

THE CLASS OF 1964 POLICY RESEARCH SHOP **TELEHEALTH AND HOUSING INSECURITY IN THE UPPER VALLEY**



PRESENTED TO UPPER VALLEY HAVEN

Michael Redmond, Executive Director

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EXECUTIVE SUMMARY

This study seeks to answer the question, “How can we optimize the delivery of telehealth to improve the health of people experiencing homelessness (PEH) in the Upper Valley?” The question is presented by the Upper Valley Haven’s (UVH) Executive Director Michael Redmond as part of the organization’s Rural Health Equity Grant funded by the Centers for Disease Control and Prevention. The literature on telehealth portrays it as a promising mode of healthcare delivery, especially in rural areas, where clients often face large burdens related to transportation and inadequate access to specialized care. This study addresses a lack of evidence about the accessibility and quality of telehealth for PEH in rural areas and examines the experiences of telehealth providers and beneficiaries in the Upper Valley.

The research team conducted and analyzed interviews with 15 individuals representing 11 healthcare and social service providers in the Upper Valley. Almost all had little or no experience providing services via telehealth before the institution of restrictions related to the COVID-19 pandemic in the Upper Valley. At the time of the interviews—late 2022 and early 2023—most organizations had shifted to a hybrid of in-person and remote service delivery. Some findings from this analysis are consistent with the literature on the impacts of telehealth on access to healthcare. For example, reduced transportation burden was widely cited as a beneficial impact of telehealth, especially for PEH. Healthcare providers also described mental health services as activities well-suited to the telehealth format. Telehealth has also alleviated barriers to accessing healthcare, including stigma associated with medical conditions and treatments. However, PEH in the Upper Valley face several obstacles to obtaining access to healthcare via telehealth. These include a lack of access to necessary technology, technological literacy, and confidential spaces, as well as mistrust in communication technology. Providers also described activities they found ill-suited to telehealth, such as initial visits (many of which involve complex medical and legal paperwork) and treatments that involve physically bringing clients into their communities. During the period of strict pandemic-related restrictions, organizations in the Upper Valley implemented supports to combat these barriers, including the provision of internet devices and, in some cases, wireless hotspots, as well as the designation of physical spaces for confidential visits and the use of workflows in which nurses assisted clients with examinations and technological issues in-person.

Four primary insights can be drawn from this study: (1) comprehensive assistance with technology—which comprises assurance of a device, a connection, and technological literacy—is essential to ensuring access to telehealth; (2) effective telehealth visits require clients to trust both the confidentiality of secure communication technology and the relevant health system or system. Some interviewees commented that clients experiencing homelessness and housing insecurity often found trust in one or either to be a barrier to accessing care; (3) safe, confidential spaces in which to take telehealth visits are essential for open communication between clients and providers, and often not available for PEH; and (4) in-person assistance—including assistance with technology and physical examination—from nurses during telehealth visits is often necessary to ensure the quality of telehealth visits. These insights may serve to guide programs seeking to optimize the delivery of telehealth services for PEH in the Upper Valley. Future studies should obtain and analyze data on the personal experiences of PEH in the Upper Valley with respect to telehealth. These would engender a more comprehensive evaluation of telehealth services in the region and steps necessary to optimize them.

1 INTRODUCTION

The Upper Valley community is a collection of rural towns along the border between central Vermont and New Hampshire. Like other rural communities across the country, the Upper Valley struggles with prevalent homelessness and housing insecurity.¹ People experiencing homelessness (PEH) in the region experience many challenges in finding secure housing and accessing physical and mental healthcare services. Homelessness is a social determinant of health, a non-medical factor that is associated with outcomes and risks related to health, daily function, and quality of life for members of a demographic.² As the Upper Valley emerges from a period of restrictions related to the COVID-19 pandemic, telehealth technology has promised a platform that expands access to high-quality, affordable care.

Upper Valley Haven, the largest shelter for PEH in the region, commissioned the student research team at Dartmouth College to study the experiences of PEH accessing healthcare via telehealth. This research brief analyzes the experiences of local medical and social service institutions in providing services to PEH in the Upper Valley and offers insights on the optimization of telehealth delivery for this population.

2 PURPOSE AND APPROACH

The onset of the COVID-19 pandemic forced individuals to reorient interpersonal interactions and relationships, including those with healthcare providers. Telehealth has allowed specialists and generalists to connect with those seeking urgent and primary care while adhering to guidelines for social distancing. PEH frequently lack transportation and time availability, and telehealth provides a potential path to effective, accessible care even in the post-pandemic era. This report will specifically address the experiences of PEH in the Upper Valley (hereafter referred to as the “target population”) using telehealth.

The research team will adopt a three-pronged conceptual framework in approaching the research question. First, the research team will look at access to telehealth by the target population, identifying technological (e.g., access to video conferencing), physical (i.e., access to tablets), and human (e.g., technological support staff) infrastructure constraints. Next, the research team will examine access to care, studying the limitations and strengths of telehealth with respect to treatments and types of care. Lastly, the research team will seek to understand the PEH experience with care via telehealth, determining levels of satisfaction with care.

3 BACKGROUND

Previous studies that examine unstably housed groups and interview telehealth providers generally portray telehealth as an effective means of reducing barriers to healthcare. However, there are limited studies of rural, shelter-housed PEH and their use of telehealth services. This study seeks to bridge the gap between an existing understanding of the general lived experiences and health data of rural PEH and their experiences accessing care through telehealth.

3.1 PEH IN THE UPPER VALLEY

Homelessness is a relative condition defined by community norms and standards of living.³ Rural homelessness, like that in Northern New England, distinguishes itself from urban homelessness.⁴ Some studies include in statistics about homelessness couch surfers or persons living in cars; others track only persons living on the streets.⁵ Because of seasonal changes in weather, estimated counts of PEH in the Upper Valley vary by time of year.⁶ In January 2018 and 2019, Windsor County, VT reported 125 and 91 PEH, respectively.⁷ In September 2019, Grafton County, NH counted 115 PEH.⁸ Despite limited data on the precise number of PEH in the Upper Valley, significant demand for services indicates housing difficulties in the region.⁹ UVH, located in White River Junction, VT, serves as the region's primary shelter for PEH.¹⁰ On average, emergency shelters serve more than 700 people each night in New Hampshire.¹¹ The Upper Valley exhibits a robust healthcare system, combining the expertise of Dartmouth-Hitchcock Regional Medical Center/Dartmouth Health (DHMC) in Lebanon, NH and the VA Medical Center in White River Junction, VT with the outreach of smaller clinics and centers.¹² Internet is accessible in public libraries, coffee shops, and shelters, and PEH temporarily residing in the Upper Valley Haven reportedly have at least intermittent access to smartphones.¹³

3.2 HEALTH FOR PEH

Homelessness exacerbates existing health issues, creates new ones, and makes chronic conditions more difficult to treat and prevent.¹⁴ Rates of chronic and acute physical illnesses are higher among PEH relative to the general population.¹⁵ PEH are more likely to visit the hospital or a clinic than adults of all socioeconomic statuses who have housing.¹⁶ PEH are also more likely to experience challenges related to mental and physical health.¹⁷ PEH tend to delay care until symptoms become severe because they prioritize other concerns. Many seek out care in the emergency room instead of other clinical environments. PEH face unique physiological and emotional stressors, leading to less self-confidence and greater emotional distress relative to the general population. One in three PEH in the United States has an untreated psychiatric illness.¹⁸ In New Hampshire, where the count of PEH suffering from mental illness is unavailable, the general population still reports more poor mental health days than the national average.¹⁹ Furthermore, young persons in New Hampshire are at high risk for substance misuse, another prevalent cause of homelessness that requires comprehensive treatment.²⁰ The 2018 Community Health Needs Survey conducted by DHMC found that the Upper Valley community most needed “access to mental health care services, [and the] prevention of substance misuse and addiction.”²¹

3.3 NATIONAL AND STATE POLICY

The federal government and the Vermont and New Hampshire state governments coordinate several schemes to address homelessness. In 2021, the U.S. Departments of Housing and Urban Development (HUD) and Health and Human Services (HHS) provided almost \$7.2 billion in homelessness-related funding to local organizations throughout the country.²² HUD currently administers two major programs, the Emergency Solutions Grant (ESG) and the Continuum of Care (CoC) scheme, to alleviate homelessness.²³

Medicaid is another critical enabler of healthcare for people experiencing housing insecurity. Nationally, 51 percent of patients in Health Care for the Homeless (HCH) health centers receive their

health coverage through Medicaid.²⁴ However, over 63 percent of PEH are uninsured.²⁵ There has been a federal effort to expand Medicaid coverage to telehealth services for chronic conditions.²⁶ This action is critical because affordable, early interventions can decrease the morbidity and mortality for patients with chronic cardiovascular conditions.²⁷ All states cover teleradiology, 49 cover telemental health, and 36 cover various home-based telehealth services.²⁸ Medicaid coverage in New Hampshire, however, is relatively more restrictive. The state’s program reimburses only some medical services provided over live video, and only with certain types of healthcare providers, locations, and patients in healthcare shortage areas.²⁹ DHMC finds that many members of the Upper Valley community need affordable health insurance.³⁰ State-level responses to this need vary significantly between Vermont and New Hampshire. A combination of federal grants and state income taxes pay for public and subsidized housing. In New Hampshire, the state spent over \$2 million on programs relating to homelessness in 2020.³¹

3.4 TELEHEALTH

The onset of the COVID-19 pandemic altered public engagement with healthcare services, especially in rural communities like the Upper Valley. Public health measures restricted patient and provider mobility, hindering the provision of in-person medical services. In many cases, health services pivoted to virtual mediums, collectively referred to as telehealth. Also known as telemedicine, telehealth is the “use of medical information that is exchanged from one site to another through electronic communication to improve a patient’s health.”³² Telehealth comprises a method of connecting patients with healthcare providers when in-person care is unnecessary or untenable and can comprise any of the following elements:

- Virtual visits: A patient and a healthcare provider communicate via live and synchronous means—usually video, telephone, or live chat.
- Chat-based interactions: Asynchronous online or mobile app communications transmit patient data to providers, who return diagnoses or treatment plans later.
- Remote patient monitoring: Patient data are remotely collected, evaluated, and communicated with healthcare providers through wearable or portable health technologies.
- Technology-enabled modalities: Telehealth and virtual care solutions provide other derivative services, including drug therapies and disease prevention and management.

At the national scale, telehealth was already widely used among healthcare providers. In 2016, HHS estimated that more than 60 percent of all healthcare institutions and 40-50 percent of all U.S. hospitals used some form of telehealth technology.³³ Numerous specialty fields, including emergency care, psychiatry, pharmacy, trauma, and pathology, utilize telehealth for virtual consultations, prescription authorizations, and patient monitoring.

3.4.1 POSSIBILITIES OF TELEHEALTH

Background research yields numerous examples of benefits telehealth has offered to providers and patients in underserved, rural communities. First, it has improved access to healthcare services for consumers and has extended the geographic reach and expertise of health facilities. This improvement in care is critical; compared with those in urban areas, people in rural areas exhibit higher rates of unhealthy behaviors and have less access to healthcare and healthy foods.³⁴ Second, telehealth has enabled shared staffing regimes, reduced travel times, fewer or shorter hospital stays, and other beneficial arrangements that improve cost efficiencies and increase consumer convenience, especially

in places facing shortages of providers.³⁵ In 2017, telehealth services saved medical facilities in the U.S. \$20,841 each on average.³⁶ Rural medical facilities in Arkansas, Oklahoma, and Texas have reported savings of over \$100,000 per year as the result of implementing telehealth technology.³⁷ Telehealth consumers also report higher satisfaction rates. The majority of respondents in a cross-sectional survey indicated that their telehealth experience was “just as good as” or “better than” their traditional in-person medical appointment experience.³⁸

The existing research, which is constrained but consistent, elucidates both the opportunities and challenges that telehealth presents for the target population. This literature generates critical insight that can be extrapolated to the Upper Valley setting. A study comparing mobile health intervention with clinic-based intervention found similarly high patient satisfaction rates in both settings.³⁹ Mobile health intervention participants also initiated treatment at higher rates. Another study examining the impact of telehealth on appointment retention among individuals with substance use disorders (SUDs) found a positive correlation between housing status and appointment no-show incidence.⁴⁰ Additionally, a study provided homeless veterans with tablets to determine the most frequently used modality for telemental health services. Nearly half of veterans experiencing homelessness who received a tablet spoke over video with a provider within six months of receiving the tablet.⁴¹

Telehealth is tailored to provide basic care to rural and underserved patients.⁴² There is growing consensus in both policy and scholarly research that telehealth is a promising supplement to, and even an effective substitute for, some in-person medical services and interventions in rural areas. The Centers for Disease Control and Prevention (CDC) promotes telehealth schemes to improve care for chronic diseases in rural areas. It has also encouraged the transition of diabetes, stroke care and rehabilitation, SUD, and epilepsy management programs from facility-based to home-based care. Evidence suggests that the safety and effectiveness of home-based telehealth models are equal to the care delivered in facilities.⁴³ For example, the American Heart Association finds that in nonmetropolitan areas, “telestroke” care increased the use of intravenous tissue plasminogen activators, reduced in-hospital mortality, and lowered capacity burdens on hub hospitals.⁴⁴ Telehealth is also supported among medical specialties like mental health care, an area of care traditionally considered within the sole purview of in-person treatment. According to the CDC, telehealth can be an effective approach for communication and counseling.⁴⁵

Existing studies indicate that telehealth is a feasible and cost-effective option to reduce disparities in healthcare access and outcomes. A study conducted by the National Health Care for the Homeless Council found that telehealth is an effective means of providing care for PEH.⁴⁶ The Council interviewed staff at 17 HCH programs across the country and concluded that telehealth reduced the rate of missed appointments, was considered safe and accessible, and audio-only phone visits worked best for the PEH demographic.⁴⁷ Furthermore, PEH patients and providers alike report demonstrably improved health outcomes and high satisfaction rates for telehealth clinical visits.⁴⁸

3.4.2 TELEHEALTH: CHALLENGES

Previous studies have identified several outstanding obstacles to the widespread adoption and use of telehealth for PEH. First, telehealth may have some limitations in the scope of care that it can safely and effectively facilitate. In-person consultations may be necessary in many circumstances, especially in instances that necessitate comprehensive physical examinations or more personal interactions.⁴⁹ For instance, there are unclear understandings regarding the prescription of controlled substances (such as medication for mental health) in virtual settings. The Ryan Haight Act mandates that at least “face-

to-face” consultation be conducted before controlled substances can be subscribed.⁵⁰ Currently, the Drug Enforcement Agency interprets this statute as allowing for telehealth consultations.⁵¹ Second, telehealth has traditionally faced legal and regulatory hurdles. During the COVID-19 pandemic, the federal government issued temporary administrative orders that allowed for policy flexibilities related to telehealth services. Nationally, these temporary telehealth policies were instrumental to the success of the HCH program, a Human Resources and Services Administration-funded initiative to deliver care to the vulnerable PEH population. In New Hampshire, House Bill 1623 stipulated that during the pandemic, private insurance companies must cover care delivered via telehealth as comparable in-person care.⁵² This stipulation applies to live video telehealth and extends to state employee health plans. However, the volatile regulatory environment may pose an ongoing challenge for PEH seeking mental health services online. Lastly, public, and private sector stakeholders must supply the necessary infrastructure for telehealth services to successfully cater to PEH. While technology access and awareness is not ubiquitous among PEH, shelter partners and other private service providers can offer the necessary resources to overcome both structural barriers such as broadband access and competence barriers including video and audio call training.

4. METHODS

Field research comprised semi-structured interviews with providers and support staff employed at local healthcare and social service organizations in the Upper Valley. Semi-structured interviews were chosen as a methodology for their effectiveness in collecting detailed qualitative data while maintaining confidentiality for interviewees and their clients. This method allowed the research team to capture nuanced commonalities and differences in experience and opinion regarding telehealth.

Recruited interviewees volunteered for confidential, virtual interviews lasting between 30 and 60 minutes. The research team recorded all interviews and tagged them based on notes and transcripts. By analyzing tags and notes, the research team developed themes describing interviewees’ experiences providing healthcare via telehealth, as well as its impact on access to healthcare and well- and poorly-suited activities.

5. RESULTS

The research team interviewed 15 individuals representing 11 organizations. Interviews occurred during late 2022 and early 2023, after most restrictions related to the COVID-19 pandemic (e.g., social distancing and mask wearing) had been lifted in the Upper Valley. All interviewees were employees or former employees of organizations serving the Upper Valley region. These organizations included medical practices, behavioral healthcare providers, government service programs, and non-clinical not-for-profit institutions focused on health and wellbeing. The populations they served included survivors of gender-based violence, uninsured and underinsured adults and families, individuals with Medicaid or Medicare or who are eligible for such coverage, and the broader population of the Upper Valley. Most interviewees described their organizations as serving few PEH relative to their total client population. Two described this proportion as moderate to high.

5.1 EXPERIENCE WITH TELEHEALTH

Most organizations did not offer telehealth before the institution of pandemic-related restrictions in the Upper Valley in 2020. Three had limited experience delivering healthcare and other services remotely before the restrictions. One respondent cited a general lack of insurance coverage for remote healthcare as a reason for minimal or no engagement with telehealth. With the start of the pandemic, however, organizations offered diverse services via telehealth. These included primary care, mental health care (including psychotherapy and psychiatry), nutritional assistance, crisis support, and case management. Most interviewees described a lack of preparedness for the sharp transition to remote interactions. Throughout the period of pandemic-related restrictions, organizations delivered almost all services remotely, with exceptions for essential services. They employed a variety of platforms to conduct telehealth, including internet chat, text, phone call, and video call.

During the period of strict pandemic-related restrictions, the Vermont emergency housing program allowed all individuals without adequate housing to live in hotel and motel rooms for extended periods. Therefore, many of the clients experiencing housing insecurity that the interviewees' organizations served were sheltered for much of the period of near-exclusive telehealth use.

At the time of the interviews—after most pandemic-related restrictions had been lifted—most interviewees characterized their organizations as employing telehealth for a low or moderate proportion of their clients. One organization was delivering services in an exclusively remote format at the time of the interview. Three interviewees noted efforts at their institutions to return as soon as possible to in-person formats for most interactions with clients.

5.2 BARRIERS TO ACCESS

Interviewees described several challenges related to the remote delivery of healthcare and social services. These included barriers to access, which can be divided into two categories: technological and social.

5.2.1 TECHNOLOGICAL BARRIERS

Internet and Device Access

The most widely cited challenge related to telehealth was limited access to necessary technology among clients. Interviewees representing eight of the eleven organizations included in the study mentioned this obstacle. Difficulties include unreliable access to (a) devices and (b) internet or phone service, although the latter was more commonly identified. Interviewees described clients experiencing homelessness or housing insecurity as having especially unpredictable access to the internet and/or mobile phone minutes. Even with sufficient mobile phone minutes, clients were impeded by poor cellular coverage in the most rural portions of the Upper Valley.

People experiencing homelessness and housing insecurity were subject to particularly unreliable internet access when pandemic-related restrictions were most intense. During this period, many

individuals in Vermont without adequate housing lived in hotel and motel rooms for extended periods. Although these hotels and motels generally offered internet and phone access, interviewees recalled reports from their clients of hosts eliminating such services after certain periods of stay. Thus, even with an adequate device, these clients could not use their hotel or motel Wi-Fi connections or the telephones in their rooms.

Technological Literacy

Interviewees also found that, even if clients had access to a device and internet/phone service, their competence using the device and its software impacted the quality of remote interactions. A lack of technological literacy was prevalent among older adults, and interviewees described it as a barrier to effective evaluation and communication. In some cases, clients had no desire to build their technological literacy, and so were limited in their ability to take part in telehealth. Inadequate technological literacy was often accompanied by mistrust in the internet or phone calls as confidential means of communication.

5.2.2 SOCIAL BARRIERS

Privacy

Privacy represented a significant concern for patients experiencing homelessness. Although remote platforms offer clients some flexibility in the locations they choose to take visits, some may not have access to environments appropriate for confidential discussions. Interviews yielded examples of clients discussing personal medical information in public, and these experiences were more common among people experiencing homelessness and housing insecurity, who may only have been able to access the internet in public areas like libraries. Even when clients were housed or sheltered, interviewees described uncertainty about some clients' abilities to speak freely. That is, they did not know if a client was taking their visit in an abusive or otherwise unsafe home.

Mistrust in Health Systems

Some medical providers explained that in addition to trust in technology, successful telehealth visits require trust in health systems more broadly. One interviewee attributed relatively high rates of mistrust in health systems to poor past experiences with the medical establishment. While pandemic-related restrictions were in effect, this distrust, along with limited access to devices and connectivity, exacerbated the difficulty of establishing contact with clients experiencing homelessness and housing insecurity.

5.3 BENEFICIAL IMPACTS ON ACCESS

Commonly identified advantages of telehealth over in-person visits included reduced transportation burden and reduced time commitments for both clients and providers. The reduced need for travel was especially beneficial for clients with children. When clients had limited access to transportation or limited availability—common obstacles for PEH—providers often preferred remote visits. Interviewees representing four organizations offered these advantages as reasons for improved no-

show rates. One shared that some clients were able to access services through telehealth that they would not otherwise have been able to receive, due to restrictions in mobility and/or transportation.

Another interviewee associated benefits with the ability of telehealth to reduce the need for visits to physical clinical environments. This interviewee reported that poor past experiences have induced negative associations among some clients with settings like hospitals. Chief among these have been experiences of stigma associated with their medical statuses or treatments. Remote visits allowed clients to circumvent some of these stigmatizing experiences.

5.4 POORLY-SUITED ACTIVITIES

Organizations were limited in their abilities to conduct physical examinations via telehealth. Although some sent medical devices such as blood pressure cuffs to patients, most were confined to visual assessments during video calls. Observations involving the provider's hearing or feeling of the patient were often impossible. One interviewee mentioned concern that the incompleteness of examinations increases reliance on patients' assessments of their health, which could augment the negative consequences of under-reporting symptoms.

Other services limited by the remote format of telehealth included those which physically brought patients into their communities, for example, on an assisted shopping trip for groceries. These interactions are essential in programs of care in cases of severe anxiety and similar mental health challenges. One interviewee also framed telehealth visits as missed opportunities to bring such patients into the community for interpersonal interaction.

Several interviews included discussion about challenges of remote communication that existed even with technologically literate clients. Initial visits, for example, were not optimally performed via phone or video chat. Interviewees cited difficulty establishing rapport with new patients or clients as a main obstacle to successful initial visits. They also reported inefficiency relative to in-person communication when guiding clients through paperwork, especially complex medical or legal documents.

5.5 WELL-SUITED ACTIVITIES

Interviewees most often identified mental health services as the kinds of clinical services most compatible with telehealth. Except in severe or critical cases like those mentioned above, several organizations employed telehealth extensively during the period of pandemic-related restrictions. Even at the time of the interviews, mental health services constituted a large portion, or even the majority, of telehealth visits at organizations that provided such services.

Telehealth was also regarded as suitable for check-ins and examinations of known, ongoing issues. In these cases, service providers had already established rapport with clients. Relative to initial visits, providers described clients in these instances as more relaxed and trusting.

A small number of interviewees mentioned that remote visits facilitated collaboration with other providers and community partners. Telehealth reduced the need to coordinate physical meetings when more than one institution was involved in a case.

A provider of social services mentioned that remote visits—especially those conducted by phone—reduced stress among clients. According to the provider, clients often feared that if they did not present themselves in a certain way during visits, they might be denied the service. Conducting visits via phone calls reduced this anxiety.

5.6 SUPPORTS THAT ENABLE TELEHEALTH

Interviewees mentioned several practices that improved their organizations' abilities to engage in high-quality remote visits. The most prevalent and highly appraised of these practices were the implementation of in-person assistance from nurses, the provision of internet devices and service along with instruction on their use, and the maintenance of private spaces on-location in which clients could take their visits.

Presence of Nurses or Other Support Staff

Several interviewees described workflows in which nurses assisted clients in-person during some telehealth visits. All those who described in-person assistance from nurses emphasized its importance in optimizing telehealth visits. Nurses could perform physical examinations and collect data using professional equipment, then relate their findings to providers during the visit. They could also resolve technological issues.

Provision of Internet Service, Device Access, and Instruction

Several interviewees described efforts, supported by state- or nation-wide initiatives, to distribute tablets to clients in need of internet devices. Perceptions of the success of these initiatives were mixed. Some recalled use of tablets among those who needed them. One interviewee mentioned that, although tablets were available, clients who did already own internet devices were unlikely to have access to the internet in the first place. The tablets, in those cases, offered little benefit. Some mentioned providing Wi-Fi hotspots in addition to tablets and offering instruction on their use.

Provision of Confidential Spaces

Several medical providers described efforts at their physical locations to keep rooms available for use during telehealth visits, even if they were conducted by other institutions. These rooms provided safe, private environments to discuss confidential information. One interviewee observed that, during the period of pandemic-related restrictions, hotel and motel rooms generally offered private settings for PEH to take telehealth visits. However, PEH in shelters or other living situations may not have had access to environments like those, making the availability of confidential spaces especially valuable.

6. DISCUSSION

Interviews focused on the challenges, benefits, and potential future directions of telehealth in the Upper Valley. Although stances toward telehealth were mixed, interviewees offered generous insights about how it might be optimized to serve PEH. These insights can be distilled to four points, representing a framework of considerations which should undergird efforts to improve telehealth outcomes in the Upper Valley and other rural communities.

6.1 COMPREHENSIVE ASSISTANCE WITH TECHNOLOGY IS ESSENTIAL

Three technological components are necessary for successful telehealth visits: an internet device or phone, internet access or cellular coverage, and adequate technological literacy. The absence of any of these components eliminates the abilities of providers and clients to communicate remotely. It would be insufficient, for example, to provide internet devices to clients without ensuring technological literacy and access to the internet. It is also insufficient to provide devices and wireless hotspots without ensuring clients have sufficient knowledge of their operation (or access to assistance). Lacking any one of these three components negates the potential utility of the others. Ensuring they are in place is especially important when serving older clients and PEH because, in the experiences of the interviewees, individuals in these categories are less likely than others to meet all requirements for successfully using communication technologies.

6.2 EFFECTIVE TELEHEALTH REQUIRES TRUST IN BOTH TECHNOLOGY AND HEALTH SYSTEMS

Trust in medical advice is strongly associated with adherence to it.⁵³ Trusting the telehealth format entails trust in (a) the confidentiality of secure technology and (b) the relevant health system or systems. Some interviewees remarked that difficulty accepting one or both is more common among clients experiencing homelessness and housing insecurity. Without trust in the confidentiality of technology, clients may be less likely to reveal relevant information to their providers. Without trust in health systems, clients may be reluctant to seek treatment at all. Both types of apprehension must be addressed to ensure telehealth visits occur and are productive.

6.3 SAFE, CONFIDENTIAL SPACES ARE ESSENTIAL AND OFTEN UNAVAILABLE FOR PEH

Safe and private spaces ensure that clients can communicate openly and honestly about their health and behaviors with counselors, medical professionals, and other confidential service providers. Interviewees describe unhoused clients as often taking visits in public places where confidentiality cannot be maintained. Even people who are housed, securely or not, may be living in an abusive or otherwise unsafe home where they are unable to freely communicate aloud. Providers have found it difficult to determine when clients face such conditions.

About half of the interviewees recommended steps to ensure people experiencing homelessness and housing insecurity have secure access to confidential spaces. They suggested libraries, hotels, medical practices, and similar institutions with internet or phone access as candidates to supply essential privacy.

6.4 ENTIRELY REMOTE DELIVERY IS NOT OPTIMAL IN MANY CASES

Clients often do not possess the technological literacy necessary to conduct effective telehealth visits. This impacts the quality of clients' visits and providers' abilities to conduct thorough assessments. Interviewees with experience positioning nurses or other community partners with clients emphasize their importance in optimizing visits. Guiding patients' use of technology and/or conducting examinations enabled providers to better interact with clients and, in the case of medical consultations, receive immediate and accurate health metrics. Some interviewees were so impressed by the positive impact on outcomes of in-person assistance that they envisioned optimized telehealth systems as employing this technique in most cases.

7. CONCLUSION

This study addresses the question, "How can we optimize the delivery of telehealth to improve the health of people experiencing homelessness in the Upper Valley?" It does so by conducting and analyzing semi-structured interviews with healthcare and social service providers in the Upper Valley. Literature on telehealth portrays it as a promising mode of healthcare delivery in rural areas, increasing access to specialized care and reducing burdens such as transportation costs. Some findings from this study align with the literature. For example, reduced transportation burden is widely cited as a beneficial impact of telehealth, especially for clients experiencing homelessness and housing insecurity. Medical providers also describe mental health services as activities well-suited to the telehealth format. Telehealth has also alleviated some barriers to accessing healthcare, including stigma associated with medical conditions and treatments.

However, PEH in the Upper Valley face several obstacles to obtaining access to healthcare via telehealth. These include a lack of access to necessary technology and/or technological literacy, inadequate access to confidential spaces, and mistrust in communication technology—all barriers especially prevalent among PEH. Providers also described activities they found ill-suited to telehealth, such as initial visits (many of which involve paperwork) and treatments that involve physically bringing clients into their communities.

Interviews also produced examples of supports healthcare and social service providers implemented—beginning with the start of pandemic-related restrictions in the Upper Valley in 2020—to expand access to, and quality of, telehealth visits. These included the provision of internet devices and, in some cases, wireless hotspots, as well as the designation of physical spaces for confidential visits and the use of workflows in which nurses assisted clients with examinations and technological issues in-person.

Four primary insights can be drawn from this study: (1) comprehensive assistance with technology—which comprises assurance of a device, a connection, and technological literacy—is essential to ensuring access to telehealth; (2) effective telehealth visits require clients to trust both the confidentiality of secure communication technology and the relevant health system or system; (3) safe, confidential spaces in which to take telehealth visits are essential and often not available for PEH; and (4) in-person assistance from nurses during telehealth visits was widely praised among medical providers.

These insights may inform programs to optimize access to, and the quality of, telehealth for PEH in the Upper Valley. Future studies should obtain and analyze data on the personal experiences of PEH in the Upper Valley with respect to telehealth. These would engender a more comprehensive evaluation of telehealth services in the region and steps necessary to optimize them.

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