Integrating a telehealth delivery solution into a health care organization is often a prolonged and daunting endeavor involving many steps. Each step calls into play participation and varying levels of teamwork among clinical, administrative, and technical staff of the organization. A successful clinical telehealth program begins with proper preparation. Because of the COVID-19 pandemic and the relaxation of regulatory and reimbursement barriers to telehealth, health care must move quicker than usual in their planning and implementation. The planning steps in this guide remain the same, but strategies for more rapid deployment in the context of the pandemic are included in the new resource compilation section starting on page 8.

There are several overall guides for planning cited below, each varying in their emphases and sequencing of steps. Through experience, we have come to favor that of Burgiss with the following seven steps:

1. Evaluate Needs and Feasibility
2. Develop Care Services Plan
3. Develop a Business Plan
4. Develop a Technology Plan
5. Train Personnel
6. Pilot Service
7. Evaluate Outcomes

He further recommends that: “An organization planning a telehealth program should make the first pass through the steps, repeat the process with additional passes, and modify each step until it is confident that the plan realistically represents a program that can be implemented with a high probability of success. After achieving this level of confidence, the organization should make a commitment to implement the plan.”

In our version of this approach, we recommend the planning group first investigate how they can address a set of key questions surrounding some critical goals under the umbrella of assessing needs and feasibility of the telehealth program considered for implementation. Such work calls for navigating through elements of Burgiss’ steps in abbreviated form before settling down to planning operational details of implementation. The planners have to believe in feasibility of delivering the new telehealth services before they can commit to proceeding. That means going through the motions of business planning with considerable guesswork around equipment choices and telehealth service volume. Beyond scoping out start-up equipment and training costs, the team will gain an important perspective on how sustaining ongoing operational costs will depend on prospects of reimbursement revenue or other economic benefit, depending on improved health outcomes (e.g. avoiding penalties for high re-hospitalization rates).

Key clinical leaders must be engaged in these initial planning steps, for without buy-in by clinical champions a telehealth program is destined to fail. Their involvement early on is important for success as well because their confidence in working with new technology and their capacity to achieve effective work-flow adjustments in their practice are essential.

The table below organizes the steps for assessing needs and feasibility of a telehealth program and identifies key resources and tools for guidance. The detailed implementation planning to follow will
depend in many ways on the type of telehealth service to be delivered and role of the organization as a hub or spoke in any networking involved. Thus, our planning steps are generically organized around a series of key questions. Each phase can benefit from the more extensive collection of Telehealth Planning Resources provided below.

<table>
<thead>
<tr>
<th>1. Evaluate Needs and Feasibility</th>
<th>Questions to address</th>
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| Define the needs you hope to address via a telehealth program | What patient needs will be addressed?  
What provider needs will be addressed?  
What needs of the organization will be addressed? | Follow needs assessment steps as outlined in the California TRC Guide (2, 3). A key step is review of health disparities and unmet needs for timely health care access in your regional and patient populations which could be addressed through telehealth. Review further guidance in other resources and implementation guides (4-5).  
Review general features of successful programs (6-9) and begin to explore how programs of interest align with national goals and funding schemes for health care reform (10, 11). Assess organizational readiness to proceed in the clinical areas of most interest (12-13). Network with other organizations involved in regional or state-level planning and identify partners for service development. |
| Educate yourself on successful applications and approaches | Have others tried to address needs that are similar to yours?  
Are there models that might be relevant?  
Are there evidence-based practices you should incorporate? | Search NETRC’s resource listings at netrc.org by clinical categories of interest. Look for program successes in your region through a search by state. Download relevant recommended resources in the NETRC Resource Toolkit on program start-up and operational standards for the clinical applications of interest. Find appropriate reviews of outcomes for such approaches in the last section, “Evidence Base for Telehealth.” |
| Conduct a needs/demand analysis for service(s) | What is a realistic estimate for the demand for the services being proposed?  
How could you generate greater demand for the services? | Review clinical service records to estimate the number of clients requiring long travel and volume of referrals/transfers for care elsewhere that could be handled by telemedicine services. Query potential partner organizations on projected patient numbers that might be served through telehealth teamwork. Identify clinical benefits of prospective telehealth services and consider using them in marketing strategies that could increase service volume (14). |
| Develop an initial conservative estimate of the added costs for the program beyond clinical provider time | What is the cost of standard units of needed equipment, training, extra staff or contracted help with any needed technical support, scheduling, and patient presentation? | Identify likely equipment required to meet clinical needs through review of relevant webinars and white papers of the National Telehealth Technology Assessment Resource Center (15) and other comparison resources (16-17). Estimate ballpark pricing by visiting vendor and reseller websites (18). Consider any needs and extra costs for set-up of special telehealth rooms (19-21). Begin to project extra staffing costs based on staffing and training recommendations within the California TRC guide (22-23). |
### Create an initial business plan

What are some potential options for funding and sustaining this project?

How do prospective reimbursement, grant, and other revenue match up to extra program costs?

Review grant opportunities for equipment capitalization and operational funding support at the Rural Assistance Center (24-25). Project insurance status profile of prospective patient mix and availability of public and private insurance reimbursement for planned service (26-27). Use business planning templates from the ATA and others to estimate patient volume required to break even on the balance of costs and revenue (28-29).

### 2. Implementation of a Care Services Plan

Once a target for telehealth clinical services has been selected and consensus achieved on implementation, teamwork among clinical and administration must be harnessed in setting goals, objectives, staff responsibilities, and timelines. The following list of questions should provide a useful framework for these planning steps:

- Where will the providers be located?
- Where will the patients be located?
- How will the providers be credentialed and privileged to deliver virtual care at the patient site?
- How will the services be scheduled and delivered?
- What level of quality of audio and video are needed?
- What steps and technical assistance support will be applied for quality assurance?
- Will your providers need additional instruments/peripherals for exams?
- How will scheduling be accomplished?
- What means will be used to assure provider access to the patient’s medical record prior to provision of clinical services?
- What type of support does the provider need at the patient location?
- What training or resources does the clinician and support staff need to make the delivery of care effective and efficient?
- How will scheduling be accomplished?
- How will documentation of clinical services be achieved and made accessible to those in need of the information?
- What information and communication does a referring physician need?
- What are the options and methods for billing private and public insurance programs?

With these answers the planning team will be in a position to develop detailed protocols and procedures for delivering the new telehealth services. All of the steps in the process should be in a written protocol that accounts for the relative roles and stages of action for the patient, the referring provider, the remote clinic staff, and the local staff. These protocols should be written into your planning document and revised as the planning progresses. If you make a commitment to implement the program, these planning protocols can be revised to become approved clinical protocols. The use of a mock run through of the protocol steps is often important to work out unforeseen details, as well as to provide training. NETRC can supply model protocols for most common telemedicine applications. Also of great help for formulating clinical program details is to visit a site of a local or regional program already in successful operations with the application of interest and checking out their protocols and procedures.

### 3. Develop a Business Plan and Risk Analysis

Developing at least a basic business plan is a critical step that is often omitted. The goal of financial sustainability of the program may seem comfortably off in the hazy distance during the pilot phase of your program. However, projections of costs and revenue sources in that future is important in the near term to help make believers of the care team and key administrators and to set milestones for the project which
can guide each step along the way. Even if start-up costs are largely covered by a grant or accessible capital funds, true sustainability requires consideration of equipment replacement costs after two to five years depending on its durability.

At a low volume of clinical telehealth services, existing staff may be tasked without much strain with such extra duties as scheduling, equipment checks, and/or patient informed consent and presentation at the remote site. Yet, with a ramping up of your program, commitment to dedicated staff roles will have a cost impact worth planning for. Whether your revenue sources for program operations lies mainly with pay-per-service reimbursements or through cost avoidance for delivering managed care, there will usually be a dependence on service volume to attain the “break even” point between net income and expense. The same is true if the prime mover of the new program is to achieve quality care outcomes subject to pay-for-performance benefits or penalties for not meeting the benchmark (e.g. 30-day rehospitalization rates). Setting a target for service volume by a certain date can help set the timeline for engagement of additional partner organizations and providers needed for meeting the goal.

A marketing plan should be included in the business plan. It is a part of this step since marketing typically has a cost and since the success of the marketing plan will impact utilization and revenues. This plan should include communications to help garner buy-in and support for the program by members of your own organization and patients, community leaders, and other health care organizations in your service area. Uncertainty over community need and acceptance of the new services may call for a certain level of market research, such as surveys of area residents and referral sources about acceptance and projected utilization of the telehealth services.

The detailed steps for business planning will vary extensively by the type of telehealth program under development. However, there are generic templates developed to guide such efforts (see references 34-37 above and general best practice steps in reference 1 and 18). Extending work in planning phases 1 and 2 above, your efforts here will be concerned with addressing many of the following questions about estimated start-up and ongoing costs and revenues for the program:

**Costs:**

- Are there grants worth pursuing that could help subsidize equipment, telecommunication costs, and/or program development costs?
- What equipment does your organization currently have that could be leveraged?
- What is the estimated initial cost of investment in new equipment?
- Are there technical training costs that need to be covered?
- What will the ongoing maintenance (e.g., service agreements) costs be?
- Will you need to expand your organizational telecommunications capacity?
- What will the additional bandwidth, network management, or security elements such as a Virtual Private Network cost?
- What is a reasonable estimate for costs of additional staffing for clinical, administrative, and technical needs for the program?
- Does your organization and providers’ liability insurance cover delivery of care by telehealth and, if not, how much extra cost will be involved for its inclusion?

**Revenues and/or cost savings**

- What costs might be decreased due to the telehealth program?
- Are there travel savings for providers that can translate into cost benefits?
- Does the clinical service, provider, and service sites qualify for reimbursement from Medicare, Medicaid, and private insurance plans?
- Is there a potential for cost benefits due to outcomes such as decreased patient transfers or hospital readmissions?
4. Develop a Technology Plan

A thorough and objective technology plan will be based on realistic needs, a care services plan, and a business plan (the first three steps) that can increase the probability of long-term sustainability of a telehealth program. Review the priorities you listed when evaluating needs in step 1 to determine what functionality and capacity will be required of the equipment. You will have already made projections on costs of common equipment solutions for the telehealth application selected. Now your task is to refine your selection to the most cost effective solution for a system that is close to the cutting edge, but not so new and untested that it is on the “bleeding edge.”

Usually, an organization in this stage needs to contract for some expert help. Your technical services and IT staff may be plenty savvy about computers and HIT systems, but unless they have had significant direct experience with telemedicine systems they are unlikely to be in a position to readily weigh vendor claims for their products or judge how satisfied your clinical providers will be with their equipment and software. You will need strategies for the following questions:

- How will you research vendor products and technology relevant to desired telehealth applications?
- How will you translate clinical needs of providers and patients into technical, usability, and interoperability specifications for the equipment or software?
- Is there an operational telehealth program nearby you can visit to gain knowledge on a potential model for a technology solution?
- Once vendor solutions get honed down to a few choices, can you get them to provide hands-on demonstrations or equipment loans to garner input from your relevant clinicians, administrators, and technical staff?
- How can you use an equipment specification and bidding process to assure the most cost effective deal is made with a vendor?
- To what extent can you include training and equipment maintenance costs in the purchase to reduce program costs?

5. Train Personnel

Develop and implement a plan for training personnel to prepare them for the arrival of the technology and for its use with patients and providers.

- How will you conduct operational training for physicians, other relevant providers and clinical staff, and/or patients?
- Will use of the system and protocols with a mock patient benefit the relevant staff?
- What procedures will you build in for back-up solutions in case of technical failures of the system through either equipment malfunction or user error?
- How will you train referring providers about the role of telehealth in the organization, potential benefits, and relevant protocols?
- How will you train administrators about the services that will be offered and their benefit to the community?
- How will you train other staff so that they too can leverage the technology?

6. Pilot Service

The care and technology plans should be tested by performing a pilot program with a limited number of patients and staff members for a limited duration. As with any new way of delivering service, it is much better to learn lessons with a few patients and staff members than it is with large numbers. Questions to resolve for such a plan include:
• How many providers and what representative patients will be used for the trial?
• How long will the trial run?
• Will you include attempts to obtain reimbursement for the pilot efforts?
• What kind of inputs from the experience of providers and patients do you need to guide optimization of the operational clinical protocols?
• Does it appear from the clinicians and support staff that additional training on the equipment and protocols is needed?
• Do you need to extend the pilot further to get limited outcome data?

7. Evaluate Outcomes

You organization’s quality assurance staff should be involved in order to complete planning to assure that the quality of health care delivered by telehealth meets the same standards as in-person face-to-face care. This does not require a major research-oriented effort. At the first level, systems should be in place for the support staff or provider to log whether communication over the system was adequate for the clinical purposes intended. This is especially important early on in the program to make sure there are not technical glitches or user errors in the system use which can be readily addressed.

Basic questions of patient and provider satisfaction are important to address at the beginning of the project to garner input to help improve the implementation of the service. A basic survey with a few questions and opening for comments may be adequate. As providers are often too busy to reliably complete such paperwork, you might consider having a support staff member involved in facilitating the telehealth services to verbally ask the provider a couple of rating questions on adequacy of the system for clinical needs and if there were any problems. For long range outcome measures on the benefits or impact of telehealth, it will be important to develop a plan for how that data will be collected and used. Your evaluation program can be guided by the following questions:

• For operational QA, how can you collect information on day-to-day quality of system performance so the technical service staff can detect and address system problems in a timely way?
• How can your program monitor and detect errors in use of the system that could be addressed in a timely way with targeted training?
• What goals and performance standards underlie the telehealth program which calls for clinical measurement efforts?
• How can you garner input from providers and patients on perceived benefits of telehealth for delivery of services without undue burdens of time and effort?
• Can existing data collection for your EMR and the QA systems built on it serve to reveal the impact of the telehealth services with minimal modification (e.g. a code field for telehealth)?
• How will data on patients served with telehealth be compared to usual care?
• How can your assessment take into account the extra staff efforts required for the program so organizational cost benefits may be estimated?

Key Program Planning Resources

2. California Telehealth Resource Center. How to conduct a telemedicine needs assessment. CTEC Discovery Series, Apr. 2009 htm
15. National Telehealth Technology Assessment Resource Center: Toolkits [htm]
16. LeadingAge Center for Aging Services Technologies. CAST telehealth and RPM selection tool. Leading Age, 2017 [htm]; Selection matrix: [xls]
24. Rural Assistance Center: Rural Funding and Opportunities [htm]
25. NETRC Federal Funding Resources [pdf]
26. Center for Connected Health Policy. State telehealth laws and Medicaid program policies: a comprehensive scan of the 50 states and District of Columbia. CCHP, Fall 2019 [htm]
27. Center for Connected Health Policy. Telehealth reimbursement. CCHP Fact Sheet, February, 2019 [pdf]
RESOURCES FOR PLANNING DEVELOPMENT OF TELEHEALTH PROGRAMS

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**Program Planning Guides and Best Practices in Context of the Pandemic**

--**General**

American Academy of Physicians. Telemedicine: A practical guide for incorporation into your practice. ACP, March 2020 [htm](https://www.acponline.org/)


American Medical Association. AMA quick guide to telemedicine in practice. AMA, March 2020 [htm](https://www.ama-assn.org/dissemination-item/ama-q)


Department of Health and Human Services. Telehealth: Health care from the safety of our homes--For providers: getting started. DHHS website, 2020 [htm](https://www.hhs.gov/)

Great Plains Telehealth Resource and Assistance Center. Telehealth quick start: prerequisites, policies, procedures, and practice—webinar slidesets. gpTRAC, March 28-29, 2020 [htm](https://www.gptrac.org/)

Health Resources & Services Administration. Planning your telehealth workflow. HRSA, Department of Health and Human Services, May 2020 [htm](https://www.hrsa.gov/)

Health Resources & Services Administration. Telehealth—for providers. HRSA, Department of Health and Human Services, May 2020 [htm](https://www.hrsa.gov/)

Mid-Atlantic Telehealth Resource Center. MATRC telehealth resources for COVID-19. MATRC website, 2020 [htm](https://www.matrc.org/)


National Consortium of Telehealth Resource Centers. Telehealth and COVID-19. NCTRC Webinar, March 19, 2020 [Slides; Recording](https://www.nctrc.org/)


Northwest Regional Telehealth Resource Center. Quick start guide to telehealth during the current public health emergency. NRRTC, March 2020 [pdf](https://www.nrrtc.org/)


--Primary care and pediatrics
American Academy of Family Physicians. Using telehealth to care for patients during the COVID-19 pandemic. AAFP website, 2020 htm
American Academy of Pediatrics. Telehealth support: Provider to patient visits. AAP, May 2020 htm
American Diabetes Association. CMS Resources: Telehealth during the COVID-19 national pandemic. ADA website, April 2020 htm
American Medical Association. Telehealth Implementation Playbook. AMA, April 2020 pdf
 Centers for Disease Control and Prevention. Phone advice line tools: Guidelines for children (2-17 years) or adults (≥18 years) with possible COVID-19. CDC, March 30, 2020 pdf
Cheng A, Vasquez Guzman CE, Duffield TC, Hofkamp H. Advancing telemedicine within family medicine's core values. Telemed. eHealth [epub ahead of print], July 2020 htm
Dodell G. Telemedicine SOAP: Set-up, operation, action, and plan/policy—webinar recording. American Association of Clinical Endocrinologists, April 2020 htm


Hoover, M. Adapting the Annual Wellness Visit to telehealth. Caravan Health, April 6, 2020. [pdf].


Khurana H, Schlegel S. From behind the front lines: rapid deployment of home tele-monitoring for COVID-19 patients—webinar recording. mHealth Intelligence Webcast, April 10, 2020.


Allergy clinics in times of the SARS-CoV-2 pandemic: an integrated model. 
**Clin. Transl. Allergy** 10:23, 2020 [htm]


Nagata JM. Rapid scale-up of telehealth during the COVID-19 pandemic and implications for subspecialty care in rural areas. *J. Rural Health* [epub ahead of print], April 2020 [htm]


Quinlan C. Leveraging telehealth to address social determinants in the FQHC environment—webinar recording and slides. Northeast-Mid-Atlantic Virtual Telehealth Conference, June 19-July 17, 2020 [htm]


Schulz T, Long K, Kanhhutu K, et al. Telehealth during the coronavirus disease 2019 pandemic: Rapid expansion of telehealth outpatient use during a pandemic is possible if the programme is previously established. *J. Telemed. Telecare* [epub ahead of print], July 2020 [htm]


Showalter G. Telehealth physical exam. *Caravan Health*, April 14, 2020 [pdf]


Wicklund E. COVID-19 gives providers a blueprint for new telehealth strategies. mHealth Intelligence Features, May 18, 2020 [htm]


Woodall T, Ramage M, LaBruyere JT, McLean W, Tak CR. Telemedicine services during COVID-19: Considerations for medically underserved populations. *J. Rural Health* [epub ahead of print], June 2020 [htm]


---Behavioral health


American Psychological Association Services, Inc.. Answers to practicing psychologists’ latest questions about providing telehealth services. APA Services, Inc., April 2020 [htm]


American Psychological Association. Telepsychology and telehealth. APA website, 2020 [htm]

American Society of Addiction Medicine. COVID-19 - Supporting access to telehealth for addiction services: Regulatory overview and general practice considerations. ASAM, March 25, 2020 [htm]

Association of Social Work Boards. Regulatory provisions for social work emergency responders and COVID-19 policy actions. ASWB, April 6, 2020 [xls]


Bartels SJ, Baggett TP, Freudenreich O, Bird BL. COVID-19 emergency reforms in Massachusetts to support behavioral health care and reduce mortality of people with serious mental illness. Psychiatr. Serv. [epub ahead of print], May 2020 [htm]


Burgoyne N, Cohn AS. Lessons from the transition to relational teletherapy during COVID-19. Fam Process. [epub ahead of print], July 2020 [htm]


Emezue C. Digital or digitally delivered responses to domestic and intimate partner violence during COVID-19. JMIR Public Health Surveill. 6(3):e19831, 2020 [htm]


Gurwitch RH, Salem H, Nelson MM, Comer JS. Leveraging parent-child interaction therapy and telehealth capabilities to address the unique needs of young children during the COVID-19 public health crisis. Psychol. Trauma [epub ahead of print], June 2020 [htm]


Hser YI, Mooney LJ. Integrating telemedicine for medication treatment for opioid use disorder in rural primary care: beyond the COVID pandemic. J. Rural Health [epub ahead of print], June 2020

Jain N, Jayaram M. Letter to the editor in response to the article: "Digital mental health and COVID-19: using technology today to accelerate the curve on access and quality tomorrow". JMIR Ment. Health [epub ahead of print], July 2020


Kroll J, Martinez RG, van Dyk IS. COVID 19 tips: building rapport with adults via telehealth. ResearchGate, April 2020


Lerman AF, Ozini FR. Telemental health laws: overview. Epstein Becker Green, LLC, 2020


National Association of Social Workers. Telehealth. NASW website, March 2020

Northeast Telehealth Resource Center. Roadmap and Toolkit for Implementing Primary Care and Behavioral Telehealth Services during the COVID-19 Pandemic. NETRC, April 2020


Ostrowski J. Telemental/behavioral Health 201—webinar recording and slides. Northeast-Mid-Atlantic Virtual Telehealth Conference, June 19-July 2020

Pacific Southwest Mental Health Technology Transfer Center. Virtual Learning Guide—supporting those who use virtual platforms to support the mental health and school mental health workforce. Pacific Southwest MHTTC, April 1, 2020


Plimplton R, Rabinowitz T. Online Discussion Series 2-Telehealth 101 & A provider’s perspective on telemental health—webinar recording. New England Mental Health Technology Transfer Center, March 10, 2020

Policastro-Smith C. Providing telehealth services and instruction to students and clients with a focus on those with developmental disabilities and on the autism spectrum—webinar recording. Northeast & Caribbean Mental Health Technology Transfer Center, May 13, 2020


Society of Clinical Psychology. COVID-19 resources for clinical psychologists. American Psychological Association website htm

South Southwest Mental Health Technology Transfer Center. Cultural and linguistic responsiveness in telehealth. MHTTC, April 15, 2020 htm

Southeast Mental Health Technology Transfer Center. Telepsychiatry during COVID-19. Southeast MHTTN, April 9, 2020 htm


Torous J, Wykes T. Opportunities from the Coronavirus Disease 2019 pandemic for transforming psychiatric care with telehealth. *JAMA Psychiatry* [epub ahead of print], May 2020 htm


Whittingham M, Martin J. How to do group therapy using telehealth. American Psychological Services, Inc, April 10, 2020 htm


Wright MS. COVID-19 Telehealth Primer. Telebehavioral Health Institute, April 6, 2020 htm


---Dentistry---
Glassman P. Using teledentistry to maintain services and contact with patients during the time of COVID-19 physical distancing. *California Northstate University College of Dental Medicine*, April 5, 2020 [pdf]
Maret D, Peters OA, Vaysse F, Vigarios E. Integration of telemedicine into the public health response to COVID-19 must include dentists. *Int. Endod. J.* [epub ahead of print], April 2020 [htm]

**Regulatory Policies**

---Changes with pandemic---
Academy of Nutrition and Dietetics. Green light to MNT via telehealth for Medicare beneficiaries. *AAND, March 17, 2020* [htm]
Association of Diabetes Care & Education Specialists. Telehealth & COVID-19: understanding the 1135 waiver from CMS. *ADCES website*, April 2020 [htm]
Center for Connected Health Policy. Barriers & challenges to FQHC use of telehealth for substance use disorder: An examination of policies affecting FQHCs pre- and during the COVID-19 emergency. *CCHP, July 2020* [pdf]
Center for Connected Health Policy. COVID-19 related state actions. *CCHP website*, 2020 [htm]
Center for Connected Health Policy. Telehealth coverage policies in the time of COVID-19 to date. *CCHP, 2020* [pdf]
Centers for Medicaid & Medicare Services. COVID-19 emergency declaration blanket waivers for health care providers. *CMS, April 21, 2020* [pdf]
Drug Enforcement Administration. Telemedicine—COVID-19 information page. *DEA, Dept. of Justice, 2020* [htm]
Federation of State Medical Boards. States waiving licensure requirements/renewals in response to COVID-19. *FSMB, March 19, 2020* [htm]
Fishpaw M, Zawada S. Telehealth in the pandemic and beyond: The policies that made it possible, and the policies that can expand its potential. *Heritage Foundation, July 20, 2020* [htm]


Providers Clinical Support System. Frequently asked questions (and answers!): Treating opioid use disorder via telehealth tips for primary care providers. PCSS, March 2020.


The Joint Commission. Emergency management – privileging requirements when providing services via telehealth links during a disaster. Joint Commission website.

University of Texas Counseling and Mental Health Center. For mental health professionals: State-by-state guide to the rules/laws about telehealth services across state lines. University of Texas at Austin, April 2020.


--Selected baseline policies--


Center for Connected Health Policy. State telehealth laws and Medicaid program policies: a comprehensive scan of the 50 states and District of Columbia. CCHP, Fall 2019.

Center for Connected Health Policy. Credentialing and privileging. CCHP, 2015.


Drug Enforcement Administration Diversion Control Division. Use of telemedicine while providing medication assisted treatment (MAT). DEA, U.S. Department of Justice, 2018.


Reimbursement Policies

--Changes with pandemic
Academy of Nutrition and Dietetics. Green light to MNT via telehealth for Medicare beneficiaries. AAND, March 17, 2020 pdf
Allen J, Dumm M, Parde S. CMS loosens restrictions on RHC & FQHC telemedicine services – COVID-19 updates—webinar slides. BKD CPAs and Advisors, April 10, 2020 pdf
American College of Physicians. COVID-19 telehealth coding and billing practice management tips. ACP website, April 2020 htm
American Dental Association. COVID-19 coding and billing interim guidance. ADA website, April 2020 pdf
American Diabetes Association. CMS Resources: Telehealth during the COVID-19 national pandemic. ADA website, April 2020 htm
America’s Health Insurance Plans. Health insurance providers respond to coronavirus (COVID-19). AHIP website, May 2020 htm
Association of Diabetes Care & Education Specialists. Telehealth & COVID-19: Understanding the 1135 waiver from CMS. ADCES website, April 2020 htm
Center for Connected Health Policy. Barriers & challenges to FQHC use of telehealth for substance use disorder: An examination of policies affecting FQHCs pre- and during the COVID-19 emergency. CCHP, July 2020 pdf
Center for Connected Health Policy. Telehealth coverage policies in the time of COVID-19 to date. CCHP, 2020 pdf
Center for Connected Health Policy. COVID-19 related state actions. CCHP website, 2020 htm
Center for Connected Health Policy. Federally Qualified Health Centers & Rural Health Clinics acting as distant site providers in Medicare. CCHP, April 30, 2020 pdf
Center for Connected Health Policy. Quick glance state telehealth actions in response to COVID-19. CCHP, 2020 pdf
Center for Consumer Information and Insurance Oversight. FAQs on availability and usage of telehealth services through private health insurance coverage in response to Coronavirus Disease 2019 (COVID-19). Centers for Medicare & Medicaid Services, DHHS, March 24, 2020 pdf
Centers for Medicaid & Medicaid Services. COVID-19 Frequently asked questions (FAQs) on Medicare Fee-for-Service (FFS) billing. CMS, May 15, 2020 pdf
Centers for Medicare & Medicaid Services. CMS Medicare coverage and payment of virtual services—webinar recording. CMS, May 8, 2020 htm
Centers for Medicare & Medicaid Services. COVID-19 frequently asked questions (FAQs) for state Medicaid and Children’s Health Insurance Program (CHIP) agencies. CMS, May 5, 2020 pdf
Centers for Medicare & Medicaid Services. New and expanded flexibilities for rural health clinics (RHCs) and federally qualified health centers (FQHCs) during the COVID-19 public health emergency (PHE). Medicare Learning Network SE20016, April 30, 2020 pdf
Centers for Medicaid & Medicaid Services. Rural health care and Medicaid telehealth flexibilities, and guidance regarding Section 1009 of the …SUPPORT Act entitled Medicaid Substance Use Disorder Treatment via Telehealth. CMS, DHHS, April 2, 2020 pdf
Lacktman NM.  Medicare remote patient monitoring: CMS allows
Lacktman NM, Wein EH.  Medicare remote patient monitoring:
Centers for Medicare & Medicaid Services.  Connected Care Toolkit: Chronic care management resources for
Centers for Medicare & Medicaid Services.  Federal Health Clinic (RHCs) and Federally Qualified Health Centers (FQHCs).
Centers for Medicare & Medicaid Services.  Medicare Learning Network Rural Health Fact
Center for Connected Health Policy.  Billing for telehealth encounters: an introductory guide on fee-
Center for Connected Health Policy.  State telehealth laws and Medicaid program policies: a comprehensive scan
Center for Connected Health Policy.  Telebehavioral Health Institute Blog, April 7, 2020
Northeast Telehealth Resource Center.  NETRC COVID-19 telehealth resources website, 2020
Showalter G.  Telehealth before and after COVID-19: Telehealth in original Medicare fee for service. Caravan Health, March 30, 2020
Showalter G. HCC capture for telehealth and virtual care management. Caravan Health, April 6, 2020
---Baseline policies---
Center for Connected Health Policy.  Billing for telehealth encounters: an introductory guide on fee-for-service.
Center for Connected Health Policy. State telehealth laws and Medicaid program policies: a comprehensive scan of the 50 states and District of Columbia.  CCHP, Fall 2019
Lacktman NM, Acosta JN, Levine SJ.  50 state survey of telehealth commercial payer statutes.  Foley & Lardner LLC, December 2019
Lacktman NM, Wein EH.  Medicare remote patient monitoring: CMS allows “incident to” billing.  Health Care Law Today, March 14, 2019
The Joint Commission.  Clarification: Use of secure text messaging for patient care orders is not acceptable.  Perspectives, December 2016
U.S. Department of Health and Human Services.  Telemedicine and prescribing buprenorphine for the treatment of opioid use disorder.  DHHS, September 2018
---Comprehensive guides---
AlDossary S, Armfield NR, Smith AC, Martin-Khan MG.  A needs-based planning framework for telemedicine services: a practical guide.  Centre of Research Excellence in Telehealth, National Health and Medical Research Council; University of Queensland, Australia 2019
eVisit, Inc. How to successfully adopt telemedicine into your practice. eVisit White Paper, 2017 pdf (requires a free registration)
Joshi AU, Hollander JE. Why the telemedicine physical is better than you think. Telemedicine Magazine, March 9, 2017 htm
Luxton DD. Telehealth implementation guidebook. Washington State Department of Social and Health Services, 2017 pdf
Rheuban KS. Adopting telemedicine in practice. American Medical Association, 2015 htm
Rocha L, Maley S, Scott D, Louder D. Introducing the Rural Telehealth Toolkit—Webinar. Rural Health Information Hub, June 5, 2019 htm Transcript Powerpoint
Slaboda JC, Wardlow L, Wade AM, Abrashkin K. A practical guide to expanding home-based primary care with telehealth. West Health Institute, La Jolla, CA. December 2019 htm (requires a free registration)
Telligen and the Great Plains Telehealth Resource and Assistance Center. Telehealth start-up and resource guide. GPTrac, October, 2014 htm

RETURN TO TOPICS

--Specific strategies and tools

- readiness and staffing
  California Telehealth Resource Center. Assessing organizational readiness—is your organization ready for telemedicine?. CTRC. 2009 pdf
  California Telehealth Resource Center. Telemedicine room design program guide. CTRC website--video: htm
  California Telehealth Resource Center. Defining roles and responsibilities: patient site and remote clinician staff. CTRC website--video: htm
  Maryland Health Care Commission. Telehealth readiness assessment tool. MHCC, 2019 pdf

- technical set-up and operations
  Bright MD, Inc. The interoperability sandbox: Ensure your virtual care delivery platform plays nicely with your other IT systems. Bright MD White Paper, 2019 htm (requires a free registration)
  California Telehealth Resource Center. Telemedicine room design program guide. CTRC website--video: htm
  Facility Guidelines Institute. Accommodations for telemedicine services. FGI, August 2017 pdf
  FCC Disability Advisory Committee. Best practices to promote effective access to and usability of ICT products and services for Americans with cognitive disabilities. Consumer and Governmental Affairs Bureau, Federal Communications Commission, September, 2016 pdf
  Nassar C, Costello JK, Wolf-Prusan L. Telehealth troubleshooting—webinar recording. Technology Transfer Center, April 28, 2020 video slides
  Ontario Telemedicine Network. eVisit (videoconferencing) lighting recommendations. OTN, 2013 pdf
  Southwest Telehealth Resource Center. Telehealth site assessment tool. SWTRC, 2014 pdf

- operations checklists
  Bradshaw N. Telemedicine Checklist. Arizona Telemedicine Program, February 2020 htm
Lacktman NM. Telehealth Compliance Checklist. Foley & Lardner, LLP, 2015 pdf
Texas Medical Association. Telemedicine Visit Checklist. TMA, 2020 pdf

- clinical workflow and protocols
  California Telehealth Resource Center. Sample workflows. CTRC, 2017 pdf
  California Telehealth Resource Center. Sample clinical telemedicine policies and procedures. CTRC pdf
  Health Resources & Services Administration. Planning your telehealth workflow. HRSA, Department of Health and Human Services, May 2020 htm
  Hoover, M. Adapting the Annual Wellness Visit to telehealth. Caravan Health, Apr 6, 2020 pdf
  Showalter G. Telehealth physical exam. Caravan Health, April 14, 2020 pdf
  Showalter G. Telehealth workflow. Caravan Health, April 16, 2020 pdf
  Ontario Telemedicine Network. Instruction guide for completing telemedicine clinical protocols. OTN, 2013 pdf
  Ontario Telemedicine Network. Ensuring a high quality videoconference. OTN, 2013 pdf
  Ontario Telemedicine Network. Telemedicine consultation - considerations for healthcare providers. OTN, 2015 pdf
  Penticoff MD, Devany M. Overview: key issues in specialty consultation telemedicine services. Great Plains Telehealth Resource & Assistance Center, 2015 pdf

- patient guidance and accommodation
  Agency for Healthcare Research and Quality. AHRQ's easy-to-understand telehealth consent form. AHRH, April 2020 htm
  American Psychological Association. Informed consent checklist for telepsychological services. APA, March 2020 htm
  Department of Health and Human Services. Telehealth: Health care from the safety of our homes—For patients: finding telehealth options. DHHS website, 2020 htm
  Hassan E. ASL interpreters (in person or in video) in medical settings and the law-webinar. Arizona Telemedicine Program and Southeast Telehealth Resource Center, 2018 video slides
  Hawaii State Department of Health Genomics Section. What to expect from a telehealth visit—video for patients. Hawaii DOH, March 20, 2020 htm
  Health Resources & Services Administration. Telehealth—for patients. HRSA, Department of Health and Human Services, May 2020 htm
  Marciniak A. Patient instructions for a successful telehealth visit. Caravan Health, March 30, 2020 doc
  McConnochie KM. Website manner: a key to high-quality primary care telemedicine for all. Telemed. eHealth 25(11):1007-1011, 2019 htm
  Roth D, Zekovic-Roth S, Yasutake M, Richardson M. Telehealth @ Home: A guidebook for people who will receive home-based telehealth services. Mind & Body Works, Inc., 2016 pdf

  eConsulting
  Blue Path Health. e-Consult Toolkit. BPH, 2019 htm
  Institute for High Quality Care. Checklist for eConsult implementation. Blue Shield of California Foundation, 2014 pdf

RETURN TO TOPICS

--mHealth

American Medical Association. Digital Health Implementation Playbook. AMA, 2020 htm *(requires a free registration)*
Christie GP, Patrick K, Yach D. Guidelines for personalized health technology: final report. Vitality Institute, March 2016 htm


Marrouche NF, Rhew D, Akoum N, et al.. Guidance for wearable health solutions. Consumer Technology Association, January 2020 [htp](#) (requires a free registration)


The Joint Commission. Clarification: Use of secure text messaging for patient care orders is not acceptable. *Perspectives*, December 2016 [pdf](#)


Yang WE, Spaulding EM, Lumelsky D, et al. Strategies for the successful implementation of a novel iPhone loaner system (iShare) in mHealth interventions: prospective study. *JMIR mHealth uHealth* 7(12):e16391, 2019 [htp](#)

**RETURN TO TOPICS**

--Behavioral health


Great Plains Telehealth Resource and Assistance Center. Telehealth quick start: prerequisites, policies, procedures, and practice—webinar slidesets. gpTRAC, March 28-29, 2020 [htp](#)


Northwest Regional Telehealth Resource Center. Telemental Health Toolkit. NRTRC, 2015 [htp](#)


Roth D, Zekovic-Roth S. Mental health and primary care integration model. Mind & Body Works, Inc., 2016 [pdf](#)

RTI International, Inc. Using telehealth to identify and manage health and substance use disorder conditions in rural areas. Office of the Assistant Secretary for Planning and Evaluation, September 2017 [pdf](#)

U.S. Department of Health and Human Services Assistant Secretary for Planning and Evaluation Office of Disability, Aging and Long-Term Care Policy. Best practices and barriers to engaging people with substance use disorders in treatment. ASPE, March, 2019 pdf


Woo V, Saad A. Geriatric mental health telemedicine clinical protocol. Centre for Addiction and Mental Health and Ontario Telemedicine Network, 2009 pdf

RETURN TO TOPICS

Technology Assessment and Selection


Association of Diabetes Care & Education Specialists. Technical specifications for selected platforms. ADCES, 2020 pdf


eVisit, Inc. Definitive guide to purchasing a telemedicine platform. eVisit, October 2017 htm (requires a free registration)

Iafolla T. 15 questions to ask your telemedicine vendor. eVisit, Inc., 2019 htm


MobilDrTech, Inc. Telemedicine stethoscopes: white paper. MobilDrTech, January 2019 pdf

National Telehealth Technology Assessment Resource Center. Telehealth Technology Assessment Toolkits. TTAC, htm

National Telehealth Technology Assessment Resource Center. Video platforms: customer point of view. TTAC,2020 htm

National Telehealth Technology Assessment Resource Center. Toolkit: Clinician's guide to video platforms. TTAC, 2020 htm


Owings-Fonner N. Let's get technical: Comparing the latest telehealth solutions. American Psychological Services Inc., December, 2019 htm

Roth D, Zekovic-Roth S, Yasutake M, Richardson M. Telehealth @ Home: A guidebook for people who will receive home-based telehealth services. Mind & Body Works, Inc., 2016 pdf


Slaboda JC, Wardlow L, Wade AM, Abrashkin K. A practical guide to expanding home-based primary care with telehealth. West Health Institute, La Jolla, CA. December 2019 htm (requires a free registration)

Telebehavioral Health Institute. Video teleconferencing companies claiming HIPAA "compliance," compatibility or offering "Business Associate" agreements, 2020 htm

Texas Medical Association. Telemedicine vendor evaluation tool. TMA, 2019 pdf

Texas Medical Association. Telemedicine vendor options. TMA, 2019 pdf

Wiklund E. Picking the right telehealth platform for a small or solo practice. mHealth Intelligence Featured Resource, April 2018 htm

RETURN TO TOPICS

Online Telehealth Training

--COVID era set
American College of Physicians. Telemedicine: A practical guide for incorporation into your practice. ACP, March 2020 [htm]
Ellimootil C. Telehealth basics: A primer on video visits—webinar recording. University of Michigan, March 15, 2020 [htm]
---Pre-COVID era
California Telehealth Resource Center. Telehealth coordinator online training modules. CTRC, 2919 [htm]
Training video collection [htm]
National Consortium of Telehealth Resource Centers: Webinar compilation, 2011-2020 [htm]
National Telehealth Technology Assessment Resource Center. Media resources: Videos and Webinar presentations [htm]
Northwest Regional Telehealth Resource Center. Telemental Health Toolkit-video series. NRTRC, 2015 [htm]
Old Dominion University School of Nursing and South Central Telehealth Resource Center. Telehealth Etiquette Series [htm]
Roth DE. Telemedicine: How to do it right!—webinar. National Consortium of Telemedicine Resource Centers, April 2019 [htm]
TelehealthVillage, Inc. Foundations of Telehealth—online course, 2019 [htm]
Thomas Jefferson University. Telemedicine: Conducting an Effective Physical Exam. [htm]

RETURN TO TOPICS

Business Planning and Sustainability

Chiron Health. Telemedicine revenue calculator. Chiron Health, Inc., [htm](requires a free registration)
National Consortium of Telehealth Resource Centers. Funding sources for telehealth. NCTRC Fact Sheet, November, 2019 [pdf]
National Consortium of Telehealth Resource Centers. 15 key steps for creating a business proposal to implement telemedicine. NCTRC Fact Sheet, June 2018 [pdf]
Wiiklund E. What will happen with telehealth when the emergency is over? mHealth Intelligence, March 23, 2020 [htm]

--Primary care

American Lung Association. Telehealth as a vehicle for tobacco cessation. ALA, September 2018 [pdf]
Canadian Agency for Drugs and Technologies in Health. Telehealth delivery of nutritional counselling for the management of chronic diseases that require dietary changes: clinical effectiveness and evidence-based guidelines. CADTH Rapid Response Reports, June 2015 [htm]
Center for Connected Health Policy. Federally Qualified Health Center (FQHC) Research Catalogue. CCHP, August 2018 [pdf]
Joshi AU, Hollander JE. Why the telemedicine physical is better than you think. Telemedicine Magazine, March 9, 2017 [htm]
National Association of Community Health Centers. Telehealth and health centers. NACHC, April 2018 [pdf]
Petersen CL, Weeks WB, Norin O, Weinstein JN. Development and implementation of a person-centered, technology-enhanced care model for managing chronic conditions: cohort study. JMIR mHealth uHealth 7(3):e11082, 2019 [htm]
Powell RE, Stone D, Hollander JE. Patient and health system experience with implementation of an enterprise-wide telehealth scheduled video visit program: mixed-methods study. *JMIR Med. Inform. 6(1):e10, 2018* [htm](https://doi.org/10.2196/11188)


---

### Home based care


Almathami HKY, Win KT, Vlahu-Gjorgievska E. Barriers and facilitators that influence telemedicine-based, real-time, online consultation at patients’ homes: systematic literature review. *J. Med. Internet Res. 22(2):e16407, 2020* [htm](https://doi.org/10.2196/22448)


Keeling DI. Homecare user needs from the perspective of the patient and carers: a review. *Smart Homecare Tech. TeleHealth 2:63-76, 2014* [htm](https://doi.org/10.1089/tmj.2014.0043)


Uscher-Pines L, Huskamp HA, Mehrotra A. Treating patients with opioid use disorder in their homes: an emerging treatment model. *JAMA [pub ahead of print], May 2020* [htm](https://doi.org/10.1001/jama.2020.5277)


---

**RETURN TO TOPICS**
--mHealth in primary care


Byambasuren O, Sanders S, Beller E, Glassiou P. Prescribable mHealth apps identified from an overview of systematic reviews. NPJ Digital Med: 1(12): 12, 2018 pdf


Dinh-Le C, Chuang R, Chokshi S, Mann D. Wearable health technology and electronic health record integration: scoping review and future directions. JMIR mHealth uHealth 7(9):e12861, 2019 htm


Jacob C, Sanchez-Vazquez A, Ivory C. Social, organizational, and technological factors impacting clinicians’ adoption of mobile health tools: systematic literature review. JMIR mHealth uHealth 8(2):e15935, 2020 htm

Kew KM, Cates CJ. Home telemonitoring and remote feedback between clinic visits for asthma. Cochrane Database Syst. Rev: 8: CD011714, 2016 pdf


Llorens-Vernet P, Miró J. Standards for mobile health-related apps: systematic review and development of a guide. JMIR mHealth uHealth 8(3):e13057, 2020 htm


Veazie S, Bourne D, Petersen K, Anderson J. Evidence brief: Video telehealth for primary care and mental health services. Department of Veterans Affairs, February 2019 htm


RETURN TO TOPICS

--Behavioral health


Clay RA. How to make the most of telepsychology and steer clear of common pitfalls. *Monitor on Psychology*, May 2017 [pdf](https://monitoronpsychology.org/2017/05/10/how-to-make-the-most-of-telepsychology/)


Fortney JC, Veith RC, Bauer AM, et al. Developing telemental health partnerships between state medical schools and federally qualified health centers: navigating the regulatory landscape and policy recommendations. *J. Rural Health [epub before print], October 2018* [htm](https://journals.oxfordjournals.org/content/early/2018/09/19/jrh.jry001)


Lannin DG, Scott NA. Best practices for an online world. *Monitor on Psychology*, February 2014 [pdf](https://monitoronpsychology.org/2014/02/best-practices-for-an-online-world/)

Lau N, O’Daffer A, Colt S, et al. Science or snake oil: systematic search of iPhone and Android mobile apps for psychosocial wellness and stress management. *JMIR mHealth uHealth* [epub ahead of print], May 2020 [htm](https://www.jmir.org/2020/5/e14897)


---eConsulting---


Emerson H, Brantley E, Schrag J.  Increasing access to specialty care through collaboration: eReferral and eConsult—Issue Brief.  The National Partnership for the Health Care Safety Net, June 2016 [pdf](http://example.com)


*Northeast Telehealth Resource Center* is a partnership of Medical Care Development Public Health with the University of Vermont Medical Center.  Funded by Grant G22RH30352 from the Office for the Advancement of Telehealth, Health Resources and Services Administration, DHHS.