



# Telehealth Barriers: Overcoming Technology and Privacy Concerns

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# Disclosures

I have no relevant financial disclosures



# Outline

- Barriers to Telehealth
- Privacy Concerns with Telehealth
- Lessons Learned from Implementing Telehealth
- Improving Mental Health Access with Telehealth



# Barriers to Telehealth

- Availability of high speed internet services
- HIPAA Compliance
- Patient and Provider Buy In
- Initial Cost



# Availability of High-Speed Internet

- No specific minimum for healthcare broadband speeds, but many telehealth programs require a minimum of 1.5Mbps for both upload and download speeds
- Telehealth can be delivered across many broadband services. According to the FCC, these include digital subscriber line (DSL), cable modem, fiber, wireless (including Wi-Fi or cellular wireless), satellite and broadband over powerlines (BPL).



# Availability of High-Speed Internet

- Federal Communications Commission (FCC) is charged with “encouraging the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans...by removing barriers to infrastructure investment and by promoting competition in the telecommunications market



# Availability of High-Speed Internet

- The number of Americans lacking access to fixed terrestrial broadband service at 25/3 Mbps continues to decline, going down by more than 14% in 2018 and more than 30% between 2016 and 2018
- More than 85% of Americans have access to fixed terrestrial broadband service at 250/25 Mbps, a 47% increase since 2017



# The Digital Divide

- “The ability, both technical and financial, to make full use of the technology available, taking into consideration access, or lack of access, to the internet.”<sup>1</sup>
- Female, older, lower income and non-English speaking patients are more likely to complete a telephone visit than a video visit<sup>2</sup>

1: <https://issues.tigweb.org/digitaldivide>

2: Eberly LA, Khatana SAM, Nathan AS, Snider C, Julien HM, Deleener ME, et al. Telemedicine outpatient cardiovascular care during the COVID-19 pandemic: bridging or opening the digital divide? *Circulation*. 2020;142:510–2.





## Smartphones & Broadband Subscriptions in the U.S.

Rates vary by social determinant of health

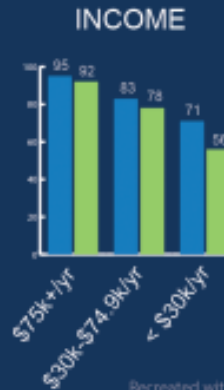


**8.1/10** U.S. adults own a phone



**7.3/10** U.S. adults subscribe to broadband

BROKEN DOWN BY (%)



Recreated with permission from the Pew Research Center.  
Anderson, Monica. (2019, June 13). Mobile Technology and Home Broadband 2019.  
Retrieved from <https://www.pewresearch.org/internet/2019/06/13/mobile-technology-and-home-broadband-2019/>



# Patient and Provider Buy In





# Initial Cost

- Deploying hardware based solutions is costly upfront
- Software based solutions are less costly upfront but lose some control when it comes to encryption



# HIPAA Compliance

- Ensure that both video and audio are encrypted
- Privacy in the home or other living situation



# Privacy Concerns



# Consent

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Most states require  
a telehealth  
specific informed  
consent

## Tennessee

*Last updated 09/04/2022*

For the purposes of this section, a healthcare provider-patient relationship with respect to telemedicine or telehealth is created by mutual consent and mutual communication, except in an emergency, between the patient and the provider. The consent by the patient may be expressed or implied consent; however, the provider-patient relationship is not created simply by the receipt of patient health information by a provider unless a prior provider-patient relationship exists. The duties and obligations created by the relationship do not arise until the healthcare provider:

- Affirmatively undertakes to diagnose or treat the patient; or
- Affirmatively participates in the diagnosis or treatment.

SOURCE: [TN Code Sec. 63-1-155 \(Accessed Sept. 2022\)](#).



# Example Consent

- This consultation was provided via telemedicine using two-way, real time interactive telecommunication technology between the patient and the clinician. The interactive telecommunication technology included audio and video. The patient was offered telemedicine as an option for care delivery and consented to this option.
- Patient Location:
- Clinician located at a site approved by Vanderbilt University Medical Center
- Other participants present, with patient's verbal consent:



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# Methods

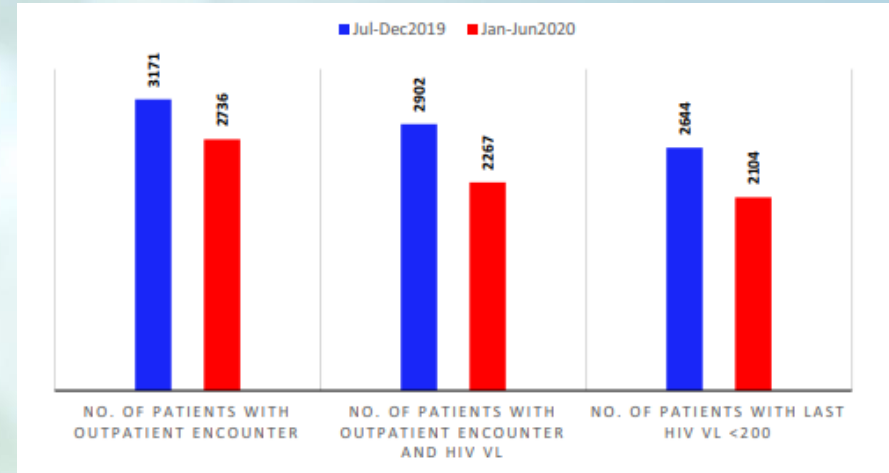
- Retrospective observational cross-sectional study of people with HIV over the age of 18 who received care at our clinic
- Outcomes included attendance at clinic visits, HIV-1 RNA PCR testing and viral suppression (HIV-1 RNA < 200 copies/mL)

# Viral Suppression

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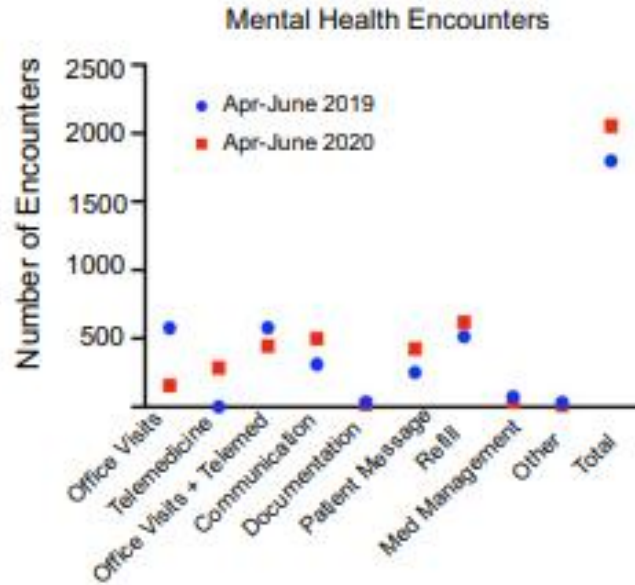


- Of the 3171 patients with an outpatient visit from 7/19 to 12/19, 91.5% (2902) had an HIV viral load and 2644 were virally suppressed (91.1% of those tested)
- Of the 2736 patients with an outpatient visit from 1/2020 to 6/20, 2267 had an HIV viral load (82.9%) and 2104 were virally suppressed (92.8% of those tested)





# Mental Health



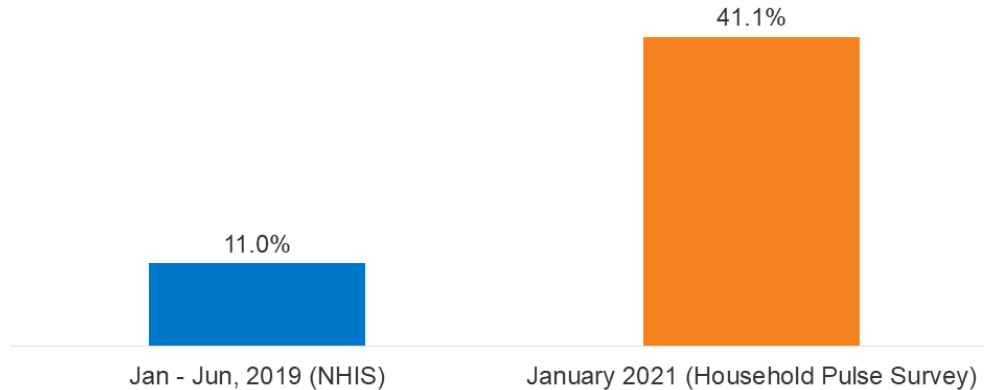
- Total mental health (MH) encounters increased by 14%
- MH communications increased by 60%
- Patient messages with MH increased by 67%
- Medication refills by MH providers increased by 20%



# Impact of COVID-19 on Mental Health

Figure 1

Average Share of Adults Reporting Symptoms of Anxiety Disorder and/or Depressive Disorder, January-June 2019 vs. January 2021



NOTES: Percentages are based on responses to the GAD-2 and PHQ-2 scales. Pulse findings (shown here for January 6 – 18, 2021) have been stable overall since data collection began in April 2020.

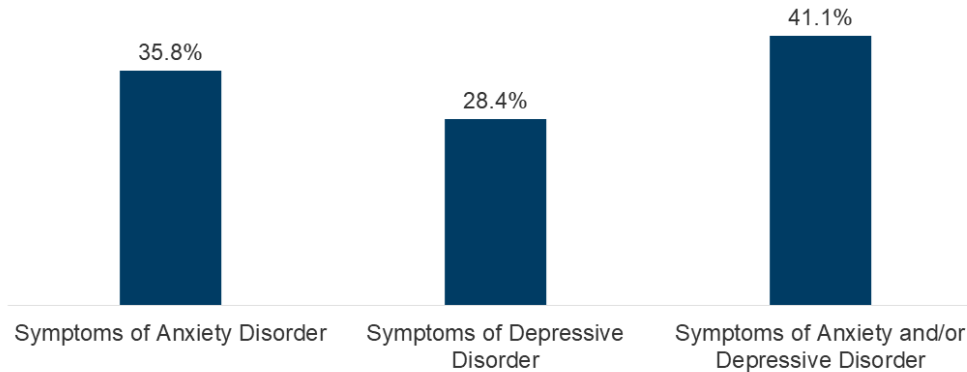
SOURCE: NHIS Early Release Program and U.S. Census Bureau Household Pulse Survey. For more detail on methods, see: <https://www.cdc.gov/nchs/data/nhis/earlyrelease/ERmentalhealth-508.pdf>



# Impact of COVID-19 on Mental Health

Figure 2

Share of Adults Reporting Symptoms of Anxiety or Depressive Disorder During the COVID-19 Pandemic



NOTES: These adults, ages 18+, have symptoms of anxiety or depressive disorder that generally occur more than half the days or nearly every day. Data shown is for January 6 – 18, 2021.

SOURCE: U.S. Census Bureau, Household Pulse Survey, 2020 - 2021.





# **INTERVENTIONS TO INCREASE ACCESS TO MENTAL HEALTH**



# Phone Check Ins

- Used for people who needed to connect with behavioral health
- Used for people struggling with isolation due to COVID-19
- Gave patients number to reach out to for support



# Telehealth

- Provider could patch behavioral health consultant (BHC) into zoom visit for consults
- BHC could join after provider visit for follow up therapy appointment





# Scheduling

- Therapists were given control of their schedule to self schedule patients
- Patients were provided with reminder phone calls ahead of their appointment
- A nurse or medical assistant would call to assist the patient in logging on for their appointment to provide IT support if needed.
- Adapting frequency of in-person visits to limit exposure



# Improved Contact with Patients

- Obtained a dedicated behavioral health phone. Patients were given the direct phone number and were encouraged to reach out during working hours
- Improved portal usage with sending out references, plans



# Future Directions for Telehealth

- Which barriers are improved? Which ones are exacerbated?
- Which patients should be prioritized for telehealth vs. in-person visits?
- Improving access to care and eliminating the digital divide
- Increased utilization for mental health care



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