**HISTORY OF TELEHEALTH**

Telehealth broadly refers to enhancing health care delivery and education through various methods. The use of video communications in health care in the United States dates to the late 1950s when doctors at the University of Nebraska used a two-way, interactive television to transmit neurological examinations to students across campus. By 1964, they were able to provide health services 112 miles away at Norfolk State Hospital, via the telehealth link they built.1,2,3

Laws and insurance reimbursement policies related to telehealth are rapidly evolving, with states varying on their approach to telehealth policy. Medicare only reimburses for certain services when they are delivered via live video. Medicare also restricts the types of facilities and health care providers that can use telehealth services. It almost completely limits the use of telehealth to rural areas, with some exceptions. Under Medicaid, states can reimburse for telehealth services if the service meets federal requirements of quality of care and efficiency. Some states also have a geographic restriction for reimbursable services under Medicaid, like with Medicare. Federal regulations do not require private payer insurance plans to cover telehealth services, but many of these plans do reimburse for them.4

**Forms of Telehealth**

Telehealth has four modalities: live video, store-and-forward, remote patient monitoring, and mobile health.2

- **Live video** refers to real-time, two-way interaction between a health care provider and a patient, caregiver, or other provider using audiovisual methods.

- **Store-and-forward telehealth** refers to recorded data transmission to a health care provider. This data includes videos or imaging like x-rays that may be sent via secure email. The practitioner will then use the data to provide a service or evaluate a health case outside of a live interaction.

- **Remote patient monitoring (RPM)** is when the health history from a patient at one location is transmitted to a provider at another location to use in the patient’s care. Once a patient is home or placed in a care facility after an emergency room visit, for example, RPM allows providers to continue to track their medical data.

- **Mobile health or mHealth** refers to the use of technology like tablets and cell phones to support public health education and practice.

**PrEP Telehealth**

As computer and mobile device usage increases, telehealth will become a more common type of health care delivery. Telehealth is now being used in fields such as chronic disease monitoring and management, dentistry, physical and occupational therapy, and counseling.2 Regarding pre-exposure prophylaxis (PrEP), telehealth specifically refers to the delivery of PrEP related clinical services to prevent HIV. Where PrEP telehealth is available, those receiving PrEP can now have virtual visits with their provider, as opposed to having a physical visit.

**Benefits of PrEP Telehealth**

PrEP telehealth can increase PrEP access for those most vulnerable to HIV who may not otherwise have access due to social stigma or distance from the closest PrEP provider. Because telehealth allows patients to have virtual provider visits, it can alleviate some of the difficulties surrounding geographic isolation, such as in rural areas, or reluctance to access PrEP because of fear of stigma.
Telehealth can also **reduce PrEP delivery barriers** related to local health care professional shortages since, again, patients do not necessarily have to physically visit a provider. A third advantage of PrEP telehealth is that it can **support patients who struggle with medication adherence.** The development and use of real-time electronic adherence monitors, digital medicine systems, and short message service (SMS) surveys in PrEP research illustrates technology advances that may improve adherence measurements. In the future, this could mean intervening and improving adherence to PrEP in real time.5

**Strategies to Implement PrEP Telehealth**

When implementing PrEP telehealth in clinical settings, it is important to consider several factors and questions, such as those listed below.6,7,8 This is not an exhaustive list, but it is intended to prompt thinking about your agency’s resources and the barriers you may encounter when implementing telehealth platforms or activities.

✔ Your patients’ and organization’s Internet broadband access
  o What is the minimum bandwidth and broadband speed needed to use your PrEP telehealth technology to its fullest capacity?
  o What telehealth applications are compatible with local broadband speeds?

✔ Laws in your state that address telehealth
  o How will you ensure that your telehealth platform protects patient privacy and is HIPAA compliant?
  o What laws does your state have about online prescribing?
  o Will providers at your agency be required to have multi-state licensing to use telehealth?

✔ Insurance reimbursement policies in your state
  o What telehealth services are covered by private insurance companies and government programs, like Medicaid and Medicare, in your state?

✔ Staff training on the new technology
  o How will you measure staff readiness and willingness to implement PrEP telehealth?
  o How will you encourage staff who are reluctant to adopt the new technology?
  o How will you train staff on the new technology?

✔ Potential partnerships with organizations that will support the implementation
  o What organizations can you partner with to increase the chance of success for the PrEP telehealth implementation (e.g. local laboratories, pharmacies, etc.)?
  o In what specific ways will you partner with each of these organizations?

**PrEP Telehealth Models**

There are currently successful PrEP telehealth models in the field, where this innovative tool is being used to change the landscape of PrEP delivery. Though your agency may lack the resources of the models that follow, you can benefit from using the questions above as initial steps to implementing telehealth.

In February 2017, the Iowa Department of Public Health (IDPH) launched TelePrEP to address rising HIV diagnoses in their state and to engage rural communities that are geographically isolated. By using the Vidyo© application and collaborating with local laboratories, pharmacies, the Signal Center for Health Innovation, and University of Iowa Health Care, IDPH created a TelePrEP clinic model. Patients can visit a lab closest to them to get their PrEP-related labs drawn. They are offered medication via mail delivery.9 More information on TelePrEP can be found at [https://www.prepiowa.org/teleprep](https://www.prepiowa.org/teleprep).

PlushCare, the urgent care telehealth platform available in 31 states, launched their availability of PrEP services in November 2017. After enrolling in PrEP services with PlushCare, patients have a virtual visit with a PlushCare physician and the physician orders PrEP-related tests at a local lab. A 90-day prescription for PrEP medication is sent to the patient’s preferred pharmacy once the labs are reviewed. PlushCare can send reminders when patients need to have repeat lab testing or have another visit with their PlushCare physician to continue receiving PrEP prescriptions.10
Prepmate is an SMS-based tool for PrEP adherence support developed in 2016 by researchers from the University of California-San Francisco (UCSF). Its effectiveness was assessed in a PrEP implementation study at a Chicago PrEP clinic. Prepmate was tailored for youth and used in the study with young men who have sex with men (MSM) and transgender women. The tool’s support system, especially its daily SMS reminders and weekly SMS check-in messages, produced high ratings for acceptability and use among both groups which prompted increased PrEP adherence and retention.\(^\text{11}\) Researchers from UCSF have also created Please PrEP Me (https://pleaseprepme.org), an interactive map and directory to help patients find local PrEP providers.\(^\text{12}\) The site, presented in both English and Spanish, includes resources for patients, navigators, clinicians, and non-clinician providers in all 50 states and the District of Columbia. A chat function allows patients to submit questions about HIV prevention.

The PrEP Locator is a directory of private and public practice PrEP providers in the United States. The directory is presented by Emory University, in collaboration with the M-A-C AIDS Fund. Data from the PrEP Locator is made accessible with open source tools so that it can be integrated with mobile apps and existing websites. The directory is at https://preplocator.org.\(^\text{13}\) PrEP Locator, Prepmate and Please PrEP Me demonstrate how incorporating mHealth strategies in PrEP delivery can benefit people struggling with daily adherence to PrEP.

Building Organizational Capacity

The CDC-funded HIV CBA Center at CAI can help conduct an assessment of your organizational needs, identify resources, plan for implementation and provide you with training and capacity building support that leads to successful programs for high-impact HIV prevention. The HIV CBA Center is able to shape trainings and technical assistance to the specific needs of your healthcare organization. The approach includes building the capacity of the providers and support staff in areas such as:

- Behavioral Change & Motivational Interviewing
- Treatment Adherence
- Identifying Early Red Flags for Abandoning Care & Poor Adherence
- PrEP – Pre-Exposure Prophylaxis

For more information on how to obtain our capacity building services to incorporate into your Health Care Organization, visit www.CBA.CAIGlobal.org.

References