National Mental Health and Substance Use Policy Laboratory

6WHYHQ 'HWWZ\OHU 3K', Center for Mental Health Services*

$PDQGD 'RUHVRQ 03$, National Mental Health and Substance Use Policy Laboratory*

7DQ\D *HLJHU 3K' 03+, National Mental Health and Substance Use Policy Laboratory*

'RQHOOH -RKQVRQ 3K' 0+6$, National Mental Health and Substance Use Policy Laboratory*

-RKQ 3DOPLHUL, Center for Mental Health Services*

Expert Panel

%DUW $QGUHZV 3K', Behavioral Health Response, &KLHI &OLQLFDO 2vFHU =HUR6XLFLGH $FDGHP\ )DFXOW\ Member

%ULDQ +HSEXUQ 0', National Association of State Mental Health Program Directors

0HL :D .ZRQJ -', Center for Connected Health Policy, National Telehealth Policy Resource Center

-DQ /LQGVD\ 3K', Baylor College of Medicine*

7KRPDV 0LODP 0' 0'LY ,ULV 7HOHKHDOWK 9LUJLQLD Tech Carilion School of Medicine and Research Institute

-RH 3DUNV 0', National Council for Behavioral He

0DUN : 3DUULQR 03$, American Association 7UHDWPHQW RI 2SLRLG 'HSHQGHQF

-D\ 6KRUH 0', Department of Psychiatry, 8QLYHUVLW\ RI &RORUDGR $QVFKX

6DGLH 6LOFRWW2vFH RI WKH $GY of Telehealth, Health Resources and Services Administration

3HWHU <HOORZOHHV, University of California Davis Health

&RQWUDFW 6WD‡

2OLYLD %DFRQ Abt Associates

.RUULQ / %LVKRS Korrin Bishop Writing & Ed

(OOHQ &KLOGV 3K' Abt Associates

<YRQQH &ULVW\ Abt Associates

0DUJDUHW *ZDOWQH\ 0%$ Abt Associat

$OH[LV 0DUEDFK 03+ 303 Abt Associate

1LNLWKD 5HGG\ Abt Associates

'DQLHO -HuHUVRQ 6PLWK, Abt Associates

6DUDK 6WHYHUPDQ 3K' 06: Abt Assoc

&KULVWRSKHU :HLVV 3K' Abt Associates

(O\VH <DUPRVN\ /,6&: Abt Associates

*Members of Guide Planning Team

In some studies of telehealth treatments, the comparison/control group was not treatment as usual nor minimal/no intervention; rather, the design compared the telehealth approach to the same treatment delivered in-person. In these cases, these non-inferiority studies tested whether administering the treatment using a telehealth modality leads to outcomes that are comparable, or no worse, than in-person treatment (which is known to be evidence-based).

Step 3: Study Review and Rating

Next, trained reviewers assessed each study to ensure the methodology was rigorous, and, therefore, could demonstrate causation between the treatment and WKH LGHQWL¿HG RXWFRPHV 5HYLHZHUV DQDO\]HG DQG documented each study to ensure:

1. Experimental and comparison groups were VWDWLVWLFDOO\ HTXLYDOHQW ZLWK WKH RQO\ GLuHUHQFH being that participants in the experimental group received the intervention and those in the comparison group received treatment as usual or no/minimal intervention.
2.)RU UDQGRPL]HG H[SHULPHQWV ZLWK KLJK DWWULWLRQ and for quasi-experimental designs, baseline equivalence was established between the treatment and comparison groups.
3.)RU UDQGRPL]HG H[SHULPHQWV UDQGRPL]DWLRQ was not compromised. For example, ensuring reassignment of treatment status (usually made to balance the distribution of background variables between treatment and control groups) did not occur.
4.

3.

Photos are for illustrative purposes only.
Any person depicted in a photo is a model.

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