Via Electronic Mail

March 31, 2023

Dear Honorable Members of the Public Health, Human Services, and Insurance and Real Estate Committees:

Pursuant to §41 of Public Act 22-81, the Office of Health Strategy (OHS) was required to conduct a study and report findings on: (1) the feasibility and impact of expanding access to telehealth services, telehealth providers and coverage for telehealth services in this state beginning on July 1, 2024, and (2) any means available to reduce or eliminate obstacles to patient access to telehealth services, telehealth providers, and coverage for telehealth services in this state, including, but not limited to, any means available to reduce patient costs for telehealth services and coverage for telehealth services in this state.

The attached document is a report commissioned by OHS, prepared by the UConn Health Interoperability, Innovation and Learning Lab (UConn Health). The recommendations presented in this report are suggestions based upon UConn's research, claims data analysis, and stakeholder surveys/focus groups, and may have a fiscal impact to the state if implemented. The recommendations from the study are described below but no additional funding has been included in the Governor's biennial budget to implement them. OHS could convene the recommended workgroups to develop policy and determine financial and operational impacts which could inform future resource requests for the impacted state agencies.

Please reach out to Abby Alter at Abby.Alter@ct.gov with any additional questions regarding this report.

Sincerely,

Deidre Gifford, MD, MPH
Executive Director, Office of Health Strategy

2022

Telehealth Analysis Report

Submitted to the Connecticut Office of Health Strategy

March 15, 2023

Prepared by the UConn Health Interoperability, Innovation and Learning Lab

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Conflict Of Interest Attestation:

The research carried out for this report was done by faculty and staff from UConn Health and UConn Storrs. It does not represent the official opinion of the University of Connecticut or UConn Health. While several authors (Agresta, Lishnak) utilize telehealth in clinical care, they do not directly benefit from its findings. Thomas Agresta has an ownership interest in FlexHealthInfo and an advisory role with stock for UpSwingHealth, neither of which stands to benefit from the recommendations made in the report.

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EXECUTIVE SUMMARY

Telehealth rapidly became an indispensable tool in delivering healthcare to patients in Connecticut during the COVID-19 Pandemic. To better understand the impact of telehealth's rapid implementation, as well as the opportunities, challenges, and future needs associated with its continued use, §41 of Public Act 22-81 required the Office of Health Strategy (OHS) to report on: (1) the feasibility and impact of expanding access to telehealth services, telehealth providers and coverage for telehealth services in this state beginning on July 1, 2024, and (2) any means available to reduce or eliminate obstacles to patient access to telehealth services, telehealth providers, and coverage for telehealth services in this state, including, but not limited to, any means available to reduce patient costs for telehealth services and coverage for telehealth services in this state.

OHS engaged UConn Health to conduct a comprehensive study, including a literature review, surveys, and key informant interviews with patients and clinicians, an assessment of state and federal policies, and an analysis of available data from the All-Payer Claims Database (APCD).

The findings of this study reveal that patients and clinicians strongly support telehealth as it facilitates the provision of convenient, high-quality care. For patients, telehealth provides continuity of care and reduces barriers associated with access, especially among hard-to-reach populations. Telehealth offers patients the ability to seek various primary care, behavioral health, and specialty care services in the comfort of their homes or workplaces. Providers report that telehealth facilitates their ability to provide timely patient care and mostly found the technology easy to implement.

While continued use of telehealth has robust, across-the-board support, there exists room for improvement. Several opportunities were identified to enhance telehealth services, including payment, technology, and user support. Several policy recommendations are made within this report to address the identified challenges. Recommendations include:

- Creation of a telehealth advisory council, task force, or committee for OHS that continues to report to the legislature and state agencies.
- Creation of rapid response multi-agency state agency task force to evaluate opportunities to use state and federal dollars to support infrastructure (i.e., broadband expansion, telehealth centers), and agency policy.

- Further assess the fiscal and operational feasibility of continuing payment parity for telehealth and remote patient monitoring with an examination of actual costs to provide services compared to in-person services.

- Creation of clear policy regarding telehealth definitions, reimbursement, and requirements regarding supervision of clinicians in training for Medicaid and other state payors with recommendations that the opportunity be extended to all payors.

- Funding and evaluation of the pilot testing of telehealth specifically focused on saving healthcare dollars, while maintaining or improving quality (i.e., in correctional facilities, schools, skilled nursing facilities).

- Designation and funding of an entity to continue to monitor the policy, practice, and healthcare outcomes in Connecticut and other states as well as at a federal level and to evaluate the clinical and cost outcomes of changes with policy, usage, and payment.

- Partnering with a team to develop and administer a training program for clinicians, staff and patients on the "best practices" in telehealth.

- Expansion of access to telehealth through ubiquitous broadband coverage, low or no cost high-speed internet, low-cost and easy-to-use technology and devices, telehealth-specific spaces or centers, and expansion of interstate licensing compacts.

There is a clear existing and demonstrated benefit to the continued reimbursement of telehealth services in the State beyond the Public Health Emergency. Clinicians and patients agree that telehealth offers a convenient, high-quality complement to in-person care. However, a need remains for further evaluation of its effectiveness and impact on cost savings and health outcomes. This further study may enumerate specific cost savings, quality improvement, and effectiveness outcomes.

INTRODUCTION

Telehealth has been used for decades in the United States, with supporting evidence that it increases access to care by reducing unnecessary transportation, disruptions in care, and missed visits. Prior to the COVID-19 pandemic, reimbursement by a broad array of payors had historically been limited. The onset of the COVID-19 pandemic marked a significant increase in the use of telehealth services nationwide with a relaxation of regulations and increased reimbursement. The COVID-19 pandemic resulted in substantial growth in patient and provider reliance on telehealth to provide healthcare services. The significant expansion of telehealth led to a rise in evidence supporting its association with enhanced quality of care, reduction in hospital readmissions, and cost savings. At the same time, the need for further research is apparent, particularly around the feasibility and impact of expanding access to telehealth services and the means available to reduce obstacles to patient access in Connecticut.

With this understanding, the Connecticut Legislature in §41 of Public Act 22-81 tasked the executive director of the Office of Health Strategy, established under section 19a-754a of the general statutes, to conduct a study regarding the provision of and coverage for telehealth services in the state. The Office of Health Strategy then engaged UConn Health to conduct this study.

Beginning in August 2022, UConn Health initiated a landscape analysis to understand the current state of telehealth and identify patient perspectives on telehealth barriers to care and mitigation strategies. This analysis includes the following elements:

- A literature review of federal and state telehealth policy, law, reimbursement, performance measures, and evaluation;
- A survey of Connecticut telehealth service clinicians to gather clinical perspectives;
- A series of focus groups and key informant interviews with telehealth service clinicians to delve into perceptions of value, obstacles, access, and equity;
- A survey of Connecticut telehealth recipients to understand patient patterns and perspectives;
- A series of patient focus groups to gather details on patient perceptions of value, barriers, and mitigation strategies; and
- An economic and access analysis using all-payer claims database (APCD) data to understand if access to claims data revealed insights into disparities among users and understand the potential to identify areas of need for targeted enhanced access.

The University of Connecticut Health Interoperability, Innovation and Lab engaged with partners at the University of Connecticut Health Center Health Disparities Institute, University of Connecticut Center for mHealth and Social Media, and contractors with expertise in behavioral health and federal and state policy to conduct a thorough landscape review. The analyses are contained within this report. In addition, we discuss the perceived effectiveness of telehealth services, the mounting research on the use of telehealth in the United States and identify the gaps in access and opportunities for further research as well as recommended next steps for Connecticut.

What is Telehealth?

For the purpose of this report, the Health Resources and Services Administration (HRSA) definition of telehealth will be used. HRSA defines telehealth as the use of electronic information and telecommunication technologies to support long-distance clinical healthcare, patient and professional health-related education, health administration, and public health. Based on this definition, telehealth can include talking to a healthcare provider over the phone or through video chat, communicating with a healthcare provider through secure messaging or electronic patient portals, or using remote monitoring with a device provided by a healthcare provider.[1]

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[1] https://www.hrsa.gov/rural-health/topics/telehealth/what-is-telehealth

LITERATURE SCAN

Methods

Researchers conducted a multifaceted literature review to gather information on telehealth between 2017 and the present day. The scope of this review included health policy and reimbursement, licensing, outcomes and satisfaction, data sharing and privacy, successes and failures, facilitators and barriers to delivery, and suggestions for future growth in telehealth in primary and specialty care and behavioral health. Google Scholar, PubMed, and other academic databases available to the UConn research team were utilized to conduct the review. Key terms used included variations of the words and phrases described in the scope above.

Telehealth Satisfaction and Needs

Literature published prior to the COVID-19 pandemic suggested that successful telehealth implementations required adequate administrative support for clinicians and patients, access to easy-to-use and reliable technologies, and tools to collect user feedback, such as satisfaction surveys.[2] These identified requirements continued to be reported as core needs in delivering telehealth during the pandemic.[3,4,5] Relaxing of regulations and subsequent telehealth expansion have allowed researchers to gather more extensive samples of feedback on the use and delivery of telehealth. This research has revealed insight into additional challenges and opportunities to address satisfaction for patients and clinicians.

Patient Satisfaction and Needs

During the COVID-19 pandemic, telehealth allowed patients to continue to receive healthcare at a safe distance.[6,7] It was an indispensable tool during the public health emergency, which broadened the

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[2] Nguyen, M., Waller, M., Pandya, A., & Portnoy, J. (2020). A Review of Patient and Provider Satisfaction with Telemedicine. *Current Allergy and Asthma Reports, 20*(11), 72-78. doi: 10.1007/s11882-020-00969-7

[3] Hall, T. L., Connelly, L., Staton, E. W., Holtrop, J. S., Sieja, A., Knierim, K., & Holmstrom, H. (2022). Points of Concordance, Points of Discordance: A Qualitative Examination of Telemedicine Implementation. Journal of the American Board of Family Medicine, 35(3), 517-526. doi: 10.3122/jabfm.2022.03.210325

[4] Kruse, C., Fohn, J., Wilson, N., Paltan, E. N., Zipp, S., & Mileski M. (2020). Utilization Barriers and Medical Outcomes Commensurate With the Use of Telehealth Among Older Adults: Systematic Review. JMIR Medical Informatics, 8(8), 1-24. doi: 10.2196/20359

[5] Lin LA, Zhang L, Kim HM, Frost MC. Impact of COVID-19 Telehealth Policy Changes on Buprenorphine Treatment for Opioid Use Disorder. American Journal of Psychiatry. 2022 Jul 28:appiajp21111141. Doi: 10.1176/appi.ajp.21111141.

[6] Brody, A. A., Sadarangani, T., Jones, T. M., Convery, K., Groom, L., Bristol, A., & David, D. (2020). Family- and Person-Centered Interdisciplinary Telehealth: Policy and Practice Implications Following Onset of the COVID-19 Pandemic. Journal of Gerontological Nursing, 46(6), 9-13. doi: 10.3928/00989134-20200811-03.

[7] Haimi, M. & Gesser-Edelsburg, A. (2022). Application and implementation of telehealth services designed for the elderly population during the COVID-19 pandemic: A systematic review. Health Informatics Journal, 28(1), 1-34. doi:10.1177/14604582221075561

opportunity for care, especially among under-served communities with unique barriers, such as rural [6,8,9] and LGBTQ+ [10] populations, where access to clinicians was challenge due to a lack of proximity [11] or transportation to care that is accessible and culturally sensitive.[7,12] According to the American Telehealth Association, telehealth improves access, cost, efficiency, and quality of care and meets consumer demand for more convenient healthcare.[13] Through increased efficiency and service expansion, telehealth can bring health facilities and practices additional revenue, improve patient retention, and increase patient cost-saving by avoiding commutes or taking less time off work for appointments.[7, 13]

However, challenges with telehealth exist. Patients in rural communities have reported challenges associated with poor Internet connection/lack of broadband service and a lack of an appropriate device to connect.[11,14,15] Geriatric patients may have limited technical literacy and increased privacy concerns, [7] and are more likely to have acuity issues, such as poor eyesight, auditory challenges, or diminished mental fitness, all of which add an additional layer of complexity that needs to be considered when selecting technology. [4,16] Older populations may resist telehealth adoption because in-person care may be the only opportunity for socialization and/or opportunity to leave their home.[17] LGBTQ+ populations have been found to face unique challenges like unstable housing or financial barriers[7] to telehealth and may also have increased privacy concerns. [3]

[8] Becevic, M., Sheets, L. R., Wallach, E., McEowen, A., Bass, A., Mutrux, E. R., & Edison, K. E. (2020). Telehealth and telemedicine in Missouri, 117(3), 226-234.

[9] Myers CR. Using Telehealth to Remediate Rural Mental Health and Healthcare Disparities. Issues Mental Health Nursing. 2019;40(3):233-239. doi:10.1080/01612840.2018.1499157

[10] Swenson I, Gates TG, Dentato MP, Kelly BL. Strengths-based behavioral telehealth with sexual and gender diverse clients at Center on Halsted. Soc Work Health Care. 2021;60(1):78-92. doi:10.1080/00981389.2021.1885561

[11] Larson, A. E., Zahnd, W. E., Davis, M. M., Stange, K. C., Yoon, J., Heintzman, J. D., & Harvey, S. M. (2022). Before and During Pandemic Telemedicine Use: An Analysis of Rural and Urban Safety-Net Clinics. *American Journal of Preventative Medicine, 63*(6), 1031-1036. DOI: 10.1016/j.amepre.2022.06.012

[12] El-Miedany, Y. (2017). Telehealth and telemedicine: how the digital era is changing standard health care. *Smart Homecare Technology and Telehealth, 4*, 43-51. Doi:10.2147/SHTT.S116009

[13] https://www.ama-assn.org/system/files/telehealth-survey-report.pdf

[14] Hirko KA, Kerver JM, Ford S, et al. Telehealth in response to the COVID-19 pandemic: Implications for rural health disparities. Journal of the American Medical Informatics Association. 2020;27(11):1816-1818. doi:10.1093/jamia/ocaa156

[15] Svistova, J., Harris, C., Fogarty, B., Kulp, C., & Lee, A. (2022). Use of Telehealth Amid the COVID-19 Pandemic: Experiences of Mental Health Providers Serving Rural Youth and Elderly in Pennsylvania. *Administration and Policy in Mental health and Mental Health Services Research, 49*, 530-538. Doi: 10.1007/s10488-021-01181-z

[16] Foster, M. V. & Sethares, K. A. (2014). Facilitators and barriers to the adoption of telehealth in older adults: an integrative review. *Computer, Informatics, Nursing, 32*(11), 523-533. doi: 10.1097/CIN.0000000000000105

[17] Hyder, M. A. & Razzak, J. (2020). Telemedicine in the United States: An Introduction for Students and Residents. *Journal of Medical Internet Research, 22*(11), 1-9. doi: 10.2196/20839

The literature demonstrates the importance of understanding the desires of patients and offering the choice of a telehealth visit [18] in cases where health concerns could be effectively addressed virtually. [3]

Mental health services delivered via telehealth have been overwhelmingly well received by patients in terms of satisfaction. However, several barriers have historically slowed its adoption, including concerns about establishing rapport, privacy, and technological implementation challenges. [19]

Clinician Satisfaction and Needs

In general, the use of telehealth during the early parts of the pandemic was widely viewed as positive by clinicians. Telehealth allowed patients access to needed clinical care while reducing exposure risk for COVID-19 infections and allowing continued billing for patient care.

For clinicians, barriers include reimbursement, state licensure laws when patient and physician are in different states (common at border communities and with patients doing remote work), and training in the use of telehealth.[20] Despite evidence that telepsychiatry has been well-received in terms of satisfaction among clinicians and patients, several barriers have slowed its adoption, including concerns about the ability to establish rapport in a telehealth visit, privacy, and technology challenges.[20] Prior to the public health emergency, Medicare and Medicaid reimbursement for telehealth mental health services was extremely challenging given the restrictions of pre-pandemic policies.[20] The disparity among coverage and payment for mental healthcare compared to those for physical healthcare illustrate the historical divide between the two. The lack of parity for reimbursement of mental health issues may be associated with the stigmatization of mental health in the US." [20]

Clinicians who found the adoption of telehealth challenging during the pandemic also reported more patients who faced challenges using telehealth (e.g., technical literacy).[5,21] For clinicians transitioning to telehealth during the pandemic, greater reports of telehealth challenges were related to higher stress levels, lower engagement in self-care, and increased feelings of burnout than clinicians who reported fewer challenges transitioning to telehealth.[5] Ensuring that the educational needs of clinicians are met

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[18] Bhatia, R, Gilliam, E, Aliberti, G, et al. Older adults' perspectives on primary care telemedicine during the COVID-19 pandemic. J Am Geriatr Soc. 2022; 1- 13. doi:10.1111/jgs.18035

[19] Cowan, K. E., McKean, A. J., Gentry, M. T., & Hilty, D. M. (2019). Barriers to Use of Telepsychiatry: Clinicians as Gatekeepers. *Mayo Clinic Proceedings, 94*(12), 2510-2523. doi:10.1016/j.mayocp.2019.04.018

[20] Nielsen, M., & Levkovich, N. (2020). COVID-19 and mental health in America: Crisis and opportunity? Families, Systems and Health, 38(4), 482–485. https://doi.org/10.1037/fsh0000577

[21] Lin, L., Stamm, K. E., Ferenz, K., Wright, C. V., Bethune, S., & Conroy, J. (2022, August 18). Relationship Between Challenges With the Use of Telehealth and Psychologists' Response During the Coronavirus Pandemic. Professional Psychology: Research and Practice. Advance online publication. http://dx.doi.org/10.1037/pro0000481

and establishing appropriate reimbursement for administrative staff time involved in telehealth are two crucial components of sustainability. In 24 semi-structured interviews, one of the themes across all practice employees emphasized the need for administrative staff to be reimbursed for the time spent preparing patients for telemedicine visits.[4] The process of telehealth works better when the support team is involved in the preparation of the encounter. Activities include the time spent with both patients and providers to help with sign on, gathering resources, and ensuring smooth use of technology. Practice members also stressed the need to educate providers and staff members on when a telehealth visit is an appropriate patient care method or to develop a questionnaire/tool that could make the determination.[4]

Behavioral health clinicians have expressed support for the continued use of telehealth with a preference for video-based telehealth over phone-based methods. However, phone-based methods have been found to be acceptable for most care, except for group therapy, medication management, and multi-disciplinary team-based services.[22] The Health Resources and Services Administration (HRSA), an agency of the Department of Health and Human Services, highlights the benefits of telehealth for the treatment of substance use disorders, one of which is the ability to gain more insight into the condition based on observations of patient living space.[23] Similarly to physical health, the type of behavioral health visit offered, in-person or telehealth, needs to appropriately address the patient's concerns.[322]

Telehealth Health Outcomes

In terms of patient health outcomes, the research on telehealth is promising. Broadly speaking, patients who prefer video telehealth visits to in-person care are typically more sensitive to healthcare costs because in-person services incur a higher personal cost (e.g., transportation expenses and time off from work).[24] In some instances, telehealth for primary care has outperformed in-person services (e.g., diabetes management).[25] Research shows that telehealth can improve patient outcomes by addressing clinician shortages and increasing access to care. For example, hospitals can reduce patient mortality

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[22] Molfenter, T., Heitkamp, T., Murphy, A. A., Tapscott, S., Behlman, & Cody, O. J. (2021). Use of Telehealth in Mental Health (MS) Services During and After COVID-19. *Community Mental Health Journal, 57*, 1244-1251. Doi: 10.1007/s10597-021-00861-2

[23] https://telehealth.hhs.gov/clinicians/telehealth-for-behavioral-health/tele-treatment-for-substance-use-disorders/

[24] Premore, Z. S., Roth, E., Breslau, J., Fischer, S. H., & Uscher-Pines, L. (2021). Assessment of Patient Preferences for Telehealth in Post-COVID-19 Pandemic Health Care. *JAMA Network Open, 4*(12). doi: 10.1001/jamanetworkopen.2021.36405

[25] Baughman, D.J., Jabbarpour, Y., & Westfall, J. M. (2022). Comparison of Quality Performance Measures for Patients Receiving In-Person vs Telemedicine Primary Care in a Large Integrated Health System. JAMA Network Open. 2022;5(9). doi:10.1001/jamanetworkopen.2022.33267

and length of stay in the intensive care unit (ICU) by utilizing telehealth to provide care from intensivist staff when few are available.[12,26]

Settings	Types of Care		
Intensive Care Unit	Intensivist Consults		
Primary Care	Diabetes Management	Geriatric Care	
Behavioral Health	Mental Health Care	Substance/Opioid Use Disorder	
Pediatrics	Behavioral Health	Neurodivergent Patients	Medication Management

Figure 1: *Telehealth Settings and Types of Care*

FIGURE 1 ILLUSTRATES A SAMPLE OF THE VARIOUS TYPES OF CARE THAT MIGHT BE OFFERED VIA TELEHEALTH IN FOUR DISTINCT SETTINGS.

Geriatric, Elderly, and Older Adult Care

Literature suggests that telehealth can improve the outcomes of older adults by increasing their access to and frequency of care.[7] The elderly are more likely to have chronic conditions as well as increased susceptibility to severe infections, and telehealth can enhance the safety of their visits by minimizing their time in environments where disease transmission is more likely.[7] Additionally, in a cross-sectional survey of 873 older adults (mean age=82.7), 82% reported needing assistance from a family member or paid care provider in order to complete a telehealth video visit.[27] This finding demonstrates the need to adopt easy-to-use technologies. Family members and caregivers could also readily join or participate in visits from any location, to provide additional insight into an older adult's health.

End of Life Care

Hospice services, whether provided at home or in a facility, could also benefit from telehealth services to ensure that patients, families, and caregivers are afforded an opportunity to have their questions addressed. A home hospice provider in Washington, D.C., reduced the number of calls to after-hours services and on-call urgent visits by nurses when they implemented a proactive daily call service to check in on patients and their families to address any concerns or questions.[28] In this setting, nurses

[26] Rosenfeld, B. A., Dorman, T., Breslow, M. J., Pronovost, P., Jenckes, M., Zhang, N., Anderson, G., & Rubin, H. (2000). Intensive care unit telemedicine: Alternate paradigm for providing continuous intensivist care. *Critical Care Medicine, 12*(12), 3925-3931. DOI: 10.1097/00003246-200012000-00034

[27] Kalicki, A. V., Moody, K. A., Franzosa, E., Gliatto, P. M., & Ornstein, K. A. (2021). Barriers to telehealth access among home bound older adults. *Journal of the American Geriatrics Society, 69,* 2404-2411. DOI: 10.1111/jgs.17163

[28] Davis, M. S., Harrison, K. L., Rice, J. F., Logan, A., Hess, B., Fine, P. G., & Muir, J. C. (2015). A Model for Effective and Efficient Hospice Care: Proactive Telephone-based Enhancement of Life Through Excellent Caring, "TeleCaring" in Advanced Illness. Journal of Pain and Symptom Management, 50(3), 414-418. doi.org/10.1016/j.jpainsymman.2015.03.012

could address most concerns over the telephone. In contrast, concerns that could not be addressed ended in a healthcare clinician being dispatched to the home.

LGBTQ+ and Gender Affirming Care

The literature review pointed to telehealth as a viable modality to improve the health outcomes of people in the LGBTQ+ community by increasing their access to healthcare.[29] Telehealth can increase LGBTQ+ patients' access to culturally competent clinicians by reducing the burden of geographical barriers.[29][30] The expansion of behavioral telehealth is especially important because it is an opportunity to reduce the unmet needs for mental health-related services.[29][30] One of the most significant barriers to telehealth among transgender and other gender minorities is the requirement for an in-person examination to administer gender-affirming hormone therapy – a challenge that can be overcome with telehealth.[31]

Rural Communities

Telehealth services has been demonstrated to increase healthcare access in rural communities, which tend to have a large unmet need for various healthcare services, including behavioral health services.[8,11] Telehealth can increase the average life expectancy in rural communities by increasing the ability to seek care and improving patient retention.[8,32] Telehealth also has economic advantages in rural areas by reducing direct and indirect healthcare costs. For example, telehealth reduces patient travel time and expenses, decreases staffing costs, and lowers onsite healthcare utilization.[11,14,15] As a result of the pandemic, telehealth increased in rural communities by 27.2% in comparison to 52.3% among urban patients.[11] Barriers such as Wi-Fi/broadband access and reimbursement are challenges to the adoption of telehealth in rural communities and may explain differences in the rates of adoption between rural and urban areas.[11,14,15]

Telepsychiatry and Teletherapy

Researchers found through literature review that a greater proportion of women pursued behavioral health services via telehealth modalities after the COVID-19 pandemic. This suggests that telehealth may

[29] Waad A. Caring for Our Community: Telehealth Interventions as a Promising Practice for Addressing Population Health Disparities of LGBTQ+ Communities in Health Care Settings. Dela J Public Health. 2019;5(3):12-15. doi:10.32481/djph.2019.06.005

[30] Swenson I, Gates TG, Dentato MP, Kelly BL. Strengths-based behavioral telehealth with sexual and gender diverse clients at Center on Halsted. Soc Work Health Care. 2021;60(1):78-92. doi:10.1080/00981389.2021.1885561

[31] Mintz LJ, Gillani B, Moore SE. Telehealth in Trans and Gender Diverse Communities: the Impact of COVID-19. Curr Obstet Gynecol Rep. 2022;11(2):75-80. doi:10.1007/s13669-022-00334-7

[32] Butzner, M., & Cuffee, Y. (2021). Telehealth interventions and outcomes across rural communities in the United States: Narrative review. In Journal of Medical Internet Research, 23(8), 1-9. https://doi.org/10.2196/29575

be preferable for behavioral health services and viewed as more accessible for women.[33] There was no discernable difference for rural patients or people of color accessing behavioral health services before the transition to primarily telehealth modalities because of the pandemic.[33] However, those patients were more likely to pursue audio-only phone visits rather than video modalities.[33] Interestingly, a longitudinal cohort study found that the willingness to use video telehealth services increased among Black adults from the pandemic onset to the present day.[34] This suggests there may be different barriers for Black adults using video chat telehealth modalities for behavioral health compared to other healthcare services.

For behavioral health among the pediatric population, there are unique barriers beyond those established in adult care. For example, pediatric patients using teletherapy (behavioral health counseling over the phone or video chat) have lower engagement levels than those using telehealth for medication management.[35] This finding suggests it may be challenging to establish the necessary rapport with pediatric patients for therapy compared to shorter visits. Regarding the treatment for neurodivergent children (e.g., children with autism spectrum disorder), there are mixed results on the efficacy of telehealth interventions. Some studies show symptom improvement while others do not,[35] demonstrating a need for further research pertaining to the effectiveness of telehealth services in pediatric patients with neurodivergence.

Opioid Use Disorder and Substance Use Disorder

According to the literature, telehealth is promising for the treatment of opioid use disorder (OUD). Additionally, substance use disorder visits delivered via telehealth have been shown to be as effective as in-person visits.[36] Patients who received telehealth services during the pandemic for OUD were more likely to remain on their treatment plan and less likely to be treated for an overdose than patients who did not receive telehealth services.[36] In fact, after policy changes to telehealth due to COVID-19, the number of patients receiving buprenorphine increased in some instances, demonstrating support for

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[33] Egan, R. P., Hurley, D. B., Goetz, M. C., Smith, C. S., Palmer, B. A., & Hill, C. A. (2022). Disparities in mental health access before and after transitioning to telehealth. Journal of Rural Mental Health. https://doi.org/10.1037/rmh0000214

[34] Fischer, S. H., Predmore, Z., Roth, E., Uscher-Pines, L., Bair, M., & Breslau, J. (2022). Use of and Willingness To Use Video Telehealth Through the COVID-19 Pandemic. *Health Affairs, 41*(11), 1645-1651. doi: 10.1377/hlthaff.2022.00118

[35] Cunningham NR, Ely SL, Barber Garcia BN, Bowden J. Addressing Pediatric Mental Health Using Telehealth During Coronavirus Disease-2019 and Beyond: A Narrative Review. Acad Pediatr. 2021;21(7):1108-1117. doi:10.1016/j.acap.2021.06.002

[36] Jones CM, Shoff C, Hodges K, et al. (2022). Receipt of Telehealth Services, Receipt and Retention of Medications for Opioid Use Disorder, and Medically Treated Overdose Among Medicare Beneficiaries Before and During the COVID-19 Pandemic. JAMA Psychiatry. doi:10.1001/jamapsychiatry.2022.2284

telehealth use in OUD treatment settings.[37] It should be noted that treatment retention does not differ between in-person or telehealth services.[36] This result may be especially of interest to Connecticut, a state that expanded telehealth services to patients with substance use disorder during the pandemic.[17] A barrier to continued treatment via telehealth for opioid and substance use disorders (or any patient whose treatment includes prescribing controlled substances) is the requirement for in-person visits.[3637]

[37] Lin, L. A., Zhand, L., Kim, H. M., & Frost, M. C. (2022). Impact of COVID-19 Telehealth Policy Changes on Buprenorphine Treatment for Opioid Use Disorder. The *American Journal of Psychiatry, 170*(10), 740-747. doi: 10.1176/appi.ajp.21111141

POLICY

Medicare
Pre-COVID-19

Before COVID-19, Medicare's somewhat restrictive reimbursement policy had a significant influence on private insurance and acted as a barrier to the adoption of telehealth. Medicare policies typically made it harder to adopt telehealth modalities because of the low reimbursement rates and requirements for location of care delivery for various services.[38] Specifically, Medicare only considered telehealth services reimbursable if they included live, real-time communication between the patient and provider – and only under certain conditions.[38] Conditions for reimbursement of synchronous services under Medicare before the pandemic stipulated that the beneficiary:

1. must be enrolled in a next-generation accountable care organization;

2. receive hemodialysis (and meet in-person requirements) or;

3. was undergoing treatment for a substance use or mental health disorder.[39]

In addition, Medicare limited these services to rural areas with professional shortages.[39] In fact, before the relaxation of these rules, there was a lack of parity in the reimbursement of mental health services and physical health services. [40] Reimbursement for Medicare patients using telehealth mental health services was nearly impossible, given the restrictions of pre-pandemic policies.[40]

COVID-19 Policy Changes

When the Secretary of Health and Human Services (HHS) declared a public health emergency (PHE) and the president declared a national emergency, under Section 1135 of the Stafford Act, the Secretary of HHS gained the ability to provide waivers to relax numerous Medicare, Medicaid, and Children's Health Insurance Program (CHIP) rules for the duration of the emergency so that:

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[38] https://oig.hhs.gov/oei/reports/OEI-02-20-00520.pdf

[39] Brotman, J. J. & Kotloff, R. M. (2020). Providing Outpatient Telehealth Services in the United States Before and During Coronavirus Disease 2019. *American College of Chest Physicians, 159*(4), 1548-1558.

DOI: 10.1016/j.chest.2020.11.020

[40] Nielsen, M., & Levkovich, N. (2020). COVID-19 and mental health in America: Crisis and opportunity? Families, Systems and Health, 38(4), 482–485. https://doi.org/10.1037/fsh0000577

1. Sufficient healthcare items and services are available to meet the needs of individuals enrolled in Social Security Act programs in the emergency area and time periods

2. Providers who give such services in good faith can be reimbursed and exempted from sanctions (absent any determination of fraud or abuse).

In March 2020, under the Stafford [41] and Cares Acts, the Secretary of HHS eased Medicare requirements, ultimately allowing over 140 of its fee-for-service (FFS) programs to be delivered via telehealth and virtually ending geographic limitations nationally on that modality. FFS Medicare has long been the exemplar that other plans follow. In the spring of 2020, all significant health insurance plans moved quickly to expand coverage for services delivered via telehealth. In this way FFS Medicare paved the way for states to follow suit. Also, critically, CMS decided that services via telehealth should be billed at the same rates as in-person services. This rate parity was a major factor in facilitating providers' use of telehealth and greatly simplified the administration for providers and CMS's insurance carriers. CMS substantially expanded clinical professions that could bill for services via telehealth. CMS also expanded coverage of Remote Patient Monitoring[i] (RPM) by way of clarification.[42]

A March 2022 Office of Inspector General Data Brief provided a succinct description of the initial uptake of telehealth in Medicare:

> *Over 28 million Medicare beneficiaries used telehealth during the first year of the pandemic. This was more than 2 in 5 Medicare beneficiaries. In total, beneficiaries used 88 times more telehealth services during the first year of the pandemic than they used in the prior year… However, beneficiaries' use of telehealth for behavioral health services stands out. Beneficiaries used telehealth for a larger share of their behavioral health services compared to their use of telehealth for other services. Specifically, beneficiaries used telehealth for 43 percent of behavioral health services, whereas they used telehealth for 13 percent of office visits.[43]*

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[41] The Stafford Act authorizes the HHS Secretary to lead all Federal public health and medical response to public health emergencies, enabling the loosening of telehealth reimbursement among other activities.

[42] https://public-inspection.federalregister.gov/2022-23873.pdf
[43] https://oig.hhs.gov/oei/reports/OEI-02-20-00520.pdf
[i] remote patient monitoring - use of digital technologies to collect health data from patients in one location and electronically transmit that information securely to providers in a different location (data can include vital signs, weight, blood pressure, blood sugar, pacemaker information, etc.) source: https://www.cms.gov/files/document/telehealth-toolkit-providers.pdf

However, upon the conclusion of the Public Health Emergency Declaration, many of these services may no longer be covered, and reimbursement for these services under Medicare may impede the continued adoption of telehealth. The performance of telehealth during the pandemic had been promising, and telehealth filled a compelling need and did so with no sector reporting any red flags.

Of all federal agencies, the Substance Abuse and Mental Health Services Administration (SAMHSA) is arguably the most overt proponent of telehealth,[44] with a mission to lead public health and service delivery efforts that promote mental health, prevent substance misuse, and provide treatments and supports to foster recovery while ensuring equitable access and better outcomes. Prior to COVID-19, the ongoing opioid crisis and rising mental health needs, coupled with a shortage of providers, led SAMSHA to investigate the efficacy of telehealth in providing both behavioral health services and Medication Assisted Treatment (MAT) for opioid dependence—with favorable preliminary results. Pending the end of PHE, it will be important to consider updates to telehealth policy, including what services to extend, what to restrict, and what to expand regarding telehealth delivery, particularly around behavioral health, and substance use disorder services. Based on provisions in the Consolidated Appropriations Act of 2021, policymakers have permanently expanded coverage for telehealth services for the diagnosis, evaluation, or treatment of mental health disorders after the COVID-19 public health emergency.[45]
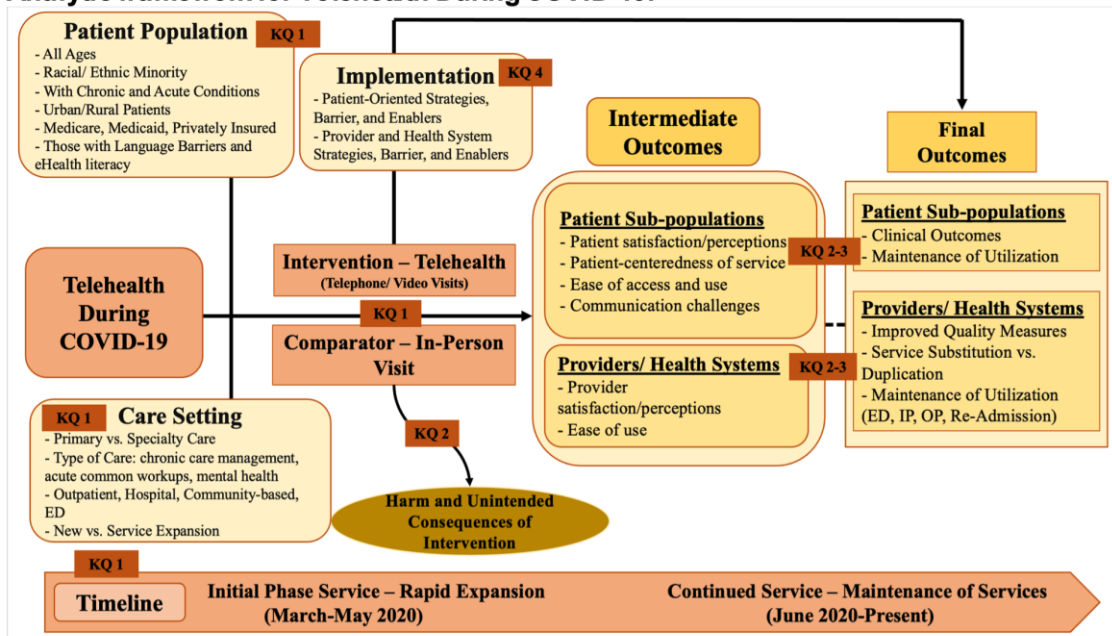
Upcoming evaluations by federal entities, including the Agency for Healthcare Research and Quality (AHRQ), whose effectiveness and outcome studies inform federal coverage policy, will impact how Congress and federal agencies address the flexibility regarding telehealth due to expire five months after the end of PHE. At this point, based on a number of pending bills it is unlikely that Congress nor federal agencies will forestall the further development of telehealth or its growing role in healthcare delivery. Still, some approaches will be encouraged, others discouraged, and a few may be precluded, at least insofar as federal programs are concerned. Fine-tuning will be an ongoing process. AHRQ has developed and published[46] an aggressive protocol for comprehensively assessing telehealth's impact, which the agency calls an analytic framework. AHRQ's graphic in Figure 2 provides a simplified overview of the framework.

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[44] https://www.samhsa.gov/resource/ebp/telehealth-treatment-serious-mental-illness-substance-use-disorders
[45] https://www.congress.gov/bill/116th-congress/house-bill/133/text
[46] https://effectivehealthcare.ahrq.gov/products/virtual-health-covid/protocol

Analytic framework for Telehealth During COVID-19.

ED = emergency department; IDS = integrated delivery system; IP = inpatient; KQ=Key Question; LHS = learning health system; OP = outpatient

Figure 2: Agency for Healthcare and Research Quality Analytic Framework for Telehealth During COVID-19

Medicaid

Medicaid reimbursement for telehealth services pre-COVID-19 varied greatly state by state including what services were billable. While there is significantly less research on Medicaid and telehealth, as compared to Medicare, some common barriers to telehealth regarding Medicaid have been identified and are as follows: 1) Restrictions on eligible services; 2) Restrictions on eligible providers; 3) Restrictions on location, 4) Restrictions on originating sites, and; 5) Reimbursement parity between in-person and telehealth visits. An initial set of findings on the use of telehealth during the pandemic, including by Medicaid, indicates that New England states generally had higher rates of utilization. Connecticut Medicaid patients stand out for their usage of telehealth for primary care and behavioral health based on data from the Healthcare Cost Institute in 2020. In fact, Connecticut patients were found to be among the top two state consumers of primary and behavioral telehealth services in 2020. This may, in part, be related to the early rapid rise in COVID-19 cases, hospitalizations, and deaths noted in Connecticut or to some other parameter, such as governmental response to the pandemic.

State-level regulation and policy can preserve the expanded telehealth coverage that patients have come to rely on and reduce potential future barriers to care. The benefits of telehealth services are

emphasized in the successes of states with extensive telehealth services. These benefits include enhanced access to and the delivery of efficient and cost-effective care. Enhanced access contributes to improved patient outcomes, reduced healthcare spending, and increased patient satisfaction.

In March 2022, the Government Accountability Organization (GAO) issued a report on the uptake of telehealth by Medicaid programs in five states: Arizona, California, Maine, Mississippi, and Missouri.[47] In these five states, from March 2020 through February 2021, 32.5 million services were delivered via telehealth to about 4.9 million beneficiaries, compared with 2.1 million services to approximately 455,000 beneficiaries in the 12 months before the pandemic. Missouri is a national leader in telehealth services due, in part, to state policies that have been implemented, which include 1) a broad definition of telehealth and telemedicine—which allows a wide variety of services to be reimbursable, and 2) reimbursement parity—there are no differences in reimbursements for in-person or telehealth services.[38]

It is up to the State of Connecticut to determine the following:

- Whether to cover telehealth-enabled services,
- What covered services can be delivered via telehealth,
- Which providers are paid for providing telehealth-enabled services,
- Whether to require parity in reimbursement for telehealth services.

Federal regulations only come into play in Connecticut if the State wishes to establish separate payment rates for services delivered through telehealth. In that case, Connecticut Medicaid would need to submit a state plan amendment (SPA). The second circumstance is if Connecticut Medicaid wanted to incorporate Remote Support and Monitoring Services (RMS) in its home and community-based services (HCBS) waiver programs to support independent living for disabled beneficiaries. In that case, Connecticut Medicaid would have to submit a §1915(c) HCBS waiver amendment. This technology holds great potential for addressing the critical needs of those who struggle to live independently in their own homes. It has been successfully pioneered in other states, notably Ohio and, more recently, Massachusetts. However, barring either of these items in the short term, Connecticut will be tasked with defining telehealth for the State, identifying reimbursable services, delivery methods, providers, and rates.

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[47] https://www.gao.gov/assets/gao-22-104700.pdf

Policy Considerations that Connecticut Medicaid could adopt and or implement on a more permanent basis:

⇒ Develop a broad definition of telehealth,[48] reflecting on CMS and ATA (American Telehealth Association) definitions. The definition of telehealth will impact the following:

   a. What specific services are eligible for reimbursement?

      i. *Currently, Federal Medicare Policy allows reimbursement for 140+ services*

   b. Who can be reimbursed?

   c. Where can the patient be located when receiving services?

   d. How is the service being delivered — as in, which modality?

      i. *Currently, Federal Medicare Policy allows live video, audio only, store and forward*, and remote patient monitoring* (* In limited cases)*

⇒ Maintain payment parity, at least on a trial basis, until significant data is available to make informed decisions

⇒ As the Public Health Emergency ends in May 2023 – it will be important to give clear direction to clinical training programs such as residency programs in primary care, as to what type of supervision is permissible for telehealth visits. (For example - prior allowance was granted for virtual supervision of resident physicians)

⇒ Consider piloting a program to offer technical assistance to consumers and clinical providers to foster best practices in telehealth as they continue to develop.

Current Trends

Organizations like the American Telemedicine Association (ATA) are committed to addressing telehealth policy. At their ATA EDGE2022 Policy Conference, the ATA focused on "approaching telehealth permanency" by convening policymakers, business leaders, and other telehealth stakeholders in the District of Columbia. There, ATA shared its vision for telehealth, including but not limited to permanence, normalization, and structural and financial integration. Improving patient experience with the healthcare system and eliminating licensure barriers are the main focus of the ATA's shared vision.

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[48] The current definition withing PA 21-9, will expire 6/30/23.

To date, several bills have been proposed and/or passed related to telehealth. See Table 1.

Table 1: Telehealth Bills (Proposed and/or passed) by State

Policy Category	Legislation Topic	State(s)
Coverage	To explain telehealth coverage under medical assistance programs and to require equal reimbursement for telehealth and in-person visits	Maryland[49]
	To implement Medicaid coverage parity; and to prohibit decreasing the rate of payment based on whether services were delivered synchronously or asynchronously	Alaska[50]
	To clarify that coverage shall not be limited to provide-to-provider telemedicine consultations but shall extend to consultations between patients and providers	Mississippi[51]
	To implement private-payer reimbursement parity	Mississippi[51] New York[52]
	To make language regarding equal reimbursement for telehealth and in-person visits permanent	Tennessee[53]
Defining Telehealth	To clarify interactions that qualify as telehealth services	Idaho[54]
	To include behavioral health providers within the definition of "healthcare provider" in the Telehealth Act	Louisiana[55]
	To include "adaptive questionnaire" in the definition of telehealth; and to enable providers to use adaptive questionnaires to establish care	Missouri[56]
	To amend the definition of telehealth to include synchronous and asynchronous technologies; and to enable providers to establish care via telemedicine	New Hampshire[57]

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[49] https://www.legislature.mi.gov/documents/2021-2022/billintroduced/Senate/pdf/2022-SIB-1135.pdf
[50] http://www.akleg.gov/basis/Bill/Detail/32?Root=HB%20265#tab1_4
[51] http://billstatus.ls.state.ms.us/2022/pdf/history/SB/SB2738.xml
[52] https://www.nysenate.gov/legislation/bills/2021/s5505
[53] https://wapp.capitol.tn.gov/apps/BillInfo/Default.aspx?BillNumber=SB2453
[54] https://legislature.idaho.gov/sessioninfo/2022/legislation/s1328/
[55] https://www.legis.la.gov/legis/BillInfo.aspx?s=22RS&b=HB624&sbi=y
[56] https://www.house.mo.gov/bill.aspx?bill=HB2165&year=2022&code=R
[57] https://www.gencourt.state.nh.us/bill_status/billinfo.aspx?id=2098&inflect=2

	To create a technology-neutral definition of telehealth	Alabama[58] South Dakota[59]
	To revise the definition of telemedicine in the insurance code	Mississippi[60]
Eye Care	To remove the in-person requirement for eye examinations	Georgia[61]
In-Person Visit Stipulations	To require providers who see patients four or more times per year via telehealth to conduct an in-person visit once every 12 months	Alabama[58]
	To enable in-state providers to deliver telehealth services without an in-person exam if the provider's license is in good standing	Alaska[50]
	To retract the in-person interaction requirement to establish a relationship for mental healthcare providers	Washington[62]
Licensure	To enact/enter interstate licensure compacts (for physicians, nurse practitioners, nurses, audiology and speech-language pathologists, behavioral health clinicians, etc.)	Alabama[58,63] Colorado[64] Connecticut[65] Indiana[66] Minnesota[67] New Hampshire[68] New Jersey[69] South Carolina[70] Utah[71]
	To allow clinicians licensed in other states to deliver services in the state	Delaware[72]
	To ensure licensed providers from any medical field may deliver healthcare services via telehealth technologies under the Medicaid code	New York[73]

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[58] http://alisondb.legislature.state.al.us/alison/SESSBillStatusResult.ASPX?BILL=HB423&WIN_TYPE=BillResult

[59] https://sdlegislature.gov/Session/Bill/22955

[60] http://billstatus.ls.state.ms.us/2022/pdf/history/HB/HB0452.xml

[61] https://www.legis.ga.gov/legislation/60031

[62] https://app.leg.wa.gov/billsummary?BillNumber=1821&Year=2021&Initiative=false

[63] http://alisondb.legislature.state.al.us/alison/SESSBillStatusResult.ASPX?BILL=SB272&WIN_TYPE=BillResult

[64] https://leg.colorado.gov/bills/sb22-077

[65] https://www.cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp?selBillType=Bill&which_year=2022&bill_num=5046

[66] http://iga.in.gov/legislative/2022/bills/senate/251

[67] https://www.revisor.mn.gov/bills/bill.php?b=senate&f=SF2302&ssn=0&y=2021

[68] https://www.gencourt.state.nh.us/bill_status/billinfo.aspx?id=2065&inflect=2

[69] https://www.njleg.state.nj.us/bill-search/2022/S3061

[70] https://www.scstatehouse.gov/billsearch.php?billnumbers=1179

[71] https://le.utah.gov/~2022/bills/static/SB0151.html

[72] https://legis.delaware.gov/BillDetail?LegislationId=79227

[73] https://www.nysenate.gov/legislation/bills/2021/s6846

	To prohibit regulatory boards from certain licensure flexibilities	Kentucky[74]
	To waive examination requirements for all providers seeking a state license	Mississippi[75]
	To establish licensure reciprocity for out-of-state physicians and surgeons	Missouri[76]
Licensure (continued)	Grants out-of-state licensure reciprocity to behavioral health providers	South Carolina[70]
	To create a telehealth license and a telehealth registration scheme for out-of-state providers	Vermont[77]
	To allow licensure flexibilities for providers delivering "irregular" or "infrequent" care and those in consultation with AL-licensed physician	Alabama[58]
Patient Safety	To require providers to create a written emergency plan for each telehealth patient and use that plan if an emergency situation arises	New Jersey[78]
Prescriptions	To revise restrictions on prescribing controlled substances through the use of telehealth to include only Schedule II drugs	Florida[79]
	To allow specific telehealth providers to prescribe Schedule I-VI drugs and to allow APRNs to prescribe Schedule I-VI drugs other than buprenorphine via telehealth after an in-person exam	Alaska[50]
	To allow for legend drugs and medical supplies to be prescribed via telehealth while providers must have had at least one in-person encounter in the previous 12 months to prescribe controlled substances	Alabama[58]
Remote Patient Monitoring	To establish a pilot program to deliver remote patient monitoring services for maternal health to high-risk/underserved TennCare recipients; and to mandate that TennCare pay providers for the RPM services	Tennessee[80]

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[74] https://apps.legislature.ky.gov/record/22rs/hb188.html

[75] http://billstatus.ls.state.ms.us/2022/pdf/history/HB/HB0447.xml

[76] https://www.senate.mo.gov/22info/BTS_Web/Bill.aspx?SessionType=R&BillID=72259758

[77] https://legislature.vermont.gov/bill/status/2022/H.655

[78] https://www.njleg.state.nj.us/bill-search/2022/A2193

[79] https://www.myfloridahouse.gov/Sections/Bills/billsdetail.aspx?BillId=73029&SessionId=93

[80] https://wapp.capitol.tn.gov/apps/BillInfo/Default.aspx?BillNumber=HB1973

Technology	To regulate mental health app developers to new privacy requirements and mandate registration with the attorney general	California[81]
	To place requirements on private entities which handle biometric information	California[82]
Teledentistry	To allow the use of synchronous and asynchronous technologies in the practice of teledentistry and to enable dentists to establish a dentist-patient relationship through electronic means	South Carolina[83]

CLINICIAN SURVEY

Methods

The 36-item clinician survey was developed to collect information on the experience of healthcare clinicians in Connecticut who have delivered patient telehealth services since the onset of COVID-19. The protocol, survey, and all recruitment and methodology strategies were reviewed and approved by the UConn Health Institutional Review Board as an expedited study (IRB #21-050-1).

The electronic survey was managed and delivered within Qualtrics Survey Software. Participant recruitment and survey distribution were conducted through electronic strategies (i.e., email, health center/organization listservs, email blasts, social media, etc.) and flyers in healthcare facilities (e.g., primary care and specialty care offices). Eligibility criteria for the clinician survey included:

- Connecticut healthcare professional
- Adult (≥18 years of age)
- English-speaking
- Experience providing patient telehealth services since the onset of COVID-19
- Access to a computer or mobile device with an internet connection

The survey consisted of multiple choice and open-ended questions about healthcare clinicians' professional experience using telehealth services since the onset of COVID-19 and their opinion on the impacts, barriers, and access to telehealth services for them and their patients. See Appendix A for a comprehensive list of the survey questions. Survey data collection occurred from October 2022 to November 2022, and respondents were not paid for participation.

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[81] https://leginfo.legislature.ca.gov/faces/billHistoryClient.xhtml?bill_id=202120220AB2089
[82] https://leginfo.legislature.ca.gov/faces/billVotesClient.xhtml?bill_id=202120220SB1189
[83] https://www.scstatehouse.gov/member.php?code=1703408887&chamber=H

The survey data were coded and analyzed using IBM SPSS statistical software and stored on systems secured with encryption and password protection.

Results

A total of N=695 clinician surveys were completed.

Clinician Demographics

Survey responders included physicians (MD, DO, MBBS), nurse practitioners (APRN, DNP), physician assistants (PA-C), clinical psychologists, dieticians, and behavioral health clinicians. For the purposes of this study, data was analyzed and reported for the entire survey responder population (N=695) and then by the two main clinician types (N=691). The clinician-type groups were physical/medical health clinicians (physicians, NPs, PA-Cs) and behavioral health clinicians (clinical psychologists, LCSWs, therapists, and counselors). Over half of the survey responders (61.1%) were within the physical/medical health clinician type, and 38.9% were behavioral health clinician type.

Responders most commonly described their main practice as a physician's office, single specialty group practice (23%), or mental health, private practice (22.3%). Other main practice descriptions included multi-specialty group practice or clinic (15.8%), physician's office, solo practice (13.1%), teaching and non-teaching hospital (11.8%), and urgent care facility (.7%). The areas of practice identified by physicians, nurse practitioners, and PAs were psychiatry (23.8%), family medicine (18.6%), internal medicine: subspecialty (14.1%), and internal medicine: primary care (11.9%). Most clinicians identified their race as Caucasian (79.6%) and their ethnicity as non-Hispanic/Latino (88.3%). Clinician age ranged from 24 to 83 (mean=50), and 71.4% identified as female. More detailed information on clinician respondent demographics can be found in Table 2.

Table 2: Clinician Survey Responder Demographics

Clinician Demographics		N	%
Healthcare Profession (N=695)	Physician (MD, DO, MBBS)	226	32.5%
	Nurse Practitioner (APRN, DNP)	42	6%
	Physician Assistant (PA-C)	1	0.1%
	Clinical Psychologist	84	12.1%
	Mental Health Clinicians (LCSW, LMFT, LADC, LPC, etc.)	338	48.6%
	Dietitian	2	0.3%
	Other	2	0.3%
Clinician Type (N=691)	Physical/Medical Health Clinician	269	38.9%
	Behavioral Health Clinician	422	61.1%
Practice Type (N=695)	Physician's office, single specialty group practice	160	23%
	Mental Health, private practice	155	22.3%
	Multi-specialty group practice or clinic	110	15.8%
	Physician's office, solo practice	91	13.1%
	Other	91	13.1%
	Teaching and Non-Teaching Hospital	82	11.8%
	Urgent care facility	5	0.7%
	Skilled Nursing Facility	1	0.1%
Area of practice-Physicians, NPs & PAs (N=269)	Psychiatry	64	23.8%
	Family Medicine	50	18.6%
	Internal Medicine: Specialty care	38	14.1%
	Internal Medicine: Primary care	32	11.9%
	Other	29	10.8%
	Pediatrics: specialty care	21	7.8%
	Surgery or Surgical Specialty	17	6.3%
	Pediatrics: primary care	14	5.2%
	OB-GYN	4	1.5%
Clinician Race (N=695)	White or Caucasian	553	79.6%
	Asian	37	5.3%
	Black or African American	33	4.7%
	Multiracial	23	3.3%
	American Indian or Alaska Native	4	0.6%
	Native Hawaiian or Pacific Islander	2	0.3%
	Prefer not to say	43	6.2%
Clinician Ethnicity (N=695)	Non-Hispanic/Latino	614	88.3%
	Hispanic/Latino	44	6.3%
	Prefer not to say	37	5.3%
Clinician Gender Identity (N=695)	Female	496	71.4%
	Male	171	24.6%
	Genderqueer	3	.4%
	Non-binary	3	.4%
	Prefer not to say	20	2.9%
Time in Practice (N=695)	Less than one year	12	1.7%
	1-5 years	124	17.8%
	6-10 years	143	20.6%
	11-15 years	105	15.1%
	16-20 years	62	8.9%
	21-25 years	66	9.5%
	26-30 years	50	7.2%
	31+ years	128	9.5%
	Prefer not to say	5	0.7%

Visit Frequency

Clinicians were asked about the total number of patient visits (both in-person and telehealth) they averaged per week during three periods of time: pre-COVID-19, peak COVID-19, and current. The total number of patient visits remained consistent across all three periods, with 90% of behavioral health clinicians conducting up to 40 visits per week and 82% of physical/medical health clinicians conducting up to 60 visits. This indicates that regardless of visit type and time period, respondents averaged the same number of patient encounters.

Visit Frequency by Telehealth Visit Type (Audio-Visual/Audio Only)

As anticipated, the type of telehealth visit (audio-visual versus audio-only) varied across the three periods. Pre-COVID-19, clinicians self-reported rarely having done either audio-visual or audio-only visits. For those that did, most conducted 10% or less of visits in that manner. During peak-COVID-19, 98% of clinicians reported using audio-visual interactions. Of those clinicians, the majority used it for 80-90+% of their visits.

Figure 3: *Frequency of audio-visual visits pre-COVID, Peak of COVID, and Currently*

Telehealth visits have decreased among physical health clinicians since the peak of COVID-19. Currently, 13% of clinicians conduct audio-visual and 3% of clinicians conduct audio-only visits at the 80-90+% frequency. Telehealth visits have also decreased amongst behavioral health clinicians since the peak of COVID-19, although at a less substantial percentage. Currently, 45% of behavioral health clinicians conduct audio-visual and 5% conduct audio-only visits 80-90+% of the time.
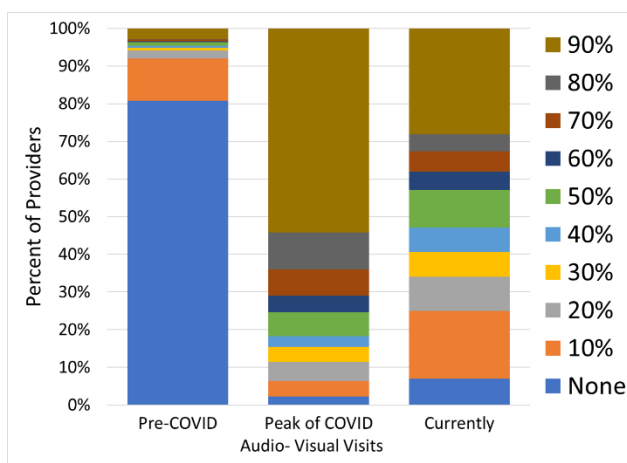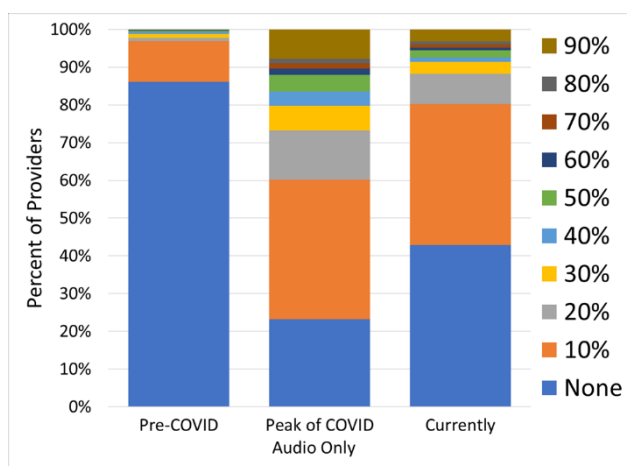
Figure 4: *Frequency of audio only visits pre-COVID, Peak of COVID, and Currently*

In conclusion, both audio-visual and audio-only visits significantly increased during the peak of COVID-19 but decreased over time. Audio-only visits were used less frequently at all three time periods when compared to audio-visual visits. In addition, while audio-visual and audio-only visit usage has decreased, significantly more clinicians are still using audio-visual or audio-only telehealth now than pre-COVID-19. See Figures 3 and 4.

Telehealth Visits Offered

The most commonly offered telehealth visits amongst the physical health clinicians were medication management (66.5%), chronic disease management (52.4%), and COVID-19-related care (41.6%). See Figure 5. Amongst behavioral health clinicians, the most commonly offered telehealth visits were individual therapy/counseling (91.9%) and mental/behavioral healthcare screenings and assessments (69.9%). See Figure 6.
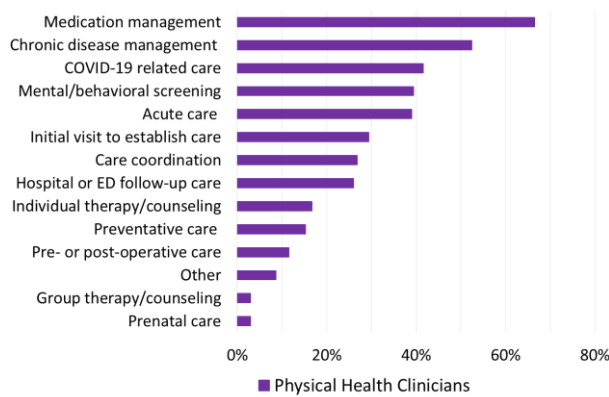
Figure 5: *Most Commonly Offered Telehealth Visits for Physical Health Clinicians*
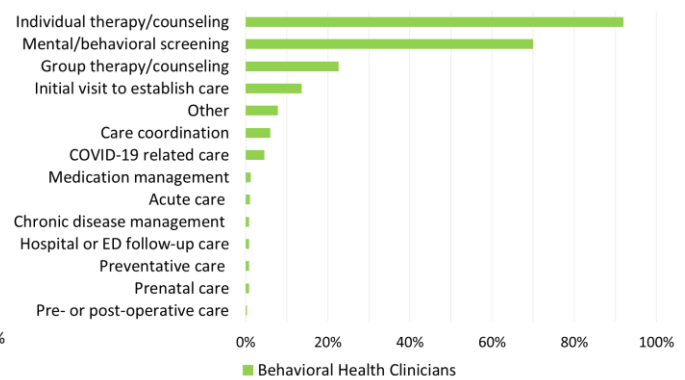
Figure 6: *Most Commonly Offered Telehealth Visits for Behavioral Health Clinicians*

Telehealth Reimbursement

More behavioral health clinicians (44%) reported that they received adequate reimbursement for these types of services, while 31% said "sometimes," and 19% did not receive adequate reimbursement. In comparison, only one-third of physical/medical health clinicians (35%) said "yes," 6% said "sometimes" and 19% reported that they did not receive adequate reimbursement. Additionally, 34% of physical health

Figure 7: *Adequate Reimbursement by Clinician Type*

clinicians reported being "unsure" of the adequacy of their telehealth reimbursement compared to 6% of behavioral health clinicians. See Figure 7.

Telehealth Impact on Practice

Overall, respondents indicate that telehealth has had a positive impact on clinician practices. Timeliness of care had the highest endorsement amongst all clinician types, with over 45% stating it was "much better" with telehealth. Behavioral health clinicians also saw a "somewhat" or "much better" impact on the safety of patients (52%) and "about the same" impact on health, perceived overall experience, equity in health outcomes, continuity of care, and clinicians' sense of accomplishment. Survey responders generally felt telehealth had "about the same" impact as in-person visits on health, safety, perceived overall experience, equity in health outcomes, continuity of care, and clinicians' sense of accomplishment. Providers reported conflicting and varied responses when it came to the connection that telehealth provides to patients. Over 37% of providers said that telehealth provided them "about the same" connection to their patients, with about 10% fewer respondents reporting a "somewhat worse" connection.

Nearly 80% of all surveyed responders "agreed" or "strongly agreed" that telehealth has helped them deliver high-quality care, was easy to implement into practice, easy to learn, is an easy and efficient way for patients to schedule appointments and has decreased the number of patient no shows. Over 50% "agreed" or "strongly agreed" that telehealth allows them to provide the same or better quality of care as office visits. Over 50% of providers reported that they "agreed" or "strongly" agreed that their patients preferred telehealth to office visits, and 37.9% of providers said that they either "agree" or "strongly agree" that they prefer telehealth visits to office visits. Overall, behavioral health providers reported higher levels of agreement with statements regarding preferred visit types. See Figure 8.
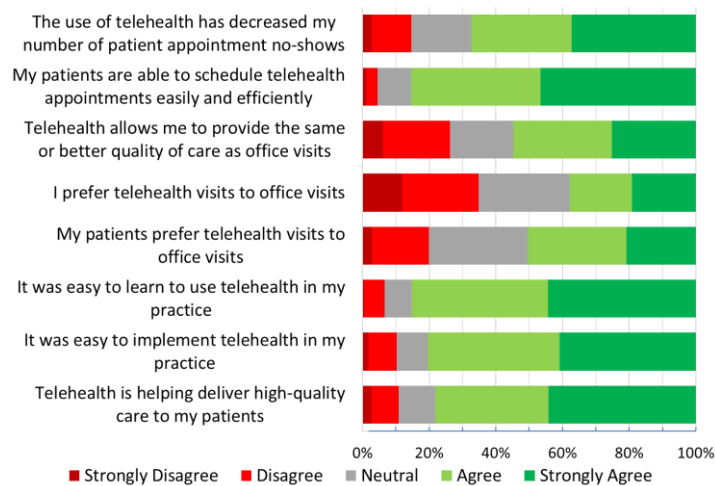

Figure 8: Clinician Agreement with Telehealth Statements

Current Telehealth Usage

Over 82% of physical health clinicians and 63% of behavioral health clinicians reported having conducted telehealth visits from the office. While fewer than half of the physical health clinicians (44%) conducted telehealth visits from their own home, most behavioral health clinicians (80%) have done so. Currently, 73% of physical health clinicians and 52% of behavioral health clinicians use the office to conduct telehealth visits more frequently than at home. These delivery areas are not mutually exclusive, and many providers do provide telehealth services in both settings.

A large portion of all responders (75%) reported using a personal device (laptop, smartphone, tablet, etc.) to conduct telehealth visits. Of those who reported using a personal device, 41% of physical health clinicians and 72% of behavioral health clinicians stated that they use their personal device "76-100% of the time."

There are numerous options when it comes to the software available for conducting telehealth visits. Available software systems have varying levels of safety and security and range in HIPAA compliance. As reported in this survey, the most frequently used platforms to deliver telehealth services were Zoom (40.9%) and Doxy.me (29.6%). See Table 3 for a complete list of reportedly used platforms.

Table 3: Platforms Reported to be Used to Conduct Telehealth Visits

Platform	No.	%
Zoom	284	40.9%
Doximity Video	87	12.6%
EHR telehealth modules or tools	98	14.2%
Doxy.me	204	29.5%
Telehealth vendor	47	6.8%
FaceTime	76	11%
Patient Portal	42	6.1%
Microsoft Teams	28	4.1%
Texting	35	5.1%
Skype	11	1.6%
Remote patient monitoring tools	10	1.4%
Asynchronous messaging apps	9	1.3%
Other	153	22%

Nearly 90% of responders reported that they "never" conducted telehealth visits using asynchronous[84] telehealth tools or performed remote patient monitoring. Live interactive audio-visual visits were the most frequently used, with 56.2% using it "76-100%" of the time. The vast majority of responders reported that they currently prefer live audio-visual interactive visits (89.5%) as opposed to telephone/audio-only visits (7.1%), asynchronous telehealth (1.7%), and remote patient monitoring of a patient (.5%).

Telehealth Needs/Access Needs

The majority of responders (91.5%) stated that they have adequate technology to provide care to their patients, while 6% said "sometimes" and 2.5% said "no". When asked if they or their practice would benefit from a group purchasing plan (for equipment, telehealth platforms, etc.), 24.7% said "yes," while 36.2% were "unsure" and 39.1% said "no."

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[84] Note: Asynchronous telehealth, also known as "store-and-forward," refers to patient care that occurs in between the patient and provider at different times. For example, a patient sends a photo of a skin condition that is later reviewed by a dermatologist who recommends treatment.

Currently, certain electronic health records (EHR) can be configured to permit the clinician and their staff to directly launch a telehealth visit from within an open EHR patient record. Thus, allowing them to directly interact with a patient's EHR record during the telehealth visit. Many of those systems allow a patient to launch their telehealth visit directly from the patient portal. This permits a clinician to stay directly within their workflow when initiating a telehealth visit. When asked about their ability to access technology directly from the EHR, answers were similar regardless of provider type, with 46% of all clinicians responding "yes," while 41.5% said "no." The remaining clinicians were either "unsure" (9%) or could only access "some" (3.6%) of the EHR. Of the clinicians who stated they could not access the EHR or had only some access, 65% said they would use this capacity if available.

Telehealth Value Measurement

Because telehealth has been newly adopted by clinicians and organizations measuring its value can be quite challenging. When asked how clinicians measure the value of telehealth in their practice, behavioral health clinicians reported assessing the perceived value of telehealth most frequently via patient satisfaction (61%), access to care (49%), and clinical outcomes and clinical quality
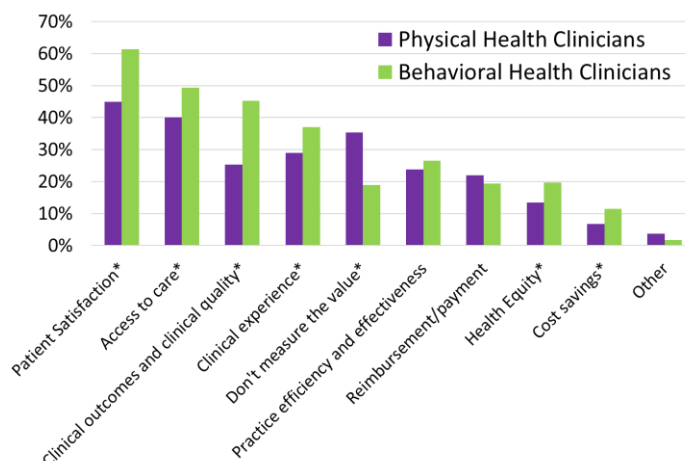

Figure 9: Clinician Reported Measurement for Telehealth Value in Practice/Organization

(45%). Physical health clinicians also reported assessing the perceived value of telehealth most frequently via patient satisfaction (45%) and access to care (40%). In general, physical health clinicians assessed the value of telehealth less frequently, and 35% reported no assessment. See Figure 9. Offering a set of standard tools to practices for evaluating telehealth might be considered an appropriate option when considering state policy.

Technology Issues

While there has been substantial improvement in tools and technology used to deliver telehealth, technology challenges remain for at least a third of respondents. Clinicians were asked to rate the frequency of technical issues in the last 6 months on a scale of "never" to "always." The majority of providers reported that technical issues occurred "rarely." When technical issues were encountered, the most commonly reported included "audio or video not working at all" and "audio or video working but

inadequate quality for what the patient or I needed." This likely represents a mixture of challenges such as outdated technology, patients or clinicians with limited technical skills, internet, or phone bandwidth issues. Further exploration of specific challenges would permit targeted interventions.

Patient Barriers

Clinicians rated the perceived barriers/difficulties in using telehealth of various patient populations on a Likert scale of no difficulty (1) to major difficulty (5). In general, behavioral health clinicians rated barriers lower than physical health clinicians. Responders reported that patients experiencing homelessness as having the most barriers and difficulties, with 46.4% saying it was a "major difficulty." Patients with hearing impairments, patients with low literacy, and non-English speaking patients were acknowledged as having "some difficulty." Patients with physical disabilities and adolescent patients received the lowest difficulty rating. See Figure 10 in Appendix G for more detail.

Clinicians also rated how frequently their patients experienced challenges/barriers from never (0) to often (3). Patient preference for in-person office visits had the highest rate amongst both clinician types, with 43.3% saying it was "sometimes" a challenge. Approximately 40% of the physical health clinicians stated that low digital literacy, lack of access to technology, and lack of internet/Wi-Fi access was "sometimes" a challenge/barrier.

Clinician Barriers

Clinician barriers were rated from never to often. All barriers had a low mean score ranging from .63 – 1.56. The highest endorsed barrier amongst behavioral health clinicians was interstate licensing issues for patients currently living out of state, with 38% stating that they "sometimes" experienced that challenge. The inability to perform a physical exam was the most commonly reported barrier amongst physical/medical health clinicians, with 39% stating that they "often" experienced that challenge and an additional 33% "sometimes" experienced it. See Figure 11 in Appendix G for more detail.

Telehealth-specific Workflows

When asked what would support improved telehealth-specific workflows, physical health clinicians endorsed more recommendations than behavioral health clinicians and at a higher level. The most commonly made recommendations amongst physical health clinicians were: to implement separate schedule blocks for in-person visits & telehealth visits (41.3%), to establish a formal process for patient check-in & check-out (39.8%), the addition of staffing resources to support workflows (39.4%) and implementation of technology that provides a digital waiting room (35.3%). Although at a much lower rate, behavioral health clinicians also endorsed separate schedule blocks for in-person visits & telehealth (30.6%) and technology that provides a digital waiting room (23.2%) as recommendations to improve telehealth-specific workflows. See Figure 12.
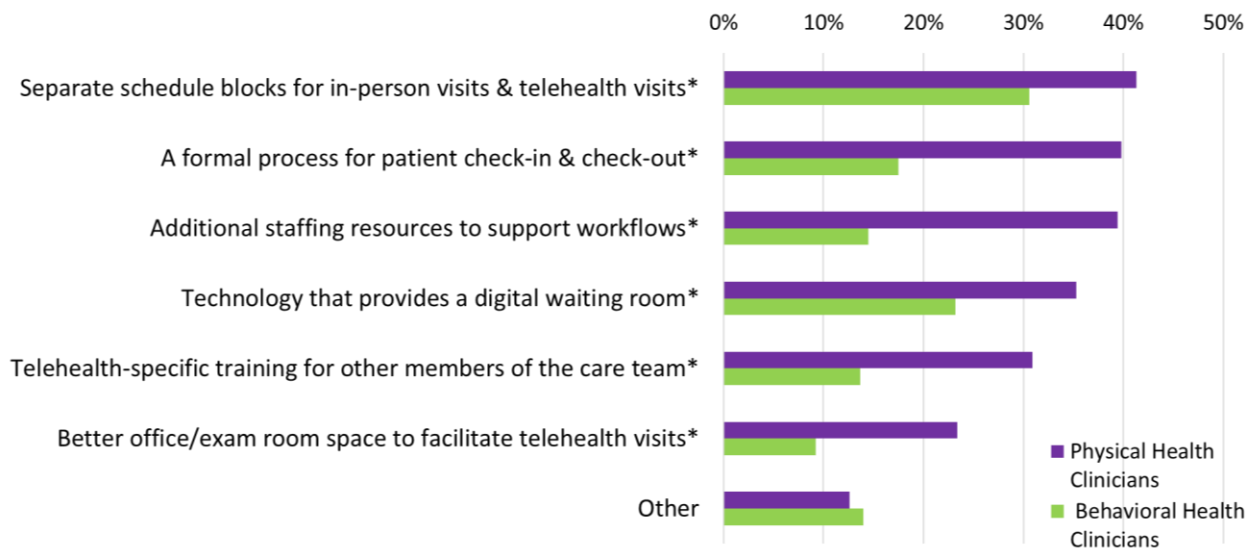

Figure 12: *Clinician Reported Telehealth-Specific Workflow Recommendations by Clinician Type*

PATIENT SURVEY

Methods

The 31-item patient survey was developed to collect information on the experience of telehealth patients throughout the State of Connecticut. The protocol, survey, and all recruitment and methodology strategies were reviewed and approved by the UConn Health Institutional Review Board as an expedited study (IRB #21-050-1).

Upon IRB approval, the electronic survey, delivered through Qualtrics, was distributed at clinical offices, various listservs, and via email through partnerships with community organizations. Eligibility criteria for the clinician survey included:

- Adult (≥18 years of age)
- Experience receiving telehealth services from a Connecticut healthcare clinician since the onset of COVID-19

The survey consisted of multiple choice and open-ended questions regarding patient experience using telehealth since the onset of COVID-19, including preferences, barriers, and facilitators. For a comprehensive list of questions included in the survey, see Appendix B. Survey data collection occurred from October 2022 to November 2022. Upon completion of the survey, respondents had the opportunity to provide their contact information to be entered to win a $50 Amazon gift card via raffle.

The survey data were coded and analyzed using IBM SPSS statistical software and stored on systems secured with encryption and password protection.

Results

A total of N=371 patient surveys were completed.

Patient Demographics

The average age of survey responders was 31 years old and ranged from 18 to 75. Most patient responders identified their race as Caucasian (76.3%). The ethnic breakdown of the responders was 20.5% Hispanic/Latino. Over half of the respondents identified as women (53.1%). The majority of the sample identified as heterosexual (75.2%). Education levels varied, with the largest groups being some college (23.5%), followed by bachelor's degree (20.5%). The primary work status among survey respondents was "employed full-time" (66.8%). Commercial insurance (45%) was the most common

type of insurance carried by patient responders, followed by Medicare (42.3%). More detailed information on patient respondent demographics can be found in Table 4.

Table 4: Patient Survey Responder Demographics

Patient Demographics		N	%
Gender	*Woman*	197	53.1%
	Man	155	41.8%
	Non-binary	10	2.7%
	Genderqueer	2	0.5%
	Prefer to self-describe	4	1.1%
	Prefer not to say	3	0.8%
Race	*White or Caucasian*	283	76.3%
	Black or African American	23	6.2%
	American Indian or Alaskan Native	13	3.5%
	Asian	22	5.9%
	Native Hawaiian or Pacific Islander	11	3.0%
	Multiracial, Biracial or Other	4	1.1%
	Prefer Not to Say	15	4.0%
Ethnicity	*Hispanic/Latino*	76	20.5%
	Non-Hispanic/Latino	285	76.8%
	Prefer Not to Say	10	2.7%
Sexual Orientation	*Heterosexual (straight)*	279	75.2%
	Bisexual/ Pansexual/Nonmonosexual	46	12.4%
	Gay/Lesbian	20	5.4%
	Queer	8	2.2%
	Asexual	10	2.7%
	Prefer Not to Say	8	2.2%
Education Levels	*Some or Less than High School*	14	3.8%
	High School Degree/GED	29	7.8%
	Trade School	41	11.1%
	Some College	87	23.5%
	Associate's Degree	25	6.7%
	Bachelor's Degree	76	20.5%
	Some Graduate School	24	6.5%
	Master's Degree	58	15.6%
	Professional Degree or Doctorate	17	4.6%
Insurance Type*	*Commercial*	167	45.0%
	Medicaid	81	21.8%
	Medicare	157	42.3%
	Self-insured	19	5.1%
	No Insurance	27	7.3%
	Unsure or Other	9	2.4%

*Survey respondents were able to select multiple insurance types

Type of Care Received

The most commonly sought types of care that patient responders received through telehealth since the onset of COVID-19 were primary care (58.8%) and behavioral health (49.9%) services. Significantly more patient responders received these types of care than any other type of care, followed by dietetics/nutrition (18.1%) and psychiatry (16.4%). Other types of telehealth care received by the patient responders included obstetrics/gynecology (12.4%), pediatrics (10.5%), diabetes care (7. 8%), physical therapy (5.9%), cardiology (5.7%), and cancer care (5.4%). See Figure 13.
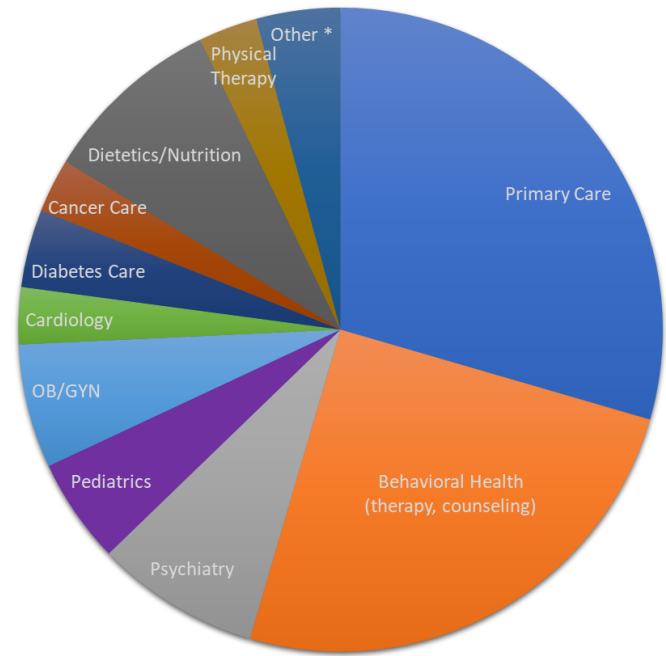

Figure 13: Patient Type of Care Received

The most common visit type in which patient responders used telehealth services was COVID-19-related care (40.7%). While not as common, telehealth visits were also used for individual therapy/counseling (29.9%), acute care (26.4%), medication management (23.7%), mental/behavioral healthcare screening or assessment (23.2%), and preventative care (22.9%).

Satisfaction/Quality of Care

When asked how satisfied they were with the telehealth services received, over 80% of patient responders felt "somewhat satisfied" or "very satisfied." See Figure 14.
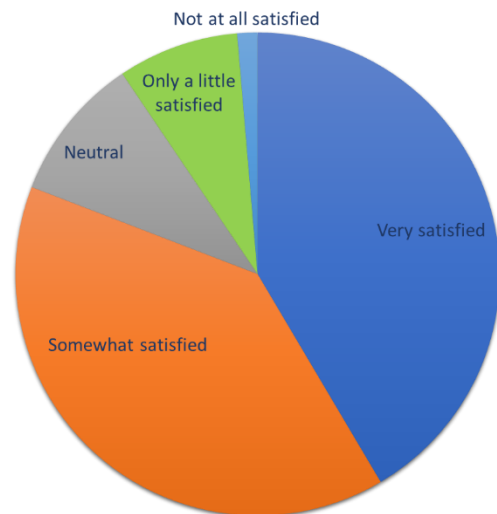

Figure 14: Patient Satisfaction with Telehealth

Regarding confidence in their clinician's ability to address their needs in a telehealth visit, over 85% of patient responders felt "somewhat confident" or "very confident" that telehealth was as effective as an in-person visit. See Figure 15.
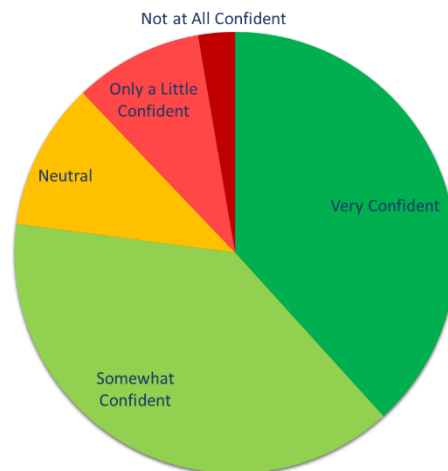
Barriers/Challenges

Patients rarely reported barriers and challenges associated with telehealth visits. When asked about topics such as difficulty paying for services, lack of insurance or problems with insurance, lack of reliable technology, and others, fewer than 25-

Figure 15: Confidence in Telehealth Visits Compared to in-person

35% of responders reported them. None of the listed challenges/barriers were experienced by more than 25-35% of the responder population. The most commonly encountered barriers/challenges that patients faced while using telehealth were lack of reliable technology (35.3%), difficulty scheduling a visit (30.2%), and difficulty finding a suitable clinician (30%).

Comparison of care to in-person

Compared to in-person visits, audio-only visits were most commonly rated as "about the same" in all areas except examination of your body/area of concern, in which 40.9% stated it was "worse." When compared to in-person visits, audio-visual visits were most commonly rated as "about the same" in all areas. Audio-visual visits were generally rated higher than audio-only visits, meaning that in general, audio-visual visits were more frequently reported as being "about the same" or "better" than in-person.

Telehealth Usage, Preferences, and Recommendations

Patients were asked about their likelihood to continue using telehealth, telehealth preferences, and suggested recommendations. When asked how likely they will be to continue using telehealth or other virtual care options after the COVID-19 pandemic ends, nearly 75% of responders stated they were "somewhat likely" or "very likely" to continue, while only 3.2% said they were "not at all likely." See Figure 16. Home was the most commonly used
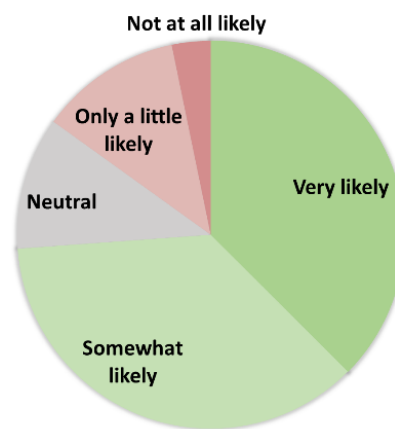

Figure 16: Predicted Use of Telehealth in the Future

location for telehealth care (82.5%). Additional locations used were car (36.1%), work (32.6%), library (19.1%), and coffee shop (8.9%). Patients were asked whether they would have preferred to attend visits for physical health in person during the peak of COVID-19, to which 73.9% of responders said they would NOT have preferred to attend visits for physical health in person.

When asked what would make telehealth easier for patients, responders most frequently endorsed free or reduced-cost internet (45%) and free or reduced-cost wireless phone services (43.7%). Other ways to make telehealth easier were help with setting up your technology (36.7%), access to equipment that you do not currently own for telehealth (28.3%), and private space within a short distance of your home set up specifically for telehealth (25.9%).

CLINICIAN FOCUS GROUPS
Methods

A series of clinician focus groups and key informant interviews were developed to pose questions and elicit responses from a diverse sample of telehealth providers from Connecticut in an interactive audio-video group discussion with a facilitator. By bringing together providers with varying telehealth roles (i.e., administrative and clinical), organizations (i.e., correctional facilities, university hospitals, state agencies, small practices), practice locations (i.e., teaching hospital, single specialty group practice), and areas of practice (i.e., family medicine, OB-GYN) we could gain knowledge from several different perspectives. The protocol, facilitators guide, and all recruitment and methodology strategies were reviewed and approved by the UConn Health Institutional Review Board as an expedited study (IRB #21-050-1).

The online focus groups/key informant interviews were conducted through Zoom. Participant recruitment was conducted through electronic strategies, including email, health center and organization listservs, flyers, and direct contact. Screening for eligibility and subsequent questions regarding participant demographics and telehealth experience were managed and delivered within Qualtrics Survey Software.

Eligibility criteria for the clinician focus group/key informant interview included:

- Healthcare professional who has experience providing patient telehealth services since the start of the COVID-19 pandemic; OR
- An administrator at an organization where telemedicine has been conducted since the beginning of the COVID-19 pandemic
- Adult (≥18 years of age)
- English-speaking
- Access to a computer or mobile device with an internet connection and audio-video capabilities
- Willing to participate in an interactive audio-video group discussion

Clinicians and healthcare administrators were recruited from health centers, health systems, non-profit organizations, and state agencies to participate in focus groups and key informant interviews.

Sessions lasted between 30 and 90 minutes and were facilitated by a moderator using a discussion guide designed to elicit attitudes about telehealth. Each session was audio recorded with the consent of participants, and audio recordings were analyzed and coded by researchers.

Researchers used thematic analysis to identify and define key themes present in the transcripts. After the first round of individual coding was completed, coders met to compare themes present in the data. Coding discrepancies were resolved using consensus and an iterative process of refining and merging codes. Quotes supporting each theme were extracted from the transcripts and are presented in the Results section below to demonstrate the data-driven nature of the qualitative findings.

Results

Researchers conducted six focus groups and six interviews from October to November 2022, totaling 21 participants. Of those interviewed, 19% represented Connecticut state agencies, and 9.5% represented non-profit behavioral health organizations; the remaining group represented clinicians who delivered telehealth services. The majority of those interviewed were physicians (57%), followed by licensed clinical social workers (14.3%), physician assistants (9.5%), licensed professional counselors (9.5%), and a nurse midwife (4.8%). Most individuals practiced at a physician's office, single specialty group practice (38.1%), or a state agency (19%). Behavioral health was the most common area of practice (28.6%).

The sample of participants was mostly White or Caucasian (62%), followed by multiracial, biracial, or other (19%) and Asian (9.5%). None of the participants identified their ethnicity as Hispanic/Latino. The participant group included nine women and twelve men with an age range from 29 to 71 and a mean age of 46. More detailed information on clinician and administrator respondent demographics can be found in Table 5.

See Appendix C for the interview/focus group facilitator guide and Appendix D for direct quotes from the interview/focus groups.

Table 5: Demographics and Affiliations of Individuals Interviewed

Demographics		N	%
Clinician/Administrator Type	*Physician (MD, DO, MBBS)*	13	57.0%
	Physician Assistant (PA-C)	2	9.5%
	Nurse Midwife (CNM)	1	4.8%
	Licensed Clinical Social Worker (LCSW)	3	14.3%
	Licensed Professional Counselor	2	9.5%
Practice Type	*State Agency*	4	19.0%
	Non-Profit Behavioral Health Organization	2	9.5%
	Physician's Office, Single Specialty Group Practice	8	38.1%
	Physician's Office, Solo Practice	1	4.8%
	Physician's Office, Solo, and Multi-Group Practice	1	4.8%
	Federally Qualified Health Center	2	9.5%
	Teaching Hospital	3	14.3%
Area of Practice	*Family Medicine*	5	23.8%
	Internal Medicine	2	9.5%
	Internal Medicine: Geriatrics	2	9.5%
	Obstetrics/Gynecology	1	4.8%
	Pediatrics	1	4.8%
	Psychiatry	2	9.5%
	Behavioral Health	6	28.6%
	Other	2	9.5%
Length of Time in Practice	*1 – 5 years*	3	14.3%
	6 – 10 years	2	9.5%
	11 – 15 years	5	23.8%
	16 – 20 years	2	9.5%
	26 – 30 years	4	19.0%
	31+ years	5	23.8%
Gender	*Male*	12	57.0%
	Female	9	43.0%
Race	*White or Caucasian*	13	62.0%
	Asian	2	9.5%
	Multiracial, Biracial or Other	4	19.0%
	Prefer Not to Say	2	9.5%
Ethnicity	*Non-Hispanic/Latino*	15	71.4%
	Prefer Not to Say	6	28.6%

Table 6: Clinician Focus Group and Interview Key Takeaways

Key Takeaways

Telehealth has value in the healthcare system

There is a time and a place for telehealth

Telehealth expands access to healthcare

Telehealth can be utilized effectively by various specialties
Telehealth visits should be appropriately reimbursed
Support for telehealth is needed

Telehealth has value in the healthcare system

Overall, interviewees found telehealth invaluable for clinicians and the healthcare system. Telehealth allows clinicians to have a more flexible schedule. For many clinicians, telehealth was the first opportunity to work from home. Lastly, some clinics struggled to accommodate their clinicians in small office spaces, but telehealth helped address space issues.

Telehealth kept patients and clinicians safe in many ways. Clinicians reported being able to continue to work while sick or having sick family members, which increased their productivity. Exposures to COVID-19, influenza and respiratory infections were also avoided with the integration of telehealth. Additionally, clinicians shared that those patients from historically marginalized groups (i.e., the transgender community) reported feeling safer and more comfortable receiving care in their own spaces. Clinicians also reported feeling safer via telehealth when working with violence-prone patients.

Many clinicians reported having significantly decreased no-show rates. Telehealth enabled clinicians to change their service delivery method and call their patients if they missed an appointment or connect with them through an audio-visual visit. Clinicians also reported that telehealth made in-person visits more effective and necessary only for some instances. Clinicians appreciate telehealth because it provides continuity of care for patients.

There is a time and a place for telehealth

Although there was overwhelming support for telehealth, clinicians and administrators believed that telehealth was most beneficial for certain health services. Common reasons for telehealth included discussing lab reports, conducting follow-ups, and caring for patients with chronic diseases. Clinicians reported that in-person visits were ideal when conducting physical exams or when vital signs needed to be collected. Clinicians also said that they enjoyed having the option of scheduling their patent as an in-person or virtual visit based on patient and clinician convenience.

Telehealth expands access to healthcare

Clinicians found telehealth especially helpful in providing healthcare access to historically marginalized groups. Telehealth provides ease for patients with low resources to receive care. Barriers for people with low resources that were overcome with telehealth were transportation and time off work.

Additionally, clinicians expressed that licensure flexibilities across states allowed them to maintain continuity of care for established patients (including established patients who were traveling to other states), provided shorter wait times, and expanded access to services for new patients.

Those working with geriatric populations found telehealth to be critical in delivering care. With telehealth, patients no longer have to rely on unpredictable transportation systems or long waiting times in the office while being exposed to COVID-19, among other viruses. Telehealth also allowed clinicians to integrate family members into health discussions. Telehealth also allowed patients in Skilled Nursing facilities to receive needed primary and specialty care that would not otherwise have been possible without patient transport.

Telehealth can be used effectively by various specialties

Though telehealth was primarily reported to be used to deliver primary care and behavioral health services, it has been used effectively by other specialties and with multiple clinical populations. Behavioral health has benefitted from telehealth and is strongly supported by behavioral health clinicians since they rely less on physical exams and can provide comprehensive care with audio-only or audio-visual visits.

Pediatric clinicians used telehealth with infants discharged from the neonatal intensive care unit. Telehealth was appreciated in this context where parents are weary of exposing their already health-compromised infants by taking them to a physical office. Pediatric clinicians leveraged audio-visual visits with parents/caregivers to see living environments and conduct physical assessments with the help of parents and caregivers.

It was also reported that telehealth expanded access to specialty services via telehealth. The expansion of telehealth across specialties made it quicker and easier for patients to be connected to specialists, including those incarcerated. Telehealth also aided in training residents who were not receiving specialty training or getting specialty experience.

Telehealth visits should be appropriately reimbursed

Clinicians and administrators expressed concern with telehealth reimbursement and the current fee-for-service payment model. Respondents supported the continuation of telehealth reimbursement beyond the COVID-19 public health emergency. Many clinicians suggested a value-based care system to fund chronic care management, especially for geriatric and primary care.

Support for telehealth is needed

Respondents shared that additional support is needed to continue and expand telehealth around the State. Resources recommended included technology support for both practices and patients and dedicated, private telehealth spaces in the community for patients. Interviewees suggested an information technology hotline that patients, clinicians, or clinical staff can call to alleviate stress related to telehealth and save time for clinicians and clinical staff who are currently serving as technical support for patients. One-on-one support to provide patient education and conduct test visits with patients was identified as a useful resource. Clinicians also suggested a seamless translation service be added to telehealth platforms to address language concerns.

Several special populations were identified which warrant further study regarding specific recommendations for additional support. Those include individuals living communally, including those incarcerated, those living in group homes, nursing homes, or those in skilled nursing facilities. Several needs identified include having: dedicated private spaces for telehealth visits, assistance with setting up the technology and skilled personnel who can assist with performance of a remote physical exam technique.

Another identified area of support was expanding access to high-speed broadband internet, free government cell phones and tablets, and remote patient monitoring. Clinicians saw the value in using government cell phones for under-resourced patients – many of which were used to receive health services. Clinicians believed that providing equipment like laptops and tablets would make it easier for patients to receive care. Clinicians also shared their want to access remote patient monitoring tools for patients with chronic conditions.

PATIENT FOCUS GROUPS

Method

To understand patient experiences with telehealth, focus groups were conducted with telehealth patients across Connecticut during October and November 2022. The UConn Health and UConn Storrs Institutional Review Boards approved the protocol as an expedited study (IRB# 23X-050-1). Participants were recruited using social media, Research Match, email listservs at UConn and UConn Health, and flyers at UConn Health and other health centers around Connecticut. Participants were eligible to participate if they were 18 or older, were English-speaking, and had a telehealth visit in Connecticut within the last year. Participants received a $50 gift card for their participation.

Focus groups were conducted by a trained moderator using a discussion guide designed to investigate patients' experiences with telehealth. Participants were asked about their telehealth experiences (e.g., types of services used), likes and dislikes relative to in-person care, suggested improvements, and for vulnerable populations (e.g., older adults, racial and ethnic minorities, LGBTQ+, people with disabilities), how the experience compared to in-person care regarding affairs of bias, stigmatization, and discomfort. Focus groups lasted approximately 60 to 90 minutes. Moderators first reviewed the rules of the focus group and research participants' rights, and participants were notified that the sessions were being recorded for transcription purposes. Initial transcriptions were completed using algorithmic software, and researchers reviewed transcriptions to correct errors and omissions.

To analyze the focus groups, researchers utilized thematic analysis to identify key themes. Researchers first generated a list of themes and then used a team-based approach to refine them. Coders met in a group to refine and reach a consensus on themes identified in the data.

Results

Researchers conducted 27 focus groups for a final sample of 54 participants (group size range 1-5). Individual interviews were conducted if only one scheduled participant attended the session. Among these participants, 50% were White/Caucasian, followed by black/African American (35%), Asian (7%), and Native American (7%). 17% of the group identified their ethnicity as Hispanic/Latinx. Just over half of the participants were women (56%), 43% were men, and 2% identified as non-binary. Ages ranged from 18 to 67, and the mean age was 31. In terms of sexual orientation, over half (57%) of the participant group identified as heterosexual and 43% identified as LGBTQ+. In this sample, 35% of participants had a chronic condition (e.g., diabetes), and 13% were obese. More than half (56%) had experienced telehealth for primary care and behavioral healthcare (61%).

Participants overwhelmingly felt that telehealth was a vital part of the healthcare landscape and would like to continue using telehealth. Still, they specified the type of care they preferred for telehealth versus in-person visits. See Appendix E for the focus group facilitator guide and Appendix F for direct quotes from the patient focus groups.

Table 7: Patient Focus Group Key Takeaways

Key Takeaways
Patients feel comfortable with telehealth
The quality of care did not decline with telehealth
Telehealth maintains or improves patient-clinician relationships
Patients prefer telehealth for behavioral health and medication management services
Telehealth barriers for patients include technology, space, finances, and clinician licensing
Patients found in-person care to have more drawbacks relative to telehealth
Suggestions for telehealth improvement include access to training, a universal platform, and culturally competent and user-friendly interfaces

Patients feel comfortable with telehealth

In general, participants reported that they had used a variety of modalities but among the most common was video visits. In addition to video visits, participants reported using online portals (e.g., MyCare, MyChart) as well as telephone visits. Participants said that they primarily used video visits for their telehealth appointments. Video visits were also reported as the most comfortable medium for participants because they most closely "mimicked real life."

Participants reported that being in the comfort of their own homes made them feel more at ease during their appointments because they felt greater privacy and were more relaxed and able to express themselves with their clinicians. Some participants reported that they felt more at ease discussing complex topics such as sexual history and mental health.

Marginalized and/or Vulnerable Populations

Participants from marginalized and vulnerable populations felt telehealth made them less likely to encounter stigma and better positioned to respond to stigma if it occurred during care. For example, many participants thought it was easier to conceal their identities over telehealth because they could turn off their video or limit their clinician's access to their entire body. LGBTQ+ patients, especially

gender non-conforming or transgender patients, felt that being able to conceal their full body in video visits was especially helpful. People of color felt that audio-only telehealth options made them less vulnerable to discrimination than in-person appointments. Participants also felt that not being in person eliminated some sources of stigma. People of color pointed out that not being in a waiting room meant they didn't need to wonder if the length of their wait was related to their race. People with disabilities felt they were confronted with less stigmatizing experiences than in-person (e.g., mobility, treatment by the clinician). Women reported that they could be more selective with clinicians using telehealth services (e.g., more options) and could avoid clinicians with whom they had negative experiences more easily.

The quality of care did not decline with telehealth

Many participants reported that telehealth did not impact the quality of care they received compared to in-person appointments. Instead, participants felt that telehealth and in-person appointments were comparable and similar in quality.

Participants also reported that telehealth improved the quality of care. This was especially true of patients who required numerous appointments, including chronic care and pregnant patients who needed frequent communication with their clinicians. Many behavioral health patients felt the quality of care they received over telehealth was greater than in-person appointments. Being at home felt more comfortable, resulting in greater ease in disclosing difficult topics. Some behavioral health patients reported that participating in teletherapy first made it easier to transition to in-person therapy, which used to make them anxious. Others said telehealth resulted in fewer missed appointments.

An important caveat to the quality of telehealth appointments, as reported by participants, was the inability to perform physical examinations or difficulty describing physical symptomology to a clinician. For many participants, conditions that require a physical exam were challenging over telehealth and often less than satisfactory. For example, patients with skin conditions reported that it was often challenging to show a clinician the condition over video.

Telehealth maintains or improves patient-clinician relationships

Many patients reported that their relationships with their clinicians were unaffected or that telehealth improved their relationships with their clinicians. Participants said that they often received more face time with their clinicians via telehealth, were more relaxed at home, resulting in greater self-expression, and had more contact with their clinician because of the convenience of telehealth appointments and messaging in online portals. For behavioral health patients, telehealth was incredibly impactful because

it was less intimidating to discuss difficult or embarrassing topics such as substance abuse relapse or behavioral health challenges.

Patients prefer telehealth for behavioral health and medication management services

Participants generally prefer telehealth for appointments that do not require physical exams or procedures. Participants who required behavioral health services such as therapy, psychiatric medication evaluation, or management overwhelmingly reported that they preferred telehealth services. Behavioral health patients said it was easier to discontinue services with a clinician they did not feel connected with over telehealth than with an in-person clinician.

Patients who required medication management strongly preferred telehealth. These appointments were often short, and participants felt it was too time-consuming to visit their clinician for these quick and routine appointments.

Telehealth barriers for patients include technology, space, finances, and clinician licensing

While most patients felt that telehealth was more convenient and accessible than in-person care, they reported several obstacles to telehealth. One of the most frequently encountered obstacles reported was technical difficulties. Participants said they and their clinicians occasionally had connectivity issues, which at times substantially impacted their appointment. Other technological issues reported were difficulty using the software and login issues.

While many patients felt most comfortable at home, an important limitation for some was finding a private space to conduct their appointments. Parents of children discovered that their children were reluctant to speak to therapists within their own homes because they felt that their conversation was not private. College students living in dorms with roommates also found difficulty finding private spaces to have therapy sessions.

Financial barriers included difficulties with reimbursement for telehealth appointments. While telehealth reimbursement expanded during the pandemic, participants expressed concern about reimbursement in the future. Other financial barriers included the cost of technology (e.g., buying a computer or smartphone, high-speed internet) and convenience fees charged by clinicians for booking telehealth appointments.

For Connecticut patients, another obstacle was the licensing of their clinicians. For some participants, it was difficult to see their clinicians who were across state lines via telehealth appointments because of their clinician's licenses.

Patients found in-person care to have more drawbacks relative to telehealth

Anticipated Stigma. In general, participants found in-person care inconvenient relative to telehealth. A significant obstacle to in-person care reported by people with disabilities, women, people of color, and LGBTQ+ people was anticipated stigma. Participants with one or more stigmatized identities felt more vulnerable to the prejudices of their clinicians when seeing them in person. People with disabilities also faced the challenges of navigating the built environment of the facility.

Discomfort. For many participants, there was an element of discomfort or awkwardness in attending an in-person appointment. For example, patients often felt awkward in waiting rooms for behavioral health clinicians, getting tested for sexually transmitted infections, or if they were obese. Behavioral health patients also reported that attending an in-person appointment was more intimidating than a telehealth appointment. Feelings of intimidation were challenging for participants to overcome, as many reported delaying or forgoing in-person care because of these feelings.

Accessibility. Many participants felt in-person appointments were often too burdensome to fit into their lives. Among these burdens were finances, distance, and time. Financially, many participants found that they lost income because of the time they needed to take off work or to commute to an appointment. In addition, many participants reported that they needed to travel a distance to get to their preferred clinician. Finally, in-person appointments were time-consuming and difficult to schedule with competing demands on their time.

Suggestions for telehealth improvement include access to training, a universal platform, and culturally competent and user-friendly interfaces

Participants felt telehealth had unlimited potential and was essential to their healthcare. Participants recommended training patients and clinicians with clear instructions on the optimal use of telehealth versus in-person appointments to improve telehealth care.

Participants suggested that a universal platform would increase the ease and adoption of telehealth. Many participants had to use several different platforms to attend appointments with other clinicians – which meant having to download and learn each unique software and its functions.

Participants advocated for user-friendly telehealth technology, including intuitive designs and easy-to-access help/tech support. Participants who are immigrants or those for whom English is a second language wanted the ability to change or customize the settings to a preferred language. Older adults wanted the ability to increase the font size of the software.

ALL-PAYER CLAIM DATABASE REVIEW

Method

All Payers Claim Database (APCD) is a state-specific database that includes medical claims, pharmacy claims, and eligibility and provider files collected from private and public payers. Through a Data Use Agreement (DUA) with OHS, UConn Health acquired, and analyzed APCD data. The protocol and methodology strategies were reviewed and approved by the UConn Health Institutional Review Board as an expedited study (IRB #21-050-1).

Access to the APCD data allowed the analysis of telehealth services versus face-to-face services by type in a time-series methodology, tracked against the COVID-19 outbreak, policy and payment changes. The observational retrospective research design study was aimed at detecting time changes, differences by population groups and regions, and differential changes by population groups and regions in medical care utilization and costs before and after telehealth became widely available in Connecticut. It is important to note that the APCD contains a subset of claims data from Connecticut for the timeframe evaluated. This includes Medicaid, commercially-insured patients from the exchange and non self-insured employers as well as self-insured employers who explicitly permit claims to be submitted to the APCD, including the State of Connecticut. Data from Medicare was not available for the entire time-frame and was not included in the analysis. While this has some limitations, it still represents the majority of healthcare delivered in Connecticut during this time period.

Health insurance claims data were analyzed for individuals whose information was supplied to the APCD. The data was from January 1, 2019 to March 31, 2022. Claims data was provided at the individual client level, with claims processed and amounts paid (or not) containing date, provider, type of care, charges (amounts), as well as healthcare services delivered, coded for payment processing for diagnoses (ICD10 codes) and procedures (CPT codes). The APCD contains data from the following sources: private, commercial, state health employees, families and retiree data, and Medicaid data. Medicare data were not available in this APCD extract.

Results

The APCD data contain two main types of claims: medical and pharmacy, with several other data files used to identify unique patients, residents of CT (eligibility), types of claims, type of service e.g., telehealth or emergency room (service), and the provider of medical services (provider).

For the purposes of these analyses, three timeframes were used: pre-COVID-19 (3/25/2019 to 3/22/2020), peak COVID-19 (3/23/2020 to 3/27/2021) and post-COVID-19 (3/29/2021 to 3/26/2022). The number of telehealth claims drastically increased from 5,361 unique patients in the pre-COVID-19 year to 273,119 in the peak COVID-19 year, covering over 620,000 claims. The number of telehealth claims and the total paid dollar amount in the post-COVID-19 year remained sizeable, at nearly 400,000 claims, and $35 million dollars, serving over 184,000 unique patients.

Table 8: Telehealth Medical Claims Data from 2019 to 2022
  Note: The number of patients include both CT and out-of-state patients.

Timeframe	Unique patients	Total count of claims	Total Paid amounts	Total Charged amounts
Pre-COVID-19 3/25/2019 – 3/22/2020	5,361	6,191	$440,926	$884,302
Peak COVID-19 3/23/2020 – 3/21/2021	273,119	620,814	$56,117,982	$103,554,589
Post-COVID-19 3/29/2021 – 3/26/2022	184,628	399,371	$35,065,691	$70,476,750

Nearly no telehealth visits were conducted in the state in the pre-COVID-19 year. In the pre-COVID-19 year an average of 57 visits per week were conducted (over the entire year). In contrast, the weekly average number of telehealth visits jumped to 11,795 in the peak COVID-19 year (2020) and remained around 7,822 in the post-COVID-19 year (2021). See Figure 17.
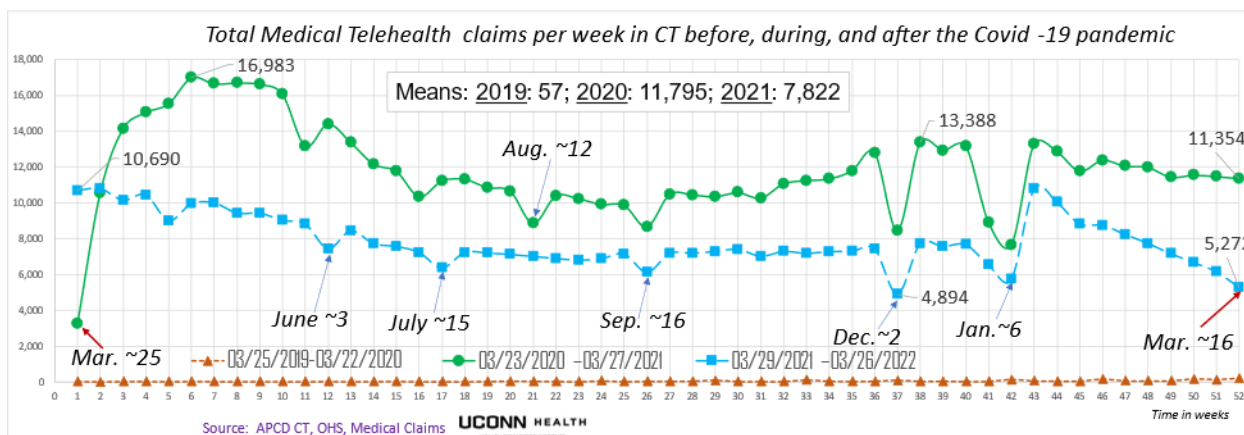

Figure 17: *Total Number of Telehealth Visits per Week in CT Before, During and After the COVID-19 Pandemic*

The average weekly total amount paid for telehealth medical claims in Connecticut was $3,503 per week in the pre-COVID-19 year, $1,066,210 per week in the peak COVID-19 year, and $687,216/week in the post-COVID-19 year. See Figure 18.
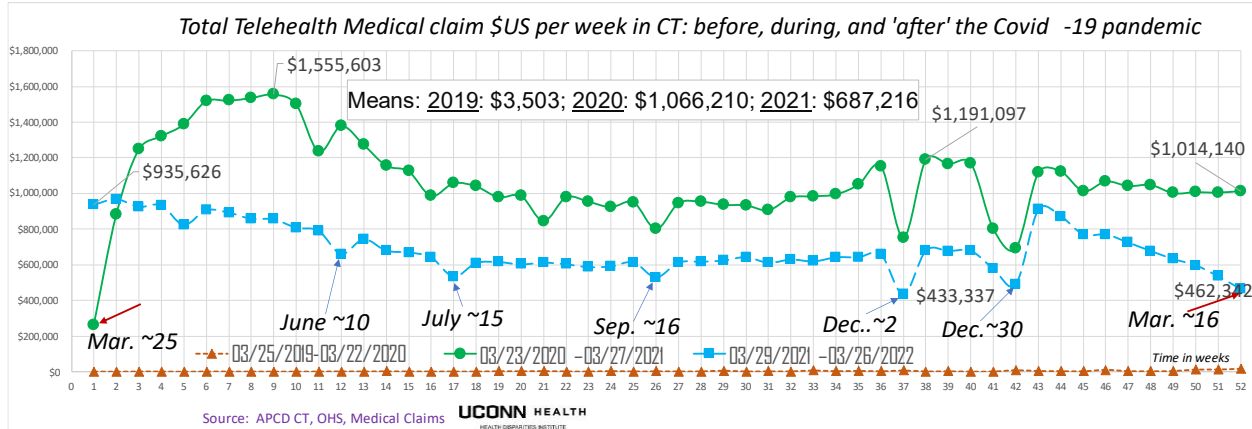

Figure 18: *Total Dollars Paid for Telehealth Visits per Week in CT Before, During and After the COVID-19 Pandemic*

These values reflect the entire CT, but there is wide variability geographically across CT; e.g., across the 282 CT ZCTAs (Zip Code tabulation Areas, distinct from ZIP codes, which are 427 in CT). Geographic patterns by ZIP Code Tabulation Areas (ZCTA) and year can be seen in Figures 19 through 25.

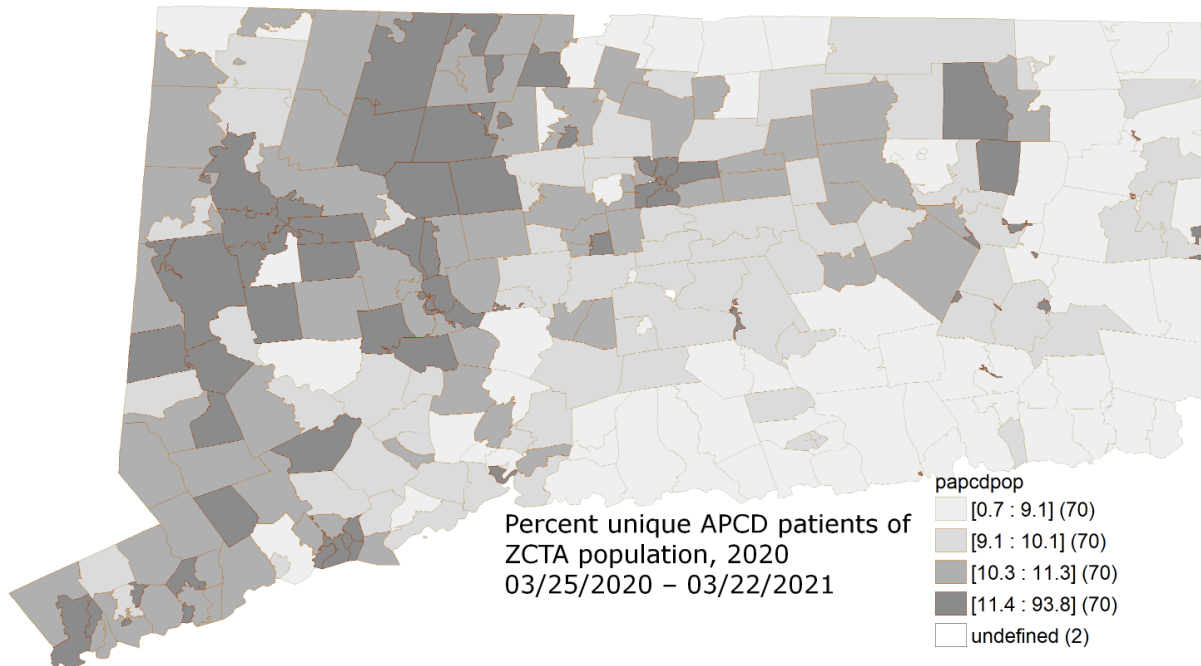The number of patients in the APCD data varied across ZCTAs around the mean of 11.0%, from 0.7% to 93.8%.

Figure 19: *Percent unique APCD patients of ZCTA population, 2020*

The percent of telehealth claims (of all APCD medical claims), for example, varied across CT ZCTAs around the mean of 7.5%, in the peak COVID-19 year, from 0.16% to 16.9%.
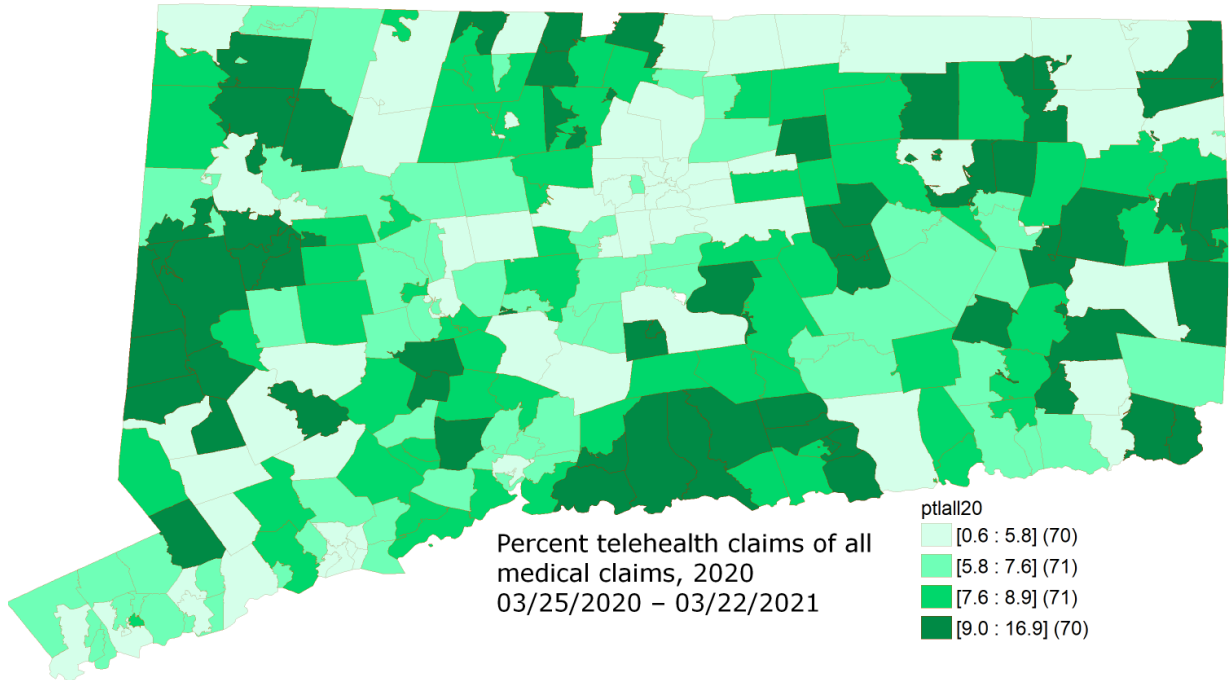

Percent telehealth claims of all medical claims, 2020
03/25/2020 − 03/22/2021

ptlall20
[0.6 : 5.8] (70)
[5.8 : 7.6] (71)
[7.6 : 8.9] (71)
[9.0 : 16.9] (70)

Figure 20: *Percent Telehealth Claims of All Medical Claims, per ZCTA, 2020*

The number of telehealth claims per patient in APCD data in the peak COVID-19 year (2020) across CT for example varied around the mean of 1.6 (SD = 0.50).
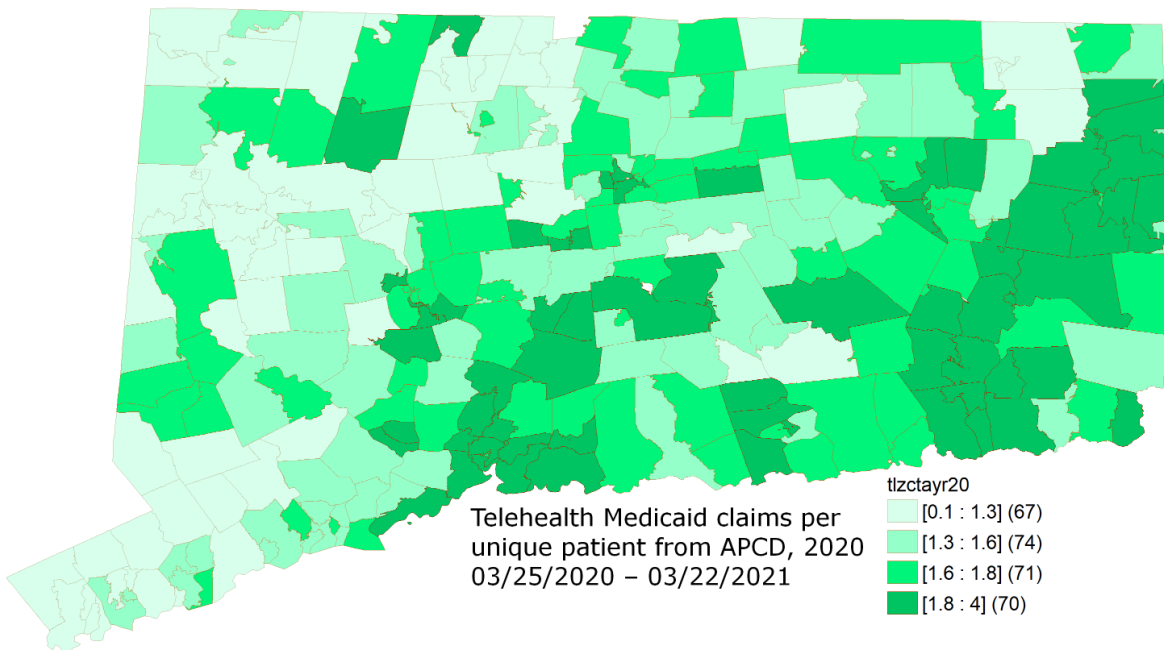

Telehealth Medicaid claims per unique patient from APCD, 2020
03/25/2020 − 03/22/2021

tlzctayr20
[0.1 : 1.3] (67)
[1.3 : 1.6] (74)
[1.6 : 1.8] (71)
[1.8 : 4] (70)

Figure 21: *Number of telehealth claims during Covid per APCD patient, per ZCTA, 2020*

The number of telehealth medical claims attributable to Medicaid per unique patient in the APCD data in 2020 was on average 0.9 (SD = 0.4).
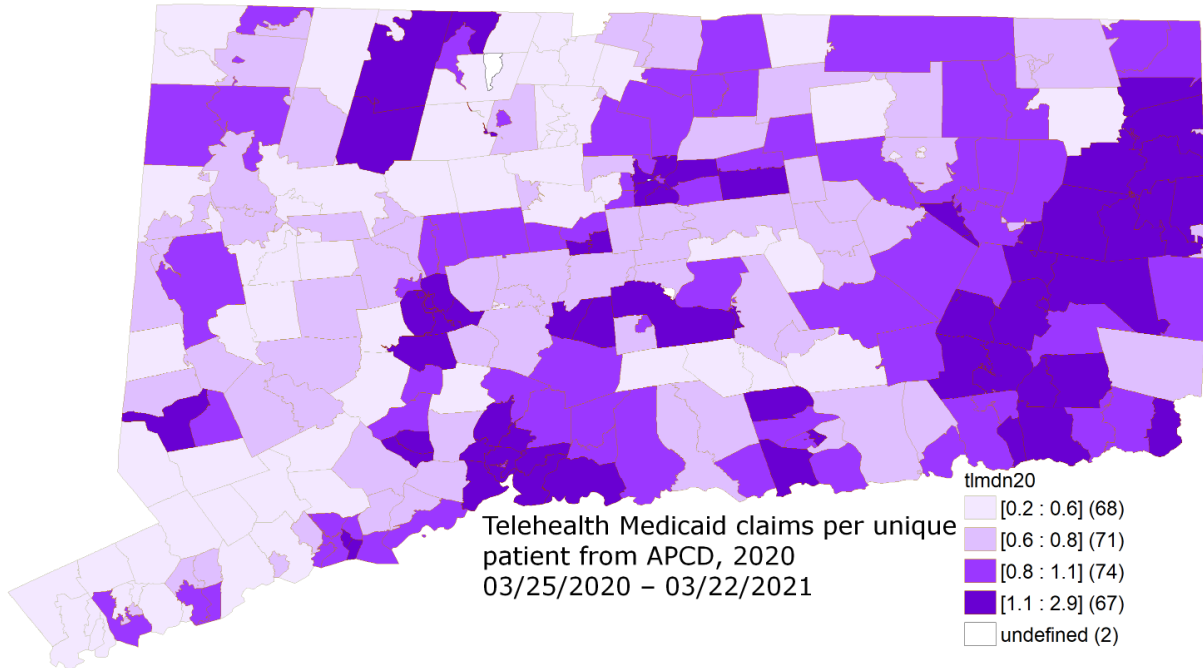

Telehealth Medicaid claims per unique patient from APCD, 2020
03/25/2020 – 03/22/2021

tlmdn20
[0.2 : 0.6] (68)
[0.6 : 0.8] (71)
[0.8 : 1.1] (74)
[1.1 : 2.9] (67)
undefined (2)

Figure 22: *Telehealth Medicaid claims per unique patient from APCD, 2020*

The number of Emergency Room (ER) medical claims per patient in the APCD data in 2020 was 0.6 on average (SD = 1.0).
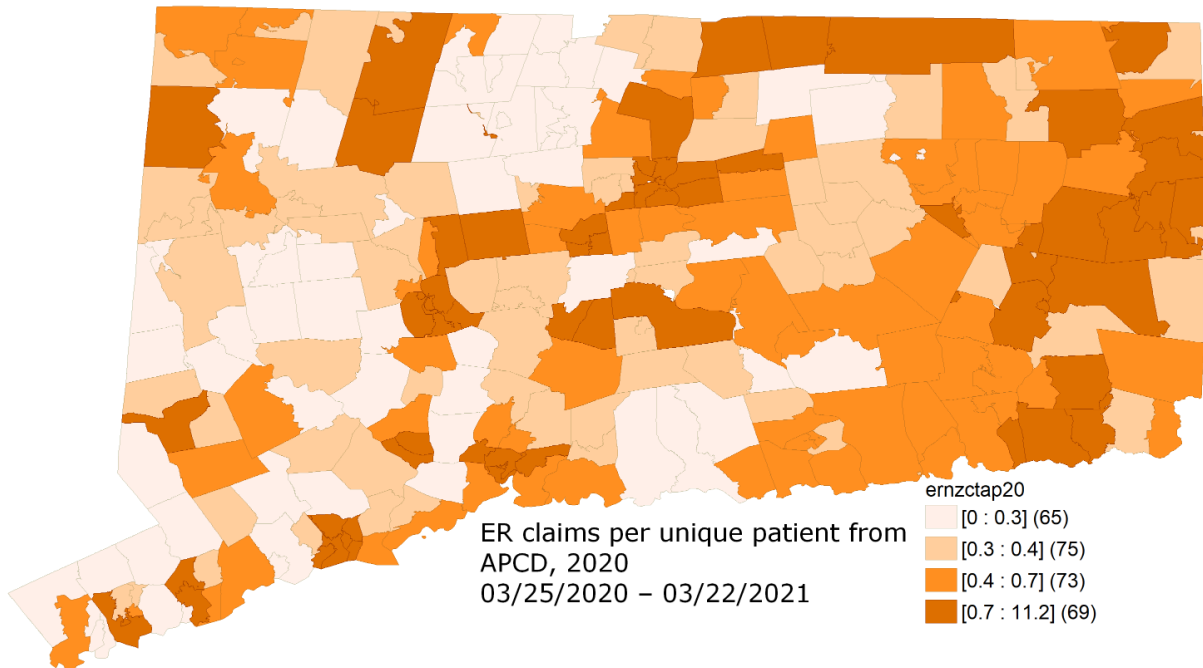

ER claims per unique patient from APCD, 2020
03/25/2020 – 03/22/2021

ernzctap20
[0 : 0.3] (65)
[0.3 : 0.4] (75)
[0.4 : 0.7] (73)
[0.7 : 11.2] (69)

Figure 23: *Emergency Room (ER) claims per unique patient from APCD, 2020*

The number of Medicaid Emergency Room (ER) medical claims per patient in the APCD data in 2020 was 0.3 on average (SD = 0.3).
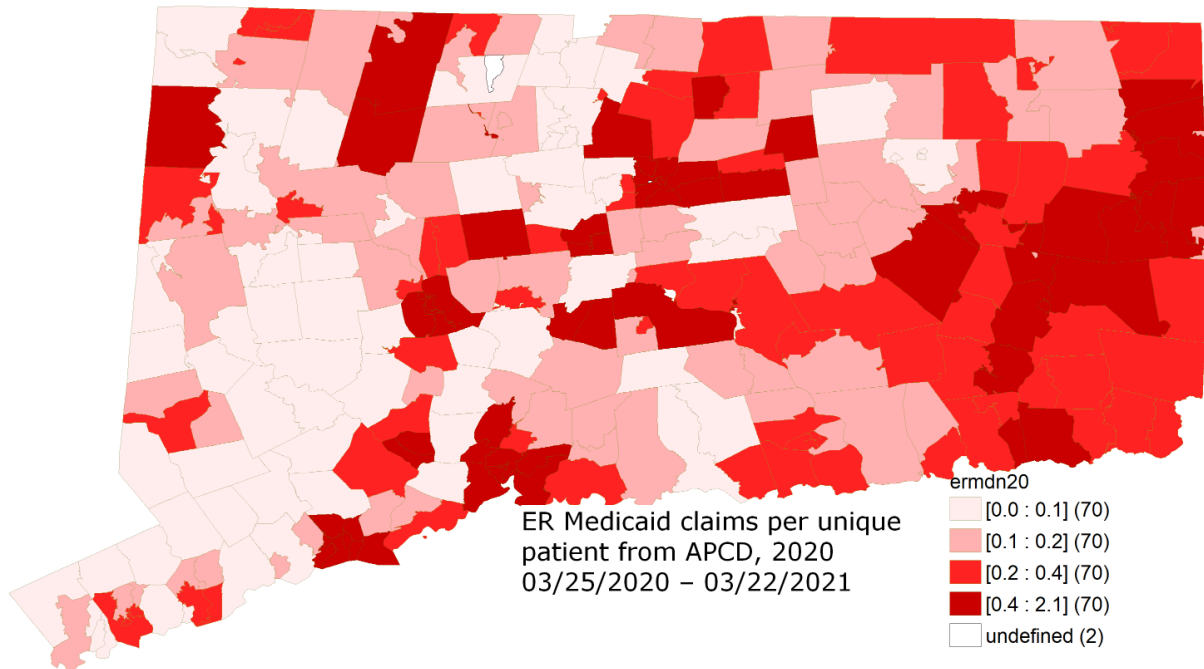

Figure 24: *ER Medicaid claims per unique patient from APCD, 2020*

The average percent of all people without health insurance across the 2017-2021 years (according to Policymap.com) was 4.4% (SD = 5.1%).
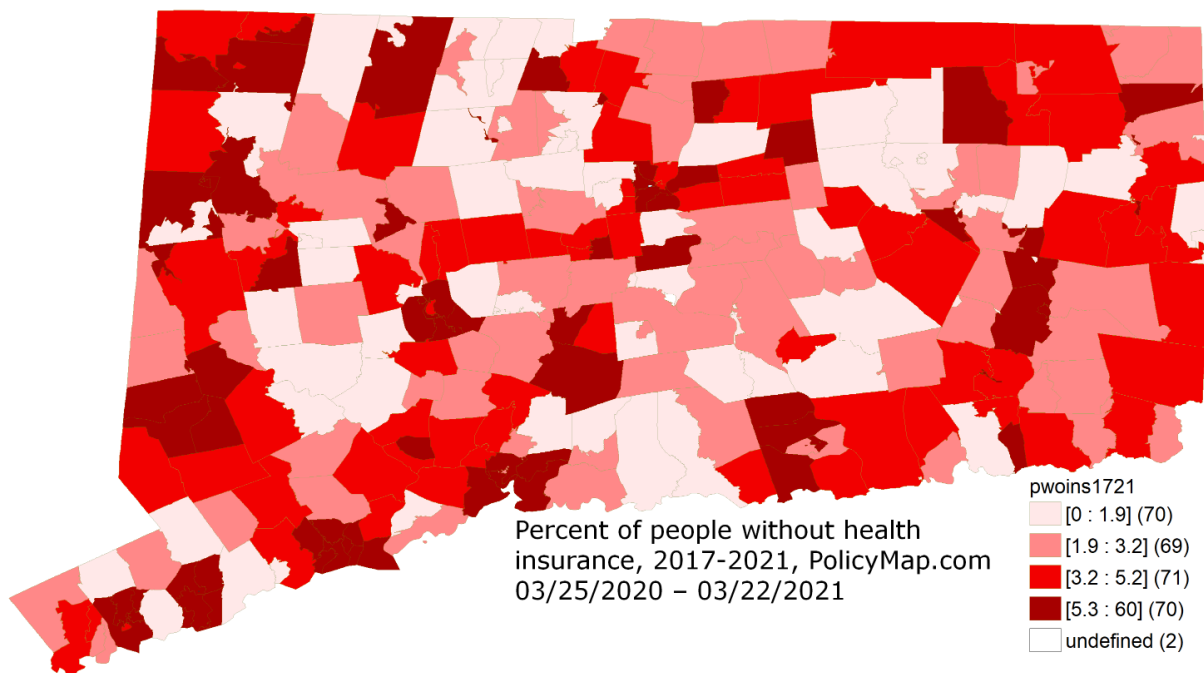

Figure 25: *Percent of all people without health insurance, 2017-2021, Policymap.com*

CONCLUSION/CONSIDERATIONS

The literature review, provider, patient surveys and interviews clearly demonstrated that patients and clinicians widely support telehealth. Telehealth allows for continuity and timeliness of care, addresses issues of access for patients, and permits clinicians to be productive while maintaining a healthy work-life balance. Clinical practices also benefit from telehealth by reducing no-shows and providing flexibility to maximize in-person clinical time. Overall, telehealth has made it much more feasible for clinicians to deliver necessary, high-quality care to patients since the onset of COVID-19 and the Public Health Emergency.

Telehealth has been particularly beneficial to specific populations and fields of medicine. Populations that can often be difficult to reach, including geriatric and older adults, LGBTQ+, and rural communities, were able to take advantage of the flexibilities that come with telehealth. Behavioral health clinicians and patients are especially supportive of telehealth. Telehealth helps reduce the stigma surrounding the treatment of mental health and substance use disorders and can help address the nationwide behavioral health clinician shortage by making better use of their time with a marked reduction in no-show office visits being especially prominent for them.

Although telehealth has strong support from patients and providers, several issues for optimal deployment remain. Barriers like connection to broadband or Wi-Fi continue to be a challenge for many patients throughout the State of Connecticut, making a solid argument for the continuation of payment for audio-only visits and universal access to broadband. Other populations have shared concerns beyond technological issues. Physical limitations, including patient mobility and transportation, lack of privacy in shared spaces, requirements for translation services and clinician licensing, have been identified as barriers to telehealth access.

Providers both in the survey and the interviews made a clear request for the payment and reimbursement for telehealth to continue in the State of Connecticut beyond the Public Health Emergency. Clinicians and patients agree that telehealth does not replace in-person care but instead complements it. Without telehealth payment and reimbursement, many Connecticut residents will go without convenient, high-quality care. Still, telehealth, including its effectiveness, ability for cost savings, and associated health outcomes, should continue to be assessed and measured.

The use of the APCD data for evaluating the time-related usage, costs and geographic trends of telehealth delivery was helpful in developing a cursory description of this data but has much wider

potential for the future if investments are made in the analytics infrastructure, completeness of the data and the expertise needed to develop meaningful reports.

While performing the research for this report the authors identified a number of gaps that if filled would potentially improve the effectiveness, efficiency and quality of healthcare delivery, not just for telehealth, but also for in-person clinical and behavioral health. These can be organized into five categories:

1) There is a gap in knowledge and skill development about best practices for telehealth, including when it is most appropriate to use, how to engage staff and patients ahead of the visit to optimize care and how to best utilize the technology and software tools.

2) There is limited longitudinal data tracking and evaluation at state and national levels to examine trends regarding utilization, costs, who is actually receiving and delivering care as well as more importantly health outcomes. This is hampered in Connecticut by the lack of a full data-set within the APCD, as well as not having a dedicated source of funding, limited expertise and no dedicated analytics infrastructure. There is also no connection to clinical data which could be accomplished by pairing information from the APCD with that available in the state's designated Health Information Exchange.

3) Equitable access to appropriate technology, software, broadband and private space for patients to receive care, while improved somewhat with more frequent ownership of smartphones, remains an issue for many within the state. For those in congregate settings such as nursing facilities, group homes and prisons, this can be compounded by decreased autonomy as well.

4) There remains a need for policy development and clarity regarding long-term payment reform for telehealth and remote patient monitoring and clinician inter-state licensing. This can be tied together with Connecticut's stated goals to increase the primary care workforce, improve health outcomes and facilitate optimal access to care for underserved and marginalized populations.

5) There has been limited coordination across state (and federal) governmental agencies regarding all of the issues above which potentially leads to confusion and missed opportunities to create cross-agency synergy for projects and spending.

The recommendations listed below attempt to address most of these gaps.

RECOMMENDATIONS

Again, the Governor's proposed budget does not support most of the recommendations listed below. OHS could convene the recommended workgroups to develop policy and determine financial and operational impacts which could inform future resource requests for the impacted state agencies.

The data gathered through the literature scan, focus groups, interviews, and surveys have been analyzed and culminated in the following recommendations. The State of Connecticut may consider implementing a selection of these recommendations to improve telehealth and subsequently improve the health of Connecticut residents.

Table 9: Telehealth Recommendation for Connecticut

Recommendations

Practice Recommendations	Creation of a telehealth advisory council, task force, or committee
	Creation of multi- agency, rapid response, state agency task force
Policy Considerations	Fiscal and operational feasibility of continuing payment parity for telehealth and remote patient monitoring
	Funding and evaluation of telehealth pilot testing
	Monitoring of policy, practice, and healthcare outcomes
	Support for training for "best practices" in telehealth
	Expansion of access to telehealth

Practice Recommendations
Creation of a telehealth advisory council, task force, or committee for Office of Health Strategy

This proposed council would make recommendations to the legislature and state agencies regarding the routine use and payment for telehealth and digital care services as the Public Health Emergency ends. The group should be time-limited (2 years), multi-disciplinary, and involve members of both the public and private sectors. This group should be adequately funded and staffed. It could report through the Office of Health Strategy to the legislature or executive branch and register through the Health Information Technology Advisory Council or Healthcare Cabinet of OHS. Members should include state agencies that have a stake in telehealth, including, but not limited to:

- the Departments of Social Services, Public Health, Correction, Mental Health and Addiction Services, Energy and Environmental Protection, Veterans Affairs, Comptroller's Office
- State legislators
- Consumers and patients

- Clinicians from primary, specialty, and behavioral healthcare settings, including those from federally qualified health centers

- the Health Information Exchange (Connie), and

- insurers

Creation of multi-agency rapid response, state agency task force

A rapid response inter-state agency task force is recommended to evaluate the recommendations and findings contained in this report and other upcoming telehealth expansion and funding opportunities. This group would be responsible for assessing opportunities for the State of Connecticut to use state and federal dollars to fund infrastructure, technology, training, and payment for telehealth services and facilitating collaborations across state agencies and policies. As one example, there is potential for pooled funding of mental health agencies, federal opioid addiction treatment funding, and broadband expansion dollars allocated toward a telehealth-enabled Medication Assisted Treatment program. Another example could be pooled funding from the Departments of Education, Mental Health and Addiction Services, Social Services, and others for school-based mental and other healthcare telehealth services (e.g., asthma treatment or obesity treatment) as well as provision of multi-purpose technology tools for home education and telehealth service usage.

Policy Considerations

Fiscal and operational feasibility of continuing payment parity for telehealth and remote patient monitoring.

There should be an evaluation whether Connecticut residents, including Medicaid recipients, state employees and retirees, and privately- insured patients, should continue to have services paid for at the same rate as in-person services for telehealth. This evaluation should include an examination of actual costs to provide services compared to in-person services. Additionally, a value-based payment model may be considered and piloted. This could include a per member per month "telehealth" payment with a specialized group like primary care providers who do telehealth.

Funding and evaluation of telehealth pilot testing

Not only was telehealth found to be convenient for patients and clinicians alike, but, in many cases, telehealth helped clinicians deliver appropriate, high-quality care while saving healthcare dollars. Telehealth may save state/municipal resources and improve access and timeliness to care. In certain circumstances, savings may be realized for Medicaid or other state agencies with a reduced payment

for transportation costs and supervision of patients who are incarcerated, residents of skilled nursing facilities, or patients with physical and mental disabilities in community living arrangements.

Department of Correction facilities should all have a safe, staffed, telehealth-enabled suite for acute care, behavioral health, and routine chronic care, with contracts in place to provide primary, specialty, and mental health services. Specific funding to establish and staff these telehealth suites should be allocated, and a pilot program could be established with one to several institutions within a year. The return on investment in access, timeliness of care, and overall cost should be routinely evaluated.

Skilled nursing facilities should be adequately resourced, and payment methodologies aligned to permit routine telehealth services for post-acute, post-surgical, and chronic care to occur when medically appropriate. This could also reduce the burden on overly taxed staff who might be required to travel with patients to appointments. Pilot programs could be established with dual eligible and/or state-employee/ retiree plans as payors and monitored for healthcare and fiscal outcomes. For any pilot program to be successful, the impact on racial and ethnic disparities and the impact on digital literacy must be addressed.

Monitoring of policy, practice, and healthcare outcomes

A standardized method should be developed to evaluate and monitor the delivery of clinical and costs outcomes associated with changes in policy, satisfaction with, equity, usage, payment, and effectiveness of telehealth and remote patient monitoring services to inform future policy. Data could include those from the all-payer claims database; the health information exchange (Connie); insurers, patient and provider satisfaction surveys; and insurers and government agencies surveys. Funding for this evaluation should be allocated, and a university or contractor should be responsible for this routine evaluation. An annual or bi-annual (every other year) report should be made to the Office of Health Strategy and/or the legislature for at least the next four years or until best practices and standards are firmly established, and any corrective legislative and policy changes have been enacted and studied.

Support for training for "best practices" in telehealth

Training for "best practices" in telehealth should be supported for clinicians, office staff, visiting nurses, patients, patient caregivers, community health workers and others seeking technical assistance. State or

federal program dollars can be allocated to prove telehealth education and therefore reduce the variability in the quality of experience and could help with the process of preparing for telehealth visits.

A training program for clinicians to share best practices could be delivered virtually, and it might be appropriate to add required training to continue to receive payment for telehealth services. Resources to develop such a program can be found through professional organizations such as the American Medical Association, American Association for Family Physicians, American College of Physicians, and American Academy of Pediatrics and could be leveraged for Connecticut's clinician training program.

A training program for patients and their caregivers might be focused on technology-related issues, the appropriateness of telehealth for specific situations, and how to best prepare for the actual telehealth visit. Real-time technical assistance should also be available to patients. If remote patient monitoring is used, tutorials or live technical assistance on uploading data from blood pressure or glucose monitoring devices can be made available. A pilot program to develop and evaluate community-based patient support services to help with technical set-up and equipment supply and usage of remote monitoring tools (e.g., continuous glucose monitors and blood pressure cuffs) may be beneficial to telehealth patients in CT. Payment options for community health workers, visiting nurses, and other health professionals to help set up and facilitate in-home telehealth services for the elderly or patients with disabilities should be considered.

Expansion of access to telehealth

Continuation of payment for telehealth services alone will not entirely eliminate barriers to access, and other challenges to access should be explored. Ubiquitous broadband coverage throughout Connecticut is essential but insufficient to facilitate patient access. Affordable options for high-speed internet connections are needed for low-income or under-resourced patients. Access through a process such as a voucher or prior approval for devices could be made available to patients through their healthcare provider as a service for the most seriously in need patients. Low-cost and easy-to-use technology (i.e., smartphone or tablet) for connections should also be available for telehealth and remote monitoring programs.

Standardized group purchasing programs for technology and tools for patients and clinicians should be considered. This would reduce the time, cost, complexity, and variability of establishing or updating a telehealth program for clinicians. This would also address a barrier for patients who lack the technology, equipment, internet, or telephone capabilities needed to receive telehealth services.

A safe, secure, technology-enabled space to receive telehealth care should be established. These spaces could be set up in public libraries, community health centers, primary care offices, senior centers, college campuses, or other appropriate areas. There could be a schedule for usage and onsite support for technology tools and connections. Funding to establish these locations could be via pilot funds, competitive grants, or other means with concomitant dollars set aside to evaluate their effectiveness.

The expansion of inter-state licensing should also be explored. Interstate compacts address issues of clinician shortages and service timeliness. Connecticut already participates in the Interstate Medical Licensing Compact and the Psychology Interjurisdictional Compact. Joining other interstate compacts for other professionals may quicken licensing processes for CT clinicians, allow clinicians to practice in multiple states, and expand patient treatment access. Considerations should be given to licensure portability, appropriate oversight for out-of-state providers and use of flexible reciprocity to waive out-of-state providers into a CT license.

Conclusion of the National Public Health Emergency Declaration

Thought should also be given to the implications of the ending of the National Public Health Emergency Declaration, set to expire in May 2023. The consequences of this change on federal and subsequent state policies are yet unknown but may have significant impacts.

Appendices

Appendix A: Clinician Survey Questions

1. Are you a healthcare provider currently caring for patients in the State of Connecticut?

2. Since the start of the COVID-19 pandemic, have you conducted any patient visits via telemedicine (i.e., virtual patient encounters conducted in real-time via an audiovisual platform or by telephone/audio only)?

3. What type of provider are you?

4. Which of the following best describes your main practice?

5. What race best describes you?

6. Are you of Hispanic, Latino/a, or Spanish origin?

7. Gender: How do you identify?

8. What is your age?

9. How long have you been in practice?

10. How many TOTAL patient visits were you averaging per week (both in-person and telehealth)?

11. Approximately what percent of telehealth visits were you averaging per week during the following periods: Prior to COVID, Peak of COVID, and Currently?

12. How do you anticipate the number of telehealth visits you conduct to change in the next year?

13. What types of visits do you currently offer your patients through telehealth? Check all that apply.

14. Do you receive adequate reimbursement for these types of services?

15. How do you think your use of telehealth impacted the following in your practice?

    a. Health of my patients

    b. Safety of my patients

    c. Timeliness of care for my patients

    d. Perceived overall patient experience

    e. Equity in health outcomes of my patients

    f. Sense of accomplishment from my work

    g. Feeling connected to patients

    h. Continuity of care

16. To what extent do you CURRENTLY agree or disagree with the following statements:

    a. Telehealth is helping deliver high-quality care to my patients.

    b. It was easy to implement telehealth in my practice.

    c. It was easy to learn to use telehealth in my practice.

    d. My patients prefer telehealth visits to office visits.

    e.   I prefer telehealth visits to office visits.

    f.   Telehealth allows me to provide the same or better quality of care as office visits.

    g.   My patients are able to schedule telehealth appointments easily and efficiently.

    h.   The use of telehealth has decreased my number of patient appointment no-shows.

17. Approximately what percentage of your telehealth visits are CURRENTLY conducted using:

    a.   Live audio-visual interactive visits

    b.   Telephone/audio-only visits

    c.   Asynchronous telehealth

    d.   Remote patient monitoring of a patient

    e.   Other

18. Which method do you CURRENTLY prefer for conducting telehealth visits?

19. Where do you conduct telehealth visits? Check all that apply.

20. Currently, which location do you use most frequently?

21. Do you ever use a personal device (laptop, smartphone, tablet, etc.) to conduct telehealth visits?

22. How frequently do you use a personal device to conduct telehealth visits?

23. Do you have adequate technology to provide care to your patients?

24. Would you or your practice benefit from a group purchasing plan (for equipment, telehealth platforms, etc.)?

25. How do you currently measure the value of telehealth in your practice or organization?

26. Are you able to access your telehealth technology directly from Electronic Health Record?

27. Would you use this capability if available to you?

28. Which platform(s) do you use to deliver telehealth services? Select all that apply.

29. In the past 6 months, how frequently have you or your patients encountered the following technical issues during telehealth visits?

    a.   Audio or video not working at all

    b.   Audio or video stopped working in the middle of the visit

    c.   Audio or video working but inadequate quality for what the patient or I needed

    d.   Had problems connecting to the telehealth service

    e.   Other (specify)

30. Certain patient populations may have additional barriers and difficulties in using telemedicine to receive care. Please rate your perceived difficulty for the patient populations below regarding their ability to successfully engage in telehealth visits in the past 6 months.

a. Patients with low literacy

b. Patients with low health literacy

c. Non-English-speaking patients/patients requiring an interpreter

d. Patients experiencing homelessness

e. Patients with mental or behavior health problems

f. Patients with hearing impairments

g. Patients with vision impairments

h. Patients with other physical disabilities

i. Patients with intellectual disabilities

j. Elderly patients

k. Pediatric patients

l. Adolescent patients

31. What features could a telemedicine platform incorporate to better cater to the needs of patients with the above characteristics?

32. In the past 6 months, which of these potential challenges/barriers have YOU experienced while providing telehealth services?

a. Low or no reimbursement

b. Rollback of COVID-19 waivers, coverage and payment policies

c. Interstate licensing issues for patients currently living out of state

d. Personal technology challenges (poor office Wi-Fi, system crashes, etc.)

e. Communication challenges with my patient population (i.e., establishing rapport, difficulty interpreting nonverbal cues)

f. Integration with HER

g. Inability to perform a physical exam

h. Inability to perform point of care testing

i. Low patient engagement

j. Lack of implementation support

k. Cost of implementing or maintaining a telehealth platform

l. Other

33. In the past 6 months, how frequently have YOUR PATIENTS experienced the following challenges/barriers while using telehealth services?

a. Lack of access to technology

b. Low digital literacy

c. Lack of internet/Wi-Fi access

d. Patient preference for in-person office visits

e. Lack of understanding of telehealth insurance coverage

f. Lack of understanding of telehealth offerings

g. Lack of privacy during appointment

h. Lack of insurance

i. Lack of access to language/interpretation services

j. Other

34. Which of the below would support improved telehealth-specific workflows? Select all that apply.

35. Optional: Please use this space to provide any other advice, insight, or anecdotes about your experiences with telemedicine. What features would make it easier for you to conduct visits via telemedicine?

Appendix B: Patient Survey Questions

1. Have you received telehealth services from a Connecticut healthcare provider since the onset of COVID-19?

2. Are you at least 18 years of age?

3. What type of care have you received through telehealth since the onset of COVID-19 (March 2020)?

4. What types of visits have you used telehealth for? Check all that apply.

5. Overall, how satisfied are you with the telehealth services you've received?

6. How confident are you in your clinician's ability to address your needs in a telehealth visit as effectively as an in-person visit?

7. In the past 6 months, have you experienced any of the following barriers or challenges while using telehealth?

   a. Difficulty paying for services

   b. Lack of insurance or problems with insurance

   c. Lack of reliable technology i.e., poor cell service or Wi-Fi, system crashes, old cell phone, etc.

   d. Difficulty understanding how to use the technology to connect to your provider

   e. Difficulty communicating with your provider

   f. Difficulty finding a suitable provider

   g. Difficulty scheduling a visit

   h. Limited or lack of privacy during a telehealth visit

8. Have you experienced any other challenge or barrier related to telehealth visits?

9. Please share the challenges and barriers you have experienced.

10. Compared to in-person visits, how do AUDIO-ONLY (i.e., phone calls) visits rate in the following areas:

    a. Getting your questions answered

    b. Examination of your body/area of concern

    c. Understanding medical terminology and explanations

    d. Being able to follow up with clinician recommended next steps

    e. Preserving records of the encounter for yourself

    f. Gathering information, obtaining forms and filling out forms

    g. Following up on a lab test result

11. Compared to in-person visits, how do AUDIO-VISUAL (i.e., video chats) visits rate in the following areas:

a. Getting your questions answered

b. Examination of your body/area of concern

c. Understanding medical terminology and explanations

d. Being able to follow up with clinician recommended next steps

e. Preserving records of the encounter for yourself

f. Gathering information, obtaining forms and filling out forms

g. Following up on a lab test result

12. How likely will you be to continue using telehealth or other virtual care options after the COVID-19 pandemic ends?

13. During the PEAK of COVID-19, would you have preferred to attend visits for your physical health in person?

14. Please share the reasons why you would prefer an in-person visit.

15. In which locations have you received telehealthcare? Select all that apply.

16. When compared to in-person visits, how would you describe what you had to pay for telehealth service (copays) in the past 6 months?

17. What would make telehealth easier for you? Check all that apply.

18. In the last 12 months, did you have difficulty paying your household bills?

19. How many months could you manage financially if you lost your source of income?

20. Do you currently have any medical debt?

21. If an unexpected expense happened today, how much would you be able to pay in cash?

22. What is your age?

23. What race best describes you?

24. Are you of Hispanic, Latino/a or Spanish origin?

25. Gender: How do you identify?

26. Please indicate the term that BEST describes your sexual orientation. We understand that people identify themselves in various ways, but please do your best to indicate which term most accurately reflects your sexual orientation.

27. What is your highest level of education?

28. What is your main work status?

29. What type of insurance do you have? Select all that apply.

30. What is your US zip code?

Appendix C: Clinician and Administrator Key Informant Interview and Focus Group Facilitator Guide

1. What are your overall thoughts about telehealth? These can be positive, negative, fears, or worries. Please share whatever you are feeling.

2. What has your experience using telehealth been like thus far? This can be a specific occurrence you've had with a patient or a perception of telehealth infrastructure's programmatic and administrative side.

3. How has telehealth impacted your practice or the healthcare organization where you work? This can be related to revenue, morale, work-life, etc.

4. What do you consider a barrier or challenge for yourself as a healthcare professional to using telehealth services? What about your patients?

5. What do you consider an advantage or benefit of using telehealth services as a healthcare professional? What about your patients?

6. Do you feel you can address your patients' needs via telehealth as effectively as an in-person visit?

7. Based on your telehealth experiences, what can healthcare systems do to improve your telehealth experience moving forward?

8. Given the option, would you continue providing telehealth services after the COVID-19 pandemic? Why or why not?

9. What recommendations would you suggest to Medicaid or the legislature to improve telehealth?

10. Are there any final questions or comments about telehealth?

Appendix D: Clinician and Administrator Key Informant Interview and Focus Group Facilitator Guide Quotes

Theme	Quote
Telehealth has value in the healthcare system	• "My no-show rates have become far, far, far fewer since I've added the ability to fall back to a zoom call." *- Ryan, 42-year-old Asian man; physician, specialty: psychiatry; solo and multi-group practices* • "I didn't even realize this until I started my telehealth practice; what a relief it is for me because in the mental health field there are patients who aren't yet stabilized in their addiction. I was just a solo practitioner up on the second floor in a small building, and half the time there was nobody but me and the patient in the building. I suppose there was always a potential for something bad to happen." *- John, 63-year-old White man; physician, specialty: addiction medicine; physician's office, solo practice*
There is a time and a place for telehealth	• "People should have a right to choose what they want, and it shouldn't be a provider decision in any way. If we can create a member-driving or patient-driven way of doing it, they can try and decide what's best for them." *- Mark, 39-year-old White man; State agency administrator, trained as a physician* • "The other thing I now get that I can't get in the clinic is I now know what the real home environment is like... it's given me an incredible amount of insight in terms of what the home is like, how the parents are interacting with their child...I have actually seen it to be an advantage" *- Frank, 70-year-old White man; physician, specialty: pediatrics neonatology, teaching hospital* • "Being in the office setting can often be intimidating, especially to some of our teenage patients." *- Susan, 58-year-old White woman; nurse midwife, physician's office, single specialty group practice*

Telehealth expands access to healthcare	• "The barriers are a lot less now than they were a year and ½ ago, as this is becoming more commonplace." *- Scott, 56-year-old White man; physician, specialty: internal medicine, physician's office single-specialty group practice* • "The biggest barrier is laws that don't allow them to be across borders…that becomes a whole secondary source of stress and there's just not enough access." *- Ryan, 42-year-old Asian man; physician, specialty: psychiatry; solo and multi-group practices*
Telehealth can be used effectively by various specialties	• "In the vast majority of situations, a telephone visit does just as well… in terms of the kind of business that I need to take care of in terms of getting a history and reviewing the patients' medications; and if they were hospitalized, and what kind of care they're receiving" *- Paul, 66-year-old White man; physician, specialty: geriatrics, physician's office, single specialty group practice* • "I think that behavioral health, psychiatry and psychology work very well in telehealth because we have less of a need to lay our hands on the patient at every visit. Psychiatric assessments and psychotherapy can very well be conducted virtually." *- Jaya, 42-year-old Asian woman; physician, specialty: psychiatry, teaching hospital*
Telehealth visits should be appropriately reimbursed	• "People really want telehealth to stay… audio-only is really important, especially for Medicaid members" *- Mark, 39-year-old White man, State agency administrator, trained as physician* • "I would fiercely advocate against contraction of payment or reduction in payment. That is going to force clinics to say we don't do telehealth because they can't afford some other form of intensely truncated reimbursement….it seems like there's no parity there… Making sure that reimbursement is equivalent is an essential piece to this because clinicians' hands will be tied." *- Ryan, 42-year-old Asian man; physician, specialty: psychiatry; solo and multi-group practices*
Support for telehealth is needed	• "Resources are king…equipment like a telehealth suite or telehealth room in each [correctional] facility…some

	support equipment would be dynamite…and more people to manage the telehealth." *- Greg, 55-year-old man, race not disclosed;* *State agency administrator, trained as a physician* • "Education, training and patient support, I think that would be extremely helpful" *- Jaya, 42-year-old Asian woman; physician, specialty: psychiatry, teaching hospital* • "I would like to see a little more effective teaching around video visits. A resource center to educate staff and patients on what ways we can use telehealth." *- Ashley, 29-year-old White woman; physician assistant, specialty: family medicine, Federally Qualified Health Center*

Appendix E: Patient Focus Group Facilitator Guide

1. Many telehealth modalities exist including phone visits and video chat visits via a computer or another personal device. What type of telehealth modalities have you used? Please share your experiences and opinions about the modalities you have used.

2. There are other ways to communicate with your provider, and I will ask you a few questions about them. For example, you may have used MyChart, MyCare or other online portals to communicate with your provider. Or you may have remotely uploaded health data to your doctor's online platform from a medical device you wear at home such as a glucometer, home blood pressure cuff, oximeter, or another device. How do these types of communications with your doctor impact your care? Or if you haven't used these, how would they change or not change the care you receive?

3. Which telehealth modalities that you've used did you feel most comfortable with and why?

4. How did the quality of care you received via telehealth compare to in-person visits?

5. How has telehealth affected your patient/provider relationship? Name the type of telehealth you are referring to first.

6. How has telehealth impacted your comfort level in sharing private and/or confidential information with your provider? Name the type of telehealth you are referring to first.

7. Which healthcare services (if any) would you prefer to do via telehealth? And why?

8. Which healthcare services (if any) would you prefer to do in person? And why?

9. What sort of obstacles (if any) have you encountered when it comes to telehealth? Name the type of telehealth you are referring to first.

10. What sort of obstacles (if any) have you encountered when it comes to receiving care in person?

11. What do you like most (if anything) about getting care via telehealth? Name the type of telehealth you are referring to first.

12. What is your biggest concern when it comes to receiving care through telehealth? Name the type of telehealth you are referring to first.

13. Based on your experiences, what suggestions do you have for improving telehealthcare, i.e., making it easier to use? Name the type of telehealth you are referring to first.

14. Tell me about any circumstances where telehealth allowed you to have care that might have otherwise been difficult to obtain. For example, a preferred provider was too far away,

telehealth allowed you to get an earlier appointment, telehealth allowed you to receive care when the clinic was closed due to COVID-19, etc.

15. Would you continue to use telehealth services if it was offered by your provider? Why or why not? Name the type of telehealth you are referring to first.

16. How does your telehealth experience now compare to the experience you had in the beginning of the pandemic? What if anything is different?

Appendix F: Patient Focus Group Quotes

Theme	Example
Patients feel comfortable with telehealth and often prefer it	"Honestly, I usually feel more comfortable with it. Just because I'm in my own room, so I can control a lot more about my environment. I know where the tissues are, and I know where water is...especially for therapy, which can get intense. Emotionally, it's nice to be in my own space. And also, not have to worry about driving back afterward. Because driving right after you've cried for an hour is not fun. So yeah, I really like it. I like the video aspect. There are some days where I wish I were just like doing a phone call." *- Victoria, 21-year-old White woman*
The quality of care did not decline with telehealth	"I was using the same provider. So, this was my general practitioner. I didn't feel that there was any difference in quality." *- Marissa, 66-year-old White woman*
Telehealth maintains or improves patient-provider relationships	"For me, it's affected it positively… with telehealth I guess it's been easier for me to communicate with a healthcare provider." *- Jada, 26-year-old Black woman*
Patients prefer telehealth for behavioral health and medication management services	"I definitely prefer to do my therapy [over] telehealth. And that's for a variety of reasons. The main one is an access issue. You know, I'm a person with a lot of very specific, like mental health concerns. And therefore, it is difficult and has been difficult for me in the past to find a therapist that I find gives me a type of care that is helpful to me while still staying within a range that I want to travel. Also, finding the time within my day to not only fit in the therapy session or psychiatry visit but getting there via car or public transit. And being able to choose from any provider in Connecticut has been immensely helpful." *- Liam, 19-year-old, White transman*
Telehealth barriers for patients include technology, space, finances and provider licensing	"I had a fantastic therapist, but her connections sucked and were so bad. Granted, mine [Wi-Fi] was bad at home, too, but sometimes she talked for like two minutes. And I wouldn't hear a word because it would just be a frozen screen and her not saying anything. So, the actual quality of what I was getting was perfectly fine, but in terms of receiving it, it can be difficult with telehealth." *- Heather, 19-year-old White woman*
Patients found in-person care to have more drawbacks relative to telehealth	[discussing barriers to in-person care] "The very first one is fear of intimidation, you know, most times, and what I face while I am alive is, is the fact that there is racism in the United States." *- Andre, 34-year-old Black man*

Suggestions for telehealth improvement include access to training, a universal platform, and culturally competent and user-friendly interfaces	[discussing online portals & booking appointments] "I feel like most of the portals don't--- they're initially in English, and they're not going to first thing ask what is your preferred language, and then filter you towards providers that can meet that…So sometimes you'll try to schedule with a provider, and they do not speak the language that you're trying to speak. So, I feel like if that was structured more that way, where it was built into part of the process and could filter people appropriately, it would open a lot of doorways for people." *- Mercedes, 38-year-old Hispanic woman*

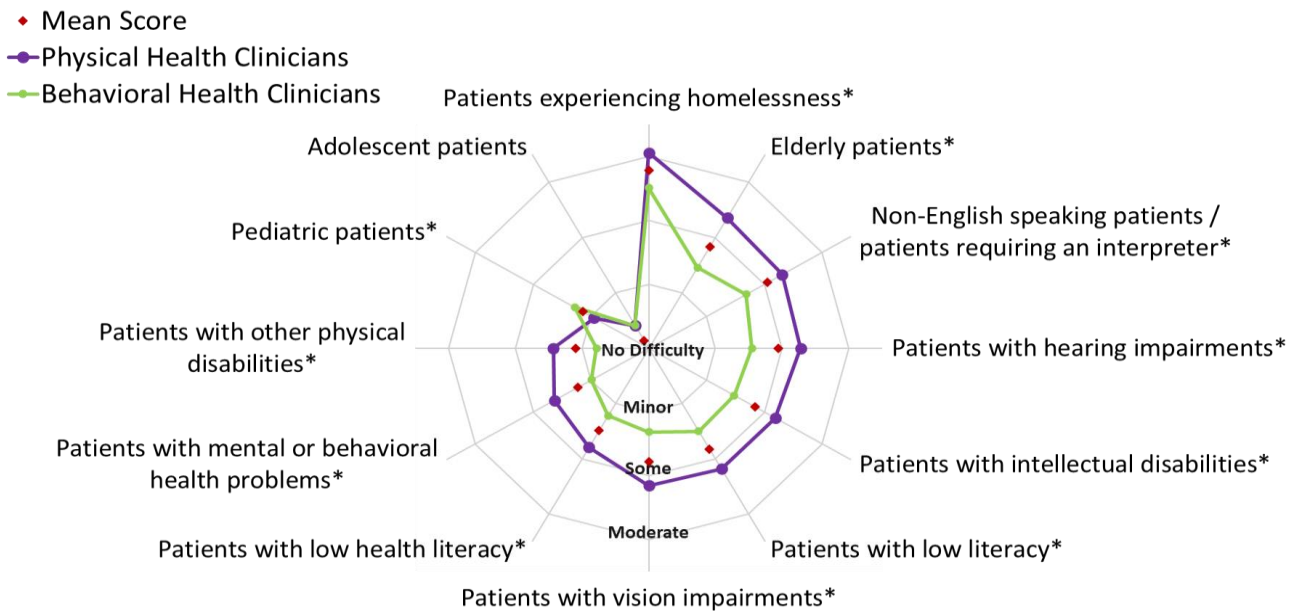## Appendix G: Patient and Provider Barriers

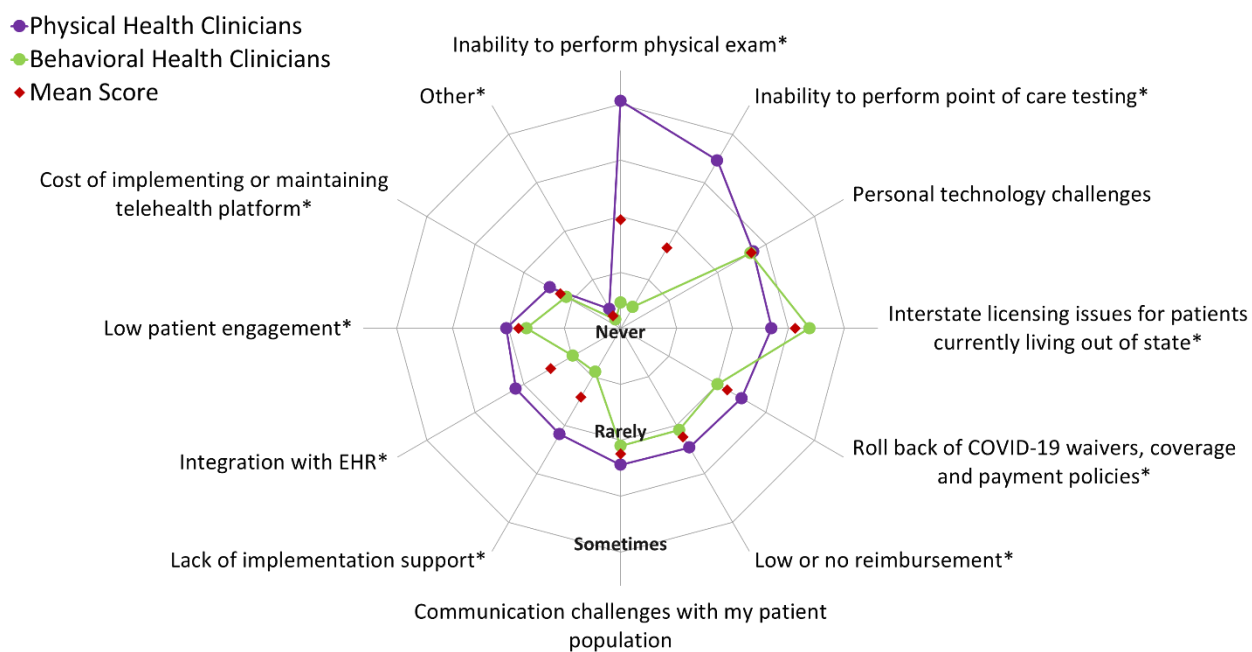*Figure 10: Perceived Patient Level of Difficulty with Telehealth by Clinician Type*

Figure 11: Clinician Barriers with Telehealth by Clinician Type