Study of Telehealth Expansion and Payment Parity

FINAL REPORT TO THE MINNESOTA LEGISLATURE 2024

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Study of Telehealth Expansion and Payment Parity – Final Report to the Minnesota Legislature 2024

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DEPARTMENT OF HEALTH

Protecting, Maintaining and Improving the Health of All Minnesotans

Minnesota Senate

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September 2024,

To the Honorable Chairs and Ranking Members:

MDH is pleased to share the **Minnesota Department of Health's (MDH) Final Report from the Study of Telehealth Expansion and Payment Parity.**

The Legislature directed this study in 2021 to help inform their work to set telehealth coverage and reimbursement policies, and to explore the role of telehealth in the future of health care for Minnesotans. The preliminary report, Study of Telehealth Expansion and Payment Parity: Preliminary Report to the Minnesota Legislature 2023, was released in June 2023.

Telehealth has been a tool for health care delivery in the United States for decades, and a topic of Minnesota health care payment parity policy since 2015. The COVID-19 pandemic thrust telehealth into a new prominence, increasing from less than 3% of all primary care visits among commercial health plan enrollees (the focus of this report) in 2019, to about one-fifth of all primary care visits in 2021 and 2022. Similarly, for behavioral health care among commercial enrollees, use of telehealth increased from less than 2% of all behavioral health visits to one-fourth of all behavioral health visits. As the COVID-19 pandemic progressed and subsided, it became clear that telehealth was addressing barriers to health care beyond those related to pandemic restrictions.

The rapid expansion of telehealth services was possible, in part, because of federal and state regulation changes that eased restrictions and allowed for reimbursement of more modes of telehealth (such as audio-only) and in more places (such as people's homes and telehealth visits that originated in metropolitan areas). The research and knowledge base regarding telehealth continues to grow, but answers to many important questions are coming into focus.

This final report to the Minnesota Legislature pulls together findings from a wide range of qualitative and quantitative studies. A synthesis of study results suggests the overall conclusion that, to date, telehealth has expanded access to health care without appearing to compromise health care quality or patient satisfaction. Patients and providers appreciate the option of telehealth, as long as it is not the only choice. The increased use of telehealth since early 2020 does not appear to have led to additional health care spending, but it is too early to tell if it is leading to measurable savings. Regarding health equity, telehealth does expand access to health care, but access to telehealth itself is not equitable, particularly for people with limited digital access or digital literacy.

In light of the findings of this study, MDH makes nine recommendations to support continued broad availability and use of telehealth as a tool to deliver health care services, helping Minnesotans to access timely, effective, and affordable health care:

- **Recommendation 1**: Payment parity should continue for real-time (synchronous) audio-visual and audio-only telehealth for health care services for which telehealth may substitute for, and is comparable to, in-person care. If evidence emerges that there are significant or meaningful cost savings without sacrificing quality or satisfaction, the payment structure could be revisited.

- **Recommendation 2:** Audio-only telehealth should continue to be included in the definition of telehealth in Minnesota statute, and therefore be subject to payment parity and coverage requirements.
- **Recommendation 3:** Further investments in infrastructure are needed to improve access to telehealth.
- **Recommendation 4:** Broad action is needed to help people build their knowledge, skills, and comfort to use telehealth effectively.
- **Recommendation 5:** Build the capacity across sectors to support equitable access to health care via telehealth.
- **Recommendation 6:** Require that health plans and health care providers provide clear and transparent communication about options for telehealth services, including costs to patients.
- **Recommendation 7:** Ensure that policies promoting telehealth access do not limit availability of in-person care for all Minnesotans.
- **Recommendation 8:** Telehealth can support a strained health care workforce, and training and continuing education for providers must include telehealth and related technologies.
- **Recommendation 9:** Ongoing monitoring and policy-relevant research on telehealth is needed to ensure that its use effectively supports Minnesotans' health and does not increase risks of harm.

The report includes additional considerations related to telehealth's intersections with digital equity, workforce burnout and shortages, innovation, overall health care access and costs, and the potential for waste, fraud, and abuse.

Questions or comments about the report may be directed to Stefan Gildemeister, State Health Economist and Director of the Health Economics Program, at Stefan.gildemeister@state.mn.us or (651) 201-3550.

Sincerely,

/s/ Brooke Cunningham

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Supplements

The following supplemental reports, containing detailed information from the main components of this study, are available online: MDH Telehealth Study Publications

Supplement A: Center for Evidence-based Policy (CEbP*), Audio-Only Telehealth: Existing Center Research and Environmental Scan*, August 2023.

Supplement B: Minnesota Electronic Health Record Consortium (MNEHRC), *Minnesota Study of Telehealth Expansion and Payment Parity*, December 2023.

Supplement C: Mathematica Inc., *Minnesota Study of Telehealth Expansion and Payment Parity Final Report*, November 2023.

Supplement D: Oliver Wyman Inc., *Telehealth Analysis: Utilization Trends and Telehealth's Impact on Premium Rates- Minnesota All Payer Claims Database*, October 2023.

Supplement E: SDK Communications, *Stakeholder + Community Perspectives on Telehealth*, January 2024.

Supplement F: Wilder Research, *Impact of Telehealth Expansion: A Qualitative Study of Service Recipients, Providers, and Payers*, December 2022.

Acronyms

Black, Indigenous, and People of Color (BIPOC)

Center for Evidence-based Policy (CEbP)

Centers for Medicare & Medicaid Services (CMS)

Electronic Health Record (EHR)

Evaluation and Management (E/M)

Federally Qualified Health Center (FQHC)

Health Information Technology (HIT)

Minnesota All Payer Claims Database (MN APCD)

Minnesota Department of Commerce (COMM)

Minnesota Department of Health (MDH)

Minnesota Department of Human Services (DHS)

Minnesota Electronic Health Record Consortium (MNEHRC)

Minnesota Health Access Survey (MNHA)

Minnesota Health Care Programs (MHCP)

Minnesota Telehealth and Access Survey (MNTAS)

Public Health Emergency (PHE)

Technical Advisory Group (TAG)

Executive Summary

Telehealth – or the delivery of remote clinical services through the use of telecommunications technology – moved to the forefront of health care delivery during the onset of the COVID-19 pandemic. The overall use of telehealth was very low prior to 2020 and grew rapidly during the early months of the COVID-19 pandemic as health care providers were limiting in-person appointments to preserve capacity, reduce viral transmission, and conserve scarce protective equipment. Telehealth use has declined since then, but even so, current telehealth availability and use remain much higher than pre-pandemic levels and it has shown significant promise in expanding access to health care.

In addition to COVID-19 related disruptions to in-person health care, many policies that had restricted telehealth use were relaxed as part of the state and federal response to the pandemic, with some policies extended or adopted permanently after the end of the Public Health Emergency (May 2023). This contributed to fundamental changes in the availability and use of telehealth in Minnesota and nationally that continue today, including:

- **Use of telehealth has stabilized at a much higher level than before the COVID-19 pandemic.** About 31% of all Minnesotans had at least one telehealth visit between mid-2022 and mid-2023. Among commercial enrollees, 19% of primary care visits and 26% of behavioral health visits were delivered via telehealth in 2022, compared to 3% and 2%, respectively, in 2019.
- **Local 'brick and mortar' clinics are now offering telehealth.** Prior to the onset of the COVID-19 pandemic, most telehealth visits for Minnesotans with commercial health insurance were through digital health platforms such as Virtuwell®, Teladoc®, or Doctor on Demand®. Today, telehealth is commonly available from the same providers Minnesotans see for in-person care. As of July 2023, about 60% of Minnesota physicians, physician assistants, and drug/alcohol counselors, and about 75% of behavioral health providers, report using telehealth for at least some of their visits.
- **Behavioral health care has become the most common type of telehealth visit.** Prior to 2020, the most common reasons for telehealth visits among commercial enrollees in Minnesota were for non-emergency acute care (e.g., sinusitis, urinary tract infections). In 2021, the most common reasons for telehealth visits were for behavioral health care (e.g., depression and anxiety). Over 50% of mental and behavioral health visits were conducted via telehealth in 2022.
- **Audio-only telehealth (e.g., telephone visits) became available as an option for delivering and receiving health care services.** Emergency orders during the early months of the COVID-19 pandemic that required reimbursement of audio-only telehealth visits at parity to in-person visits were subsequently codified in statute as part of the Minnesota Telehealth Act (2021),

with a sunset date that has been extended to June 30, 2025. Use of audio-only telehealth is relatively uncommon among commercial enrollees – less than 2% had an audio-only visit in 2022.

This report summarizes findings from two years of research and stakeholder engagement led by the Minnesota Department of Health (MDH) to address the Minnesota Legislature's questions about the impact of telehealth expansion and payment parity on health care access, quality and outcomes, satisfaction, costs, and equity. The legislation directing this study also includes questions regarding whether there are health care services or populations for which telehealth positively or negatively impacts health outcomes, the extent to which telehealth substitutes for in-person care or are services provided in addition to in-person care, whether audio-only telehealth (e.g., telephone) promotes health equity and/or reduces barriers for underserved and vulnerable Minnesotans without sacrificing quality of care or satisfaction, and the impact of telehealth on access to and availability of in-person care. The report also provides recommendations and considerations for the Minnesota Legislature as they contemplate current and future telehealth policies.

This is a mixed methods study, based on qualitative and quantitative data collected from a variety of sources. The enabling legislation directed MDH to focus on the commercial (private) insurance market and enrollees, while the Minnesota Department of Human Services (DHS) focused on the impacts for Minnesota Health Care Programs, including Medical Assistance and MinnesotaCare. However, it was not possible to identify commercial enrollees in every data source we used, and attention to legislative questions about specific populations, such as older adults, rural Minnesotans, and communities of color, required a broader lens.

A synthesis of study results suggests the overall conclusion that, to date, telehealth has expanded access to health care without appearing to compromise health care quality or patient satisfaction. Patients and providers appreciate the option of telehealth, as long as it is not the ***only*** choice. The increased use of telehealth since early 2020 does not appear to have led to additional health care spending, but it is too early to tell if it is leading to measurable savings. Regarding health equity, telehealth does expand access to health care, but access to telehealth itself is not equitable, particularly for people with limited digital access or digital literacy.

Key findings

- **Telehealth use varies by patient characteristics.** Telehealth use was more common among Minnesotans with greater health care needs and costs, and/or with comorbidities (e.g., diabetes, hypertension, depression, etc.), and among people residing in metropolitan areas or areas with high broadband access. Audio-only telehealth use was similarly more common among people at higher risk and with comorbidities, but also among older Minnesotans and

those residing in nonmetropolitan areas, areas with low broadband access, or higher poverty areas. Younger adults, those with commercial health insurance, and those with college degrees were more likely to use audio-visual telehealth. These patterns suggest that, while preferences or convenience might drive some decisions to use (or not use) telehealth, those who use telehealth may also have greater health care needs, and use of audio-only telehealth rather than audio-visual telehealth may be driven more by circumstances than by choice.

- **Telehealth makes accessing care faster and easier for many Minnesotans.** Providers, patients, health plans, and public health professionals all agree that telehealth's greatest contribution has been to expand access to care when it is needed and to reduce barriers for patients with challenges related to transportation, child care, and work, those who feel stigma attending in-person visits, and those who do not trust locally available providers or health systems. Since early 2020, telehealth has become an important option for many Minnesotans seeking behavioral health care services. However, disparities in digital access and digital literacy are substantial barriers to audio-visual telehealth use.
- **Telehealth can strengthen health equity by expanding access to health care, but access to telehealth is not currently equitable.** Telehealth cannot solve root causes of systemic issues that impact health, such as racism, ableism, discrimination, or generational wealth gaps, but it can potentially help to reduce some of the inequities in health care access that further exacerbate health disparities. In addition, it may help Minnesotans connect with health care providers with whom they feel more comfortable, including those who share similar cultural backgrounds and experiences. However, access to telehealth itself is not equitable, and is particularly challenging for people with limited digital access or lower digital literacy. Audio-only telehealth has fewer barriers but is not necessarily patients' or providers' first choice for accessing health care. Importantly, inequities in technology access, income, transportation, mobility, and other issues impede health equity. Engagement from diverse sectors will be needed to ensure that access to health care, including access via telehealth, is equitable.
- **Expanded use of telehealth does not appear to have contributed to greater health care spending.** An actuarial analysis of health care spending for commercial enrollees in the MN APCD showed that increased telehealth use beginning in March 2020 did not lead to greater than expected health care spending in subsequent months. Interviews with Minnesota's health plans also affirm that they made no adjustments to premiums due to changes in telehealth utilization. More research is needed to determine whether telehealth can lead to cost savings without sacrificing quality or satisfaction. Costs for telehealth may increase, however, if previously unbilled encounters (e.g., secure messaging or emails) become billable, if additional fees, including facility fees, are implemented, or if unnecessary or duplicative services are provided.

- **Early evidence suggests that telehealth can be used to deliver high quality care and may help to improve outcomes when supplementing in-person care.** Evaluating quality and outcomes for telehealth care is complex, and the evidence base is limited, but growing. While telehealth is not an appropriate option for every situation, MDH found that quality of care does not appear to be compromised by the use of telehealth and it may improve health outcomes for some by facilitating easier or more frequent interaction with health care providers. Analysis of data from electronic health records focusing on depression, type 2 diabetes, and asthma found little to no difference in quality-of-care measures when comparing providers with high versus low telehealth use. Other analyses, however, suggest the potential for greater fragmentation of care among older Minnesotans who used telehealth, and some providers expressed a concern that seeking e-visits or other telehealth care from providers who are not affiliated with the patient's usual clinic system could lead to greater fragmentation of health care.
- **Most Minnesotans are satisfied with telehealth.** Minnesotans who used telehealth were largely satisfied with their experience, and satisfaction was generally consistent across audio-only and audio-visual visits. Telehealth fell short of patient expectations when technological issues arose.
- **Telehealth can be a substitute for in-person visits or used in addition to in-person visits.** Telehealth can be used in place of in-person visits in many situations, especially for primary care and behavioral health services. Telehealth may also serve as a good way to add additional touchpoints or follow-up for patients managing chronic conditions or with other complex needs. Analysis of claims data found that commercial enrollees (primarily employed, working-age adults and their dependents) were more likely to have relied on telehealth as a replacement for in-person visits because increased telehealth use was balanced by decreased in-person visits. However, Medicare Advantage enrollees (primarily ages 65 and older) did not appear to be using telehealth to substitute for in-person visits.
- **Preferences for telehealth versus in-person care varied, and availability of in-person care is needed to ensure telehealth is one choice but not the only choice.** Convenience and timeliness of telehealth appointments were important reasons for preferring a telehealth visit, whereas being able to see a particular provider or having health care needs that require in-person evaluation were reasons for preferring in-person visits. Older adults and BIPOC Minnesotans were more likely to express preferences for in-person care. For many Minnesotans, however, options for in-person care are limited, particularly for those residing in areas with health care workforce challenges. While telehealth has the potential to increase care options, efforts to ensure adequate availability of in-person care continue to be needed.
- **Audio-only telehealth is an important tool for accessing care, including behavioral health care, particularly among those who experience challenges accessing in-person care or audio-visual telehealth care.** A literature review focused on audio-only telehealth found that services

delivered via audio-only telehealth can be comparable to in-person services in terms of effectiveness, health outcomes, health care utilization, and quality of life. While use of audio-only services is generally low, use is highest among potentially vulnerable populations (e.g., older patients, sicker patients, and patients in areas with low broadband access). In Minnesota and nationally, audio-only telehealth has been used most commonly for behavioral health care services.

Recommendations

In light of the findings of this study, MDH makes nine recommendations to support continued broad availability and use of telehealth as a tool to deliver health care services, helping Minnesotans to access timely, effective, and affordable health care. As with health care more broadly, achieving and maintaining high standards for telehealth require action from a broad range of Minnesotans, including (but not limited to) policymakers, government agencies, health care providers, health plans, community organizations, and researchers. Some recommendations highlight the need for investments or resources, which may be achieved by redistribution of existing resources (e.g., personnel, physical space, dollars, etc.) in some cases rather than necessarily requiring new or additional funding. The main report includes additional considerations related to telehealth's intersections with digital equity, workforce burnout and shortages, innovation, overall health care access and costs, and the potential for waste, fraud, and abuse.

Recommendation 1: Payment parity should continue for real-time (synchronous) audio-visual and audio-only telehealth for health care services for which telehealth may substitute for, and is comparable to, in-person care. If evidence emerges that there are significant or meaningful cost savings without sacrificing quality or satisfaction, the payment structure could be revisited. While payment parity policies generally pertain to fee-for-service arrangements, MDH encourages efforts among providers and health plans to work together to identify innovative ways of providing and reimbursing telehealth in ways that support patient care, align with patient preferences, ***and*** help to contain health care costs. In the meantime, changes to payment parity requirements could disincentivize the availability of telehealth at a time when many Minnesotans have come to accept and expect it as an option for some of their health care needs. Knowing that payment parity policies will continue will also help provider organizations further plan and invest in telehealth.

Recommendation 2: Audio-only telehealth should continue to be included in the definition of telehealth in Minnesota statute, and therefore be subject to payment parity and coverage requirements. Audio-only telehealth has filled an important gap in health care availability and access, particularly for people seeking behavioral health care, older Minnesotans, those with complex chronic conditions, and those residing in areas with low broadband access. In line with Recommendation 1, the

definition and coverage requirements would only apply to audio-only telehealth services for which there is a comparable in-person counterpart. Any changes to audio-only telehealth policies should be made in consultation with the populations and providers who have come to rely on that modality of telehealth as an option for receiving or delivering care.

Recommendation 3: Further investments in infrastructure are needed to improve access to telehealth. Equitable access to telehealth requires equitable access to telecommunications technology, including broadband. The Office of Broadband Development (Minnesota Department of Employment and Economic Development) is currently leading activities, both statewide and for areas or groups with greater disparities in internet access, to improve and expand the availability of and access to telecommunications and information technologies. Strengthening these efforts will help to address the disparities in access to telehealth as an option to receive and deliver health care services.

Recommendation 4: Broad action is needed to help people build their knowledge, skills, and comfort to use telehealth effectively. Health literacy varies across patients, and digital literacy on the part of both patients and providers can add an additional barrier. Resources are needed to cover technology support and other efforts that facilitate effective use of telehealth in order to ensure that telehealth is equitably available to everyone who would benefit from its use. Health care providers and health insurance plans must ensure that they are providing the Minnesotans they serve with the support needed to use telehealth easily, appropriately, and effectively.

Recommendation 5: Build the capacity across sectors to support equitable access to health care via telehealth. Resources will be needed by diverse sectors such as digital infrastructure, broadband, and technology in order to support good and equitable telehealth. Conveniently located physical spaces that provide internet access and privacy (e.g., in the workplace, schools, libraries, community centers, etc.) are also needed to make it easier for people to access health care through telehealth. These efforts to improve equitable access to telehealth (and to health care via telehealth) will require stakeholder buy-in and meaningful investment from government and the private sector, including the health care industry.

Recommendation 6: Require that health plans and health care providers provide clear and transparent communication about options for telehealth services, including costs to patients. For Minnesotans to make good, informed choices about when and how to use telehealth, they need clear and easily understood information from their providers and health insurance carriers about what services are available via telehealth, how much it will cost them out-of-pocket, and how to get prompt answers to any questions they may have.

Recommendation 7: Ensure that policies promoting telehealth access do not limit availability of in-person care for all Minnesotans. When supporting telehealth, it is also important to ensure that in-

person capacity remains available so that telehealth use is one choice, but not the only choice, for timely and affordable health care. Telehealth shows promise for supporting greater and more equitable access to health care, but it is only one tool among the many that will be needed to address provider shortages, barriers to health care, and the ongoing need for access to in-person care.

Recommendation 8: Telehealth can support a strained health care workforce, and training and continuing education for providers must include telehealth and related technologies. Telehealth use by providers across Minnesota continues to expand and has real implications for building capacity within an already strained workforce, particularly in parts of the state with more acute workforce shortages such as rural or underserved communities. New and experienced providers require continuous training to provide high-quality care to patients using evolving technology. Many of the skills and competencies needed to provide telehealth care effectively, including practical, legal, and ethical considerations, are different than those needed for in-person care, and are equally important for patient and provider safety, experience, satisfaction, and quality.

Recommendation 9: Ongoing monitoring and policy-relevant research on telehealth are needed to ensure that its use effectively supports Minnesotans' health and does not increase risks of harm. Evidence-based policies regarding telehealth require periodic assessment of the knowledge and literature base, as well as an understanding of where there are gaps. There will be an ongoing need to collect and analyze data and disseminate the findings as telehealth continues to evolve and its availability and indications are refined. Studies based on data held by provider organizations and health plans are needed, in addition to clinical and public health studies led by researchers in academia and other research institutions.

MDH is grateful for the contribution of study participants who shared their time and experience to inform the results of this study. MDH also recognizes the tremendous work of our vendor partners and thank the stakeholders, including members of the Technical Advisory Group (TAG), who have supported and contributed to this study since the beginning (See Appendix A for a full list of TAG members).

Research Methods and Data Sources

MDH gathered data and other evidence using both quantitative and qualitative research methods, sometimes called a "mixed methods" approach. The following original data sources informed this report:

- **Center for Evidence-based Policy (CEbP): Audio-Only Telehealth Existing Research and Environmental Scan**: Researchers from the CEbP at the Oregon Health and Science University conducted an environmental scan of relevant publications related to audio-only telehealth services. The full environmental scan including key findings are provided in Supplement A to this report. (CEbP, 2023)
- **Minnesota All Payer Claims Database (MN APCD):** A large-scale database that systematically collects health care transaction records, including medical claims, pharmacy claims, and enrollment information from multiple private and public payers. (MN APCD, 2023)
- **MDH Survey of Minnesota Health Plan Companies:** Between August and October 2023, MDH contacted Minnesota health plan companies to complete an online questionnaire about their current practices and future plans for coverage of telehealth services. Follow-up interviews were conducted to gather recommendations for future telehealth policies. The health plans that participated are estimated to represent about 84% of the commercially insured membership in Minnesota.
- **MDH Telehealth Spotlight Interviews:** To incorporate specific uses and applications of telehealth not captured by other data sources, or study components, MDH interviewed 15 experts on uses of telehealth ranging from chronic disease management to hospital-based services such as telestroke. The spotlight topics incorporated in this report are: telehealth use for people with rare diseases, telehealth use in preventing and managing type 2 diabetes, hospital-based telehealth, MDH COVID-19 telehealth program, and telestroke in Minnesota. The spotlights are highlighted in blue throughout the report.
- **Minnesota Electronic Health Record Consortium (MNEHRC):** The MNEHRC used electronic health record (EHR) data to analyze outpatient use of telehealth and prevalence of audio-only and audio-visual telehealth use from 2018 to 2022 and the impact of telehealth expansion on quality of care comparing calendar year 2019 to calendar year 2022. The following health systems contributed data to the analysis: Allina Health, CentraCare, Children's Minnesota, Essentia Health, Hennepin Healthcare, HealthPartners, M Health Fairview, and Sanford Health. The full report is provided in Supplement B to this report. (MNEHRC, 2023)
- **Minnesota Telehealth and Access Survey (MNTAS):** The MNTAS was a follow-up survey to respondents of the Minnesota Health Access Survey (MNHA), a large-scale biennial population survey that focuses on information about how Minnesotans access health insurance and health

care services to inform policies aimed at improving access to health care and health insurance for all Minnesotans. The data in this report were collected between June 2023 and August 2023 and document telehealth use in the 12 months prior to when the survey was taken. About 4,100 Minnesotans participated in the MNTAS. (MNTAS, 2023)

- **Minnesota Health Care Workforce Survey:** A survey administered to nearly 180,000 providers from across 20 different health care professions at the time they renew their professional license in Minnesota. The survey provides an understanding of the availability, distribution, and demographics of the workforce. The data in this report are based on analyses at three periods in time: calendar year 2019, 2022, and 2023. (Workforce Survey, 2023)
- **Minnesota Health Information Technology Ambulatory Clinics Survey (HIT):** A biennial survey of medical groups and clinics in the state. The survey explores the adoption and effective use of electronic health record (EHR) systems, health information exchange, and related health information technologies. The data in this report were collected as part of the 2022 survey. Over 1,100 clinics participated in this survey. (HIT Survey, 2022)
- **Mathematica, Inc.:** Mathematica evaluated the impact of telehealth expansion and payment parity through the 2021 Minnesota Telehealth Act on the use of health care services covered by private sector health insurance and Medicare Advantage in Minnesota. Their analyses used data from the MN APCD and focused on questions regarding quality and outcomes, equity, access, audio-only telehealth, and whether telehealth visits might substitute for in-person visits or be in addition to in-person care. The full report is provided in Supplement C to this report. (Mathematica, 2023)
- **Oliver Wyman Actuarial Consulting, Inc.:** Oliver Wyman performed an analysis of the impact that telehealth services have had on health care claim payments from 2019-2021 and to consider the projected influence that telehealth services could have on future premium rates in Minnesota's private sector (commercial) health care market. To conduct their analyses, Oliver Wyman used data from the MN APCD and Merative MarketScan Commercial Database. The full report is provided in Supplement D to this report. (Oliver Wyman, 2023)
- **SDK Communications + Consulting Qualitative Study:** SDK interviewed operations and business analysis leaders of nine large health care provider systems, leaders of eight small community-centered clinics, nine community-based advocates, 37 individual patients, and gathered input from listening sessions with 29 public health professionals to better understand telehealth operations across different service providers, emerging uses of telehealth, patient preferences, and the impact of telehealth on health equity. All interviews were conducted between August and November 2023. The full report is provided in Supplement E to this report. (SDK, 2024)
- **Wilder Research Qualitative Study:** A qualitative study based on interviews with 30 service recipients and 20 health care providers, as well as individual and group interviews with 16 leadership representatives of five health plan companies ("payers"). Service recipients were

persons ages 18 to 65 living in Minnesota with commercial health insurance coverage who had used telehealth in the last 18 months. All interviews were conducted between August and October 2022. The full report is provided in Supplement F to this report. (Wilder Research, 2022)

As is the case with any study, each data collection tool used here is associated with some degree of imprecision, uncertainty, and potential for bias. For example:

- Survey data can be associated with potential biases resulting in findings from the survey that differ somewhat from the "truth" that exists in the broader population. This type of discrepancy may stem from how the study population is selected, how questions are framed, and how respondents interpret and answer the questions.
- Health care claims data can be affected by the degree of accuracy and completeness of the data recorded in the claim. By their nature, health care claims do not include detail about care received by people who do not have insurance coverage or for services delivered and paid for outside of an insurance benefit. Further, there are some gaps in the data because not all health plan companies report to MDH.
- Electronic health record data contain timely and comprehensive data of health care encounters, diagnoses, and demographic information. Like claims data, the accuracy and completeness of information may affect the quality of these data. Further, it is secondary data collected for the purposes of documenting a clinical encounter. While it can establish the presence of a clinical encounter conducted via telephone or video telehealth for the purposes of a provider contacting a patient, it cannot distinguish whether that encounter was billed.
- Interviews and listening sessions generally rely on discussions with a small number of individuals and may not include all perspectives, nor are findings fully generalizable to the broader population.

Each of the supplemental reports noted above includes a more complete discussion of the study questions, methods, and results, including limitations. The supplemental reports may be found on the MDH Minnesota Study of Telehealth Publications webpage. Additional information about the MDH surveys or the MN APCD is available from MDH upon request.

Legislative Questions

The 2021 Minnesota Legislature passed the Minnesota Telehealth Act which directed MDH to consider the following questions when making recommendations in both the preliminary and final report (Laws of Minnesota 2021, 1st Special Session, Chapter 7, Article 6, Section 27):

1. The impact of telehealth expansion and payment parity on access to health care services, quality of care, health outcomes, patient satisfaction, and value-based payments and innovation in health care delivery;
2. The impact of telehealth expansion and payment parity on reducing health care disparities and providing equitable access to health care services for underserved communities;
3. Whether audio-only communication as a permitted option for delivering services (i) supports equitable access to health care services, including behavioral health services, for the elderly, rural communities, and communities of color, and (ii) eliminates barriers to care for vulnerable and underserved populations without reducing the quality of care, worsening health outcomes, or decreasing satisfaction with care;
4. The services and populations, if any, for which increased access to telehealth improves or negatively impacts health outcomes;
5. The extent to which services provided through telehealth: (i) substitute for an in-person visit; (ii) are services that were previously not billed or reimbursed; or (iii) are in addition to or are duplicative of services that the patient has received or will receive as part of an in-person visit;
6. The effect of telehealth expansion and payment parity on private sector health care costs, including health insurance premiums; and
7. The impact of telehealth expansion and payment parity, especially in rural areas, on patient access to, and the availability of, in-person care, including specialty care.

In addition, MDH must report:

8. The criteria payers used during the study period to determine which patients were medically appropriate to be served through telehealth, and which categories of service were medically appropriate to be delivered through telehealth, including but not limited to the use of audio-only communication; and
9. The methods payers used to ensure that patients were allowed to choose to receive a service through telehealth or in person during the study period.

Introduction

Telehealth jumped to the forefront of health care delivery at the start of the COVID-19 pandemic. Four years later, telehealth appears to have earned a permanent spot as a tool in the arsenal of effective care delivery, but clinical guidelines for its use and policies regarding payment are still evolving.

Telehealth has been a tool for health care delivery in the United States for decades, and a topic of Minnesota health care payment parity policy since 2015. Yet the COVID-19 pandemic thrust telehealth into a new prominence, increasing from less than 3% of all primary care visits among commercial health plan enrollees (the focus of this report) in 2019, to about one-fifth of all primary care visits in 2021 and 2022 (Mathematica, 2023). Similarly, for behavioral health care among commercial enrollees, use of telehealth increased from less than 2% of all behavioral health visits to about a quarter (one-fourth) of all behavioral health visits. Telehealth offered the only care option for many health care services early in the pandemic, as people were asked to stay at home and reduce their social contacts as much as possible to reduce transmission of COVID-19, relieve pressure on health care systems, and preserve limited supplies of protective gear. As the COVID-19 pandemic progressed and subsided, it became clear that telehealth was addressing barriers to health care beyond those related to pandemic restrictions.

The rapid expansion of telehealth services was possible, in part, because of federal and state regulation changes that eased restrictions and allowed for reimbursement of more modes of telehealth (such as audio-only) and in more places (such as people's homes and telehealth visits that originated in metropolitan areas).

Today, the COVID-19 pandemic has moderated amid better tools to prevent, detect, and treat COVID-19 infections, and the Public Health Emergency (PHE) has ended. However, providers' and patients' expectations of — and comfort with — audio-visual and audio-only telehealth have permanently changed. Some of the most notable changes include the growth in telehealth services offered by "brick-and-mortar" clinics and the sustained use of telehealth for behavioral health services (including mental health and substance use services).

This report summarizes findings from over two years of research and stakeholder engagement led by the Minnesota Department of Health (MDH) to address the Minnesota Legislature's questions about the impact of telehealth expansion and payment parity on health care access, quality and outcomes, satisfaction, costs, and equity. Additional questions posed by the Legislature focus on whether there are health care services or populations for which telehealth positively or negatively impacts health outcomes, the extent to which telehealth substitutes for in-person care or are services in addition to in-person care, whether audio-only telehealth (e.g., telephone) promotes health equity and/or reduces

barriers for underserved and vulnerable Minnesotans without sacrificing quality of care or satisfaction, and the impact of telehealth on access to and availability of in-person care. The key findings in this report build upon the preliminary report to the legislature and highlight the important considerations that need to be kept in mind to understand and evaluate the role that telehealth plays within the larger health care system (MDH, 2023). This final report provides additional findings and recommendations for the Minnesota Legislature as they contemplate current and future telehealth policies. A series of "Spotlights" throughout the report highlight some of the innovative ways telehealth is being used in Minnesota to support and improve health care access and delivery.

MDH was directed to focus on the commercial (private) insurance market and enrollees, while the Minnesota Department of Human Services (DHS) focused on the impacts for Minnesota Health Care Programs, including Medical Assistance and MinnesotaCare. However, it was not possible to limit our analysis to commercial enrollees in every data source we used, and attention to legislative questions about specific populations, such as older adults, rural Minnesotans, and communities of color, required a broader lens. Throughout the report, we try to make it clear when we are referring to specific populations (such as commercial enrollees, Medicare Advantage enrollees, Minnesotans residing in rural areas, all Minnesotans, etc.). As such, it is important to bear in mind key differences in the populations enrolled in different types of health insurance, which are based on eligibility requirements such as age, employment, and income.[1]

To achieve the goals of this legislative directive, MDH commissioned focused studies, examined data from several MDH surveys, and consulted researchers, health care providers, health plans, and advocacy organizations to explore critical questions about the future of telehealth. MDH worked with SDK Communications + Consulting (SDK) to plan and prepare this report.

Original research and data incorporated into the report include:

- An actuarial analysis of health care claims in the MN APCD (Oliver Wyman),
- An analysis of clinical data from electronic health records (Minnesota Electronic Health Record Consortium (MNEHRC)),

[1] For example, the commercial health insurance market largely reflects employed, working-age adults and their dependents. Most commercial plan enrollees are under the age of 65. Medicare coverage primarily covers people ages 65 and older but is also available to people with certain disabilities or health conditions (e.g., end-stage renal disease, amyotrophic lateral sclerosis (ALS or Lou Gerhig's disease). Medicare Advantage plans are offered by private health plans and are approved by Medicare as an alternative to traditional Medicare. Eligibility for Minnesota Health Care Programs (including Medical Assistance and MinnesotaCare) is based on income level and/or having certain disabilities or health conditions.

- A comprehensive analysis of telehealth use and outcomes using data from the MN APCD (Mathematica),
- A literature review of audio-only telehealth studies (Center for Evidence Based Policy (CEbP)), and
- Qualitative interviews with health plans (MDH, Wilder Research), providers (MDH, SDK, Wilder Research), public health professionals (MDH, SDK), and patients (SDK, Wilder Research).

The full reports from each of these studies are included as supplements to this report. Data from several MDH surveys are also included in the report.

MDH worked with the CEbP to plan and convene a Policy-Informed Telehealth Research Workshop, held in February 2023, to help shape the research approach and contribute to the discussion of the findings. The TAG was consulted throughout the study. This report summarizes the key findings gleaned from all of these efforts.

This study was undertaken in coordination with the Minnesota Department of Commerce and the Minnesota Department of Human Services (DHS), which has led a parallel study of telehealth's impact on Minnesota Health Care Programs (MHCP), including Minnesotans covered by Medical Assistance (the state's Medicaid program) and MinnesotaCare (the state's basic health plan).

Policy Context

The COVID-19 Public Health Emergency (PHE) ended in the summer of 2023. Since then, Minnesota has joined other states and the federal government in considering current and future telehealth policies.

In 2021, the legislature passed the Minnesota Telehealth Act to codify telehealth expansions that had been temporarily instituted by Governor Walz's executive orders in 2020. The expanded telehealth services codified through this law apply to commercial health insurance and MHCP. The expanded coverage requirements include:

- **Removing limits** on coverage for telehealth services based on geography,
- **Increasing accessibility** of behavioral health and substance use disorder services,
- **Removing limitations** on services for MHCP recipients, including limits on the number of visits and expanded provider options,
- **Adding audio-only** visits to the definition of telehealth and the corresponding requirement to cover these at parity until July 1, 2023 (in spring 2023, the Legislature extended payment parity for audio-only telehealth until July 1, 2025), and
- **Requiring reimbursement** to be the same as in-person services for both commercial insurers and MHCP (without constraining the effective use of value-based payment contracts).

The legislature established the Minnesota Study of Telehealth Expansion and Payment Parity to study the impact of telehealth and payment parity on access to health care services, quality of care, health outcomes, patient satisfaction, health equity, health care costs and insurance premiums, value-based payments and innovation in health care delivery, and availability of in-person services.

This Minnesota-based study was conducted during a time when telehealth policies and practices have been relatively fluid. Some policies are temporary and will expire without further action. Further, state-level practices are also influenced by federal Medicare policies. With the federal PHE ending in May 2023, there are a number of federal Medicare policies that have become permanent and some that are still temporary until December 31, 2024, without federal legislative action (U.S. Office of Health & Human Services, 2023). Some of the permanent changes include allowing Medicare patients to participate in telehealth visits from their home (rather than a clinic) and making audio-only telehealth permanently allowable for behavioral health services. The temporary policies include allowing reimbursement for telehealth in metropolitan and other non-rural areas for visits beyond behavioral health services and easing limits on in-person visit requirements. In addition, all Medicare providers are currently eligible to offer telehealth services, but this automatic allowance is a temporary policy. Decisions on the future of these policies from both Congress and the Centers for Medicare and Medicaid Services (CMS) are important and will influence the standards adopted by commercial health plans.

This report is meant to inform ongoing and future policy discussions about telehealth. The information summarized herein will contribute to a better understanding of how state and federal telehealth policies have impacted telehealth use in Minnesota and how its rapid expansion has impacted many aspects of health and health care more broadly.

Defining Telehealth

Telehealth and the use of technology are not new to health care, but their scopes and definitions are rapidly expanding. Technology is evolving at a rapid pace, which has only accelerated since the onset of the COVID-19 pandemic. Its unparalleled growth is touching every corner of health and health care, from artificial intelligence integration in health care delivery to personalized phone apps that track a number of health-related activities such as daily steps or biometrics such as blood glucose levels.

The terms telehealth and telemedicine are often used interchangeably to refer to the delivery of remote clinical services through the use of telecommunications technology. Some definitions of telehealth are broader and include non-clinical services such as provider training, continuing education, and provider-to-provider consultations. In this report, MDH uses the term “telehealth” to

include clinical services only and focuses on clinical encounters between a patient and a health care provider.

Under this definition, telehealth includes an array of services, which may be grouped into the following broad categories:

- **Synchronous (real-time) telehealth** involves a live interaction between a patient and provider through video or audio and is usually a scheduled visit. Synchronous services may include visits between patients and providers to address a specific health need (e.g., respiratory symptoms, skin rash), follow-up visits after a hospital or outpatient procedure, check-ins with a provider for ongoing care (e.g., for chronic conditions such as hypertension or diabetes), medication management, psychotherapy sessions, and more. Patients usually participate in these visits from their homes but sometimes may go to a local clinic to have a telehealth visit with a provider located somewhere else and increasingly participate while on-the-go (e.g., from a car, workplace, or school). This type of telehealth may also be used for provider-to-patient consultations that occur during an inpatient hospital stay. Synchronous telehealth is the area of services that many people think of most, especially in payment parity conversations.
- **E-visits** (sometimes referred to as virtual visits) are often initiated by a patient via a patient portal or other means of accessing telehealth-based care, and do not require an appointment. Patients may interact with a provider via secure messaging, or they may answer a series of questions via a chat function or online questionnaire, and then are contacted later by a health care provider to follow up. E-visits are often available to enrollees in commercial health plans through a virtual provider system (e.g., Virtuwell®, Teladoc®, Doctor on Demand®) that is separate from their in-person, brick-and-mortar clinic, but availability of e-visit options through patients' usual, in-person health care providers is increasing. E-visits are sometimes described as a type of asynchronous telehealth, but they may also be a hybrid of synchronous and asynchronous components.
- **Asynchronous, or store-and-forward, telehealth** is often used to collect patient intake information or as part of follow-up care. For example, a patient (or their primary care provider) may send images of a patient's skin condition to a dermatologist for diagnosis or treatment recommendations, or to monitor post-treatment healing progress. In addition, some types of secure messaging between patients and providers are increasingly being considered as a type of asynchronous telehealth and becoming billable services.
- **Remote patient monitoring (RPM)** includes the electronic collection and transmission of medical data from individuals using digital technologies to a health care provider, such as through an app on a smartphone. Transmission of monitoring data may happen in real-time, or the data may be collected and sent to providers on a regular basis. Examples include monitoring of blood pressure, blood glucose, weight, or heart rate.

Across these categories of telehealth, technology and care delivery approaches that leverage technology continue to evolve and both patients and providers have become more comfortable using telehealth (and related technologies) to manage health information and deliver or receive health care (See Spotlight: Telestroke in Minnesota).

Spotlight: Telestroke in Minnesota

Stroke is the fifth leading cause of death and one of the leading causes of disability in Minnesota. Early intervention and treatment are critical to good recovery after a stroke. Telestroke is a telehealth model that predates the COVID-19 pandemic and has changed the landscape of stroke care in Minnesota, leading to earlier interventions and more coordinated care for patients.

The telestroke model is determined by individual hospitals and health systems that establish relationships within their own system or with other health systems. Telestroke programs facilitate consultations, through phone or video technology, between on-site (in-person) providers at one location and experts at another location. Recommended therapies, including medications to treat a stroke, can be initiated immediately after consultations with the appropriate specialists. Providers can make patient-specific treatment decisions, including whether a patient needs to be transferred to a higher-level hospital. This model allows patients to stay in their local communities, when possible, while simultaneously maintaining capacity availability at tertiary medical centers, which offer specialty care. Telestroke supports provider-to-provider consultations, fosters ongoing professional relationships, and grows expertise among providers at community hospitals with limited specialists.

MDH coordinates the Minnesota Stroke System and designates facilities as Acute Stroke Ready Hospitals. Most designated hospitals are Acute Stroke Ready. These hospitals are typically *receiving* telestroke services. MDH also supports Primary Stroke Centers and Comprehensive Stroke Centers, which are certified through the Joint Commission, an accreditation body focusing on quality and safety. Primary Stroke Centers and Comprehensive Stroke Centers tend to be telestroke *providers* as they are at the higher level of designation and have more capabilities for treatment. Health systems and telestroke providers have established processes for tracking quality and conducting case reviews – a required component for sites to maintain their stroke hospital designation from MDH.

Based on an annual hospital inventory survey conducted by the MDH Stroke Program, telestroke is primarily used in emergency departments. Bed capacity constraints at both community and larger system hospitals, along with limited EMS transportation, can delay the time it takes a patient to be seen and treated. Telestroke programs can help patients in rural areas with limited or no inpatient neurology options to receive appropriate and time-sensitive treatment in their home community, which benefits patients, families, providers, and local health systems.

The Minnesota Telehealth Act of 2021 updated the 2015 Minnesota Telemedicine Act and specifically defined telehealth as:

> *"The delivery of health care services or consultations through the use of real-time, two-way interactive audio and visual communications to provide or support health care delivery and facilitate assessment, diagnoses, consultation, treatment, education and care management of a patient's health care. Telehealth includes the application of secure video conferences, store-and-forward technology, and synchronous interactions between a patient located at an originating site and a health care provider located at a distant site."*
>
> (Minnesota Statutes, section 62A.673, subdivision 2)

Other forms of telehealth, such as remote patient monitoring, are not included in this definition but are covered elsewhere in Minnesota statute. One major difference between the Minnesota Telemedicine Act (2015) and the Minnesota Telehealth Act (2021) is that audio-only encounters (e.g., telephone visits) were explicitly excluded from the 2015 definition of telemedicine but are included in the 2021 definition of telehealth until July 1, 2025.

Telehealth Use in Minnesota

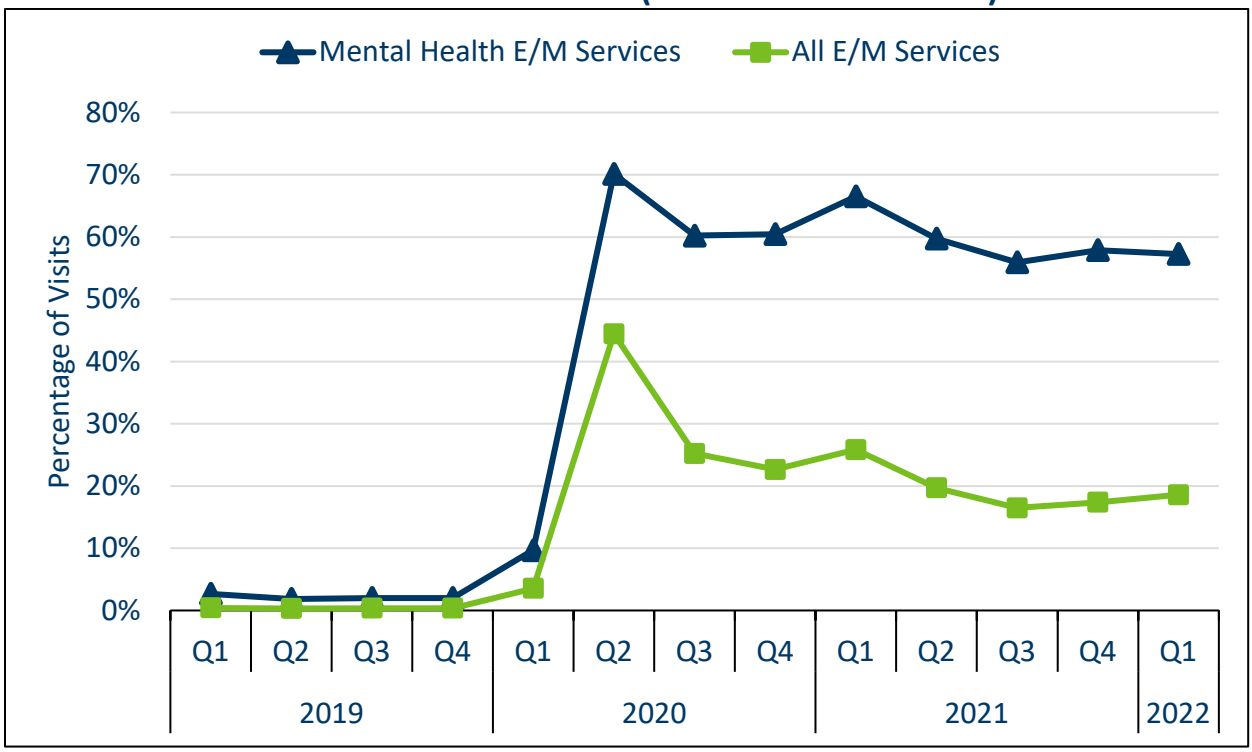
The COVID-19 pandemic sparked dramatic growth in the number of telehealth visits – a reflection of stay-at-home policies to reduce transmission of the COVID-19 virus, relaxation of many state and federal restrictions previously in place, and requirements for telehealth to be reimbursed at parity for more scenarios during the pandemic. As the pandemic has subsided, telehealth use has declined from the 2020 peak to a new, lower level that still far out-paces pre-pandemic telehealth use. Equally important, the types of services offered via telehealth have continued to evolve since early 2020 and point to an expanded role for telehealth into the future.

Together, the pandemic-related disruptions to health care availability and use and related changes to existing telehealth policies contributed to fundamental changes in the availability and use of telehealth in Minnesota and nationally. MDH examined patterns of telehealth use from the perspectives of Minnesota patients, providers and health plans, the types of visits or care being delivered by telehealth, characteristics of audio-visual and audio-only telehealth users, and how these patterns have changed in recent years. This section of the report summarizes those changes and describes the patterns of telehealth use in Minnesota, including who is using telehealth, what kinds of health care services are being delivered via telehealth, how people are using telehealth, and insights from interviews as to why people are choosing telehealth.

Use of telehealth has stabilized at a much higher level than before the COVID-19 pandemic.

Figure 1 illustrates the general pattern described above, of rapid growth in the use of telehealth in March and April of 2020, followed by a decline and leveling off at a much higher level than pre-pandemic. More specifically, Figure 1 shows the percentage of a common type of office visits, billed as evaluation and management (E/M) visits, that were delivered via telehealth between January 1, 2019, and March 31, 2022, among commercial enrollees (MN APCD, 2023).[2] Prior to the onset of the COVID-19 pandemic, a very small percentage E/M visits were delivered via telehealth. This percentage rose dramatically in 2020 and subsequently leveled off but remains at a level much higher than in 2019. Notably, use of telehealth for behavioral health E/M visits remained quite high (over 50% of encounters) through 2021 and early 2022.

Figure 1. Percentage of Evaluation and Management (E/M) Visits Delivered via Telehealth (Commercial Enrollees)

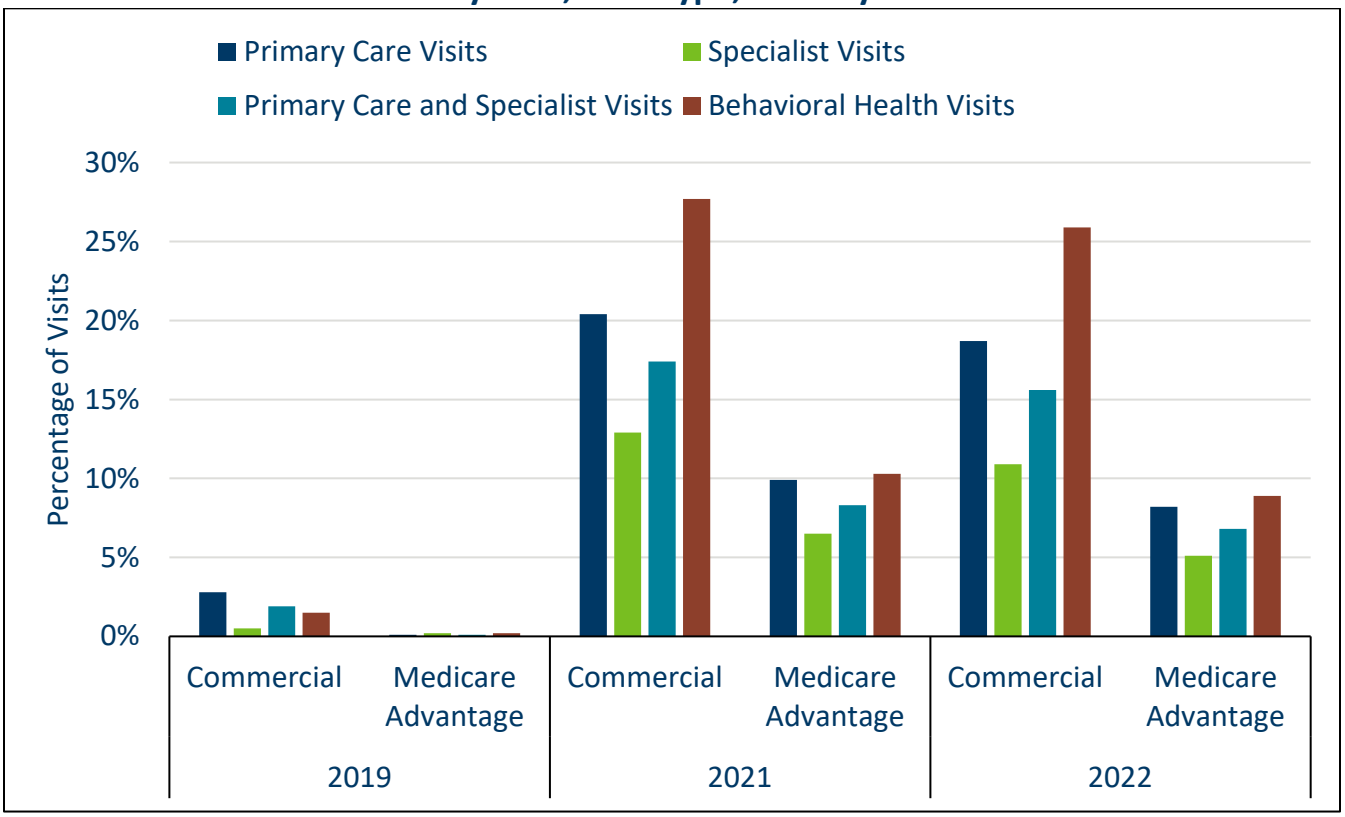


[2] E/M visits include a wide range of visits with a health care professional with the overall purpose of evaluating or managing a patient's health (e.g., to discuss, diagnose, and treat symptoms of an upper respiratory infection; to develop a treatment plan for new or poorly controlled hypertension, high cholesterol, or diabetes; to examine, diagnose, and treat a skin rash; etc.).

Source: Jiani Yu analysis of the Minnesota All Payer Claims Database (MN APCD), Extract 25.
Evaluation and Management (E/M) visits are a common set of billing codes that include a wide range of primary care visits with a health care professional with the overall purpose of evaluating or managing a patient's health.

Figure 2 provides another view of the increase in telehealth visits among both commercially insured patients and Medicare Advantage patients. In general, telehealth was used more often by commercial enrollees than Medicare Advantage enrollees, and primary care and behavioral health visits were more commonly delivered via telehealth than specialist visits. Medicare Advantage enrollees used telehealth for 9% of all behavioral health visits and 8% of primary care visits in 2022, whereas commercial enrollees used telehealth for 26% of behavioral health visits and 19% of primary care visits in 2022 (Mathematica, 2023). Use of telehealth in 2021 was only slightly higher than in 2022 and use in both years was much higher than in 2019.

Figure 2. Percentage of Total Visits Delivered by Telehealth, by Year, Visit Type, and Payer



Source: Mathematica analysis of the Minnesota All Payer Claims Database (MN APCD), Extract 26.

The patterns shown in Figures 1 and 2 suggest that telehealth use patterns may have settled into what could be an emerging "new normal." Statewide data collected as part of the Minnesota Telehealth and Access Survey (MNTAS) show that 31% (nearly one in three) of all Minnesotans (regardless of health

insurance coverage) had at least one telehealth visit between mid-2022 and mid-2023. Among the telehealth users, 41% used audio-visual telehealth, 25% used audio-only telehealth, and 34% used both modalities. When asked about the reason for their most recent telehealth visit, the most common responses were for behavioral health care, prescription management, chronic condition care, and urgent care. Compared to the statewide average, older Minnesotans (ages 65 and older) were more likely to have used telehealth for managing chronic conditions, and young adults (ages 18-34) were more likely to have used telehealth for behavioral health care (MNTAS, 2023). More information about how telehealth use varies by patient characteristics is described near the end of this section.

Telehealth can be used in place of in-person visits in many situations, especially for primary care and behavioral health services. One of the questions posed in the legislation is to what extent Minnesotans are using telehealth to substitute for in-person care, as opposed to using it to supplement in-person care. This latter scenario does not imply that there is necessarily over-use or redundant use of telehealth. In fact, telehealth may serve as a good way to add additional touchpoints or follow-up for patients managing chronic conditions or with other complex needs (See Spotlight: Telehealth Use in Preventing and Managing Diabetes).

Analysis of the MN APCD by Mathematica found that commercial enrollees appeared more likely to have relied on telehealth as a replacement for in-person visits because increased telehealth visits for primary care, specialty care, and behavioral health care between 2019 and 2021 were balanced by a decline in in-person visits. As a result, among these patients, telehealth expansion did not necessarily result in duplicative services. However, Medicare Advantage enrollees did not appear to be using telehealth to substitute for in-person visits. Among Medicare Advantage patients, the general decrease in the use of in-person services from 2019 to 2021 was similar for telehealth users and non-users. Telehealth use was associated with higher use of in-person services in 2022 for both Medicare Advantage and commercially insured patients. Medicare Advantage patients, including both telehealth users and non-users, used slightly more in-person services on average in 2022 than in 2021, suggesting their return to seeking in-person care as the COVID-19 pandemic waned. Commercial enrollees (both telehealth users and non-users) did not increase their use of in-person services in 2022 (Mathematica, 2023). Analysis of more recent data (from after the end of the PHE), when available, will likely help to clarify to what extent telehealth is substituting for in-person care and to what extent it is being used to supplement in-person care.

Spotlight: Telehealth Use in Preventing and Managing Diabetes

In Minnesota, telehealth is being used as a tool to help prevent diabetes in adults at risk for developing type 2 diabetes and to provide self-management and monitoring support for people with diabetes. Type 2 diabetes is a chronic disease that can have serious consequences and become costly to treat.

The National Diabetes Prevention Program (NDPP) is a Centers for Disease Control and Prevention (CDC) program that trained lifestyle coaches use to support people with prediabetes in order to avoid the development of type 2 diabetes.* The program is available to Minnesotans on any type of health plan. Before 2020, NDPP was almost completely in-person, but the expansion to distance learning (i.e., telehealth) during the COVID-19 pandemic has expanded access, including for seniors and Minnesotans in rural communities. Distance learning is real-time delivery of sessions from one location to participants on a video conference or telephone at another, permitting cohorts made up of Minnesotans from across the state and increasing participation of caregivers.

For people who are newly diagnosed with diabetes or who have changed their treatment plans, there are several evidence-based programs to educate and support them, including the Diabetes Self-Management Education and Support (DSMES) program. Most of these programs are run by a clinic or hospital and are usually covered by insurance. Many DSMES programs were using telehealth prior to the COVID-19 pandemic, but since the pandemic, the types of health care providers who can be reimbursed as educators has expanded. While intended to be held in-person, there are telehealth options in certain circumstances. Because a person with diabetes spends an estimated 1% of their life with their health care professional, diabetes management decisions largely fall on the person with diabetes or their caregivers. Having the DSMES program and support offered through the program available via telehealth is beneficial to patients who are self-managing their treatment plans. Most hospitals and clinics have tech support to assist program participants with telehealth technology.

Diabetes educators can be based anywhere in the state to provide both in-person and virtual support throughout the day. Telehealth also supports culturally congruent care by connecting patients with educators who speak the same language. Finally, telehealth may help to extend the reach of this program, particularly in regions where DSMES and NDPP have not been available.

** The Minnesota Department of Health (MDH) receives funding from the Centers for Disease Control and Prevention (CDC) to increase access and participation in the National Diabetes Prevention Program (NDPP) and the Diabetes Management Education and Support (DSMES) program.*

Local 'brick and mortar' clinics are now offering telehealth.

Prior to the onset of the COVID-19 pandemic, most telehealth visits for Minnesotans with commercial health insurance were conducted with providers available through digital health platforms such as Virtuwell®, Teladoc®, or Doctor on Demand®. Today, Minnesotans commonly have the option to have a telehealth visit with the same providers (or team of providers) they see for in-person care.

As shown in Figure 3, as of July 2023, about 60% of Minnesota physicians, physician assistants, and drug and alcohol counselors, and about 75% of behavioral health providers, report using telehealth for at least some of their visits, a dramatic increase since 2019 (Workforce Survey, 2023). Interviews with

providers reinforce these data and indicate that behavioral health services delivered via telehealth remain especially popular (SDK, 2024).

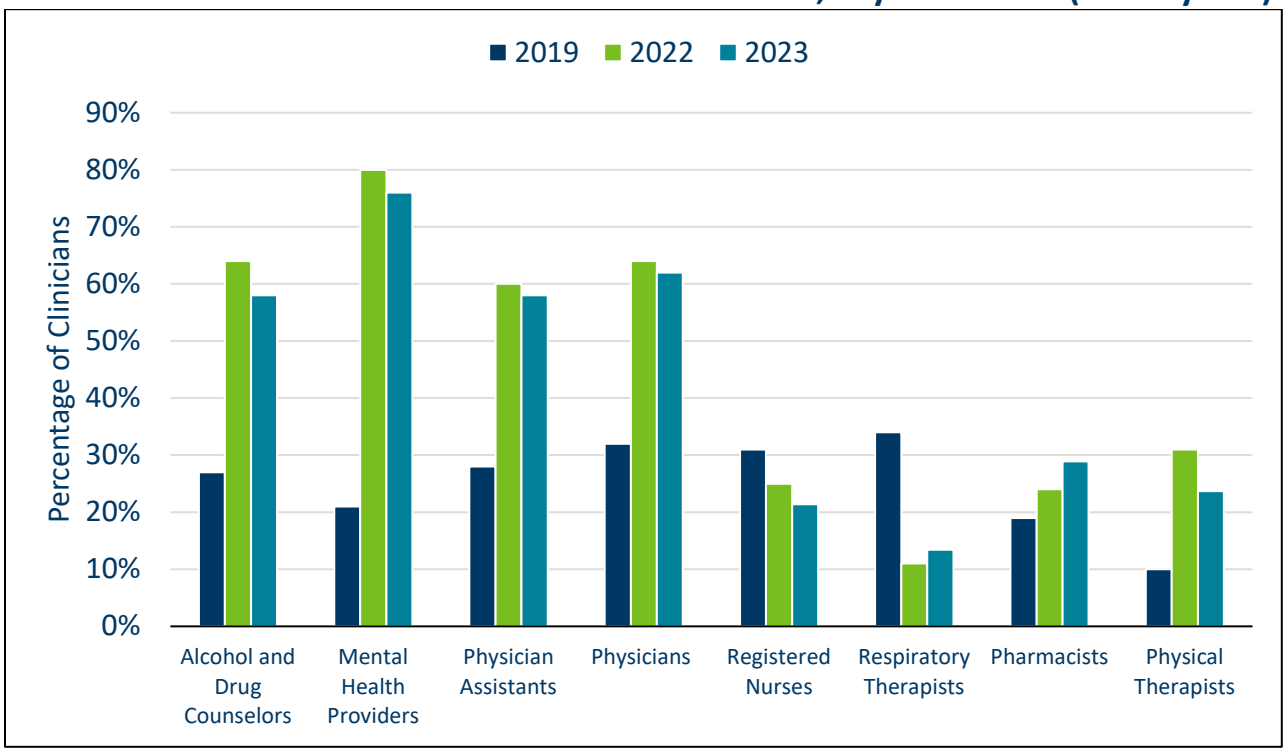
Between 2019 and 2023, the percentage of providers using telehealth increased in all regions of Minnesota, with the greatest increase among providers in urban areas (25% in 2019 to 46% in 2023) (Workforce Survey, 2023). One contributing factor to the increase in providers offering telehealth in metropolitan areas is the federal policy change that made more providers outside designated rural areas eligible for Medicare reimbursement. Providers interviewed as part of this study reported that having telehealth available as a reimbursable service for older adults covered by Medicare made it simpler to make telehealth available to all patients (SDK, 2024).

Data from the Health Information Technology (HIT) survey of Minnesota clinics found that virtually all clinics surveyed reported offering at least one form of telehealth: 99% offered video visits, 88% offered audio (telephone) visits, 52% used provider-to-provider e-consults, and 39% used asynchronous ("store and forward") telehealth.

Figure 4 shows the types of care being delivered via telehealth and illustrates the wide range of physical and behavioral health services that Minnesota clinics are making available to their patients. Still, in-person clinic visits remain the most common way of delivering care with the vast majority (83%) of Minnesota clinics using telehealth for less than 25% of all encounters (HIT Survey, 2022).

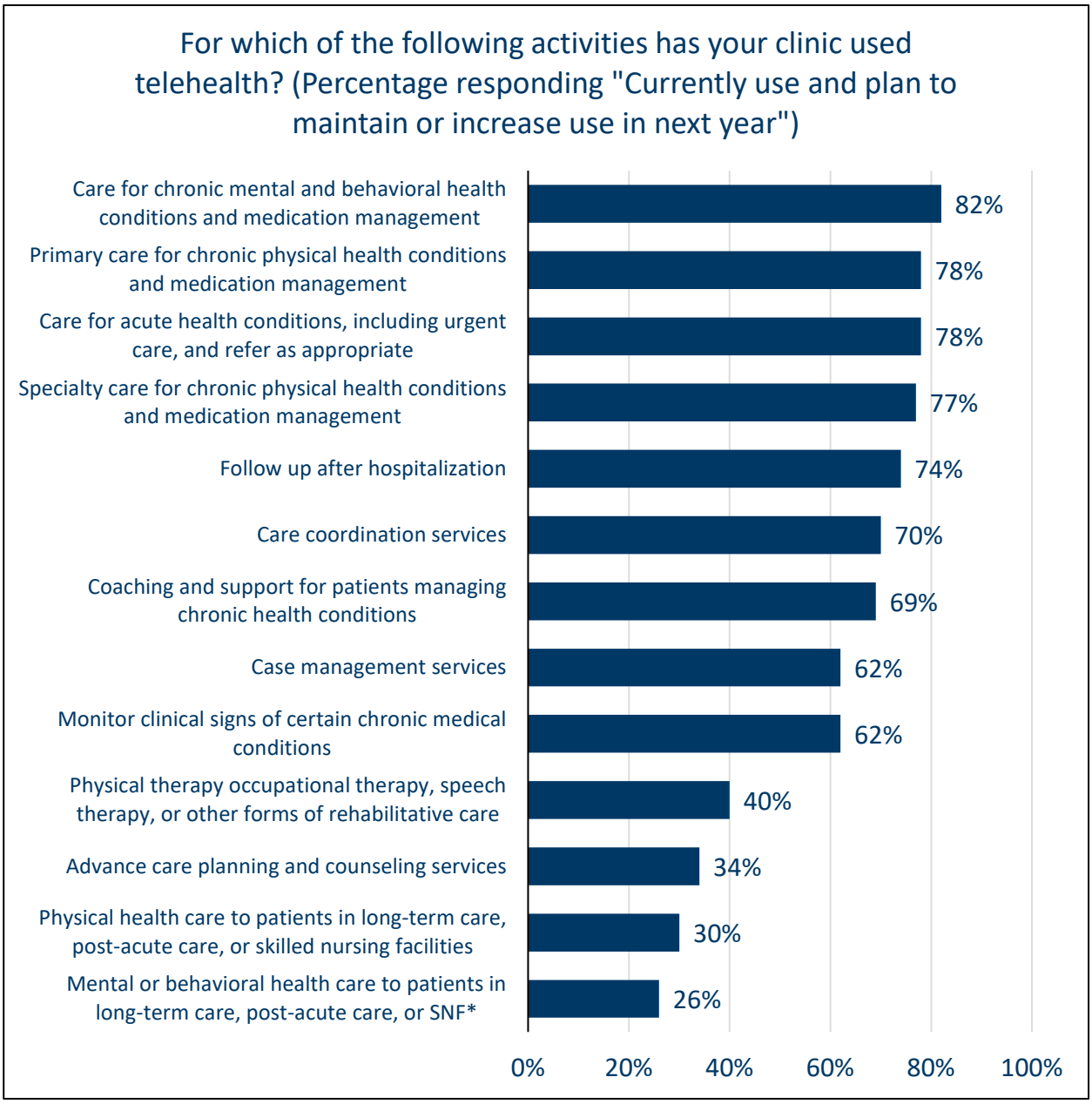
Over 85% of the clinics surveyed indicated that patient interest or demand for telehealth-based services was one of the most important determinants of how much telehealth is offered by the clinic. Other important drivers included provider interest/availability in providing health care services via telehealth, technology challenges (including broadband) on the part of the patient, reimbursement for telehealth services at the same rate as for in-person care, and the ability to provide comparable quality for telehealth versus in-person visits (HIT Survey, 2022).

Figure 3. Percentage of Clinicians Who Report Using Telehealth to Treat Patients or Clients "at Least Some of the Time," by Profession (select years)



Source: MDH Office of Rural Health and Primary Care (ORHPC) analysis of data from the Minnesota Health Care Workforce survey.

Figure 4. Telehealth Use in Minnesota Clinics (2022)



Source: MDH Health Economics Program analysis of the Minnesota Health Information Technology Ambulatory Clinics Survey (HIT) 2022. * SNF = Skilled nursing facility

Behavioral health care emerged as the most common type of telehealth visit.

As described previously, the availability and use of telehealth for behavioral health care ramped up dramatically during the early weeks of the COVID-19 pandemic and has continued to make behavioral health services easier to access for many Minnesotans. Prior to 2020, the most common reasons for telehealth visits among commercial enrollees in Minnesota were for non-emergency acute care (e.g., sinusitis, urinary tract infections). In 2021, the most common reason for telehealth visits was to receive behavioral health care (e.g., depression, anxiety) (MN APCD, 2023).

Even after the availability of many in-person health care services was restored, use of telehealth for behavioral health care remained relatively high (Figures 1 and 2). Analysis of data from the Minnesota Electronic Health Record (EHR) Consortium found that over 50% of behavioral health visits were conducted via telehealth in 2022 (MNEHRC, 2023). Similar estimates from the MN APCD were lower, with 26% of behavioral health visits among commercial enrollees, and 9% among Medicare Advantage enrollees, being delivered via telehealth in 2022 (Mathematica, 2023).[3]

Mathematica's analysis of data in the MN APCD suggests that the expansion of telehealth may have improved access to behavioral health care. For example, commercially insured patients who used telehealth increased their use of behavioral health services by about 2.5 additional visits per year compared with telehealth nonusers. Medicare Advantage telehealth users increased their use of behavioral health services by nearly 2 visits per year compared with telehealth nonusers. These increases in service use persisted into the subsequent year (Mathematica, 2023).

In the analyses of the MN APCD, telehealth use was associated with overall increases and higher rates of behavioral health visits among high-risk patients[4], patients with comorbidities, and patients who lived in areas with high concentrations of Black, Indigenous, and People of Color (BIPOC) residents. In

[3] The reasons for these differences are likely due to the different sources of data. Whereas the MN APCD only includes claims data for services that were paid for by health insurance, the EHR data include all encounters regardless of whether they were paid by insurance. In addition, the analyses of the MN APCD focused on those with commercial or Medicare Advantage health insurance, whereas the MNEHRC data included patients seen by any of the participating health systems regardless of insurance coverage. Further, the telephone encounters included in the MNEHRC data likely included many that were not reimbursed and may not have met the definition of telehealth that would require payment parity. Neither data set is "wrong" or necessarily flawed – they are just coding and counting encounters based on different sets of criteria. Regardless of these differences, the general patterns are similar and behavioral health visits were the most common type of telehealth visit in both datasets.

[4] For this study, Mathematica used output from the Johns Hopkins Adjusted Clinical Groups® (ACG®) System (Version 13.0) to categorize commercial and Medicare Advantage patients in the MN APCD into low, medium, or high-risk groups for health care utilization and related health care spending (Mathematica, 2023).

addition to potentially underserved populations, telehealth use was also associated with overall increases and higher rates of behavioral health service use in metropolitan areas. These benefits were more limited among patients in areas with low broadband access, especially among patients enrolled in Medicare Advantage (Mathematica, 2023).

Analysis of EHR data also found that telehealth use for behavioral health care varied by patient and geographic characteristics. Whereas all age groups had a substantial increase in their utilization of behavioral health services via telehealth, working age adults (ages 18-65) emerged as the highest users of behavioral care telehealth, whereas prior to the onset of the COVID-19 pandemic, adults ages 65 and older were the highest users. Prior to the expansion of telehealth during the COVID-19 pandemic, telehealth for behavioral health was similar among people with different race or ethnic backgrounds. This changed, with higher utilization among Asian, Black or African American, White, and Hispanic or Latino Minnesotans. Patients identifying as American Indian or Alaskan Native used less telehealth overall, including for behavioral health care.

Telehealth can also help to address challenges and barriers to accessing behavioral health care, such as long wait times for appointments and limits on taking on new patients because of space or staffing constraints. A 2024 study on behavioral health treatment facilities across the United States found that 80% of the facilities taking new patients offered telehealth. Of these, 97% offered telehealth counseling services, 77% offered medication management services, and 69% offered diagnostic services via telehealth. There was no difference in telehealth services based on the patient's clinical condition, perceived race or ethnicity, or sex. The median wait time for a first telehealth appointment was 14 days, though there was considerable variation in length of wait time across states (state-specific medians ranged from 4 days to 75 days) (Cantor et.al., 2024).[5]

Interviews with health care providers and health plan companies, and discussions with the TAG affirm that expanding access to behavioral health care via telehealth has helped to address previous challenges in the behavioral health system and equipped providers to better meet the growing demand for behavioral health services. Minnesota health plan companies noted that providers, including those with brick-and-mortar practices and those with virtual care-only practices, have expanded their behavioral health services.

[5] The study by Cantor et al. (2024) did not include a comparison group and the authors noted that there is not a definitive national estimate for wait times for an in-person mental health visit. They cited a recent survey of psychiatrists in 5 states (New York, California, North Dakota, Virginia, and Wyoming) that found a significantly longer wait time for in-person psychiatry appointments (median = 67 days) than for telepsychiatry appointments (median = 43 days). The full report from this survey is available at: https://pubmed.ncbi.nlm.nih.gov/37290263/.

Interviews with providers and patients (SDK, 2024) identified several ways in which telehealth helps to reduce barriers to accessing or maintaining behavioral health care, including that the availability of telehealth:

- **Makes it easier for patients to keep a provider**. Several of the interviewed patients said they favored telehealth for behavioral health care because it allows them to keep a provider with whom they share a good rapport. One patient described moving from an inner-ring suburb of the Twin Cities to a rural area an hour north. The ability to keep her provider through that move was incredibly helpful to her overall mental health. Another person talked about her daughter's ability to schedule quick check-in meetings with her provider from college and how helpful it has been for her daughter to keep continuity in that relationship through the transition to college life.
- **Allows some people to seek behavioral health treatment without fear of stigma**. Seeking help for behavioral health is a source of stigma in some communities. Interviewed providers reported seeing more willingness to seek behavioral health treatment in these communities when the service was available via telehealth. For example, a provider who specializes in working with the Somali community reported having greater success encouraging people managing trauma to complete a behavioral health appointment via telehealth, without being seen walking into an office. Similarly, a rural patient described how much she appreciates the privacy of behavioral health appointments via telehealth.
- **Helps rural patients access behavioral health services.** The behavioral health provider shortage has been a challenge in rural areas for years. Telehealth makes behavioral health care available and more accessible in many areas of Minnesota where accessing in-person services is challenging.
- **Allows providers to expand capacity.** Some providers described how telehealth has allowed them to expand the number of behavioral health appointments offered because they are no longer limited to the available private rooms in a hospital-adjacent facility. Prior to adopting telehealth, one provider had a five month wait for appointments; now they can accommodate appointment requests in days or weeks.

Overall, behavioral health providers expressed that telehealth has dramatically increased their ability to meet patient demand and expand their services. However, some providers cautioned against allowing behavioral health care to become entirely virtual, particularly for people with serious and persistent mental illnesses (SDK, 2024).

Audio-only telehealth (e.g., telephone visits) became available as an option for delivering and receiving health care services.

The Minnesota Telemedicine Act (2015) explicitly excluded audio-only encounters from the definition of telemedicine, and therefore these visits were not subject to payment parity requirements. This policy changed through emergency orders at the state and federal level during the early months of the COVID-19 pandemic to require reimbursement of these visits at parity to in-person visits. This change was subsequently codified in the Minnesota Telehealth Act (2021), with a sunset date extended until June 30, 2025.

Audio-only telehealth has become an important way to access health care for some Minnesotans, particularly for older Minnesotans and those residing in rural parts of the state. About 59% of telehealth users in Minnesota reported using only audio-only telehealth or both audio-only and audio-visual telehealth for health care appointments in the past year (MNTAS, 2023).[6]

Audio-only telehealth is relatively uncommon among commercial enrollees – less than 2% of all commercial enrollees in the MN APCD had an audio-only visit in 2022 (Mathematica, 2023). A somewhat higher percentage of Medicare Advantage enrollees (5%) had an audio-only visit that year. However, these figures only represent claims for services that were paid by insurance and were specifically coded as audio-only and are likely an undercount of audio-only visits. Billing codes for telehealth are evolving along with telehealth itself, and some of the codes do not distinguish between audio-only and audio-visual telehealth encounters. Further, some encounters may be scheduled as (or begin as) audio-visual encounters, and then switch to audio-only due to technology or connection issues that arise.

Even so, there were important differences between characteristics of patients accessing audio-only telehealth and those who use audio-visual telehealth. While the use of audio-only telehealth was much lower than audio-visual, overall, use of audio-only was highest among potentially vulnerable populations. Among both commercially insured and Medicare Advantage patients, use of audio-only telehealth was more common among high-risk patients and among patients with a broad range of comorbidities, as well as among those living in nonmetropolitan and high-poverty areas. Among commercially insured patients, use of audio-only telehealth was also more common among residents of areas with low broadband access (Mathematica, 2023).

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[6] Of the 31% of Minnesotans who reported using any type of telehealth between mid-2022 and mid-2023, 25% used audio-only telehealth exclusively, 41% used audio-visual telehealth exclusively, and 34% had both types of telehealth visits (MNTAS, 2023).

A review of the literature focused on audio-only telehealth found that that many physical and behavioral health services delivered via audio-only telehealth were comparable to in-person services in terms of effectiveness, health outcomes, health care utilization, and quality of life (CEbP, 2023).

Audio-only telehealth is proving to be a helpful modality for people seeking physical and behavioral health care and to help patients keep appointments, improve medication adherence, or triage complex needs. For example, some small and community-based providers interviewed rely on audio-only telehealth to connect with patients who are unable to attend a scheduled in-person appointment due to running behind, inclement weather, or other last-minute challenges (SDK, 2024). Some patients interviewed shared a preference for audio-only telehealth, especially for behavioral health or medication adherence appointments, because they find the provider-initiated apps required to access audio-visual telehealth to be too cumbersome for the nature of the appointment. Finally, several providers noted that some of their patients, particularly older patients, are much more comfortable using a phone rather than navigating the technology needed for an audio-visual appointment. In some rural areas, audio-only telehealth is much more accessible and reliable given limited availability of broadband. However, some behavioral health professionals who participated in the DHS-led telehealth study expressed concern about exclusive use of audio-only telehealth and suggested the need for in-person or audio-only visits at regular intervals (MN DHS, 2023).

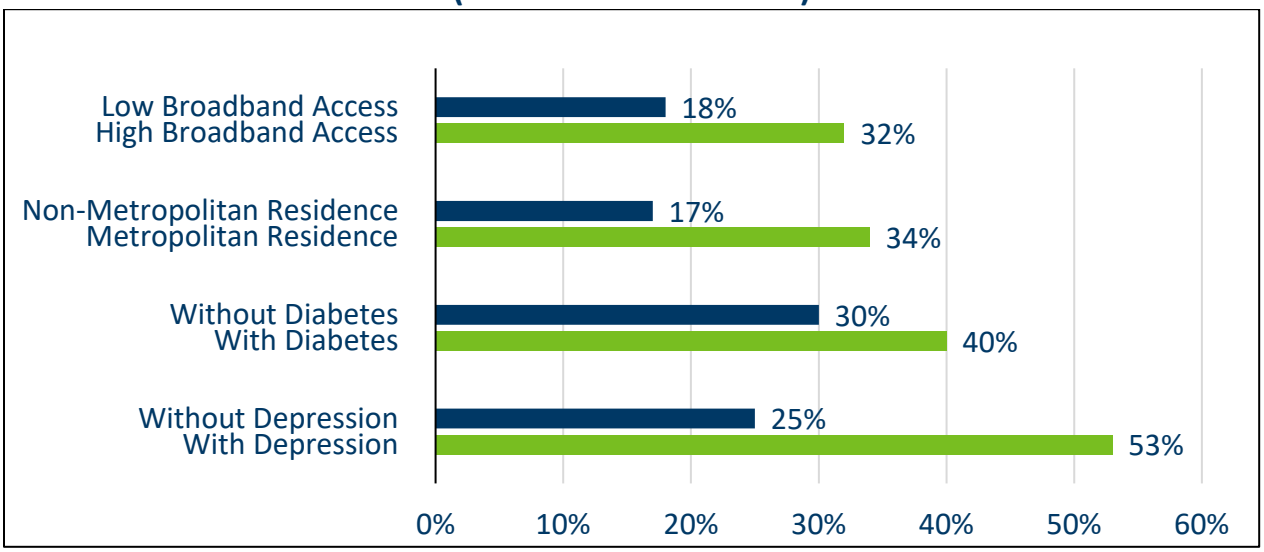
Telehealth use varies by patient characteristics.

Characteristics of telehealth users differed from non-users, and there were also differences between audio-only telehealth users and audio-visual telehealth users.

Analysis of claims data in the MN APCD for Minnesotans with commercial health insurance or Medicare Advantage found that telehealth use was more common among people at higher risk, with comorbidities (e.g., diabetes, depression), or who lived in metropolitan areas and areas with high broadband access (Figures 5a and 5b) (Mathematica, 2023).

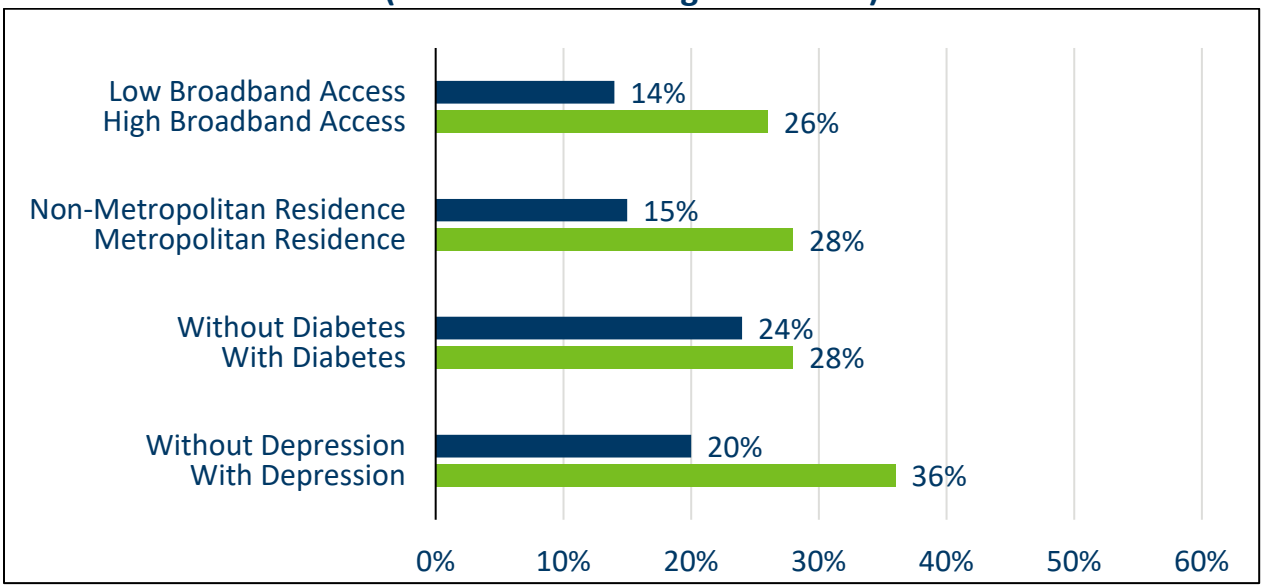
Similarly, audio-only telehealth use was more common among people at higher risk and with comorbidities. However, audio-only telehealth was also more common among older Minnesotans and those residing in nonmetropolitan areas, areas with low broadband access, or higher poverty areas (Mathematica, 2023).

Figure 5a. Patient Characteristics Associated with Telehealth Use (Commercial Enrollees)



Source: Mathematica analysis of the Minnesota All Payer Claims Database (MN APCD), Extract 26.

Figure 5b. Patient Characteristics Associated with Telehealth Use (Medicare Advantage Enrollees)



Source: Mathematica analysis of the Minnesota All Payer Claims Database (MN APCD), Extract 26.

The MNTAS survey (MNTAS, 2023) corroborates and extends the findings from the MN APCD. For example:

- **Telehealth (including both audio-only and audio-visual) use is more common among residents in the Twin Cities Metropolitan Area, and less common among Greater Minnesota residents.** Telehealth use was significantly higher than the statewide average for Minnesotans residing in

the Twin Cities Metropolitan Area, 36% of whom used telehealth during the study period compared to the statewide average of 31%. On the other hand, telehealth use for people living in Greater Minnesota (24%) was lower than the statewide average (31%).

- **Telehealth use is lower among children, people with lower education, and people without health insurance.** Specifically, 23% of children under the age of 18 used telehealth (compared to statewide average of 31%). Telehealth use was also lower among Minnesotans with a high school education or less (21%), and those without health insurance (11%) (MNTAS, 2023).
- **Audio-only telehealth use is more common among older Minnesotans**. The MNTAS survey found that telehealth users ages 65 and older were more likely than the statewide average to use audio-only telehealth only and not to use audio-visual (45% of telehealth users ages 65 and older compared to 25% statewide used audio-only exclusively).
- **Audio-visual telehealth use is more common among young adults, privately insured, and college graduates**. Use of audio-visual telehealth exclusively (no audio-only use) was more common among Minnesota telehealth users who were young adults ages 18-34 (53% of whom used audio-visual exclusively), had private insurance (49%), and who were college graduates (50%), compared to use statewide average (41%) (MNTAS, 2023).

Taken together, findings from this study suggest that, while preferences or convenience might drive some decisions to use (or not use) telehealth, many Minnesotans who use telehealth also have greater health care needs. In addition, audio-only telehealth is more accessible or comfortable than audio-visual telehealth for older Minnesotans and those with insufficient technology or broadband to support an audio-visual telehealth visit.

Evaluating Telehealth's Impact in Minnesota: Access, Equity, Cost, Quality, and Satisfaction

The previous section describes patterns of telehealth use in Minnesota, including the changes and expansion that occurred since the onset of the COVID-19 pandemic. In this section, MDH addresses the key questions posed by the Minnesota Legislature regarding the impact of telehealth expansion and payment parity on health care access, equity, costs, quality and outcomes, and satisfaction. These are important indicators of an effective health care system.

Access: Telehealth makes access to health care faster and easier for many Minnesotans.

Telehealth makes health care more accessible from more providers than what was previously available through in-person care alone. Equally important, telehealth equips health care providers and community health workers with new tools to reach patients where they are, in their language, and in the mode most comfortable to them.

Providers, patients, and public health professionals agree that telehealth's greatest contribution has been the expanded health care access it affords. Across focus groups and interviews with providers, patients, and public health professionals, several benefits were noted consistently, including:

- **Faster access to appointments**. For some, this meant quicker access for an urgent care provider in the Twin Cities Metropolitan Area. For others, telehealth meant they could see a specialist located 4 hours away within a week, rather than having to delay the appointment until they had a full day available to make the trip.
- **Easier to balance medical needs with work, school, and life**. Telehealth makes it easier for patients to have a health care visit with fewer disruptions to their daily commitments – at work, school, or at home. Whether it is people balancing their own health care needs with other life demands, or those who are caregivers for children or elderly family members who need to see a health care provider, telehealth can make it easier.
- **Fewer missed appointments**. Telehealth appointments are easier to keep for people who need to manage child care, work, transportation, or other barriers to accessing in-person care. Many providers noted fewer missed appointments or cancellations with telehealth, allowing them to maximize their time spent providing care to their patients.
- **Greater access to care for people in locations with health care workforce shortages.** Wide areas of Greater Minnesota do not have enough health care professionals, particularly behavioral health professionals, to meet the demands for service. In addition, the transportation barriers to accessing care are even greater there. Telehealth can help people living in these areas access care more easily.
- **More opportunities to access specialists.** Providers and aides such as home health workers talked about opportunities for consulting with specialists via telehealth, particularly for those in Greater Minnesota. Telehealth increases the number of available specialists and makes it possible to see them without having to travel great distances. Some participants talked about the strain on older adults traveling to the Twin Cities or Rochester, and how those stresses are avoided with telehealth.
- **Easier to participate in brief check-ins and get help managing chronic diseases.** Both patients and providers talked about the convenience of telehealth for quick meetings to manage chronic

diseases in between in-person visits. For example, one person expressed her appreciation (especially during winter) that her rheumatologist suggested that they alternate in-person visits and telehealth visits to manage her condition. Another person shared her previous experience taking public transportation to medication management appointments. The travel was an hour each way and the stress exacerbated her anxiety. Now, with telehealth, she's able to keep that appointment consistently without the added stress of transportation.

- **More opportunities for people with significant access barriers and those with complex needs to access health care.** Telehealth is also emerging as a tool to help outreach workers connect people to care. For example, one provider described sending staff with electronic tablets to homeless encampments to check on the health of people living there. Those who need medical attention are immediately connected to the clinic for a quick visit and may be referred for follow-up care. Some providers from federally qualified health centers (FQHC) have come to rely on telehealth for first visits with patients who have complex health needs, language barriers, or other challenges. In these instances, telehealth is used to provide a first conversation, understand the mix of needs, and map out a care plan. These telehealth visits also help build rapport and trust, which results in patients being more willing to come in person for follow-up care.
- **Easier to maintain care continuity through moves and life changes.** Provider continuity was one of the telehealth benefits most consistently shared by patients. Some participants described their experiences maintaining a relationship with a behavioral health provider through a move or for a child's transition to college. Others talked about maintaining a relationship with their provider while wintering in a southern state. Across examples, patients valued telehealth as a mode of care that allowed them to maintain their relationship with their provider and, in their eyes, receive better care as a result.

Flexibilities regarding interstate licensing and care introduced as part of the COVID-19 pandemic response had the additional impact of supporting continuity of care and facilitating consultations with specialty care. This flexibility benefits Minnesotans who wish to see their Minnesota-based provider when they are temporarily away from home, as well as Minnesotans who wish to consult with a provider from outside of Minnesota. For example, some Minnesotans expressed appreciation that they or their family members could continue to receive care from their usual Minnesota provider even if they were out of state to attend college, travel, or spend winters in warmer parts of the country (SDK, 2024). As another example, rare disease advocates spoke to the benefits of seeing specialists whose practices are based in other states (See Spotlight: The Importance of Telehealth to the Rare Disease Community).

Minnesota provider systems also benefit from telehealth. For example, interviews by SDK (2024) and Wilder Research (2022) found that provider organizations appreciate how telehealth has supported:

- **Expanded capacity to serve patients**. Previously, large health care systems capped available services to the physical space available at their hospitals and clinics. This was especially true for behavioral health care. Now, telehealth has allowed providers to expand the appointments available. One system's behavioral health department has seen their wait times for new clients drop from five months to a matter of weeks.
- **More opportunities for follow up.** Many providers use telehealth to follow up with patients after surgeries or procedures, while others leverage the technology to follow up on care plans and keep in communication with patients between appointments.
- **Greater ability to consult with other providers.** Providers appreciate telehealth for its ability to help them connect with specialists, especially those who are some distance away. Provider-to-provider consultations help to ensure appropriate care for patients in their home communities and helps to build the experience and capacity of primary care and other providers to care for their patients with more complex needs.

Spotlight: The Importance of Telehealth to the Rare Disease Community

Access to health care via telehealth has been important to the rare disease community, even before the COVID-19 pandemic. Many people with rare diseases face challenges finding and accessing health care specialists with expertise in their medical condition. Given the limited number of specialists in a particular rare disease, it is not uncommon for them to be based in a different state than where the patient lives. During the federal Public Health Emergency — when there was greater flexibility around telehealth — patients and families were able to have follow-up visits with specialists they had not been able to see in years due to mobility issues or travel barriers. Even when care is available within state, data show that patients living with a rare disease must travel farther to receive care than patients living with a common condition (Bogart et.al., 2022). Because a large proportion of rare diseases are chronic and complex, often requiring consultations and follow-up care with a range of specialists, the demands of travel significantly impact access to care.

Like other uses of telehealth that create provider-to-provider connections, the rare disease community also benefits from the tele-mentoring that can happen between the in-state and out-of-state specialists providing care to patients living with rare diseases.

Considerations around telehealth for the rare disease community include the burden on patients and their families to have access to certain specialists; impact of state-licensure requirements; and ensuring that patients still have a choice in how they receive their care, so telehealth does not become

the only option to access certain specialists. Additional considerations include the interaction of state and federal regulation and oversight, and the need for consistency for optimal access. Finally, there is the broader question of how to address barriers to care faced by Minnesotans with complex medical conditions and rare diseases, including how telehealth might best be used as a tool to support patients, families, and providers.

Because telehealth makes it easier to see a wider range of providers, it raises questions about whether providers who are available only by telehealth can be included in provider networks and help health plans meet network adequacy requirements. Health care provider networks in Minnesota must meet geographic access standards for the number and types of providers available in the plan's service area to ensure that covered services are accessible to patients within a reasonable timeframe. Health plans may apply for a waiver if they are not able to meet all the requirements. Currently, patient access to providers through telehealth can be considered in granting a waiver only if there are no providers of a specific type or specialty in a county (Minnesota Statutes 62K.10, subdivision 5). Many states, including Minnesota, continue to grapple with how to recognize telehealth as an access point within a provider network without indirectly impacting patients' ability to access in-person care. Population trends and workforce considerations will continue to be important in evaluating network adequacy in the future.

As a result of telehealth expansion, Minnesotans have more options for accessing a greater range of health care providers and services -- in ways that are often faster and more convenient -- to support them on their path to better health.

Equity: Telehealth can help support equitable access to health care, but access to telehealth itself is not currently equitable.

On average, Minnesota ranks as one of the healthiest states in the nation (America's Health Rankings, 2023). However, this summary measure does not reflect the health status or experiences of all Minnesotans. Communities of color, American Indians, lesbian, gay, bisexual, transgender and queer (LGBTQ) communities, the disability community, rural communities, and low-income communities experience the greatest and most persistent inequities in the state. Telehealth cannot solve root causes of these systemic issues, but it can potentially help to reduce some of the inequities in health care access that further exacerbate health disparities. In addition, telehealth may help Minnesotans connect with health care providers with whom they feel more comfortable, including those who share similar backgrounds and experiences. Still, MDH recognizes that health care is just one contributing factor to health equity, and that social determinants of health play a large and critical role.

Both audio-visual and audio-only telehealth can play a role in addressing inequities in access to health care. Yet telehealth is not a one-size-fits-all tool and whether it can be appropriate and effective varies

from person-to-person and community-to-community. Preferences for in-person and telehealth care also vary.

Several important observations and themes emerged from surveys, interviews and focus groups with patients from diverse perspectives (e.g., racial, ethnic, geographic, aging, and ability perspectives), and with community-based providers and advocates who serve these communities (SDK, 2024 and MNTAS, 2023):[7]

- **Minnesotans experiencing racial, cultural, and ethnic inequities**: There are several examples of opportunities for telehealth to help improve access to care and to support ongoing relationships between patients and health professionals. For example, telehealth can be a means for people to find and keep providers who share their racial, ethnic, or cultural identity. The MNTAS survey found that BIPOC Minnesotans expressed more preference for in-person care (compared to statewide average), including that they would have more trust that the provider was doing what is best. Interviews suggested that trust may be enhanced when telehealth offers access to providers who share the patient's racial or cultural identity. That is, some Minnesotans may prefer seeing a provider with shared identities or experiences via telehealth even if they generally prefer in-person care. Further study is needed to better understand those tradeoffs. Another opportunity for telehealth is to provide translation services more easily, without requiring that the translator, patient, and provider meet in the same physical space. It is also important that instructions for setting up a telehealth visit be available in languages in addition to English.
- **Aging Minnesotans and people with disabilities:** Telehealth may help to reduce barriers to accessing care for people with mobility challenges. On the other hand, accessing care via telehealth may be more challenging for people with auditory or visual challenges unless additional support is available. Some people with disabilities and those who are elderly rely on family members or professionals to aid in their care. Telehealth can help these caregivers more easily participate in health care visits and save the additional time and effort needed to transport the patient to the appointment. In interviews, patients and advocates also shared some concerns about telehealth. Some people with disabilities and disability advocates shared a preference for in-person care simply because they are more trustful that the provider will see them as a whole person and take their concerns seriously. Similarly, advocates working with older adults observed that it can be harder for aging couples to support each other in their

[7] These findings include information gathered from Minnesotans regardless of the type of health insurance they have, including those covered by Minnesota Health Care Programs, commercial insurance, Medicare (traditional or Medicare Advantage), other types of health plans, or people without health insurance, in addition to information gathered from providers or organizations that serve them.

health care needs when visits are delivered via telehealth. The partner often does not get the added communication with providers needed to share observations or hear instructions.

- **Minnesotans in remote locations or with transportation challenges**: Telehealth helps people with transportation barriers get quicker access to care. In Greater Minnesota, telehealth can help patients keep an appointment when weather makes driving difficult or can help those who would otherwise need transportation to appointments to seek care more regularly. Similarly, people in the Twin Cities Metropolitan Area interviewed by SDK talked about the challenges of using public transit or Metro Mobility to get to medical appointments. Across Minnesota, telehealth can save patients hours of time that would otherwise be spent traveling to and from care appointments in situations where in-person care is not necessary. However, it is worth noting that some people in Greater Minnesota expressed concern that telehealth might replace or limit the availability of in-person care.

Across these communities, there are opportunities for telehealth to support more equitable access to health care. However, access to telehealth itself is not equitable. Communities that face disproportionate inequities in digital access and affordability, and/or comfort and experience with digital technology, face barriers to telehealth access on top of other challenges to accessing health care. Audio-only telehealth has fewer barriers but is not necessarily patients' or providers' first choice for accessing or delivering health care. Importantly, inequities in technology access, income, transportation, mobility, and other issues impede health equity. In some cases, telehealth may provide a work-around to expand and improve access to health care, but telehealth alone cannot address the root causes of inequities.

Many Minnesotans, particularly those residing in Greater Minnesota, do not have access to broadband sufficient to support an audio-visual telehealth visit. Access to broadband is out-of-reach for some Minnesotans due to costs. Even in urban areas, availability and costs of high-speed internet can vary from neighborhood to neighborhood. Full broadband access that is a prerequisite for most telehealth appointments and related technologies requires that, at minimum, a broad set of conditions be met to achieve full connectivity, as defined by the National Digital Inclusion Alliance (NDIA, 2022):

- **Access**—the wires, computer, and smartphone needed to access high-speed internet;
- **Affordability**—the funding, income levels, and programs to put data, broadband subscriptions, and computers/smartphones/tablets in people's hands; and
- **Skills**—the knowledge by users to use online opportunities successfully.

A separate study of digital inequity in Ramsey County, Minnesota (SDK, 2023) found that the National Digital Inclusion Alliances' pillars of digital inclusion are necessary but not sufficient to achieve and maintain the connectivity required to complete a telehealth visit from one's home. Further, this report found that economic barriers such as tiered internet subscriptions, credit checks, and the costs of

maintaining devices that can support audio-visual technology all impact people's ability to fully access online resources, such as telehealth. BIPOC Minnesotans, immigrants, and unhoused communities are some of the populations most likely to face these financial barriers to the subscriptions and devices needed for complete telehealth access.

The United States Congress funded the Affordable Connectivity Program (ACP) in 2021 to help bridge the digital divide by providing subsidies of up to $30 per month (up to $75 per month for people who live on qualifying Tribal lands) for eligible households to have high-speed internet access. About 72% of surveyed participants reported using their ACP internet service to schedule or attend health care appointments.[8] ACP funding ran out in April 2024, ending the program and jeopardizing the affordability of internet access for millions of Americans.[9]

Together with federal initiatives, statewide efforts such as those led by the Office of Broadband Development (Minnesota Department of Employment and Economic Development), to bridge the digital divide and to improve and expand the availability of and access to telecommunications and information technologies, are necessary to address the disparities in access to telehealth as an option to receive and deliver health care services. These efforts aim to address internet service affordability, device access, and digital skills. Minnesota's Digital Opportunity Plan addresses digital opportunity statewide and for specific groups, including rural residents, members of racial or ethnic minority groups, older adults, people with lower incomes, people with disabilities, veterans, incarcerated people, and people with language barriers (e.g., English learners, people with low levels of literacy).[10]

Resources will be needed by diverse sectors such as digital infrastructure, broadband, and technology in order to support good and equitable telehealth. These efforts to improve equitable access to telehealth (and to health care via telehealth) will also require stakeholder buy-in and meaningful investment from government and the private sector, including the health care industry. Many of the inequities that create barriers to health care access pre-date telehealth and are mirrored again in the impact of digital inequities on where and how telehealth can deliver on its promise of more accessible health care.

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[8] ACP Survey results are available at: https://www.fcc.gov/acp-survey.

[9] It is currently unknown whether Congress will provide further funding for the ACP. At this time, people are being referred to another federal benefit called Lifeline, which provides eligible consumers discounts off the cost of phone, internet, or bundled services (https://www.affordableconnectivity.gov).

[10] Additional information about Minnesota's Digital Opportunity Plan is available at: https://mn.gov/deed/programs-services/broadband/adoption/

By increasing options for and availability of health services, stitching connections across the health care system, and making access easier, telehealth may serve as an important tool to support health equity more broadly. Telehealth shows promise for supporting greater and more equitable access to health care, but it is only one tool among many that will be needed to address provider shortages, barriers to health care, and the ongoing need for access to in-person care. Further, its role in supporting greater access to care for more Minnesotans is hampered by digital inequities and other barriers. Thus, while telehealth has the potential to help reduce some of the inequities that are deep-rooted in today's health care system, it may also further compound existing disparities in access to health care.

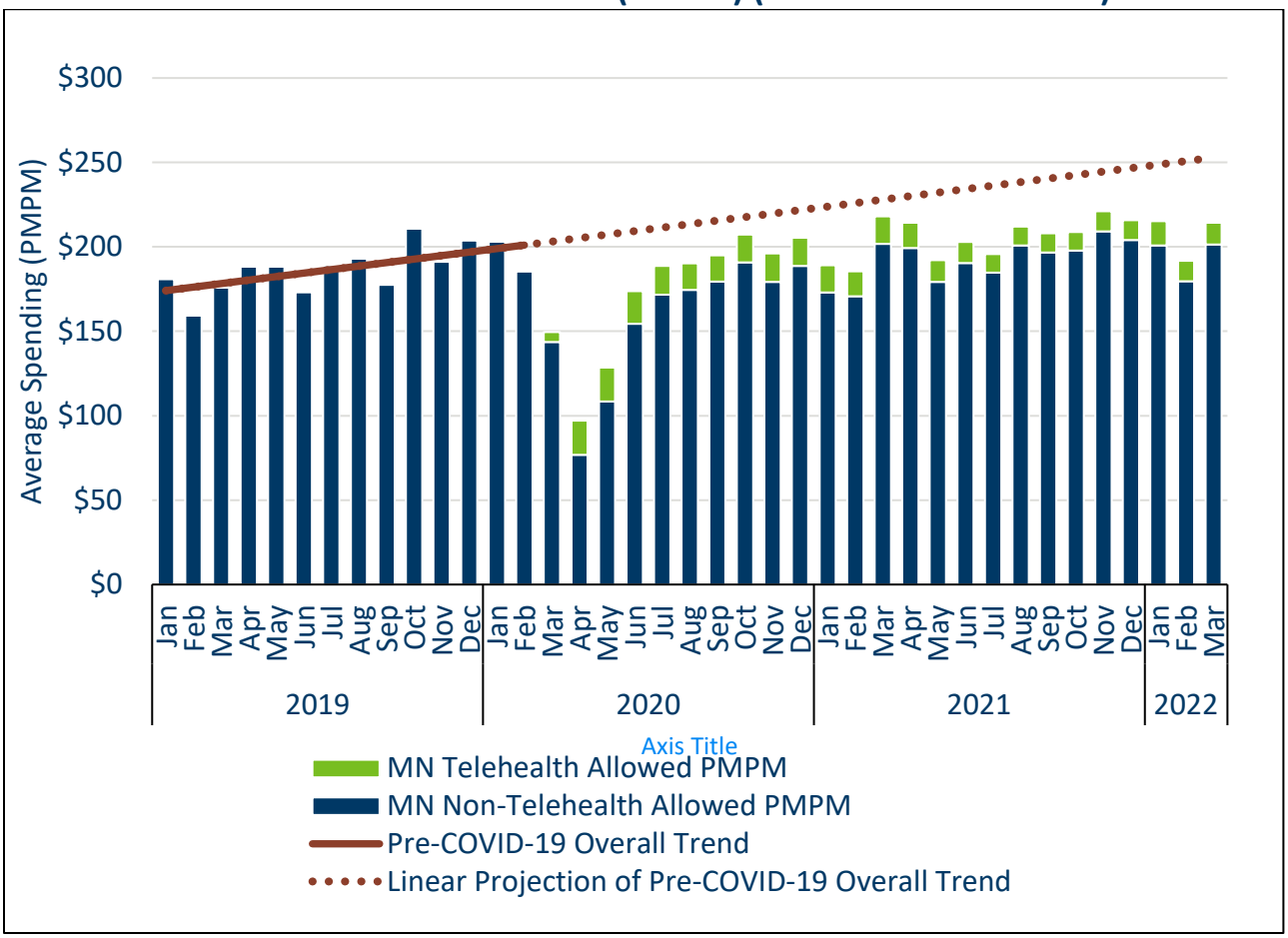
Cost: Expanded use of telehealth does not appear to have contributed to greater health care spending.

Oliver Wyman, an actuarial firm, used data from the MN APCD and Merative MarketScan Commercial Database[11] to analyze the impact of the expansion of telehealth services on health care claim costs from 2019-2021 and to consider the projected influence that telehealth services could have on future premium rates in Minnesota's commercial health care market. In addition, MDH conducted a brief survey and interviews with Minnesota health plans companies to assess the impact of telehealth on costs and premiums.

For their analyses, Oliver Wyman examined projected medical spending as reflected in claims against actual monthly per-member commercial health care spending from March 2020 through March 2022. Projected costs were based on pre-COVID-19 costs (January 2019 through February 2020). Figure 6 shows monthly spending for professional services per member, with a horizontal, angled, dotted line illustrating the projected health care utilization for the next two years. As Figure 6 illustrates, use of telehealth increased in March 2020. The analysis found that none of the actual monthly spending amounts (per member per month) between March 2020 and March 2022 period were higher than the trend line that was developed based on the pre-COVID-19 spending levels and trends (Figure 6; Oliver Wyman 2023).

[11] MarketScan is a proprietary US health care claims database used for health care research. For their analyses, Oliver Wyman filtered the dataset to Minnesota residents with comprehensive medical and pharmacy coverage. More information on MarketScan is available at: https://www.merative.com/documents/brief/marketscan-explainer-general.

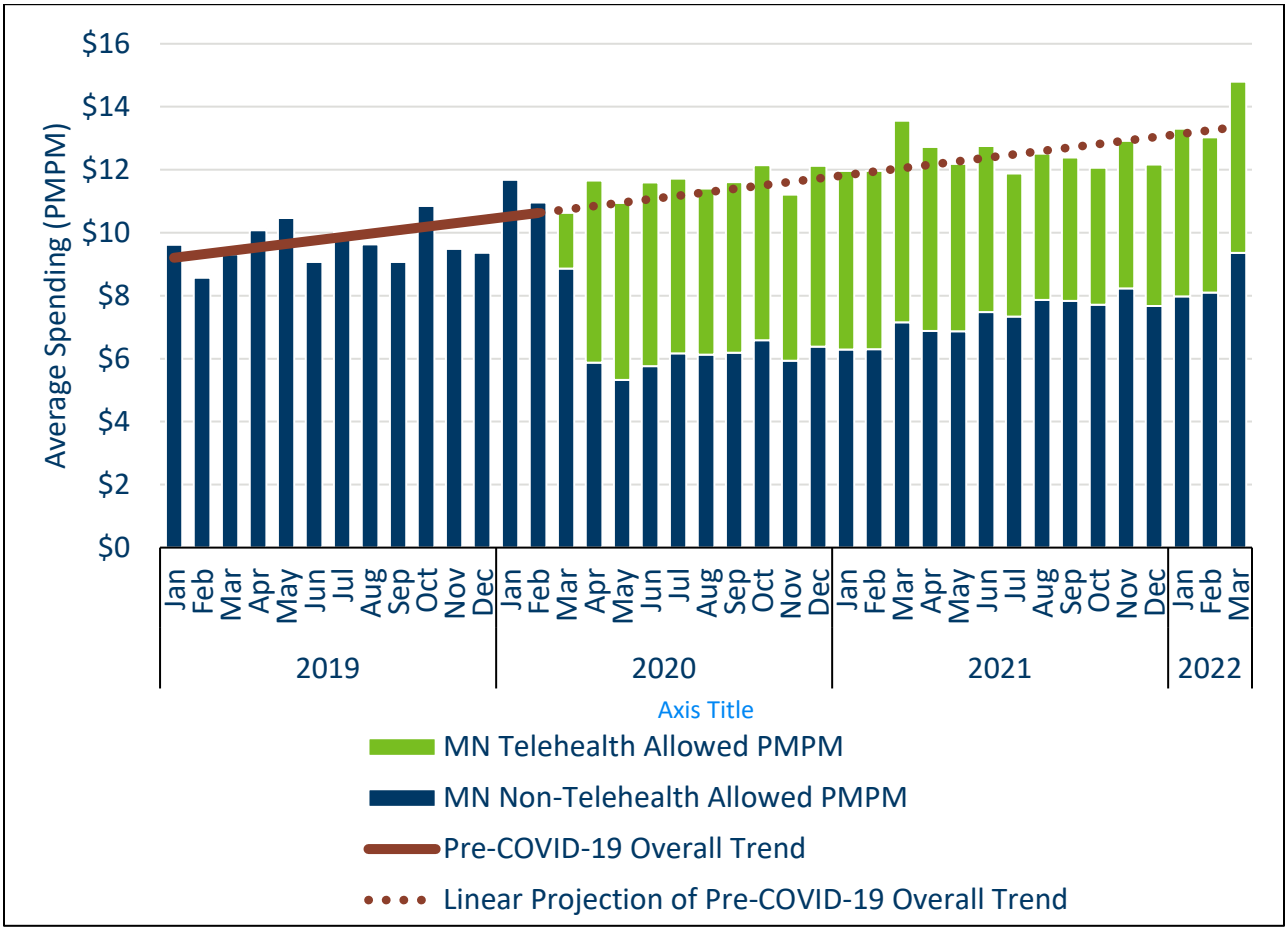
Figure 6. Projected Versus Actual Professional Services Spending, Per Member Per Month (PMPM) (Commercial Enrollees)



Source: Oliver Wyman analysis of the Minnesota All Payer Claims Database (MN APCD), Extract 25.
PMPM: Per member per month.

Oliver Wyman performed a similar analysis of commercial professional claims for behavioral health services (including mental health and substance use-related care), both in-person and telehealth. Figure 7 shows that telehealth has played an even greater role in behavioral health care, and that the overall spending on these services (per member per month) is generally consistent with projected spending (Oliver Wyman, 2023). It is worth noting that the need for behavioral health care services has grown substantially in the United States since the start of the pandemic for reasons outside the modality of telehealth (NIH, 2023).

Figure 7. Projected versus Actual Spending for Behavioral Health and Substance Use Treatment, Per Member Per Month (PMPM) (Commercial Enrollees)



Source: Oliver Wyman analysis of the Minnesota All Payer Claims Database (MN APCD), Extract 25.
PMPM: Per member per month.

Oliver Wyman's analysis suggests that telehealth services are not contributing incrementally to overall professional service costs or to professional services costs for behavioral health and substance use care in calendar year 2021 or the first quarter of 2022 and, therefore, do not appear to create excess costs (Oliver Wyman, 2023).

MDH interviews with Minnesota's health plans affirmed these initial findings. Health plans interviewed also do not anticipate a change in future spending due to changes in the utilization of telehealth services. Further, Minnesota's health plans made no specific adjustments due to changes in telehealth utilization when projecting their base experience to premium rates for calendar years 2022, 2023, or 2024.

During the interviews, some health plans posed questions about whether telehealth modalities can contribute to lowering health care costs. A report published by the Society of Actuaries (SOA) Research Institute states that the impact of telehealth on short- and long-term costs could actually be favorable (i.e., result in lower overall costs); however, the report also states that "much more analysis of health outcomes is required before any conclusion can be reached" (SOA, 2023).

On the other hand, changes to billing practices for telehealth could lead to greater health care costs to patients and their health plans if previously unbilled encounters, such as those through secure messaging or email, become billable as e-visits. Costs could also rise if the frequency or price of facility fees attached to telehealth encounters increases. Some states (e.g., Connecticut, Maryland, Georgia) have passed laws to prohibit hospitals or health systems from charging a facility fee for telehealth services (with some exceptions). Minnesota law requires providers and health systems to give prior notice to patients that they may charge facility fees for any non-emergency services, including telehealth, but there is not currently a law that restricts or prohibits facility fees for telehealth.

Health plan companies interviewed by MDH suggested that some enrollees have expectations that the costs of telehealth services to them, including patient co-payments, will be lower than the costs of in-person services. However, one health plan supported keeping things simple by having one co-payment rate that would apply to both in-person and telehealth care.

Quality: Telehealth can be used to deliver high quality care and may help to improve outcomes when supplementing in-person care.

The evidence base regarding telehealth and quality and outcomes continues to grow. Evidence from the literature and this study show that telehealth can be used effectively to achieve comparable outcomes or to improve outcomes compared with exclusively in-person care. However, it would not be appropriate to conclude that any use of telehealth in every situation will produce positive outcomes. Evaluating health care quality and outcomes is complex, and findings are often limited to a specific use case for telehealth or for specific health conditions or outcomes.

Health care operations leaders interviewed as part of this study noted that the ability of telehealth to deliver care of comparable quality as in-person care is an important determinant of whether and in what circumstances to offer telehealth (SDK, 2024). As part of the 2021 National Health Records Survey, 77% of primary care physicians and 73% of medical specialists responded that they were able to provide a similar quality of care during telemedicine visits compared with in-person visits "to some or a great extent." A smaller percentage of surgical specialists (51%) responded similarly (Myrick et al. 2024).

To address questions about quality and outcomes, the MDH study focused on findings from the Minnesota EHR Consortium (MNEHRC, 2023), which examined quality measures for patients with diabetes, depression, or asthma, and from analyses of the MN APCD (Mathematica, 2023), which examined measures including continuity of care, potentially avoidable emergency department (ED) visits and hospitalizations, and follow-up care following an ED visit or hospital admission for behavioral health. The rationale for choosing these measures is described in Supplements B and C. Briefly, we selected health conditions that are relatively common and for which there are established quality measures (diabetes, depression, asthma). Continuity of care, avoidable hospital visits, and timely follow-up care post-hospitalization are also established measures of care quality.

In addition, MDH contracted with the Center for Evidence-based Policy at the Oregon Health Science University (CEbP, 2023) to conduct a literature review that focused on quality and outcome measures for audio-only telehealth. Interviews with providers and health systems conducted by SDK (SDK, 2024) provide additional important information on how systems are monitoring quality and health outcomes.

Key findings from these evaluations of telehealth and quality of care are summarized below:

Quality measures for patients with depression, type 2 diabetes, and asthma. Among patients with these conditions, EHR data generally showed no differences in the change in quality of care from 2019 to 2022 when comparing providers with high versus low telehealth use. This was true for measures assessing processes of care, quality measures, and rates of emergency department encounters and hospitalizations for patients with depression, diabetes, and asthma. The one exception was rates of administering the PHQ-9 assessment.[12] Additional research is needed to further understand how telehealth use might be driving these findings. See Supplement B for the MNEHRC full report.

Continuity of care measures. Continuity of health care from consistent, coordinated providers is associated with higher quality health care, better health outcomes and lower overall costs (Jeffers & Baker, 2016). Mathematica analyzed data from the MN APCD to compare continuity of care measures among commercial enrollees and Medicare Advantage enrollees (analyzed separately) who either used telehealth in 2021 or did not use telehealth in 2021. Telehealth was not associated with substantial

[12] The PHQ-9 is the nine-item depression scale of the patient health questionnaire. It is commonly used as a screening tool, to aid diagnosis, and to monitor symptoms. Although the rate of administering a PHQ-9 assessment for patients with depression was greater for high telehealth use providers in 2019 and 2022, the change in use of the PHQ-9 from 2019 to 2022 (in this case, a decrease in use) was greater among patients who were seen by high telehealth use providers (76% in 2019; 67% in 2022) compared to patients seen by low telehealth use providers (60% in 2019 and 2022). Changes in scores on the PHQ-9 in 2022 (compared to 2019) did not differ significantly between high and low telehealth use providers.

differences in continuity of care between 2019 and 2021. However, for Medicare Advantage enrollees, telehealth use was associated with slightly fewer visits with the patient's usual provider of care as well as slightly greater fragmentation in 2022. Results for commercial enrollees in 2022 were inconclusive. See Supplement C for the Mathematica full report.

Hospitalizations and emergency department visits for ambulatory care sensitive conditions. Ambulatory care sensitive conditions (ACSCs) are a set of health conditions for which hospitalizations and ED visits should be avoidable when patients are receiving high-quality and well-coordinated care. In their analysis of Medicare Advantage patients in the MN APCD, Mathematica found that telehealth use in 2021 was associated with increases in hospitalizations and ED visits for ACSCs from 2019 to 2021, and with higher levels of hospitalizations and ED visits for ACSCs in 2022. The increases and higher levels of hospitalizations were more pronounced for older patients (75 years and older), high-risk patients, patients with diabetes and hypertension, and patients residing in metropolitan areas. The association between telehealth use and hospitalizations and ED visits for ACSCs among commercially insured patients was smaller in magnitude and not always statistically significant.

These findings should be interpreted with caution. Analysis of claims data in the MN APCD is insufficient to disentangle the contribution of telehealth use from unobserved factors in driving these findings. Further, lingering disruptions to health care from the COVID-19 pandemic were likely still present in 2021 and 2022. Additional research—for example, a randomized study, the gold standard for assessing causality —would be needed to determine whether telehealth use, another factor, or a combination of factors is driving the increases in potentially avoidable hospitalizations and ED visits observed for Medicare Advantage enrollees. See Supplement C for the Mathematica full report. The MNEHRC analyses, which were not limited to commercial or Medicare Advantage enrollees, found that rates of emergency department encounters and hospitalizations for patients with depression, diabetes, and asthma were similar for patients whose providers were high versus low telehealth users.

Follow-up for hospitalizations or emergency department visits for mental illness. Timely follow-up care after hospitalizations and emergency department visits for mental illness and self-harm increases the likelihood of good health outcomes and reduces rates of rehospitalization (Luxton et al., 2013; Barekatain et al., 2014; Bruffaerts et al., 2005; Griswold et al., 2018). Mathematica analyzed data from the MN APCD to evaluate follow-up visits after hospitalizations or emergency department visits for mental illness among commercial health insurance enrollees and Medicare Advantage enrollees (analyzed separately) who either used telehealth in 2021 or did not use telehealth in 2021. From 2019 to 2021, telehealth use (in 2021) was associated with a small but statistically significant increase in follow-up visits after an ED visit for mental illness among commercially insured patients. However, telehealth was not associated with significant differences in follow-up visits after a hospitalization for mental illness among commercially insured patients, nor was telehealth associated with changes in

follow-up visits after either a hospitalization or ED visit for mental illness among Medicare Advantage patients. Telehealth use in 2021 was associated with a higher likelihood of receiving a follow-up visit following a hospitalization or ED visit in 2022 among both commercially insured and Medicare Advantage patients. These findings for 2022 suggest that telehealth users were as likely or more likely to receive follow-up care following a hospitalization or emergency department visit for mental illness but this should be interpreted with caution. A more rigorous study design, such as a randomized study, would be needed to fully assess whether telehealth use or some other factors are driving these associations. See Supplement C for the Mathematica full report.

Literature review focused on audio-only telehealth. The Center for Evidence-based Policy (CEbP) at the Oregon Health and Science University provided an overview of their existing research on audio-only telehealth (e.g., telephone) and conducted an environmental scan to learn more about the use and effectiveness of audio-only telehealth for specific conditions and populations. At the time of the CEbP report, audio-only telehealth research appeared to be largely focused on behavioral health, chronic conditions, and oncology. Findings suggest that many physical and behavioral health services delivered via audio-only telehealth were comparable to in-person services with regard to effectiveness, health outcomes, health care utilization, and quality of life. CEbP also found audio-only services improved patient satisfaction and treatment adherence while decreasing barriers to care. There were some notable exceptions, including limited evidence to support the efficacy of audio-only telehealth for group psychotherapy or family psychotherapy. One limitation of the environmental scan is that audio-only telehealth was not implemented widely in the United States until 2020, limiting research on the use of this modality within many clinical specialties and settings. See Supplement A for the CEbP full report.

Interviews with health care providers and health systems. Interviews with health care operations leaders found that most, if not all, health systems monitor certain aspects of quality performance on a regular basis. One leader reported that, in most cases, there were no differences between telehealth and in-person visits, and they found slightly better medication adherence and health behaviors (e.g., following dietary recommendations to manage diabetes) among telehealth users. In addition, providers also noted that they are seeing improved health outcomes among patients with chronic diseases such as diabetes and hypertension who are using telehealth to connect with providers between appointments or to participate in remote patient monitoring. However, some providers expressed a concern that seeking e-visits or other telehealth care from providers who are not affiliated with the patient's usual clinic system can lead to fragmented health care (SDK, 2024). See Supplement E for the SDK full report.

Taken together, the available evidence suggests that telehealth can be used to deliver care of similar quality as in-person care for many conditions and can potentially lead to improved care and outcomes

by facilitating more “touch points” with providers to check-in on symptoms or response to therapy, or to follow up after an ED or hospitalization for mental illness. Continued monitoring by providers and health systems is necessary to ensure quality and outcomes remain comparable (and acceptable), and to identify situations where telehealth use has not been beneficial to patients. The development of best practice guidelines by health care professional organizations will also help to ensure effective use of telehealth. Finally, further research is needed to better elucidate how and in what circumstances telehealth can be used most effectively, including situations where telehealth can be used instead of an in-person visit, as well as situations where telehealth use in addition to in-person care contributes to better outcomes.

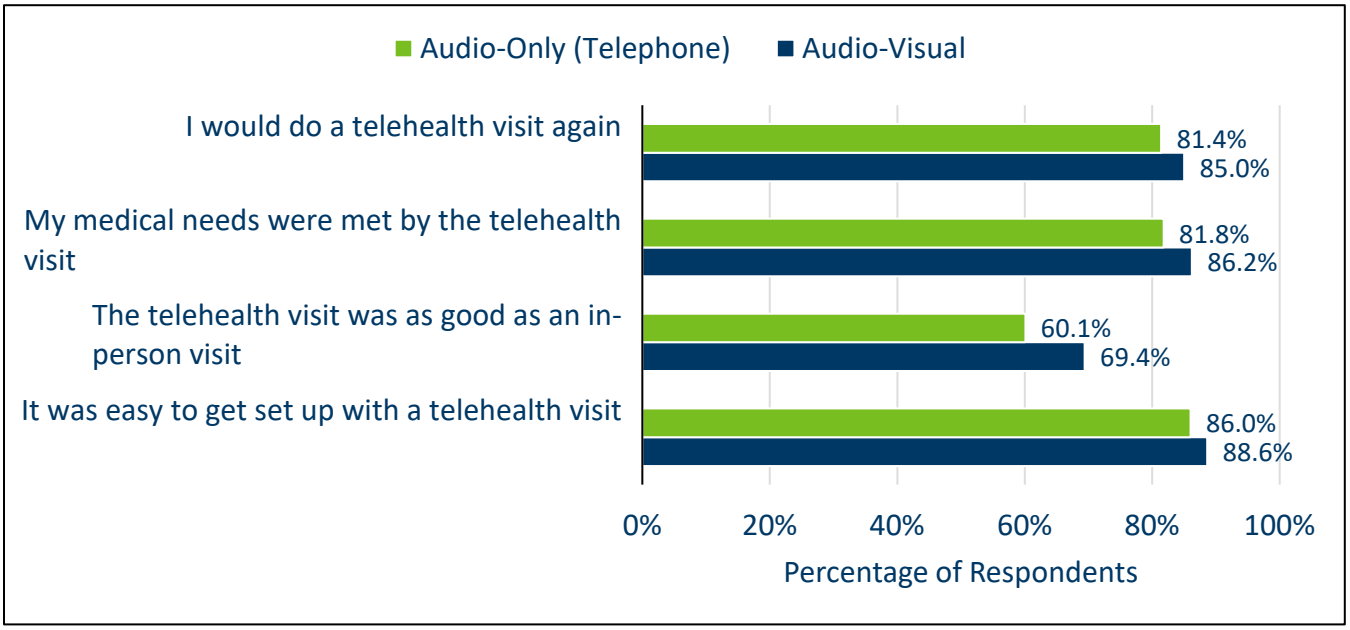
Satisfaction: Most Minnesotans are satisfied with telehealth care.

As described previously, about 31% (nearly 1 in 3) of Minnesotans used telehealth between mid-2022 and mid-2023. Of those, 25% used audio-only telehealth exclusively, 41% used audio-visual telehealth exclusively, and 34% used both during the 1-year study period of the MNTAS survey. This finding is consistent with Minnesota Health Access (MNHA) Survey results from late 2020 to late 2021 (MDH, 2023).

The MNTAS survey found that Minnesotans who had a telehealth visit were largely satisfied with their experience (Figure 8). A strong majority (80% – 90%) reported that they would do a telehealth visit again, that it was easy to get set up with a telehealth visit, and that their medical needs were met. Responses were generally similar for audio-only (telephone) visits and audio-visual visits. There was less agreement with the statement that their telehealth visit was “as good as an in-person visit.” About 69% felt that their audio-visual visit was as good as in-person, and 60% felt that their audio-only visit was as good as in-person (MNTAS, 2023).

Most of the health care providers and patients interviewed by SDK valued telehealth as an option for care and are generally satisfied with it. They appreciate the convenience, and patients especially value the way telehealth fits health care more smoothly into the rest of their lives or accelerates access to providers and specialists. For some patients, the stress and anxiety involved with scheduling and getting to in-person appointments can have a negative impact on their wellbeing. Telehealth helps people avoid these stressors and makes it easier for them to follow care plans and actively manage their health (SDK, 2024).

Figure 8. Satisfaction with Telehealth Visit:
Percentage of Minnesotans who "Agreed" or "Strongly Agreed" with Each Statement



Source: MDH Health Economics Program analysis of the Minnesota Telehealth and Access Survey (MNTAS), 2023.

Data from the 2021 National Health Records Survey indicate that physician satisfaction with telemedicine technology for patient visits varied by specialty. Among primary care physicians, 66% were satisfied with telemedicine technology, with the remaining 34% being neutral or dissatisfied. Similarly, 64% of medical specialists were satisfied with telemedicine technology, but only 50% of surgical specialists reported being satisfied (Myrick et al. 2024).

A synthesis of the findings from the study regarding access, equity, quality and outcomes, costs, and satisfaction suggests one core conclusion: Telehealth is expanding access to health care without compromising health care quality or patient satisfaction. The increased use of telehealth since early 2020 does not appear to have led to additional health care spending. As it relates to health equity, telehealth does expand access to health care, but access to telehealth itself is not equitable, particularly for people with limited digital access or digital literacy.

Preferences, Choices, and Availability of In-Person Care

In the previous section on telehealth and access to health care, we presented some of the reasons that make telehealth an attractive option for many patients, and how it can improve and expand access to

health care. In this section, we focus on Minnesotans' preferences for telehealth versus in-person care, the importance of choice, and the need for continued availability of in-person services.

Preferences

Convenience factors are a primary driver for Minnesotans choosing telehealth. When asked about why they might prefer a telehealth visit (over an in-person visit), the three most common responses were:

- to save travel time (50%),
- because of shorter wait times for appointments (43%), and
- because it was more convenient for their work schedule (41%) (MNTAS, 2023).[13]

Even so, telehealth is not appropriate in all situations and some Minnesotans prefer to see their provider in-person. When asked why they might prefer an in-person visit (over a telehealth visit), the three most common responses were:

- the provider needed to assess their health needs in person (76%),
- the desired provider was only available in-person (35%), and
- because they were not comfortable using the technology needed for a (video) telehealth visit (14%).

Among MNTAS respondents who did not use telehealth during the study period, 21% indicated that they were not given the option for a telehealth visit, 54% said they preferred to see their provider in person, and 41% said they did not think a telehealth visit could meet their needs (MNTAS, 2023).

Interviews conducted by Wilder Research (2022) and SDK (2024) asked Minnesotans about how they decide whether to have a telehealth visit. Some of the factors people consider include:

- **The type of care needed.** Most patients interviewed said that they appreciate having telehealth as an option and like the convenience of telehealth for simple appointments like medication management or follow-up after a procedure. For medical needs that require physical examination, patients prefer in-person care.
- **Previous experience with a given provider**. Some people interviewed indicated that they would be comfortable choosing telehealth after they had met a provider in-person and built a relationship with them.
- **The tradeoff between travel time and availability of specialists.** For some people in Greater Minnesota, travel distance to a provider plays a prominent role when considering telehealth versus in-person care options. Visiting a specialist in person can come with added personal

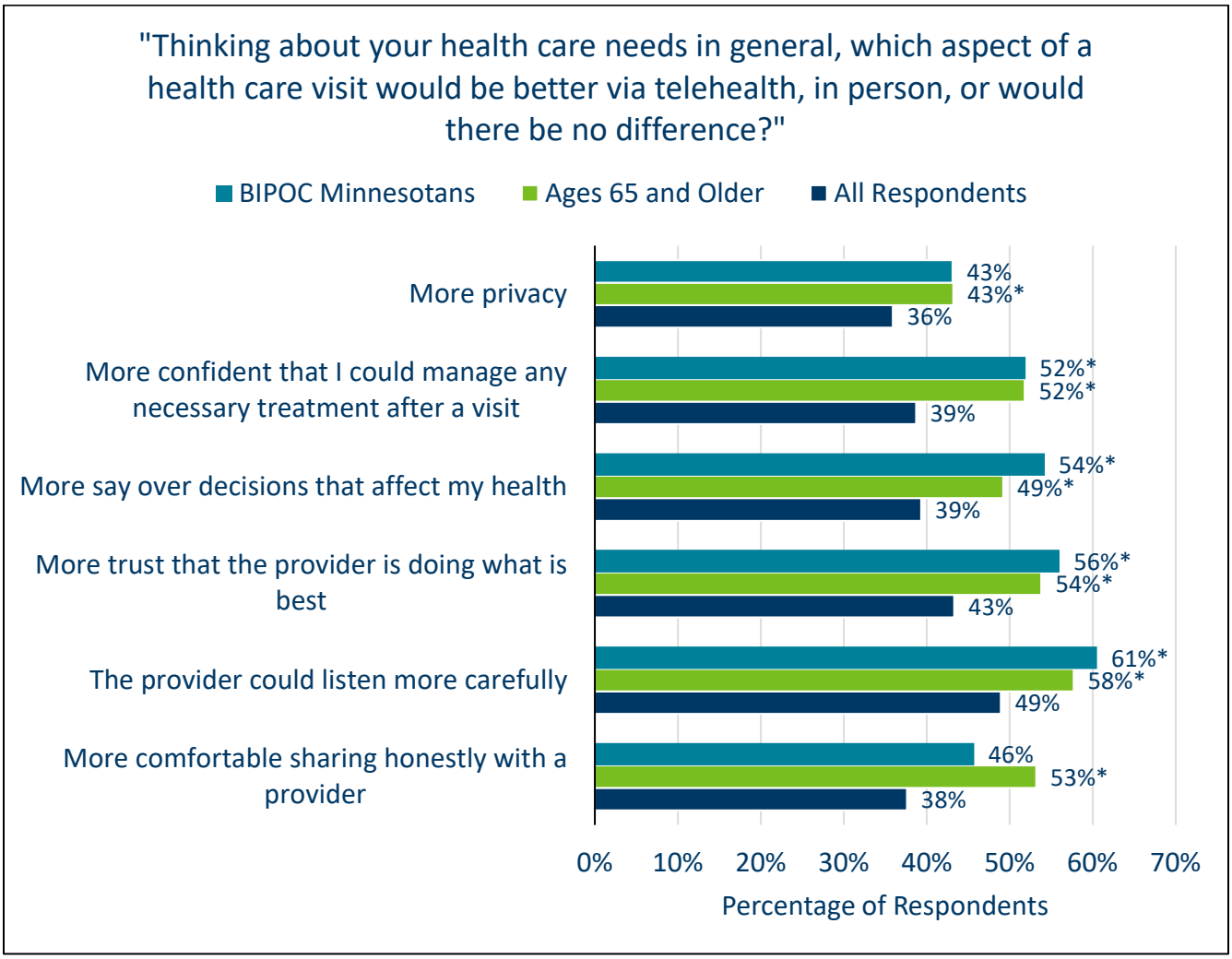
[13] Note that respondents could choose all that apply, so percentages will not sum to 100%.

costs such as taking a greater amount of time away from work, hotel, gas, meals, and other expenses. For older Minnesotans who are reluctant or unable to drive long distances, visiting a specialist out of town can also involve an adult child's (or other caregiver's) schedule. In these instances, telehealth is a valued option, especially if follow-up care can happen with their usual, local provider.

- **Wait time to get an appointment.** For patients who are looking for an available appointment as soon as possible, telehealth may offer more or earlier options. Some SDK focus group participants with transportation challenges said that they can take advantage of opportunities to see their provider when a slot opens up at the last minute (e.g., due to a cancellation), allowing them to see their providers via telehealth without taking the extra time to arrange for transportation. Similarly, telehealth can make it easier for people with child care responsibilities to be able to take advantage of available appointments without needing to arrange for care or bring their children with them to the appointment.

However, it is important to note that preferences are not the same for all Minnesotans. For example, older adults and BIPOC Minnesotans expressed more preferences for in-person care (compared to the statewide average preferences) when asked "Which aspects of health care visit would be better via telehealth, in person, or no difference?" (Figure 9; MNTAS, 2023). For each of the questions, very few people responded that telehealth was better – most of the variation was in whether they felt there was no difference between telehealth and in-person care versus feeling that in-person care was better.

Figure 9. Preferences for In-person versus Telehealth Care



Source: MDH Health Economics Program analysis of the Minnesota Telehealth and Access Survey (MNTAS), 2023.
* Indicates statistically significant differences ($p < 0.05$) in the proportion of BIPOC Minnesotans or Minnesotans ages 65 and older compared to the statewide average (all respondents) who responded that in person would be better.

Taken together, findings from the MNTAS survey (2023) and SDK interviews (2024) illustrate some of the reasons or considerations underlying preferences for in-person versus telehealth care:

- **Many BIPOC Minnesotans' telehealth preferences are influenced by their relationship or rapport with the provider(s), including perceptions of trust and shared identity.** The MNTAS Survey showed that a majority of BIPOC Minnesotans perceive in-person care as better than telehealth for their confidence that they could manage any treatments after the visits, trusting the provider to do what is best, having more say over decisions affecting their health care, and for the provider to be able to listen more carefully (see Figure 9). Many BIPOC Minnesotans

interviewed said that the opportunity to see providers who share their racial, cultural, or language experience was a key benefit of telehealth.

- **Older Minnesotans are more likely to prefer in-person care.** The percentage of Minnesotans ages 65 and older who indicated they preferred in-person care over telehealth care was significantly higher than the statewide average (MNTAS, 2023). This was true for each question shown in Figure 9. Interviews with older Minnesotans found that technology can create challenges for those with declining hearing and vision. Others observed that having a caregiving spouse attend medical appointments can be more challenging with telehealth, though some adult children of older adults said they liked telehealth because it was easier to join their parents' appointments.
- **In Greater Minnesota, patients want to ensure in-person care is always an option**. Interviews with patients in Greater Minnesota found general support for telehealth, but also a clear caution that patients want the opportunity to build relationships with providers in person. Some also noted that the internet can be inconsistent or unavailable in their area, making audio-visual telehealth unavailable or harder to manage with dropped connections and other challenges. For these patients, telehealth is a valuable option, but it is equally important that the in-person care is available so that Minnesotans may choose the type of health care visit that they prefer.

Individual provider preference also plays a role in telehealth use and availability. Some provider systems interviewed by SDK (2024) and Wilder Research (2022) shared that some individual providers may choose not to offer telehealth because of their own level of comfort (or discomfort) with the technology. This was heard more commonly from providers in Greater Minnesota (SDK, 2024).

For situations where use of telehealth produces similar (or improved) outcomes as in-person care, patient and provider preferences should determine whether or not to use telehealth.

Choice

To better understand whether Minnesota telehealth users felt they had a choice, the MNTAS Survey asked participants who had one or more telehealth visits in the past year, whether they were given the choice to do an in-person office visit instead.[14] Among telehealth users, about half (54%) responded that they were given a choice to do in-person for all of their telehealth visits, 32% were given a choice

[14] The following question was asked of MNTAS Survey participants who had a telehealth visit in the previous year: "Thinking about all of your telehealth visits in the past 12 months, did the provider give you the choice to do an in-person office visit instead?" Those who responded, "Yes, for some visits" or "No" were asked for the reason(s). The four response options are listed above. "Other" responses not shown due to low sample size.

for some of their telehealth visits, 14% responded that they did not have a choice for any of their telehealth visits. The most common reasons cited[15] for not feeling they had a choice were:

- An in-office visit was offered, but telehealth visit was more convenient (40%)
- The provider only offered telehealth services (37%)
- In-office visit was offered, but did not meet needs (15%)
- Health concerns prevented an in-office visit (12%)

In interviews with Wilder Research, the vast majority of patients (90%) said that they generally have a choice between telehealth and in-person care when making appointments. In all, 83% of respondents said they are satisfied with their ability to choose between telehealth and in-person services (Wilder, 2022). The Wilder interviews focused on Minnesotans who had used telehealth, however. In the MNTAS Survey, 35% of Minnesotans who said they did not have any telehealth visits indicated that telehealth was not offered as an option (MNTAS, 2023).

For patients who may need to choose between telehealth or no health care at all, telehealth is likely the better choice. This is most acutely felt in Greater Minnesota and among people with behavioral health needs—for these patients, telehealth may often be their only timely care option. Telehealth is likely better than delayed care for many illnesses or health maintenance appointments. Nevertheless, while telehealth has the potential to increase care options and access to care, efforts to ensure adequate availability of in-person care continue to be needed.

Options for in-person and telehealth visits need to be clear and transparent for patients. One interviewed patient described arriving at an urgent care clinic only to discover that, while a nurse on-site would take their vital signs, the visit with the doctor would be via telehealth and there were no doctors available on-site.

Availability of in-person care

People appreciate telehealth as an option, but do not want telehealth to be their only choice. For many Minnesotans, however, options for in-person care are limited, particularly for those residing in areas with health care workforce shortages. Investments of time and resources to improve or maintain in-person health care options are needed to ensure that telehealth use remains one choice, but not the only choice, for timely and affordable health care. Telehealth shows promise for supporting greater and more equitable access to health care, but it is only one tool among the many that will be needed

[15] Note that respondents could choose all that apply, so percentages will not sum to 100%.

to address provider shortages, barriers to health care, and the ongoing need for access to in-person care.

Looking Ahead

Telehealth can help to address many challenges within the health care system, including improving access to care, and facilitates more options for certain types of services and a wider range of providers. However, it also has the potential to exacerbate existing challenges. This section highlights the intersection of telehealth with the following issues: the health care workforce, opportunities for innovation and more flexible payment models, and waste, fraud, and abuse.

Health care workforce

Telehealth impacts health care workforce issues in both positive and challenging ways. Telehealth use by providers across Minnesota has risen with real implications for capacity-building within an already strained workforce. For example, telehealth support for some roles, such as emergency services or other after-hours or on-call care, reduces the burden for primary care clinicians who would otherwise be expected to provide this care. This is particularly relevant in parts of the state with greater acute workforce shortages, such as rural or underserved communities (See Spotlight: Hospital-based Telehealth). Indeed, many parts of the state, particularly in Greater Minnesota, are designated as health professional shortage areas for primary care, and even more regions have shortages for behavioral health care (MDH Office of Rural Health & Primary Care, 2022).

Spotlight: Hospital-based Telehealth

Hospital-based telehealth is an important and evolving use of telehealth. Since the onset of the COVID-19 pandemic, hospitals have expanded their telehealth services and continue to determine what services or specialties would be enhanced by incorporating telehealth options. Hospital-based telehealth includes provider-to-provider consultations, patient-to-provider consultations, and remote patient monitoring. It can also be a part of routine hospital operations such as patient admission, discharge, and follow-up. Hospitals and health systems continue to monitor quality to make sure that high standards of care are maintained regardless of how patients receive care.

Hospital-based telehealth is important for both urban and rural hospitals with benefits and drawbacks that are unique and shared. From both perspectives, hospital-based telehealth allows patients to receive care in their home community, which benefits the patient, their families, the local economy, and the local health system. It is important to recognize that telehealth programs can impact referrals and are dependent on provider availability. However, telehealth can help to support the ability to

appropriately care for patients in their home communities which, in turn, preserves capacity at higher-level hospitals to care for patients with more complex health needs.

Telehealth also has implications for an already stretched health care workforce. Staffing challenges, particularly in more rural areas, can make it hard to have an on-site hospitalist available around the clock (24/7). Some systems have found that using telehealth hospitalists for overnight shifts ("nocturnists") helps to reduce burnout among in-person staff.

Telehealth allows providers to consult with specialists who are based elsewhere, whether within their own health system or from different health systems. In addition, telehealth allows health care organizations to increase staffing capacity and bring in expertise that may not be local, particularly for rural hospitals with smaller specialty units. Hospital-based specialties that have used and benefited from telehealth include neurology, cardiology, infectious diseases, intensivists, and behavioral health. This list will continue to grow as hospitals expand telehealth to additional specialty areas.

Health care workforce shortages have increased in recent years, and while there are opportunities for telehealth to help address these shortages there are also risks that it could make some things worse. Across interviews by SDK (2024), as well as MDH's Workforce Survey (2023), a nuanced picture is emerging:

- **Telehealth may help to reduce provider burnout for some.** Telehealth may help to reduce provider burnout by allowing for a greater work-life balance and adding provider capacity beyond those available locally. Many health care employers see telehealth as a helpful tool to offering greater work-life balance to their staff, both because they are able to offer hybrid schedules and because they are able to engage a wider pool of providers as-needed when full-time or local staff are unavailable. Some providers interviewed felt that the flexibility to work remotely brought value to their personal lives and created better work-life balance.
- **Telehealth may contribute to provider burnout for some.** Telehealth could potentially add more visits for providers whose days are already at or beyond capacity with current demand (including time to see patients and updating patients' medical records). In addition, pressure to be "always on" could also contribute to burnout. Telehealth may also lead to more exhaustion due to covering more facilities remotely.
- **Telehealth may help rural clinics to support in-person staffing.** Providers based in rural areas can potentially serve a greater number of patients by adding telehealth care to their in-person services. In this way, a rural clinic's budget could accommodate more in-person staff to care for patients within their community.
- **Telehealth can help health systems manage space issues.** Health care administrators expressed that telehealth is enabling them to grow their provider workforce and get past

physical space limitations as providers can meet with patients from their home office for at least some of their visits.

- **Care facilities (e.g., adult day facilities, nursing homes) and community-based organizations also see benefits from telehealth**. Staff and advocates described the flexibility telehealth offers and how it helps them to manage staffing shortages and alleviates the transportation barriers their staff must navigate to get patients to appointments. On the other hand, other community-based caregivers who work in patients' homes, such as community health workers, noted the addition of telehealth technical assistance to their long list of services, as they are asked to help patients connect to telehealth apps and navigate the technology needed for appointments.

In order to provide or support effective, high-quality health care, new and experienced providers and community-based caregivers require continuous training, including on the use of technology as part of their health care role. Many of the skills and competencies needed to provide telehealth care effectively, including practical, legal, and ethical considerations, are different than those needed for in-person care, and are equally important for patient and provider safety, experience, satisfaction, and quality.

Innovation and payment models

Health care systems were already changing before the COVID-19 pandemic in response to operational and financial challenges. The COVID-19 pandemic created an additional need for greater innovation and flexibility in care delivery, opening doors for telehealth to help to fill gaps in existing systems, including both "brick-and-mortar" and e-health (virtual care) systems (see Spotlight: MDH COVID-19 Telehealth Program).

Minnesota health plans are currently required to reimburse health care providers equally for comparable health care services delivered in office, via audio-visual telehealth, or audio-only telehealth (i.e., payment parity). This notion is relatively straightforward for synchronous (real-time) telehealth visits, which meet the definition of telehealth in the Minnesota Telehealth Act (2021) and for which there are comparable in-person visits. However, as described above, the expansion of telehealth and related technology includes types of encounters that are not fully synchronous and/or do not have a clear in-person counterpart, such as some e-visits, store-and-forward telehealth, and remote patient monitoring. Further, payment parity is most easily understood in the context of fee-for-service payment models, and it is less clear how it would apply in situations where telehealth may be used to enhance care coordination and management, or otherwise improve health outcomes.

Spotlight: MDH COVID-19 Telehealth Program

MDH used telehealth technology to help ensure Minnesotans with COVID-19 had easy access to care and treatments (e.g., medications) that reduce the risk of serious illness or hospitalization. In the fall of 2022, MDH, contracted with Cue Health to provide treatment options to Minnesotans who have COVID-19 symptoms. The program launched in mid-December 2022 and ended in May 2024.

To increase access and availability, treatment was able to be accessed through a website, phone-call, or the Cue Health mobile app. MDH has found that most people used the website and phone number to access treatment. Once patients made the connection, they were asked to answer a set of questions, and then consulted virtually with a clinician to discuss treatment options. Prescribed medications could be picked up at a local pharmacy or be delivered to the patient's home.

While this service was available in 11 languages to all people in Minnesota—regardless of health insurance, residency, or citizenship—there was still a challenge to raise awareness about the availability of the service and how it worked, especially for those who may have benefited most.

One challenge that applies to many telehealth apps that are not a part of an existing provider or health system, is not being connected to electronic medical records. The current technology and existing infrastructure often do not allow for those connections to happen easily or lack interoperability, which can prevent valuable information from getting to a primary provider or the broader health care ecosystem. This is often related to appropriate concerns about data privacy. Thus, primary care providers often have to rely on their patients to communicate services or prescriptions they have received through telehealth apps. Patients or their caregivers also have become accountable to provide accurate information about their medical history to the telehealth provider, which can be challenging for some patients and has the potential to increase medical errors.

Despite these challenges and considerations, this MDH program was an innovative use of telehealth, increasing access to timely care to reduce serious illness or hospitalization from COVID-19.

Currently, different categories of telehealth are reimbursed differently. For example, e-visits with providers from telehealth-only or virtual care organizations are generally not subject to payment parity because there are not comparable in-person services. Health plans often offer access to these services under a different reimbursement structure than would apply to local, brick-and-mortar based providers who may offer both in-person care and telehealth. However, more health systems are beginning to offer e-visit options, and some are exploring a range of billing options for certain types of health care encounters through a patient portal (e.g., secure messaging via the patient portal). Provider systems report this is becoming necessary because these kinds of activities are becoming more time-consuming for providers. Nevertheless, this complexity makes it harder for patients to fully comprehend each of

the different options available to them, how their share of the payment may vary depending on what option they choose, or the relative tradeoffs between different options.

While health plans, providers, and patients share similarly positive views about how telehealth can be a tool to improve access to care in many situations, their perspectives on payment for telehealth are not uniform as reflected by interviews conducted by Wilder Research, SDK, and MDH:

- **Patients want the prices they pay to be predictable and fair**. Patients' telehealth comments focused more on satisfaction than cost. However, a few did express a desire to see telehealth continue to be covered in the years ahead, and others suggested that telehealth should include lower copays and other out-of-pocket costs.
- **Providers strongly prefer payment parity**. The vast majority of providers who were interviewed or consulted as part of this study emphasized the need for consistent, predictable, and appropriate payment for health services they deliver – including in-person and telehealth-based services. The key reason cited was that they should be reimbursed based on their expertise and time, regardless of whether the service was provided in-person or via telehealth. Providers believe telehealth should continue to be offered to expand access to care; however, without payment parity, there may not be a sufficient incentive to sustain or further invest in the provision of telehealth services.
- **Health plan companies want more flexibility**. Health plans are especially interested in seeing if there are types of telehealth that can/should cost less or if telehealth could be a tool to help reduce the overall cost of care. The COVID-19 pandemic prompted most plans to revise or modify covered benefits for telehealth services, primarily to allow for more flexibility and decrease barriers to care.

Providing high quality care for all Minnesotans and containing health care costs are fundamental to a well-functioning health care system. Innovation in care delivery, care coordination, payment models, and financial incentives are important elements of continued improvement toward these goals, and innovative and effective uses of telehealth in these situations should be encouraged. The current payment system (predominantly based on a fee-for-service structure) can be a barrier for both providers and health plans to considering payment models that would accommodate more flexibility and potential cost savings (Adler-Milstein et.al., 2021). As the use of telehealth technology continues to evolve, health plan companies and providers should explore and evaluate alternative payment mechanisms that incentivize patient-centered care and ensure that payments and reimbursements for telehealth services are fair to patients, providers, and health plans.

As the impacts of policies regarding telehealth and related payment are evaluated, it is essential to consider both the intended and unintended consequences of these and future policies and the extent to which they support or incentivize appropriate telehealth applications without negatively impacting

the availability and delivery of in-person care. Policies around payment and innovation should not be too prescriptive to stifle innovation, but they must also ensure that quality and health care outcomes are monitored and maintained.

Waste, fraud, and abuse

While some alternative telehealth platforms—particularly those that are staffed by unregulated and/or uncredentialed providers rather than by licensed/credentialed clinicians or other professionals—have the potential to cause harm, telehealth as a tool used by licensed health care practitioners for real-time communication with patients has not shown serious risks (Tang et al., 2022). Nevertheless, it is important to continue to monitor measures of health quality and outcomes as well as billing patterns to protect Minnesotans from harm.

Unfortunately, the rapid growth of telehealth brings opportunities for waste, fraud, and abuse, such as billing insurance for telehealth visits that were not medically necessary or for services that never took place. A recent case involving the telehealth startup Done, which is charged with overprescribing the attention-deficit/hyperactivity disorder (ADHD) medication Adderall and other stimulants, highlights particular concerns related to oversight, coordination, and management of telehealth companies' ability to prescribe drugs (United States Department of Justice, 2024). Also on the federal level, an investigation into Medicare's telehealth reimbursement in 2020 found instances of kickbacks by telemedicine companies to doctors, unnecessary or over-billed care, and other fraudulent activities (United States Office of Inspector General, 2022). The federal review found more than 70 providers who each billed services for 2,000 Medicare beneficiaries (compared with the median of 21 beneficiaries per provider). These providers billed most commonly for office visits and audio-only services.

In response to concerns around waste, fraud, and abuse associated with telehealth services, a whitepaper from the Healthcare Fraud Prevention Program (HFPP), a public-private partnership supported by CMS, recommends increased education and awareness of suspicious activity for patients, providers, and health plans to be aware of, and improved collaboration across federal and state agencies, law enforcement, and private health plans to identify emerging trends within the industry. While challenges with detecting waste, fraud, and abuse are similar to in-person care, some of the strategies regarding telehealth need to be more nimble due to the rapidly evolving technology and availability of telehealth services outside of typical health care channels. (HFPP, 2023).

The Office of the Inspector General for the U.S. Department of Health and Human Services recommends strengthening oversight and monitoring of telehealth services, providing education to providers on appropriate billing for telehealth, and following up with providers when high-risk billing patterns are identified to prevent and detect waste, fraud, and abuse.

Finally, some of the people interviewed cautioned that the apps and technology used in telehealth bear a striking resemblance to many of the scams that are the focus of public awareness campaigns aimed at older adults. Patient advocacy groups are adapting their internet literacy programs to ensure their members access the advantages of telehealth while keeping them safe on the internet (SDK, 2024).

Summary and Conclusions

This report summarizes findings from over two years of research and stakeholder engagement led by MDH to address the Minnesota Legislature's questions about the impact of telehealth expansion and payment parity in Minnesota. The availability and use of telehealth has grown rapidly since the onset of the COVID-19 pandemic when many policies that had restricted telehealth use were relaxed as part of the state and federal pandemic response. This contributed to fundamental changes in the availability and use of telehealth in Minnesota and nationally, including:

- Use of telehealth has stabilized at a much higher level than before the COVID-19 pandemic.
- Local 'brick and mortar' clinics are now offering telehealth in addition to in-person care.
- Behavioral health care, including mental health and substance use-related care, emerged as the most common type of telehealth visit.
- Audio-only telehealth (e.g., telephone visits) became available as an option for delivering and receiving health care services.

This study used data from a variety of sources, including the MN APCD, the MNEHRC, several MDH-led surveys, findings from other research studies and relevant reports, and interviews with Minnesota residents (and organizations representing or advocating on their behalf), health care providers, and health plan companies. MDH focused on data from 2021 – 2023, after the COVID-19 stay-at-home emergency orders expired, and telehealth patterns appeared to have settled into a "new normal." Nevertheless, telehealth availability and use continue to evolve at a relatively rapid pace.

Key findings include:

- **Telehealth use varies by patient characteristics.** While preferences or convenience might drive some decisions to use (or not use) telehealth, Minnesotans who use telehealth may also have greater health care needs, and use of audio-only telehealth rather than audio-visual telehealth may be driven more by circumstances than by choice.
- **Telehealth makes accessing care faster and easier for many Minnesotans.** Providers, patients, health plans, and public health professionals all agree that telehealth's greatest contribution

has been to expand access to care and reduce barriers for patients with challenges related to transportation, child care, work, stigma, and trust.

- **Telehealth can help support equitable access to health care, but access to telehealth is not currently equitable.** While telehealth cannot solve root causes of systemic issues that impede health equity, it can potentially help to reduce some of the inequities in health care access that contribute to and exacerbate health disparities. In addition, it may help Minnesotans connect with health care providers with whom they feel more comfortable, including those who share similar cultural backgrounds and experiences. However, access to telehealth itself is not equitable, and is particularly challenging for people with limited digital access or lower digital literacy. Audio-only telehealth has fewer barriers but is not necessarily patients' or providers' first choice for accessing health care. Resources and engagement from diverse sectors will be needed to ensure that access to health care, including access via telehealth, is equitable.
- **Expanded use of telehealth does not appear to have contributed to greater health care spending.** Increased telehealth use beginning in March 2020 did not lead to greater than expected health care spending in subsequent months. Interviews with Minnesota's health plans also affirm that they made no adjustments to premiums – upward or downward – due to changes in telehealth utilization. More research is needed to determine whether telehealth can lead to cost savings without sacrificing quality or satisfaction.
- **Early evidence suggests that telehealth can be used to deliver high quality care and may help to improve outcomes when supplementing in-person care.** MDH found that quality of care does not appear to be compromised by using telehealth and may improve health outcomes for some by facilitating easier or more frequent interaction with health care providers. However, use of telehealth may contribute to fragmented care for some. A review of the literature focused on audio-only telehealth found that that many physical and behavioral health services delivered via audio-only telehealth were comparable to in-person services in terms of effectiveness, health outcomes, health care utilization, and quality of life.
- **Most Minnesotans are satisfied with telehealth.** Minnesotans who used telehealth were largely satisfied with their experience, and satisfaction was consistent across audio-only and audio-video visits. Telehealth fell short of patient expectations when technological issues arose.
- **Telehealth can be a substitute for in-person visits or used in addition to in-person visits.** Telehealth can be used in place of in-person visits in many situations, especially for primary care and behavioral health services. Telehealth may also serve as a good way to add additional touchpoints or follow-up for patients managing chronic conditions or with other complex needs. Analysis of the MN APCD found that commercial enrollees may be using telehealth as a replacement for in-person visits, whereas Medicare Advantage enrollees may be using it to seek additional care.

- **Preferences for telehealth versus in-person care varied, and availability of in-person care is needed to ensure telehealth is one choice but not the only choice.** Convenience and timeliness of telehealth appointments were important reasons for preferring a telehealth visit, whereas being able to see a particular provider or having health care needs that require in-person evaluation were reasons for preferring in-person visits. Older adults and BIPOC Minnesotans expressed more preferences for in-person care. Minnesotans appreciate telehealth as an option, but do not want telehealth to be their only choice. However, options for in-person care are limited for many, particularly for those residing in areas with workforce challenges. While telehealth has the potential to increase care options, efforts to ensure adequate availability of in-person care continue to be needed.
- **Audio-only telehealth is an important tool for accessing care, including behavioral health care, particularly among those who experience challenges accessing in-person care or audio-visual telehealth care.** While use of audio-only services is generally low, use is highest among potentially vulnerable populations (e.g., older patients, sicker patients, and patients in areas with low broadband access). In Minnesota and nationally, audio-only telehealth has been used most commonly for behavioral health care services.

This report has described the many ways and circumstances for which telehealth can and has made health care more accessible for Minnesotans, without appearing to sacrifice quality or contribute to excess costs. In addition, MDH identified some areas of caution, including the need to ensure that proliferation of telehealth does not contribute to further burnout among the health care workforce, limit or reduce the availability of in-person care options, provide additional opportunities for waste, fraud, and abuse, or be used in ways that do not benefit and could potentially harm patients. Finally, many people who may benefit from telehealth need help and resources to make it more accessible, affordable, dependable, comfortable, and easy to use. Continued research and evaluation of telehealth will be needed to fill knowledge gaps and to provide a solid foundation for evidence-based health policy.

Guiding Principles

In consultation with the TAG, MDH developed a set of principles to guide the process of setting recommendations for this report. These principles are consistent with MDH's overall mission to protect, maintain, and improve the health of all Minnesotans. As telehealth recommendations were developed, MDH considered how well each recommendation advances or supports the following principles:

- **Person-centered –** Telehealth policies should support the delivery of person-centered and health-focused care.
- **Appropriate** - All health care, including care delivered via telehealth, should be appropriate to the needs of the patient. Ideally, patients should receive the right care in the right place (or via the right modality) at the right time.
- **Access** - Telehealth should be easily accessible and convenient.
- **Equity** - Access to telehealth should be equitable and telehealth use should support or improve health equity.
- **Choice** - Choice is important for the use of telehealth by both patients and providers.
- **Costs** – Telehealth should be an affordable way to access health care. Payments and/or reimbursements for telehealth services should feel fair to patients, providers, and health plans.
- **Provider Wellbeing** – Telehealth availability and use should support provider wellbeing and should not result in additional burden or burnout for providers.
- **Consistent and Predictable** – Telehealth policies that are of short duration or unpredictable make it challenging for health systems and providers to determine whether or how to invest in ongoing provision of telehealth services. It also makes it hard for patients to know what options are available to them. Setting long-term policies regarding some aspects of telehealth is also challenging given that expansion of its use is a relatively recent phenomenon.
- **Continuous Evaluation** –The evidence base to inform good telehealth policy continues to grow, and best practices and clinical guidelines for telehealth use continue to emerge. It is important to continue to monitor emerging evidence and adjust policies accordingly, while also considering the previous principle of consistency and predictability.

With these principles and the key findings from the study in mind, MDH makes the following recommendations. Although this report has focused, though not exclusively, on the commercial insurance space, many of these considerations are relevant for the public insurance space as well.

Recommendations

In light of the findings of this study, MDH makes nine recommendations to support continued broad availability and use of telehealth as a tool to deliver health care services, helping Minnesotans to access timely, effective, and affordable health care. As with health care more broadly, achieving and maintaining high standards for telehealth require action from a broad range of Minnesotans, including (but not limited to) policymakers, government agencies, health care providers, health plan companies, community organizations, and researchers. Some recommendations highlight the need for investments

or resources, which may be achieved by redistribution of existing resources (e.g., personnel, physical space, dollars, etc.) in some cases rather than necessarily requiring new or additional funding.

Recommendation 1: Payment parity should continue for real-time (synchronous) audio-visual and audio-only telehealth for health care services for which telehealth may substitute, and is comparable to, in-person care. If evidence emerges that there are significant or meaningful cost savings without sacrificing quality or satisfaction, the payment structure could be revisited. There is currently insufficient data to show whether or to what extent individual providers, clinics, and health systems may save costs by offering and delivering some care via telehealth. MDH did not have access to the data needed to support this type of analysis but anticipates that other researchers will be exploring this question in the future. While payment parity pertains to fee-for-service arrangements, MDH encourages efforts among providers and health plans to work together to identify innovative ways of providing and reimbursing telehealth in ways that better support patient care *and* help to contain health care costs. In the meantime, changes to the payment parity requirements could disincentivize the availability of telehealth at a time when many Minnesotans have come to accept and expect telehealth as an option for at least some of their health care needs.

Recommendation 2: Audio-only telehealth should continue to be included in the definition of telehealth per Minnesota statute, and therefore be subject to payment parity and coverage requirements. Audio-only telehealth has filled an important gap in health care availability and access, particularly for people seeking behavioral health care, older Minnesotans, those with complex chronic conditions, and those residing in areas with low broadband access. In line with Recommendation 1, the definition and coverage requirements would only apply to audio-only telehealth services for which there is a comparable in-person counterpart. It should be clear that not every phone call between a provider and a patient (e.g., to request a prescription refill or to clarify instructions following a recent visit) constitutes a billable telehealth visit, and whether or how much to charge for other types of telephone encounters is broader than the scope of this study and related recommendations. Any changes to audio-only telehealth policies should be made in consultation with the populations and providers who rely on that modality of telehealth.

Recommendation 3: Further investments in infrastructure are needed to improve access to telehealth. Equitable access to telehealth requires equitable access to telecommunications technology, including broadband. Many Minnesotans, particularly those residing in Greater Minnesota, do not have access to broadband sufficient to support an audio-visual telehealth visit. Even in urban areas, availability and costs of high-speed internet can vary from neighborhood to neighborhood. Access to broadband is out-of-reach for some Minnesotans due to costs. The Office of Broadband Development (Minnesota Department of Employment and Economic Development) is currently leading activities, both statewide and for areas or groups with greater disparities in internet access, to improve and

expand the availability of and access to telecommunications and information technologies. Strengthening these efforts will help to address the disparities in access to telehealth as an option to receive and deliver health care services.

Recommendation 4: Broad action is needed to help people build their knowledge, skills, and comfort to use telehealth effectively. Health literacy varies across patients, and digital literacy on the part of both patients and providers can add an additional barrier. In some situations, health care providers or organizations provide technology support for their patients. In other situations, family members or friends may provide some level of help. Resources are needed to cover technology support and other efforts that facilitate effective use of telehealth in order to ensure that telehealth is equitably available to everyone who would benefit from its use. Health care providers and health insurance plans must ensure that they are providing the Minnesotans they serve with the support needed to use telehealth easily, appropriately, and effectively.

Recommendation 5: Build the capacity across sectors to support equitable access to health care via telehealth. Whether by market factors or public policy, telehealth availability and use will continue to evolve. Resources will be needed by diverse sectors such as digital infrastructure, broadband, and technology in order to support good and equitable telehealth. Conveniently located physical spaces that provide internet access and privacy (e.g., in the workplace, schools, libraries, community centers, etc.) are also needed to make it easier for people to access health care through telehealth. These efforts to improve equitable access to telehealth (and to health care via telehealth) will require stakeholder buy-in and meaningful investment from government and the private sector, including the health care industry, to improve and expand access to the digital technology needed to support a telehealth.

Recommendation 6: Require that health plans and health care providers provide clear and transparent communication about options for telehealth services, including costs to patients. For Minnesotans to make good, informed choices about when and how to use telehealth, they need clear and easily understood information from their providers and health insurance carriers about what services are available via telehealth, how much it will cost them out-of-pocket, and how to get prompt answers to any questions they may have.

Recommendation 7: Ensure that policies promoting telehealth access do not limit availability of in-person care for all Minnesotans. When supporting telehealth, it is also important to ensure that in-person capacity remains available so that telehealth use is one choice, but not the only choice, for timely and affordable health care. Telehealth shows promise for supporting greater and more equitable access to health care, but it is only one tool among the many that will be needed to address provider shortages, barriers to health care, and the ongoing need for access to in-person care.

Recommendation 8: Telehealth can support a strained health care workforce, and training and continuing education for providers must include telehealth and related technologies. Telehealth use by providers across Minnesota continues to expand and has real implications for building capacity within an already strained workforce, particularly in parts of the state with more acute workforce shortages such as rural or underserved communities. New and experienced providers require continuous training to provide high-quality care to patients using evolving technology. Many of the skills and competencies needed to provide telehealth care effectively, including practical, legal, and ethical considerations, are different than those needed for in-person care, and are equally important for patient and provider safety, experience, satisfaction, and quality.

Recommendation 9: Ongoing monitoring and policy-relevant research on telehealth are needed to ensure that its use effectively supports Minnesotans' health and does not increase risks of harm. There are currently notable gaps in assessments of quality and outcomes for varying applications of telehealth, as well as uncertainty about the costs of investments and other resources needed to be able to offer and maintain telehealth in ways that are effective in meeting health care needs and that ensure security and privacy of personal health information. Ongoing monitoring of availability of in-person care is also needed to ensure that Minnesotans can make choices based on both preferences and needs. Evidence-based policies regarding telehealth require periodic assessment of the knowledge and literature base, as well as an understanding of where there are gaps. There will be an ongoing need to collect and analyze data and disseminate the findings as telehealth continues to evolve and its availability and indications are refined. Studies based on data held by provider organizations and health plans are needed, in addition to clinical and public health studies led by researchers in academia and other research institutions. It will also be important to monitor billing practices for telehealth, including charges for email messaging and for added facility fees.

Additional Considerations

In addition to the recommendations above, the legislature may wish to weigh the following considerations when making future telehealth policy decisions:

Flexibility for innovation and cost savings, including alternative payment models (APMs). The current payment system, which is predominantly based on a fee-for-service structure, can be a barrier for both providers and health plans in considering payment models that would accommodate more flexibility and potential cost savings. Many alternative payment models are built upon the fee-for-service structure, and determining how to code and bill an increasing range of patient-provider interactions has become increasingly confusing. For example, some e-mail messages between patients and providers are being billed as e-visits whereas other types of messages (e.g., to request a prescription

refill) are not. As the use of telehealth technology continues to evolve, health plans and providers should explore and evaluate alternative payment mechanisms that incentivize patient-centered care and ensure that payments and reimbursements for telehealth services are fair to all parties, including patients, providers, and health plans.

Provider-to-provider collaboration. Findings from this study illustrate the benefits of provider-to-provider mentorship and education that is happening through the use of telehealth. In this way, telehealth is facilitating collaborations and connections across providers who might not otherwise have consulted with each other, benefiting patients and their local communities. Telehealth's role in fostering collaboration, consultation, learning, capacity, and experience is not easily quantified through existing data and surveys but came through in many interviews as an important benefit of telehealth. As telehealth services expand, providers and policymakers will have to find the balance of where telehealth can support the health care workforce without unintentionally leading to further burnout.

Network adequacy. Health care provider networks in Minnesota must meet geographic access standards for the number and types of providers available in a certain region to ensure that covered services are available to patients within a reasonable timeframe. Many states, including Minnesota, continue to grapple with how to recognize telehealth as an access point within a provider network without indirectly impacting patients' ability to access in-person care. For health plans taking effect in 2025, MDH will be collecting data on providers' telehealth capacity and modalities, but this information will not be weighed as a factor for or against approval. Population trends and workforce considerations will continue to be important in evaluating network adequacy in the future.

Interstate Care. In response to the COVID-19 pandemic, federal and state physician licensure requirements were waived, allowing physicians and other health care professionals to provide care across state lines. These flexibilities were meant to support the COVID-19 pandemic response and provide resources to regions that needed greater assistance, but they also served to support Minnesotans seeking specialized health care outside of our state and continuity of health services from medical providers for Minnesotans who temporarily live or travel elsewhere. Minnesota and 41 other states and territories are already a part of the Interstate Medical Licensure Compact (IMLC), which allows physicians who are licensed in member states to obtain licensure in other member states. In addition, Minnesota has license reciprocity with select states for behavioral health practitioners. State-specific policies are one way to achieve greater access to providers across state lines, but they can contribute to a patchwork of policies across states and potential confusion. A federal approach to addressing provider licensure could be considered to alleviate inconsistencies and provide clarity for both patients and providers. As such, the impact on telehealth services should be kept in mind as future state or federal policies are considered or negotiated.

Waste, Fraud, and Abuse. Telehealth use has grown rapidly since the onset of the COVID-19 pandemic. Unfortunately, this growth brings opportunities for waste, fraud, and abuse, such as billing insurance for telehealth visits that were not medically necessary or for services that never took place. On the federal level, the Office of the Inspector General for the Department of Health and Human Services has examined Medicare claims data to identify high risk billing patterns (e.g., very high volumes of patients with telehealth visits or billing for most telehealth services at the highest or most expensive level). Efforts by health plans and providers are needed to prevent waste, fraud, and abuse, including strengthening oversight and monitoring of telehealth services, providing education to providers on appropriate billing for telehealth, and following up with providers when high risk billing patterns are identified.

References

Adler-Milstein, J., & Mehrotra, A. (2021). Paying for digital health care—problems with the fee-for-service system. *New England Journal of Medicine*, *385*(10), 871-873. https://www.nejm.org/doi/full/10.1056/NEJMp2107879.

America's Health Rankings (2023). Health Rankings Annual Report: © 2023 United Health Foundation. https://www.americashealthrankings.org/learn/reports/2023-annual-report.

Barekatain, M., M.R. Maracy, F. Rajabi, and H. Baratian. (2014). Aftercare Services for Patients with Severe Mental Disorder: A Randomized Controlled Trial. *J Res Med Sci.*, 19(3), pp. 240–245.

Bogart K., Hemmesch A., Barnes E., Blissenbach T., Beisang A., Engel P. (2022). Healthcare access, satisfaction, and health-related quality of life among children and adults with rare diseases. *Orphanet J Rare Dis.* 17(1),196. doi: 10.1186/s13023-022-02343-4.

Bruffaerts, R., Sabbe, M., Demyttenaere, K. (2005). Predicting Community Tenure in Patients with Recurrent Utilization of a Psychiatric Emergency Service. *Gen Hosp Psychiatry*, 27(4), 269–274. https://doi.org/10.1016/j.genhosppsych.2005.04.003.

Cantor J,. Schuler, M.S., Matthews, S., Kofner A., Breslau, J., McBain, RK. (2024). Availability of Mental Telehealth Services in the US. *JAMA Health Forum.* 5(2):e235142. doi:10.1001/jamahealthforum.2023.5142

Center for Evidence-based Policy. (2023). Audio-Only Telehealth: Existing Center Research and Environmental Scan. Center for Evidence-based Policy (CEbP), Audio-Only Telehealth: Existing Center Research and Environmental Scan, August 2023 (state.mn.us).

Diabetes Self-Management Education and Support. (2022). Retrieved March 25, 2024 from https://www.health.state.mn.us/diseases/diabetes/manage/diabeteseducation.html.

Diabetes Prevention. (2023). Retrieved March 25, 2024 from https://www.health.state.mn.us/diseases/diabetes/prevent/diabetesprevention.html.

Get COVID-19 treatment. (2024). Retrieved March 25, 2024 from https://care.cuehealth.com/mn.

Griswold, K.S., L.E. Zayas, P.A. Pastore, S.J. Smith, C.M. Wagner, and T.J. Servoss. (2018). Primary Care After Psychiatric Crisis: A Qualitative Analysis. *Annals of Family Medicine*, 6(1), 38–43. http://doi.org/10.1370/afm.760.

Jeffers, H., Baker, M. (2016). Continuity of care: still important in modern-day general practice. *Br J Gen Pract*. 66(649), 396-7. doi: 10.3399/bjgp16X686185.

Healthcare Fraud Prevention Partnership. (2023). Exploring Fraud, Waster, and Abuse Within Telehealth. https://www.cms.gov/files/document/hfpp-white-paper-exploring-fraud-waste-abuse-within-telehealth.pdf.

Luxton, D.D., J.D. June, and K.A. Comtois. "Can Postdischarge Follow-Up Contacts Prevent Suicide and Suicidal Behavior? A Review of the Evidence." *Crisis*, vol. 34, no. 1, 2013, pp. 32–41. https://doi.org/10.1027/0227-5910/a000158.

Mathematica Inc. (2023). Minnesota Study of Telehealth Expansion and Payment Parity Final Report. https://www.health.state.mn.us/data/economics/telehealth/docs/mathematica.pdf.

Minnesota Electronic Health Record Consortium. (2023). Minnesota Study of Telehealth Expansion and Payment Parity. https://www.health.state.mn.us/data/economics/telehealth/docs/mnehrc.pdf.

Minnesota All Payer Claims Database (MN APCD) (2023). Jiani Yu analysis of data from the MN APCD (Extract 25). https://www.health.state.mn.us/data/apcd/index.html.

Minnesota Department of Health (MDH). (2023). Minnesota Study of Telehealth Expansion and Payment Parity: Preliminary Report to the Minnesota Legislature. https://www.health.state.mn.us/data/economics/telehealth/docs/prelimreport.pdf.

Minnesota Department of Health (MDH) Office of Rural Health & Primary Care (ORHPC). Shortage designations - https://www.health.state.mn.us/facilities/underserved/designation.html.

Minnesota Health Care Workforce Survey, Minnesota Department of Health. (2023). Analysis of 2022 Data from Minnesota's Health Care Workforce Survey. https://www.health.state.mn.us/data/workforce/index.html.

Minnesota Health Information Technology (HIT) Ambulatory Clinics Survey, Minnesota Department of Health. (2023). Analysis of 2022 Data from the Minnesota Health Information Technology Survey. https://www.health.state.mn.us/data/hcquality/measures/docs/hit22.pdf.

Minnesota Telehealth and Access Survey (MNTAS), Minnesota Department of Health. (2023). Analysis of 2023 Data from the Minnesota Telehealth and Access Survey. https://www.health.state.mn.us/data/economics/hasurvey/index.html.

Minnesota Telehealth Act of 2021, Laws of Minnesota 2021, 1st Special Session, Chapter 7, Article 6, Section 27. https://www.revisor.mn.gov/laws/2021/1/Session+Law/Chapter/7.

Myrick, K., Mahar, M., DeFrances, C.J. (2021) Telemedicine Use Among Physicians by Physician Specialty: United States, 2021. *NCHS Data Brief* 493, 1-8. https://www.cdc.gov/nchs/data/databriefs/db493.pdf.

National Digital Inclusion Alliance. (2022). *The Words Behind Our Work: The Source for Definitions of Digital Inclusion Terms.* https://www.digitalinclusion.org/definitions/.

National Institutes of Health. (2023). Mental Health During the COVID-19 Pandemic. https://covid19.nih.gov/covid-19-topics/mental-health.

Oliver Wyman Inc. (2023). Telehealth Analysis: Utilization Trends and Telehealth's Impact on Premium Rates- Minnesota All Payer Claims Database. https://www.health.state.mn.us/data/economics/telehealth/docs/oliverwyman.pdf.

SDK Communications + Consulting (2023) "Connectivity Blueprint" http://ramseycounty.us/your-government/projects-initiataives/ramsey-connected-computer-internet-resources/connectivity-blueprint

SDK Communications + Consulting. (2024). Stakeholder + Community Perspectives on Telehealth. https://www.health.state.mn.us/data/economics/telehealth/docs/sdksupp.pdf.

Society of Actuaries Research Institute. (2023). Digital Health: After the COVID Boom. https://www.soa.org/49eeb8/globalassets/assets/files/resources/research-report/2023/digital-health-covid-boom.pdf.

Tang, M., Chernew, M. E., & Mehrotra, A. (2022). How Emerging Telehealth Models Challenge Policymaking. *The Milbank quarterly*, *100*(3), 650–672. https://doi.org/10.1111/1468-0009.12584.

United States Department of Health & Human Services. (2023, December). *Telehealth policy changes after the COVID-19 public health emergency*. https://telehealth.hhs.gov/providers/telehealth-policy/policy-changes-after-the-covid-19-public-health-emergency.

United States Department of Justice. (2024, June). *Press Release: Founder/CEO and Clinical President of Digital Health Company Arrested for $100M Adderall Distribution and Health Care Fraud Scheme.* https://www.justice.gov/opa/pr/founderceo-and-clinical-president-digital-health-company-arrested-100m-adderall-distribution.

United States Office of Inspector General. (2022). *Special Fraud Alert: OIG Alerts Practitioners To Exercise Caution When Entering Into Arrangements With Purported Telemedicine Companies.* https://oig.hhs.gov/documents/root/1045/sfa-telefraud.pdf.

United States Office of Inspector General. (2023, August). *Telehealth*. https://oig.hhs.gov/reports-and-publications/featured-topics/telehealth/.

Wilder Research. (2023). Impact of Telehealth Expansion: A Qualitative Study of Service Recipients, Providers, and Payers. https://www.health.state.mn.us/data/economics/telehealth/docs/wildersupp.pdf.

Appendix A: Technical Advisory Group (TAG) Members

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Barbara Andreasen—*Telehealth and Regional Development Director* — Allina Health

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Leo Bay, DO FAAFP—*Family Medicine/Physician Informatics* — Essentia Health

Bentley Graves—*Director of Health Care and Transportation Policy* — Minnesota Chamber of Commerce

Ryan Jelinek, DO—*Medical Director of Telemedicine and Access* — Hennepin Healthcare

Cara McNulty, DPA—*President of Behavioral Health and Mental Well-being* — CVS Health/Aetna

Jonathan Neufeld, PhD—*Program Director and Principal Investigator* — Great Plains Telehealth Resource & Assistance Center (gpTRAC); Institute for Health Informatics, University of Minnesota

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