TELEHEALTH USE IN THE COMMONWEALTH AND POLICY RECOMMENDATIONS

Report to the Massachusetts Legislature

JANUARY 2023

MASSACHUSETTS
HEALTH POLICY COMMISSION

TELEHEALTH USE IN THE COMMONWEALTH AND POLICY RECOMMENDATIONS

EXECUTIVE SUMMARY

In March 2020, at the outset of the pandemic, Massachusetts mandated the coverage of telehealth services and payment parity between telehealth and in-person services by an Executive Order issued by the Baker-Polito Administration. In January 2021, as part of comprehensive health care legislation, Chapter 260 of the Acts of 2020, *An Act Promoting a Resilient Health Care System that Puts Patients First*, Massachusetts made the coverage requirement for telehealth services permanent and also established permanent payment parity between telehealth and in-person services for behavioral health and temporary parity for primary care and chronic disease management.

As the most acute phase of the pandemic has ended, telehealth has remained an important element of the health care delivery system, and both government and industry are seeking guidance on the appropriate regulatory and payment structure for this modality of care.

To that end, Chapter 260 of the Acts of 2020 directed the Health Policy Commission (HPC) to conduct a study on telehealth use in Massachusetts and provide policy recommendations on topics such as reimbursement levels and ways to expand access to telehealth in the Commonwealth. In conducting this study, the HPC reviewed literature, analyzed telehealth spending and utilization trends using the Massachusetts All-Payer Claims Database (APCD), and engaged with a diverse set of health care stakeholders. This executive summary presents an overview of the report's findings and recommendations regarding telehealth use in Massachusetts.

KEY FINDINGS

USE OF TELEHEALTH SERVICES AMONG THE COMMERCIALLY INSURED POPULATION IN MASSACHUSETTS

Telehealth use grew substantially with the onset of the COVID-19 pandemic, accounting for two-thirds of all commercial ambulatory visits in April 2020. Over the full course of 2020, 31 percent of all ambulatory visits in Massachusetts (65.6% of mental health visits) were conducted via telehealth with 53.5 percent of commercial members making use of telehealth for at least one visit. Consistent with the state's payment parity mandate, the HPC found that found that telehealth and in-person office services were reimbursed at roughly the same rates in 2020.

Variation in the use of telehealth services

There were few differences in the rates of telehealth use by payer, but significant differences by the patient's attributed provider organization (the percentage of patients with any telehealth use for non-mental health conditions ranged from 39 to 60 percent by provider organization). In addition, the HPC found that telehealth use was higher for patients with more chronic conditions, in more urban communities, and with better internet access. There were minimal differences by community income.

Impact of cost-sharing on telehealth use

In the first six months of the COVID-19 pandemic, each of five commercial payers analyzed waived virtually all cost-sharing for telehealth services. In October, Harvard Pilgrim Health Care (HPHC) reinstated cost-sharing for the majority of their telehealth services, while Anthem reinstated cost-sharing for a small share of their telehealth visits. This reinstatement did not appear to lead to a reduction in telehealth use or spending.

Effect of telehealth on total spending

Based on an analysis comparing the change in utilization and spending from 2019 to 2020 for patients with greater telehealth access versus those with less access, HPC concludes, that – with the exception of mental health visits – telehealth's effect on utilization appeared to be largely substitutive rather than additive in 2020, and that expanded telehealth use did not appear to increase total spending. The availability of telehealth also appears to improve access to mental health care, and thus, patients with mental health needs may increase their total visits and total spending.

USE OF TELEHEALTH SERVICES AMONG THE MASSHEALTH ACO/MCO POPULATION

In the MassHealth ACO/MCO population, telehealth use peaked in April and dropped gradually towards the end of 2020, consistent with trends observed in the commercial population. Similarly, the rate of telehealth use for mental health conditions was higher than non-mental health conditions and remained consistent from April to the end of 2020.

STAKEHOLDER PERSPECTIVES AND QUALITATIVE SOURCES

To supplement claims data, the HPC engaged with a diverse set of health care stakeholders, such as providers, payers, researchers, and relevant state agencies.

Provider adoption of telehealth and patient benefits

All stakeholders agreed that telehealth has had a positive impact on patient access during the COVID-19 pandemic and recognized telehealth as an important tool in future health care delivery. Telehealth may be especially beneficial for patient populations with specific needs, such as individuals with mobility issues or people with chronic conditions who must interact frequently with the health care system.

Patient barriers to telehealth

Low digital literacy and a lack of access to connected devices and reliable internet were the biggest barriers for patients to access telehealth services. In addition, telehealth platforms, patient portals and other patient communication materials may be challenging to use for certain patient population, such as those with lower English proficiency or those with vision or hearing impairment.

Provider challenges

Despite broad adoption of telehealth, providers described that they are still in the process of refining their telehealth offerings and developing efficient hybrid care models. No providers reported that telehealth had reduced their total operating expenses, with additional expenses for establishing telehealth technology infrastructure and continued need for physical space, administrative staff, and clinician time to schedule and perform a telehealth visit as well as in-person visits. Some providers noted that telehealth has reduced their no-show rates and improved their practice efficiency by allowing providers to schedule and fill telehealth appointments at short notice.

Providers also commented on the complexity and the lack of uniformity in billing and documentation requirements from payers, which increase providers' administrative burden without adding value to patient care. Several providers highlighted the challenge posed by licensure rules which require that physicians practice medicine only to patients physically present in Massachusetts.

Audio vs. video visits

While more limited in their utility, nearly all stakeholders emphasized the importance of audio-only visits as an option for some patients, such as those without reliable internet or a connected device with a camera. There were substantial disparities by demographic subgroup in the use of audio vs. video visits. The HPC found that video use was lowest among patients 60 and above, Hispanic individuals, non-Hispanic Black individuals, those with a high school diploma or less education, and those earning less than $35,000.

Perspectives on reimbursements

Provider stakeholders supported continued payment parity in primary care and chronic disease management, given that overall operating costs have not been reduced as a result of providing telehealth services. While payers generally supported parity for behavioral health, some payers argued that the overhead expenses for telehealth should be lower in the long term compared to in-person services, which should be reflected in lower reimbursements.

SUMMARY AND POLICY CONSIDERATIONS

In accordance with Chapter 260 of the Acts of 2020, the HPC makes the following recommendations to improve patient access and quality of care while maximizing the cost-saving potential of telehealth. Among these recommendations, the HPC urges the legislature to prioritize three actions regarding the billing and payment of telehealth services:

- **Extend Payment Parity for Certain High Value Telehealth Services:** The Commonwealth should extend the sunset for the payment parity mandate on a limited basis (e.g., for 2 years) for primary care and chronic disease management. The additional time would allow providers to continue improving their telehealth platforms and workflow, and to develop efficient hybrid care models that take advantage of the lower resource needs for some telehealth visits relative to in-person visits.

- **Prohibit Unnecessary Hospital Fees:** Consistent with HPC's long standing recommendation to limit facility fees for certain common ambulatory services in hospital outpatient departments, the Commonwealth should prohibit providers from charging facility fees for telehealth services to improve market fairness and consumer protections.

- **Reduce Telehealth Billing Complexity:** Consistent with HPC's previous recommendation on administrative complexity, coding rules and documentation requirements for telehealth services should be standardized across payers – including audio-only services – to reduce unnecessary administrative complexity in the health care system and their associated costs.

Additional recommendations include:

BILLING AND PAYMENT

- **Continue Payment Parity between Audio and Video Visits:** Health plans should continue payment parity between audio and video visits to ensure that audio-only telehealth remains a viable mode of care delivery for patients facing barriers to care.

- **Promote Alternative Payment Methods (APMs):** Health plans and providers should continue to collaborate and adopt APMs that enable providers to incorporate a range of telehealth services and modalities into their practice.

ACCESS TO CARE AND HEALTH EQUITY

- **Ensure Continuity of Care when Patients are Out of State:** The Commonwealth should consider policy changes and interstate solutions that would enable providers to deliver telehealth services to established patients who live in a nearby state or who are out of state temporarily.

- **Invest in Equitable Access to and Innovative Applications of Telehealth:** The Commonwealth should develop policies and resources to foster patient digital literacy and to increase access to affordable high-speed internet and connected mobile devices.

- **Design Technology for Inclusive Telehealth Delivery:** Development and adoption of telehealth platforms that incorporate accessibility features to meet varying patient needs should be prioritized, such as the ability to integrate interpreter services, closed captioning, and high-contrast display.

- **Support Training and Capacity-Building for Clinicians and Support staff:** Providers are encouraged to devote resources aimed at increasing access to telehealth services in traditionally underserved patient populations.

CONSUMER TRANSPARENCY

- **Increase Patient Education and Transparency on Telehealth Coverage and Cost-Sharing:** To increase transparency and protect patients from receiving unexpected bills, health plans should create accessible materials to educate patients on their telehealth benefits and cost-sharing requirements. Providers should clearly disclose any billing changes in their practice and notify patients in advance of their potential cost-sharing obligation in certain situations.

INTRODUCTION

The arrival of COVID-19 in the U.S. in 2020 and subsequent social distancing policies increased the demand for health care service delivery through modalities other than in-person appointments. Massachusetts was one of many states that temporarily mandated reimbursement for telehealth services by public and private payers during the pandemic. In response to these new policies, many providers adopted telehealth services for the first time or substantially expanded their existing telehealth programs.

While the most acute phase of the pandemic has ended – and along with it, limitations on face-to-face clinical interactions – telehealth has remained an important element of the health care delivery system, and a growing body of evidence is emerging related to this modality of care. For patients, telehealth has the potential to increase convenience and access to care – particularly for scarce specialty services. For providers, telehealth represents an opportunity for practice efficiencies and the potential to address another residual effect of the pandemic – critical staffing shortages.

Despite the potential for these and other benefits, critical questions about telehealth remain. There is still much to learn about optimal use by clinical specialty, appropriate payment methods, and the possibility that telehealth could exacerbate, rather than improve, health disparities. As they look beyond the public health emergency, both government and industry are seeking guidance on the appropriate regulatory and payment structure for care delivered by telehealth.

To that end, Chapter 260 of the Acts of 2020 directed the Health Policy Commission (HPC) to conduct a study to provide data, analysis, and recommendations. Specifically, the HPC was asked to analyze telehealth utilization and spending trends in the Commonwealth, including variation by type of service, provider organization, payer, patient demographics, and geographic region, as well as total health care expenditures on telehealth services, and telehealth's impact on total health care spending. The law also directed the HPC to assess patient access and provide policy recommendations on a number of topics, including reimbursement levels and ways to expand the appropriate use of telehealth.

BACKGROUND AND POLICY CONTEXT

Telehealth refers broadly to interactions between patients and health care providers (or between providers) who are in different physical locations. These interactions can occur in real time – via video or phone calls – or through platforms such as online patient portals.

On March 10, 2020, Governor Charlie Baker declared a state of emergency in Massachusetts and subsequently issued Executive Orders that limited non-essential, elective, in-person care and bolstered patient access to telehealth.[1,2] Specifically, the Baker-Polito Administration required insurers to cover clinically appropriate and medically necessary telehealth services provided by in-network providers and to reimburse telehealth services at the same rates as in-person services. Further, it prohibited prior authorization and cost-sharing for COVID-19-related telehealth services.

In January 2021, the Massachusetts legislature enacted comprehensive health care legislation, Chapter 260 of the Acts of 2020, *An Act Promoting a Resilient Health Care System that Puts Patients First*, which established a regulatory framework for telehealth coverage and reimbursement in the Commonwealth.[i] Specifically, the legislation broadened the types of practitioners allowed to provide telehealth services, codified the requirement that payers cover telehealth services, and required that behavioral health services delivered via telehealth be reimbursed at the same rates as in-person services in perpetuity. For primary care and chronic disease management, reimbursement parity between telehealth and in-person services was extended until January 1, 2023. The statutory mandate to reimburse all other services delivered via telehealth at parity was lifted as of September 13, 2021 (90 days after the end of the Governor's state of emergency), allowing payers and providers to negotiate different rates for in-person and telehealth services.

At the federal level, Congress and the U.S. Department of Health and Human Services (HHS) acted quickly to expand telehealth access, allowing all Medicare beneficiaries to receive telehealth services from their homes and authorizing Federally Qualified Health Centers (FQHCs) and Rural Health Clinics (RHCs) to act as telehealth providers.[3,4] In addition, HHS issued waivers and flexibilities during the public health emergency that expanded the type of

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i   Available at: https://malegislature.gov/Laws/SessionLaws/Acts/2020/Chapter260

practitioners eligible to provide telehealth, increased the list of telehealth services Medicare would cover – including audio-only services – and reimbursed such services at parity with in-person care.[5] Enforcement of compliance with Health Insurance Portability and Accountability Act (HIPAA) was also relaxed, allowing providers to connect with patients using popular technology platforms (e.g., FaceTime, Skype) that may not be fully HIPPA compliant. At the end of 2022, President Biden signed the *Consolidated Appropriations Act, 2023 (H.R. 2617)* into law, extending many of the federal telehealth flexibilities through December 31, 2024.[6]

Broad expansions of telehealth coverage and reimbursement, intended to reduce in-person care to limit viral transmission, led to unprecedented telehealth utilization. A recent HHS report found that the volume of telehealth visits for Medicare Fee-For-Service (FFS) beneficiaries increased 63-fold in 2020, from 840,000 visits in 2019 to 52.7 million visits in 2020.[7] It was in this context that the Legislature directed the HPC to conduct this study.

The HPC is an independent state agency established by Chapter 224 of the Acts of 2012, *An Act Improving the Quality of Health Care and Reducing Costs through Increased Transparency, Efficiency and Innovation*. The HPC is charged with monitoring health care spending growth in Massachusetts and providing data-driven policy recommendations regarding health care delivery and payment system reform.

In conducting this study pursuant to Chapter 260, the HPC analyzed telehealth spending and utilization from the Massachusetts All-Payer Claims Database (APCD), engaged with a diverse set of health care stakeholders through interviews and public meetings, and sought input from researchers and relevant state agencies. This report is presented with the following sections: **Section I** discusses the quantitative analyses of the use of telehealth, with a focus on the commercial market. **Section II** summarizes the perspectives from various stakeholders, supplemented with published literature when appropriate. **Section III** presents HPC's policy recommendations for improving telehealth access and outcomes while balancing the goal of health care cost containment.

SIDEBAR: DEFINING TELEHEALTH

Telehealth, also referred to as telemedicine, allows clinicians to provide care to patients without physical co-location. There are three main types of telehealth services:

- **Synchronous telehealth:** real-time interaction between patient and provider through live video or audio.

- **Asynchronous telehealth**: exchange of patient information through various forms of technology (e.g., online patient portal or secure email) when patient and provider are not simultaneously co-located. Also known as "store-and-forward," this form of telehealth often involves patients' submitting their information (e.g., medical history, digital images, documents) for providers to access and evaluate later. Providers may also use asynchronous telehealth for pre-visit patient intake and follow-up care.

- **Remote patient monitoring (RPM):** collection and transmission of patient health and medical data outside of clinical settings using specific medical devices, such as continuous glucose monitors. Providers may collect a variety of data such as vital signs, weight, blood pressure, and heart rate. RPM is typically used to monitor people with chronic conditions, elderly patients, and patients post-discharge.

Synchronous telehealth services make up the vast majority of telehealth visits and are the focus of this report; however, the quantitative analyses in this report include both synchronous and asynchronous telehealth services.

Published research using Medicare and commercial claims data suggests that the use of RPM has grown in the U.S. recently.[8,9] The HPC examined the use of RPM and chronic care management procedure codes in the APCD and found a limited number of claims (data not shown). Given their small volume and the nature of this type of service, which is fundamentally different from other telehealth services (i.e., does not fully replace traditional in-person visits), the HPC excluded RPM and chronic care management procedure codes from the definition of telehealth in the following analyses. Interprofessional telehealth between providers, also known as E-consults, was also excluded.

SECTION I: USE OF TELEHEALTH SERVICES IN MASSACHUSETTS

DATA SOURCE AND METHODS FOR COMMERCIAL ANALYSIS

The HPC used V 10.0 of the Center for Health Information and Analysis (CHIA) APCD, which covers the years 2018-2020, to analyze trends in the use of telehealth services. The HPC's extract of this data represents roughly 40 percent of the Massachusetts commercial market and includes claims from five large commercial payers: Blue Cross Blue Shield of Massachusetts (BCBS), Harvard Pilgrim Health Care (HPHC), Tufts Health Plans (Tufts), AllWays Health Partners (AllWays)[ii], and Anthem.[iii] Telehealth services were identified through place of service code 02, procedure modifiers, and a set of telehealth-specific procedure codes (the full list of codes used can be found in appendix A). In-person services, unless otherwise noted, refer to health care services performed in ambulatory settings, including physician's offices, hospital outpatient departments (HOPD), urgent care centers, walk-in retail clinics, community health centers, and other clinics. These sites of care were chosen because many services provided in these settings can be adequately substituted by telehealth, in contrast to services provided in an emergency room or a hospital inpatient department. Claim lines that occurred on the same day at the same site for each patient were combined into one visit. Members were restricted to those under 65, thus eliminating individuals who may have Medicare as their primary insurance and a commercial plan only for secondary coverage.

USE OF TELEHEALTH SERVICES AMONG THE COMMERCIALLY INSURED POPULATION IN MASSACHUSETTS

HPC analyses show that telehealth use grew substantially in 2020 following pandemic-related restrictions on elective in-person care and policy changes supportive of telehealth use. Telehealth use peaked in April and May, accounting for 66 and 59 percent of all ambulatory visits, respectively (**Exhibit 1**).

Taken together, over the course of 2020, use of telehealth grew from less than 1 percent of visits in 2018 and 2019 to 31 percent of all visits with over half (53.5 percent) of commercial members making use of telehealth for at least one visit (**Exhibit 2**).

Exhibit 1: Number of in-person and telehealth ambulatory visits by month, 2020
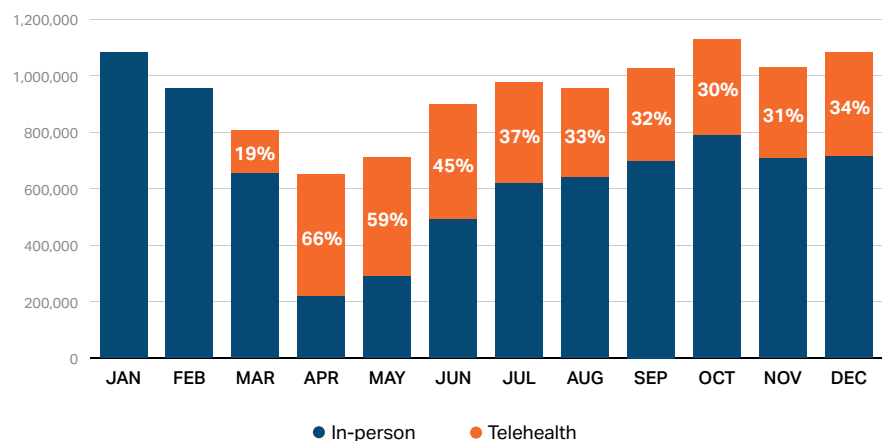
Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2020, V 10.0.

Exhibit 2: Share of ambulatory visits by site, 2018-2020

Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2018-2020, V 10.0.

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ii   AllWays Health Partners was formerly known as Neighborhood Health Plans. In January 2023 AllWays Health Partners became Mass General Brigham Health Plan.
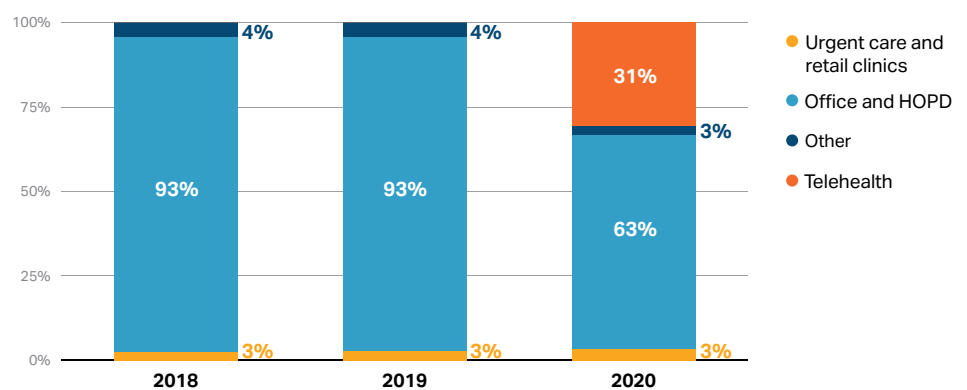
iii   Collectively, these five payers represent over 75 percent of the Massachusetts commercial market; however, due to a lack of most self-insured claims, the data the HPC has access to represents 40 percent of the commercial market.
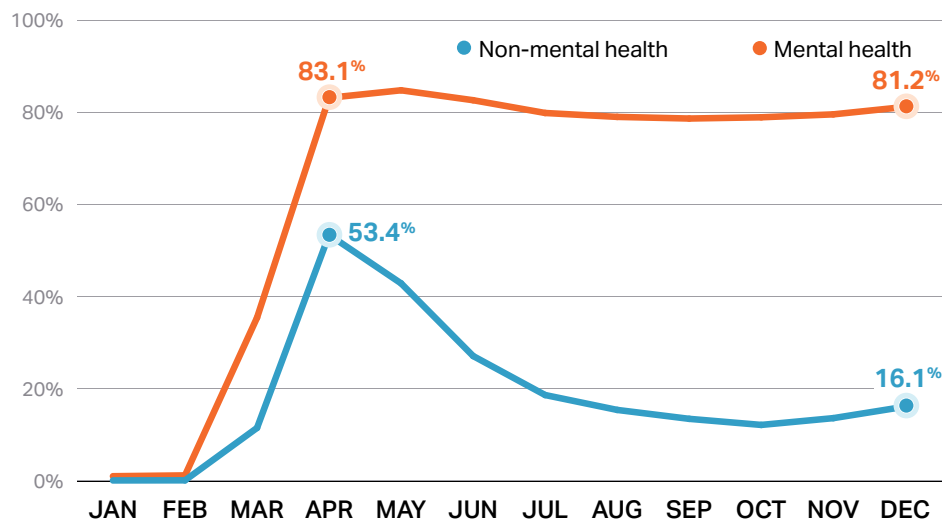
The decline in telehealth use toward the end of 2020 (**Exhibit 1**) was driven by the reduction of telehealth visits for non-mental health conditions. For these conditions, telehealth use peaked in April at 53.4 percent and declined to less than 20 percent from July to December (**Exhibit 3**). In contrast, telehealth use for mental health was consistently high in 2020 and remained at about 80 percent from April to the end of the year.[iv]

Total spending on telehealth mirrored the patterns of utilization, with telehealth spending accounting for 43 percent of ambulatory spending in April and decreasing to roughly 15 percent by December (data not shown).

Exhibit 3: Percent of ambulatory visits that were telehealth by month and type of condition, 2020

Notes: Clinical areas were adapted from Clinical Classification Software Refined (CCSR).
Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2020, V 10.0.

Exhibit 4 shows the number of in-person and telehealth visits (with the percentage of visits conducted via telehealth within each clinical area labeled) for the top 10 clinical areas by total ambulatory visit volume in 2020. The HPC observed significant variation in the rate of telehealth use by clinical area. For example, telehealth use was lower for situations that may require physical examination and/or ancillary diagnostic services (e.g., labs and imaging), including routine wellness exams (6.3 percent), eye and ear conditions (7.9 percent), and musculoskeletal conditions (9.5 percent). By comparison, telehealth use was higher for endocrine and metabolic conditions (33.2 percent) and highest for mental health conditions, where 65.6 percent visits were delivered through telehealth.

Exhibit 4: Number of in-person and telehealth visits by clinical area, 2020
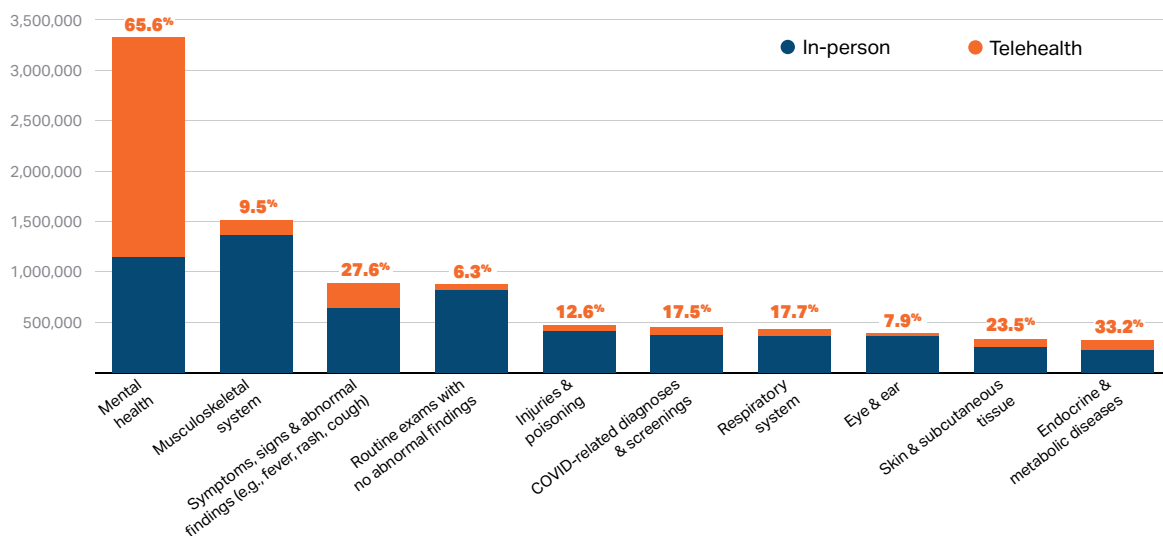
Notes: Clinical areas were adapted from Clinical Classification Software Refined (CCSR). Top 10 clinical areas were selected based on total ambulatory visit volume in 2020. For visits with multiple claims and principal diagnosis codes, the most frequent diagnosis code was used to determine clinical category.
Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2020, V 10.0.

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iv   The HPC does not have substance use claims and is thus unable to evaluate telehealth use for substance use disorders.

Consistent with the state's payment parity mandate, the HPC found that telehealth and in-person office services were reimbursed at roughly the same rates.[v] **Exhibit 5** shows the average observed payment for select evaluation and management (E&M) and psychotherapy visits in 2020.

**Variation in the use of telehealth services**

To identify potential variation in the use of telehealth services, the HPC compared utilization by payer, provider organization, geography, and other patient characteristics. There was little variation in the share of ambulatory visits delivered via telehealth by payer (**Exhibit 6**).[vi] For all five commercial payers, telehealth use was highest in the second quarter in 2020 and declined to roughly 30 percent in the last quarter of the year.

Exhibit 5: Average payment for select E&M and psychotherapy codes (including payer-paid amount and patient cost-sharing), 2020
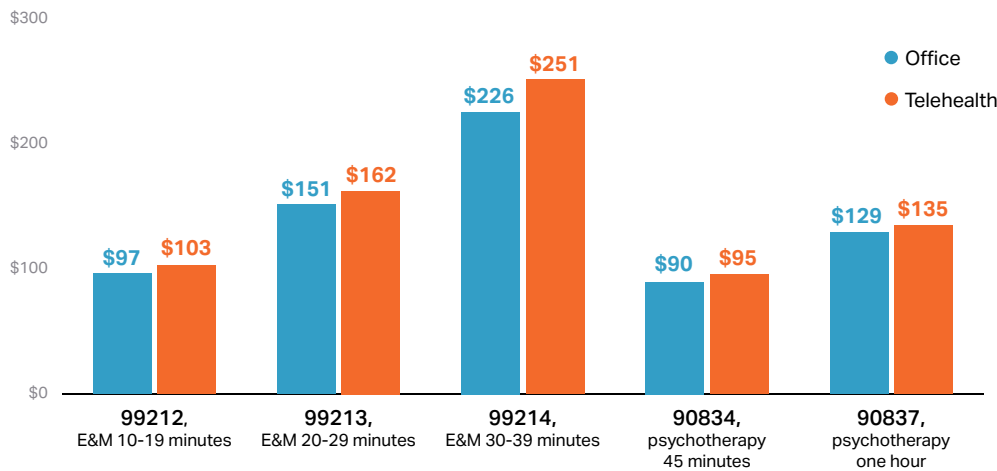
Notes: Claim lines for the same patient, same day, and same procedure code were combined into one visit. Visits for which reimbursements were less than 20 percent of the median or more than 10 times the median for the procedure code were considered outliers and not included in the average calculation. Sample was restricted to in-network visits, and E&M visits were limited to those provided by primary care providers. **Sources:** HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2020, V 10.0.

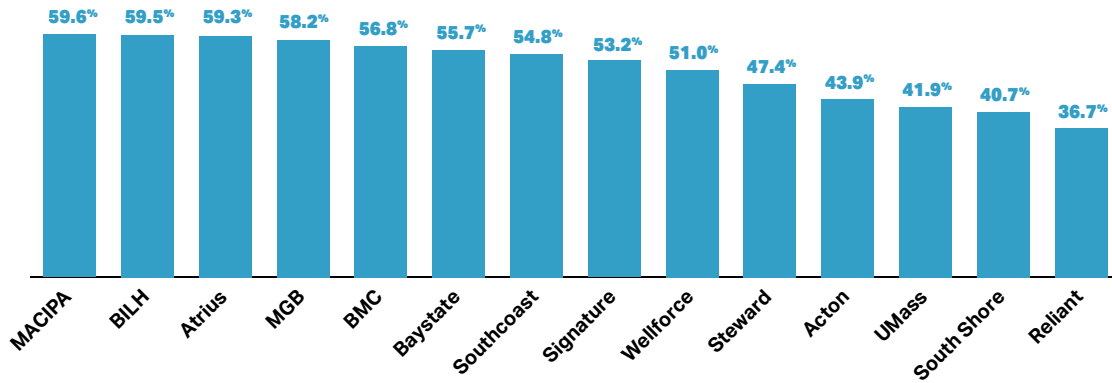**Exhibit 6**: Percent of ambulatory visits that were telehealth by payer and quarter, 2020
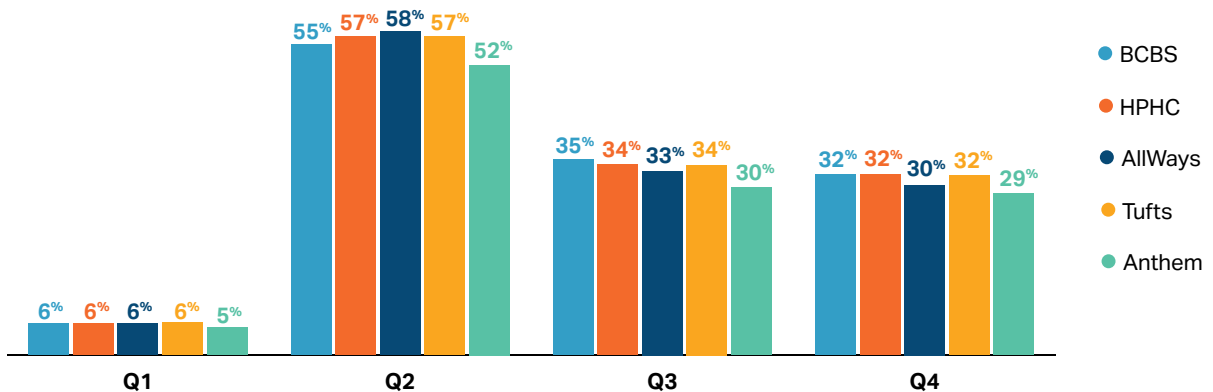
Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2020, V 10.0.

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v   Even where payment parity was strictly followed, average payment rates as shown in **Exhibit 5** will not necessarily be exact for telehealth and in-person visits because payment rates vary by payer and provider and the mix of payers and providers represented in the telehealth visits and in-person visits shown are not identical.

vi   While the share of ambulatory visits conducted via telehealth was slightly lower for Anthem, the difference was not significant when adjusted for demographic characteristics.

Exhibit 7: Among patients with at least one visit for a non-mental health condition, percent with any telehealth use for such conditions by attributed provider organization, March 15-December 31, 2020
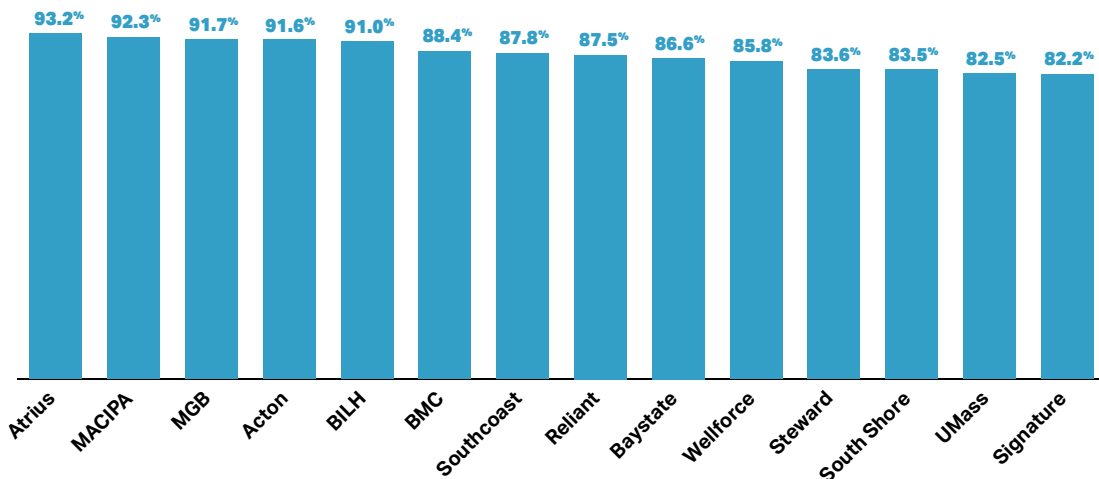

Notes: Percentages are for patients attributed to the shown organization based on primary care providers. Analysis was restricted to adult patients who had at least a visit for non-mental health conditions between March 15-December 31, 2020. Results for patients not attributed one of these 14 provider organizations are not shown. MACIPA= Mount Auburn Cambridge Independent Practice Association. BILH=Beth Israel Lahey Health. MGB=Mass General Brigham. BMC=Boston Medical Center. **Sources:** HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2020, V 10.0.

The HPC also analyzed variation in the use of telehealth by provider organization based on their primary care-attributed patient populations.[vii] The HPC found that there was significant variation in the use of telehealth by provider organization. For non-mental health conditions, telehealth use ranged from nearly 60 percent (patients with primary care providers affiliated with MACIPA, BILH, Atrius, MGB) to 40 percent or less (UMass, South Shore, Reliant) (**Exhibit 7**).

In comparison, telehealth use for mental health conditions was higher for each provider organization, though there was still some variation (**Exhibit 8**). Provider organizations whose patients had higher use of telehealth for non-mental health conditions also tended to have high use of telehealth for mental health conditions, with some exceptions (e.g., patients with Acton primary care providers had high use of telehealth for mental health conditions, but relatively lower use of this modality for non-mental health conditions).

Exhibit 8: Among patients with at least one visit for a mental health condition, percent with any telehealth use for such conditions by provider organization, March 15-December 31, 2020

Notes: Percentages are for patients attributed to the named organization based on primary care providers. Analysis was restricted to adult patients who had at least a visit for mental health conditions between March 15-December 31, 2020. Results for patients not attributed one of these 14 provider organizations are not shown. MACIPA= Mount Auburn Cambridge Independent Practice Association. BILH=Beth Israel Lahey Health. MGB=Mass General Brigham. BMC=Boston Medical Center. **Sources:** HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2020, V 10.0.

vii   For example, 59.6 percent of patients whose primary care providers were part of MACIPA used telehealth for at least one of their non-mental health visits versus 36.7 percent of patients with Reliant primary care providers. Though it is relatively rare, if a patient with a MACIPA primary care provider had a telehealth visit with a Reliant primary care provider, this analysis would "count" that visit among MACIPA's visits. The full attribution methodology has been published and used in HPC's previous work.

Differences in patient population characteristics, including geography, can also contribute to variation in the use of telehealth both by provider organization and overall. Among patients who had visits for non-mental health conditions, the percent of patients who had any telehealth use ranged from 22 percent to 69 percent by resident zip code (**Exhibit 9**). Telehealth use was highest for patients in Metro Boston and the Pioneer Valley/Franklin region and lowest in Central Massachusetts.[viii]

Use also varied by patient demographics and health status (**Exhibit 10**) as has been found in other research.[10] For example, telehealth use was higher among patients who were female, were older, had higher risk scores, and lived in more urban areas, but did not vary strongly with community income levels.

Because many of the factors that influence telehealth use are interrelated, the HPC used multiple regression analysis to determine the relative contributions of each factor, with all other factors held equal. As seen in **Exhibit 11**, mental health history was the biggest determinant of telehealth use: patients who had at least one mental health visit were 34.2 percentage points more likely to be telehealth users compared to patients who had not had any mental health visits. Being 18 and older, female, and having a higher risk score also increased a patient's likelihood to have telehealth use. Consistent with other published literature, patients living in small town/rural areas were 8.3 percentage points less likely to use telehealth compared to urban residents, and patients living in communities with better internet access were 5.5 percentage points more likely to be telehealth users.[ix,11,12,13,14,15] There was minimal difference between telehealth use by community income quintile.

The HPC found that after controlling for differences in their patient populations, variation in telehealth use by provider organization persisted. Patients of Atrius, BILH, MACIPA, and MGB were most likely to have telehealth use, while patients of Reliant, Southshore, and UMass were least likely to use telehealth.

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viii These was less variation for use of telehealth for mental health conditions by zip code, which was higher overall.

ix This estimate means that a 100 percentage point increase in the share of households having an internet subscription in any given zip code is associated with a 5.5 percentage point increase in the likelihood of a resident being a telehealth user. A more realistic interpretation is that for every 10 percentage point increase in community internet access, there is 0.55 percentage point increase in a resident's likelihood to use telehealth.

Exhibit 9: Among patients with at least one visit for a non-mental health condition, percent with any telehealth use for such conditions by zip code, March 15-December 31, 2020
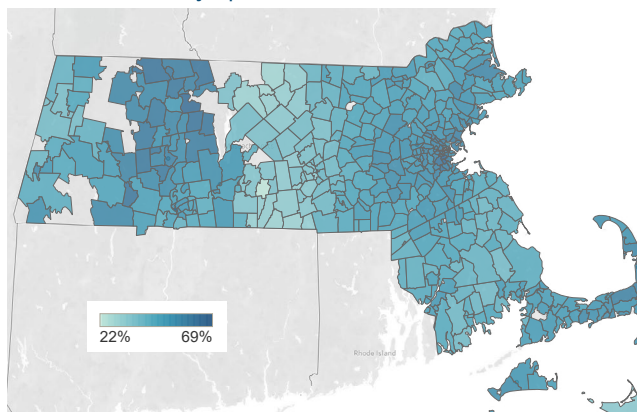
Notes: Analysis includes patients who had at least one ambulatory visit for non-mental health conditions between March 15-December 31, 2020. Zip codes for which the number of telehealth users or non-telehealth users was less than 11 were omitted.
Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2020, V 10.0.

Exhibit 10: Among patients with at least one visit for a non-mental health condition, percent with any telehealth use for such conditions, March 15-December 31, 2020

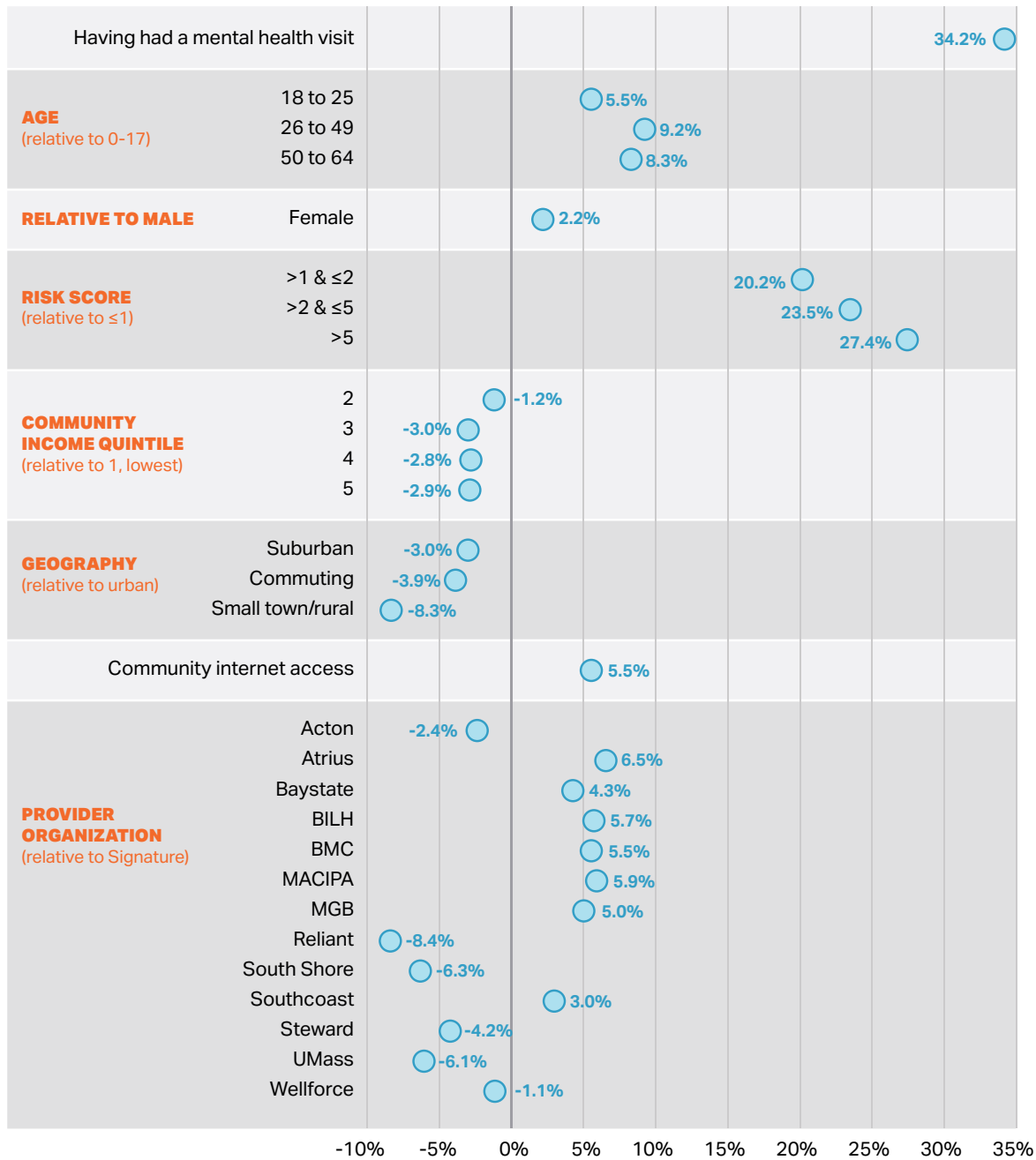| Demographic characteristics		Percent of patients who used any telehealth
SEX	Male	44.7%
	Female	51.3%
AGE	0-17	36.5%
	18-25	43.4%
	26-49	51.1%
	50-64	55.7%
RISK SCORE	≤1	36.2%
	>1 – ≤2	64.3%
	>2 – ≤5	72.8%
	>5	84.8%
COMMUNITY INCOME QUINTILE	1 (lowest income)	48.8%
	2	49.0%
	3	47.5%
	4	47.7%
	5	48.7%
GEOGRAPHY	Urban	50.1%
	Suburban	43.3%
	Commuting	43.2%
	Small town/rural	41.5%

Notes: Income quintiles were assigned based on median income of zip code.
Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2020, V 10.0.

The HPC was unable to evaluate the effect of race and ethnicity on telehealth use as a result of data limitations. However, published literature, including from CHIA's Massachusetts Health Insurance survey, generally find that the rate of telehealth use is lower among Black and Hispanic patients, compared to non-Hispanic white patients.[11,16,17] The HPC also sought to supplement its understanding of telehealth use by race and ethnicity in the qualitative section of the report.

Exhibit 11: Percentage point difference in likelihood of any telehealth use relative to the omitted group, from March 15-December 31, 2020

		Value
Having had a mental health visit		34.2%
AGE (relative to 0-17)	18 to 25	5.5%
	26 to 49	9.2%
	50 to 64	8.3%
RELATIVE TO MALE	Female	2.2%
RISK SCORE (relative to ≤1)	>1 & ≤2	20.2%
	>2 & ≤5	23.5%
	>5	27.4%
COMMUNITY INCOME QUINTILE (relative to 1, lowest)	2	-1.2%
	3	-3.0%
	4	-2.8%
	5	-2.9%
GEOGRAPHY (relative to urban)	Suburban	-3.0%
	Commuting	-3.9%
	Small town/rural	-8.3%
Community internet access		5.5%
PROVIDER ORGANIZATION (relative to Signature)	Acton	-2.4%
	Atrius	6.5%
	Baystate	4.3%
	BILH	5.7%
	BMC	5.5%
	MACIPA	5.9%
	MGB	5.0%
	Reliant	-8.4%
	South Shore	-6.3%
	Southcoast	3.0%
	Steward	-4.2%
	UMass	-6.1%
	Wellforce	-1.1%

Axis: -10% -5% 0% 5% 10% 15% 20% 25% 30% 35%

Notes: Analysis excludes patients without any health care utilization between March 15 – December 31, 2020. Community internet access measured by percent of households in the patient's zip code with an internet subscription, which includes cellular data plans (American Community Survey 5-year estimates, 2020). Regression also adjusted for payer and total number of visits (coefficients not shown). All results were statistically significant, except for payer. MACIPA= Mount Auburn Cambridge Independent Practice Association. BILH=Beth Israel Lahey Health. MGB=Mass General Brigham. BMC=Boston Medical Center.

Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2020, V 10.0.

Impact of cost-sharing on telehealth use

In March 2020, the Massachusetts Division of Insurance issued regulations instructing payers to forgo cost-sharing for medically necessary COVID-19 treatment provided via in-person and telehealth services delivered by in-network providers.[18,19] The HPC found that, in addition to complying with the Division's directives, many payers instituted additional policies (e.g., waiving cost-sharing for all telehealth services, whether or not related to COVID-19) to encourage virtual care. **Exhibit 12** shows average cost-sharing for select E&M and psychotherapy codes. While cost-sharing remained for in-person office visits, it was largely waived for the same visits conducted via telehealth.

In the first six months of the COVID-19 pandemic, all five of the payers examined waived virtually all cost-sharing for telehealth services (**Exhibit 13**). Starting in October, HPHC reinstated cost-sharing for the majority of their telehealth services[20] while Anthem reinstated cost-sharing for a small share of their telehealth claims. The remaining three payers continued to waive cost-sharing for nearly all telehealth services.

Exhibit 12: Average cost-sharing per visit for select E&M and psychotherapy codes, 2020
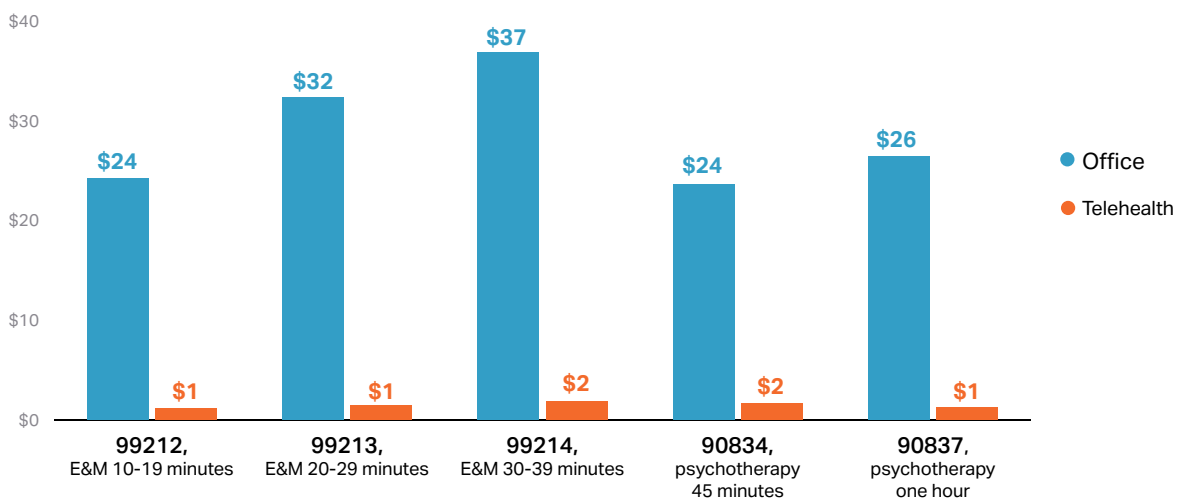
Notes: Claim lines for the same patient, same day, and same procedure code were combined into one visit. Sample was restricted to in-network visits only, and E&M visits were limited to those provided by primary care providers.
Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2020, V 10.0.

Exhibit 13: Percent of telehealth visits with any cost-sharing by month and payer, 2020
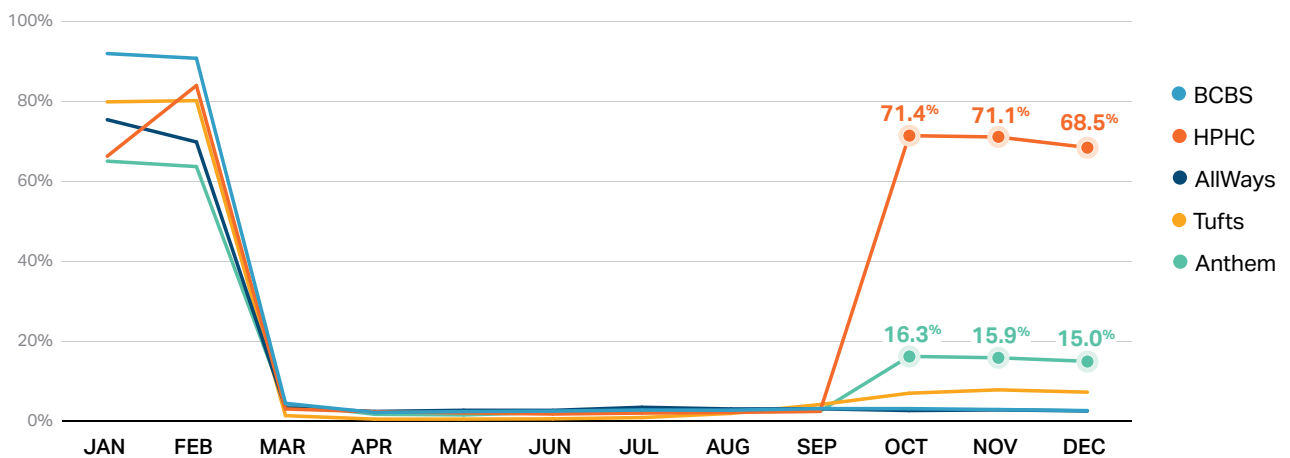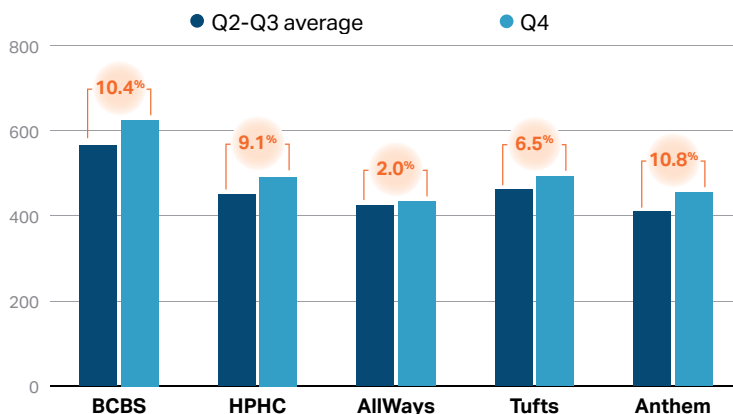

Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2020, V 10.0.

The HPC took advantage of the difference in payer policy to investigate the impact of cost-sharing on telehealth use by comparing the change in telehealth utilization and spending before and after October. If cost-sharing reduces demand for telehealth services, one would expect to observe a larger drop (or a smaller increase) in telehealth utilization for HPHC members relative to members of plans that continued waiving cost-sharing for telehealth services. **Exhibit 14** and **Exhibit 15** show the number of telehealth visits per 1,000 members for psychotherapy and non-mental health E&M services, respectively. Compared to the second and third quarter of 2020, the volume of telehealth psychotherapy services increased in the fourth quarter for all five payers, consistent with prior HPC research. The increase in utilization for HPHC members was similar or slightly higher than it was for other payers. Telehealth utilization for non-mental health E&M services (**Exhibit 15**) generally decreased in the last quarter of 2020, as options to receive these services in person became more available. The decrease was not remarkably different for HPHC members compared to the other four payers.

Exhibit 16 shows the change in telehealth spending by payer and quarter. Average telehealth spending per member declined by 8.8 percent for HPHC in the fourth quarter of 2020 – a greater decline than Anthem and BCBS but a smaller decline than AllWays and Tufts, which saw larger decreases in telehealth spending (18.0 percent and 9.9 percent, respectively).

These results suggest that HPHC's decision to reinstate cost-sharing for telehealth in the last quarter did not appear to affect utilization and spending. Nevertheless, it is possible that the effect was muted if cost-sharing was not reliably enforced prior to a telehealth visit (as it is in an in-person visit). While these results suggest that cost-sharing has limited impact on telehealth demand, the HPC will continue to monitor the data on cost-sharing in 2021 as more payers reinstated cost-sharing obligations for their members.

**Exhibit 14**: Number of psychotherapy telehealth visits per 1,000 members by payer and quarter, 2020

Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2020, V 10.0.

Exhibit 15: Number of non-mental health E&M telehealth visits per 1,000 members by payer and quarter, 2020
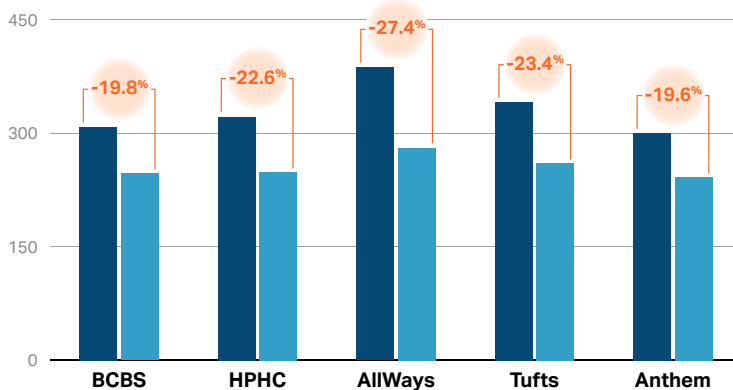
Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2020, V 10.0.

Exhibit 16: Average telehealth spending per member by payer and quarter, 2020
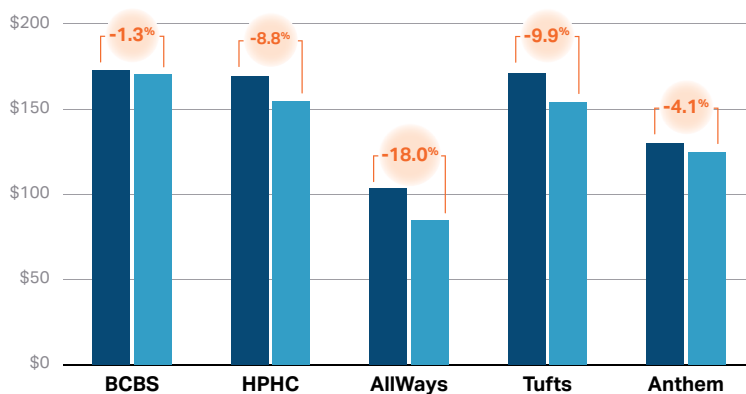
Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2020, V 10.0.

Effect of telehealth on total spending

Telehealth's effect on total health care spending hinges on several factors, including reimbursement rates, the extent to which telehealth substitutes for in-person care, and telehealth's impact on downstream services. Given that telehealth was not widely adopted prior to the pandemic, empirical research on telehealth's effect on total spending is limited and has produced mixed results. While some data suggest that telehealth induces demand and increases total spending,[21,22,23,24] other researchers have found that telehealth's effect on utilization is largely substitutive and does not lead to higher spending.[25,26,27]

Given that telehealth and in-person services were reimbursed at parity in Massachusetts during the study period, telehealth's effect on observed spending would largely reflect its effect on utilization. Identifying the effect of telehealth on utilization and spending in 2020 is challenging – telehealth use increased dramatically in 2020 while overall utilization and spending fell. But this does not imply that telehealth led to lower spending – the decrease in spending was due to the broader impact of the pandemic on the use of care.

To isolate the impact of telehealth, the HPC took advantage of the fact that access to telehealth appeared to be greater in some parts of Massachusetts than others (i.e., based on how quickly providers adopted telehealth, or community internet access, for example). The HPC therefore constructed an analysis which asked: *in areas with better access to telehealth services, did spending or utilization increase more (or decrease less) than it did in areas with worse implied access to telehealth services?* If so, then the implication is that telehealth leads to higher spending.

"Better access" to telehealth was defined based on the share of routine E&M visits performed via telehealth from July to December 2020 by patient zip code. Patients living in the 25th percentile of zip codes with the lowest level of telehealth use were defined as the "low telehealth" group and patients living in the 25th percentile of zip codes with the highest share were defined as the "high telehealth" group for purposes of this analysis (**Exhibit 17**).

Exhibit 17: Routine E&M visits conducted via telehealth by zip code quartile, July-December 2020

ZIP CODE QUARTILE	TOTAL NUMBER OF NON-MENTAL HEALTH E&M VISITS	VISITS VIA TELEHEALTH	SHARE OF TELEHEALTH
1 "low telehealth"	343,350	64,189	18.7 percent
2	485,042	114,375	23.6 percent
3	562,753	154,839	27.4 percent
4 "high telehealth"	468,645	158,155	33.7 percent

Notes: These figures reflect routine E&M visits from all commercial patients thus not limited to cohort members. Quartiles were established at the zip code level (i.e., each quartile contains 25 percent of the zip codes in the sample). The time period from July to December was chosen to allow for more variation in the rate of telehealth use by zip code, as telehealth use was higher in all areas from March to June due to pandemic-related restrictions to in-person care. **Sources:** HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2020, V 10.0.

To further ensure comparisons of patients in different geographic areas were clinically similar and to gain further insight into how expanded access to telehealth might differently affect patients with different health status, the HPC further sub-grouped patients within the low and high telehealth groups into four cohorts according to claims-based chronic disease indicators.[x] All patients included were adults aged 18-64 with full medical and prescription drug coverage in 2019 and 2020.

- **Cardiometabolic cohort:** patients had at least one cardiometabolic condition (cardiovascular disease, diabetes, or hypertension) in 2019

- **Asthma cohort:** patients had asthma in 2019

- **Healthy cohort:** patients had no major chronic disease on record in 2019 and 2020 and a risk score less than 2

- **Mental health cohort:** patients had mood disorder or psychosis in 2019

Exhibit 18 shows that cohort members in the high and low telehealth groups were generally similar in terms of sex, age, and average risk scores, while community income was slightly higher for those in the high telehealth group for the healthy and mental health cohort.

Exhibit 18: Descriptive statistics of the patient comparison cohorts, 2019

	N	PERCENT FEMALE	AVERAGE AGE	AVERAGE RISK SCORE	MEDIAN COMMUNITY FAMILY INCOME
CARDIOMETABOLIC					
Low telehealth	23,269	46.4%	50.2	2.85	$85,432
High telehealth	29,001	47.7%	48.7	2.93	$83,625
ASTHMA					
Low telehealth	2,923	63.7%	45.1	3.44	$83,631
High telehealth	3,958	66.8%	43.6	3.49	$83,734
HEALTHY					
Low telehealth	56,701	47.0%	40.0	0.56	$85,781
High telehealth	92,193	48.1%	38.5	0.56	$94,733
MENTAL HEALTH					
Low telehealth	7,670	67.0%	41.6	3.29	$86,570
High telehealth	13,326	65.5%	40.5	3.00	$96,486

Notes: Median income calculated using family income by zip code from the U.S. Census Bureau American Community Survey 5-year estimates, 2019.
Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2019, V 10.0.

x   The APCD includes patient risk scores and 12 chronic condition flags, which were created based on the Johns Hopkins ACG system. Cohort members were not mutually exclusive with the exception of the healthy cohort.

Exhibit 19 shows the change in ambulatory utilization for the cardiometabolic cohort. For those in the low telehealth group, the average number of ambulatory visits per year declined from 17.3 in 2019 to 14.8 in 2020, representing a 14.7 percent decline. Similarly, utilization declined 15.3 percent for those in the high telehealth group, from an average of 18.0 ambulatory visits in 2019 to 15.2 in 2020. Despite higher telehealth use within the high telehealth group (4.2 visits compared to 2.4 in the low telehealth group), this higher use was offset by a bigger reduction in in-person visits (a reduction of 7 visits, from 18.0 to 11.0 versus a reduction of 5 in-person visits, from 17.3 to 12.3 among the low-telehealth group). This pattern is suggestive of a largely substitutive effect.

The HPC also examined the change in total spending to explore telehealth's potential impact on downstream care and found minimal difference between the low and high telehealth group. For patients in the cardiometabolic cohort, total spending decreased 14.3 percent for the low telehealth group, and 13.4 percent for the high telehealth group (**Exhibit 20**).

The change in emergency department (ED) spending was similar between the low and high telehealth group, and the reduction in inpatient spending was slightly larger in the low telehealth group (**Exhibit 21**). In office and HOPD settings where care can be more easily substituted by telehealth visits, spending decreased more for the high telehealth group. Prescription drug spending increased for both groups (consistent with prior HPC work examining spending trends in 2020),[28] although the increase was slightly larger for the high telehealth group.

Exhibit 19: Number of ambulatory visits per person in the cardiometabolic cohort for patients in the low and high telehealth groups, 2019 and 2020
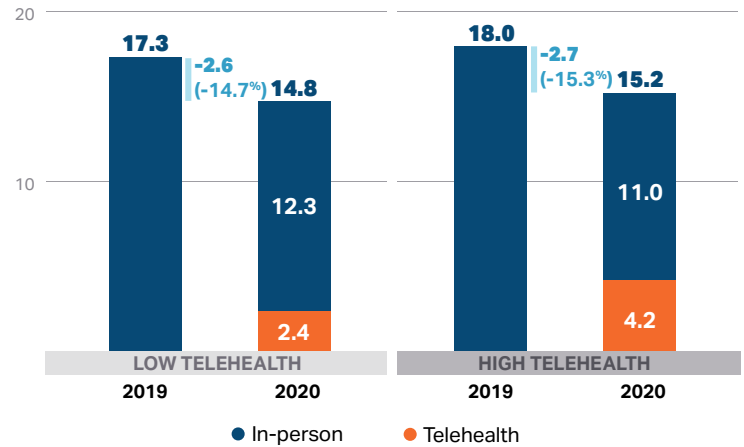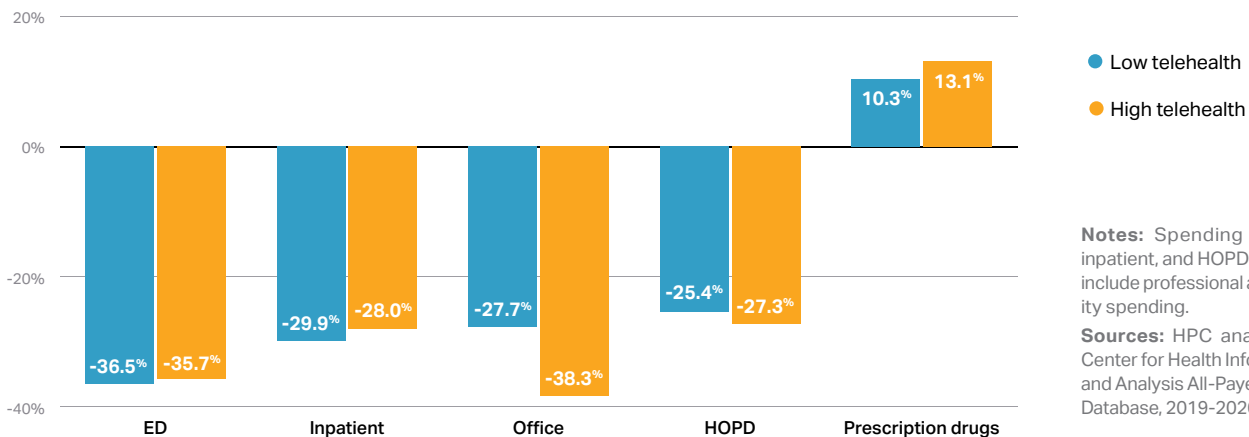

Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2019-2020, V 10.0.

Exhibit 20: Average spending per patient in the cardiometabolic cohort
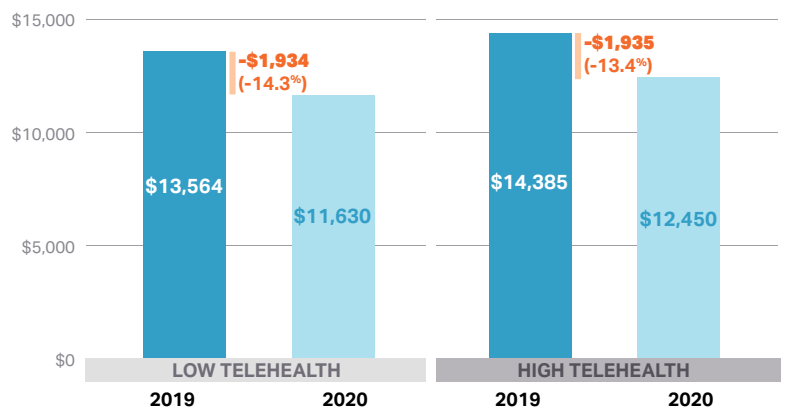
Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2019-2020, V 10.0.

Exhibit 21: Change in average spending by site per patient in the cardiometabolic cohort, 2019 to 2020

● Low telehealth
● High telehealth

Notes: Spending for ED, inpatient, and HOPD settings include professional and facility spending.
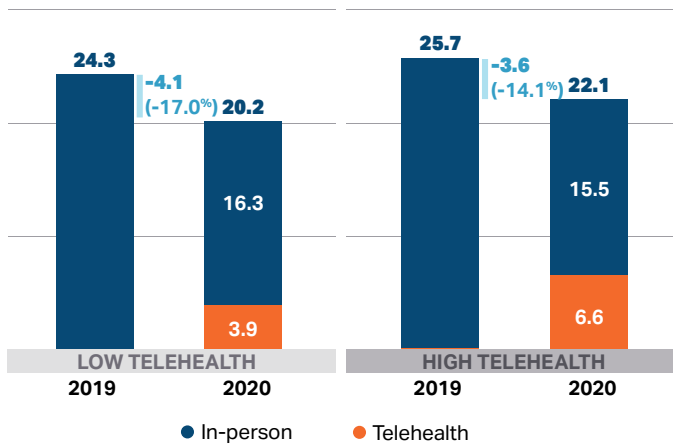**Sources:** HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2019-2020, V 10.0.

For patients in the asthma cohort, the decrease in ambulatory utilization and total spending was slightly greater in the low telehealth group (**Exhibit 22** and **Exhibit 23**).

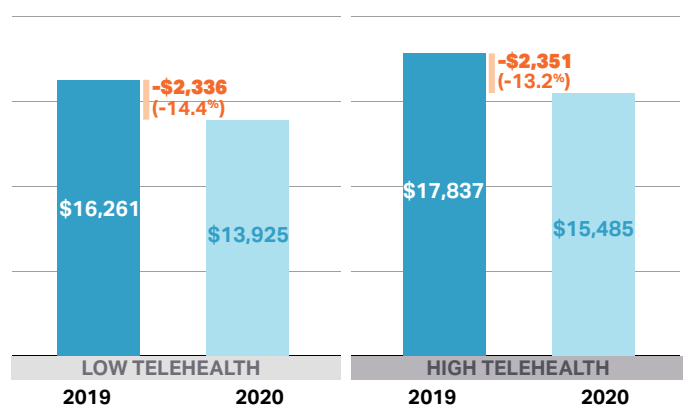Next, the HPC examined patients of the healthy cohort, whose utilization and spending were significantly less than those in the three chronic condition cohorts. Within this cohort, change in ambulatory utilization and total spending was similar between the low and high telehealth group (**Exhibit 24** and **Exhibit 25**).

Exhibit 22: Number of ambulatory visits per person in the asthma cohort for patients in the low and high telehealth groups, 2019 and 2020

LOW TELEHEALTH
2019: 24.3
2020: 20.2 (-4.1, -17.0%) — In-person 16.3, Telehealth 3.9

HIGH TELEHEALTH
2019: 25.7
2020: 22.1 (-3.6, -14.1%) — In-person 15.5, Telehealth 6.6
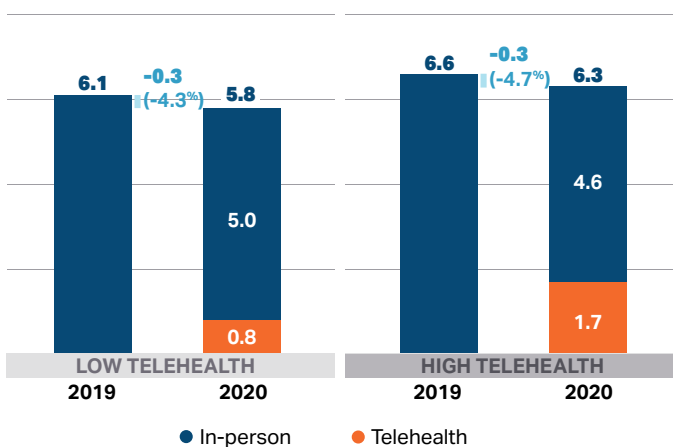
● In-person   ● Telehealth

Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2019-2020, V 10.0.

**Exhibit 23**: Average spending per patient in the asthma cohort

LOW TELEHEALTH
2019: $16,261
2020: $13,925 (-$2,336, -14.4%)

HIGH TELEHEALTH
2019: $17,837
2020: $15,485 (-$2,351, -13.2%)

Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2019-2020, V 10.0.

Exhibit 24: Number of ambulatory visits per person in the healthy cohort for patients in the low and high telehealth groups, 2019 and 2020

LOW TELEHEALTH
2019: 6.1
2020: 5.8 (-0.3, -4.3%) — In-person 5.0, Telehealth 0.8

HIGH TELEHEALTH
2019: 6.6
2020: 6.3 (-0.3, -4.7%) — In-person 4.6, Telehealth 1.7

● In-person   ● Telehealth

Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2019-2020, V 10.0.

Exhibit 25: Average spending per patient in the healthy cohort
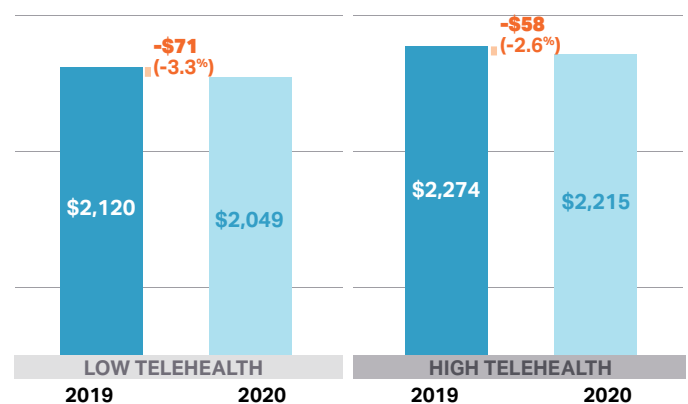
LOW TELEHEALTH
2019: $2,120
2020: $2,049 (-$71, -3.3%)

HIGH TELEHEALTH
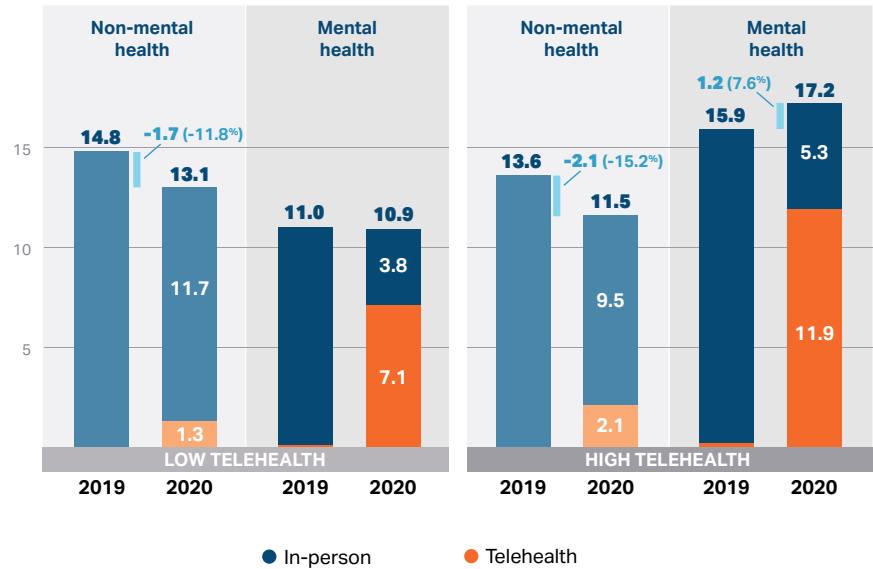2019: $2,274
2020: $2,215 (-$58, -2.6%)

Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2019-2020, V 10.0.

Finally, for patients of the mental health cohort, the HPC further categorized their ambulatory utilization into mental health and non-mental health visits. For visits unrelated to mental health, utilization decreased from 2019 to 2020 for both the low and high telehealth groups (**Exhibit 26**). However, for mental health visits, the change in utilization patterns differed between the two group: while utilization remained similar from 2019 to 2020 for the low telehealth group, the number of mental health visits grew from 15.9 in 2019 to 17.2 in 2020 for the high telehealth group, representing a 7.6 percent increase.

Combining all utilization, the total number of ambulatory visits decreased 7.2 percent for the low telehealth group, from 25.8 to 23.9 (data not shown). In comparison, the reduction in ambulatory utilization from 2019 to 2020 was smaller for the high telehealth group, at 2.9 percent (from 29.6 in 2019 to 28.7 in 2020). These results suggest that higher telehealth access was associated with higher mental health utilization compared to the low telehealth group, but not net higher utilization.

The change in total spending mirrored changes in ambulatory utilization for this cohort. Spending decreased 11.9 percent for the low telehealth group, and 4.7 percent for the high telehealth group (**Exhibit 27**).

Exhibit 26: Number of ambulatory visits per person in the mental health cohort for patients in the low and high telehealth groups, 2019 and 2020

● In-person   ● Telehealth

Notes: Clinical areas were adapted from Clinical Classification Software Refined (CCSR).
Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2019-2020, V 10.0.

Exhibit 27: Average spending per patient in the mental health cohort
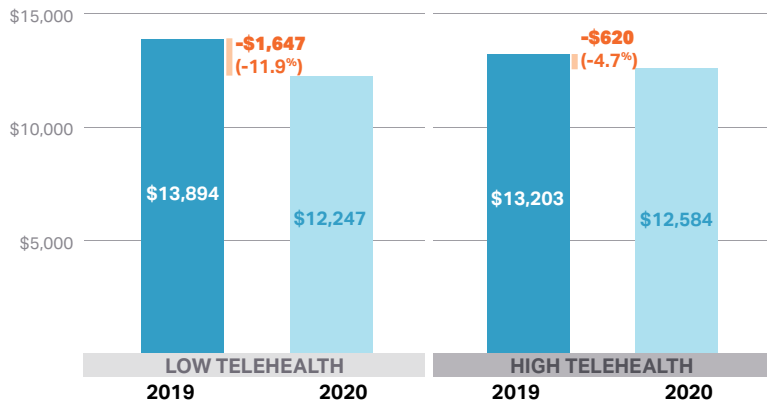
Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2019-2020, V 10.0.

By site of care, the HPC found that spending decreased more for the high telehealth group in office and HOPD settings, but less so in EDs and hospital inpatient departments (**Exhibit 28**). The difference in prescription drug spending was stark: while spending decreased 2.3 percent for the low telehealth group, it increased 15.3 percent for the high telehealth group.

In summary, average ambulatory utilization and total spending decreased for all cohort members from 2019 to 2020. The extent to which utilization and spending changed was largely similar between the low and high telehealth group for patients in the cardiometabolic, asthma and healthy cohorts. For patients in the mental health cohort, utilization of mental health services increased from 2019 to 2020 for the high telehealth group while utilization from 2019 to 2020 was unchanged for the low telehealth group,

suggesting that telehealth enabled greater access to mental health care during the COVID-19 pandemic and appears to have led to more visits than would have occurred without telehealth. Despite higher mental health utilization for the high telehealth group, their total utilization and spending still decreased in absolute terms from 2019 to 2020 – but less so than for the low telehealth group.

Based on these findings, HPC concludes, that – with the exception of mental health visits – telehealth's effect on utilization appeared to be largely substitutive rather than additive in 2020, and that expanded telehealth use did not appear to increase total spending. These results are consistent with findings from other studies using data during the pandemic.[29,30]

Exhibit 28: Change in average spending by site per patient in the mental health cohort, 2019 to 2020
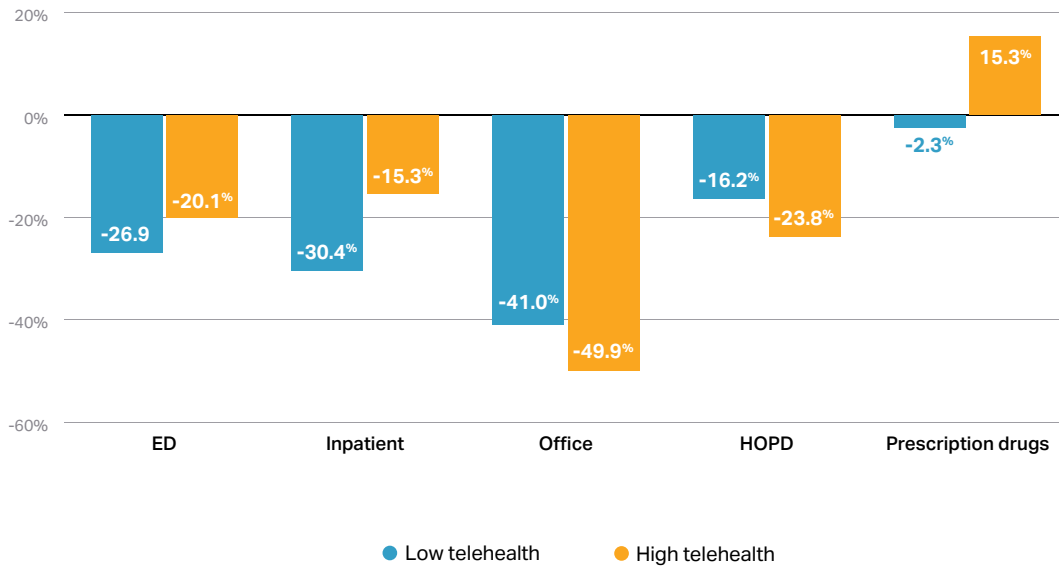
● Low telehealth ● High telehealth

Notes: Spending for ED, inpatient, and HOPD settings include professional and facility spending.
Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2019-2020, V 10.0.

## USE OF TELEHEALTH SERVICES AMONG THE MASSHEALTH ACO/MCO POPULATION

The HPC also examined telehealth utilization trends for members of several MassHealth ACOs and MCOs using 2020 claims data from the APCD, including AllWays, Tufts Public Plans, Health New England, Fallon 365 Care, and BMC HealthNet.

We found that monthly patterns of telehealth use mirrored those of the commercial population; telehealth use peaked in April and dropped gradually towards the end of the year (**Exhibit 29**).

Similarly, the rate of telehealth use for mental health conditions was higher than non-mental health conditions

and remained consistent from March to the end of 2020 (**Exhibit 30**). The percent of visits delivered via telehealth for non-mental health conditions was highest in April and dropped throughout the year, with a slight uptick in December (corresponding to a surge of COVID-19 cases.) Differences observed in the rate of telehealth use between this population and the commercial population likely reflect the patients' demographic and clinical differences. For example, members under 18 accounted for 46 percent of the MassHealth ACO/MCO sample, compared to 21 percent in the commercial sample. Compared to adult care, pediatric care often requires in-person visits in which a physical exam may be beneficial.

Exhibit 29: Number of in-person and telehealth ambulatory visits by month for select MassHealth ACO and MCO members, 2020
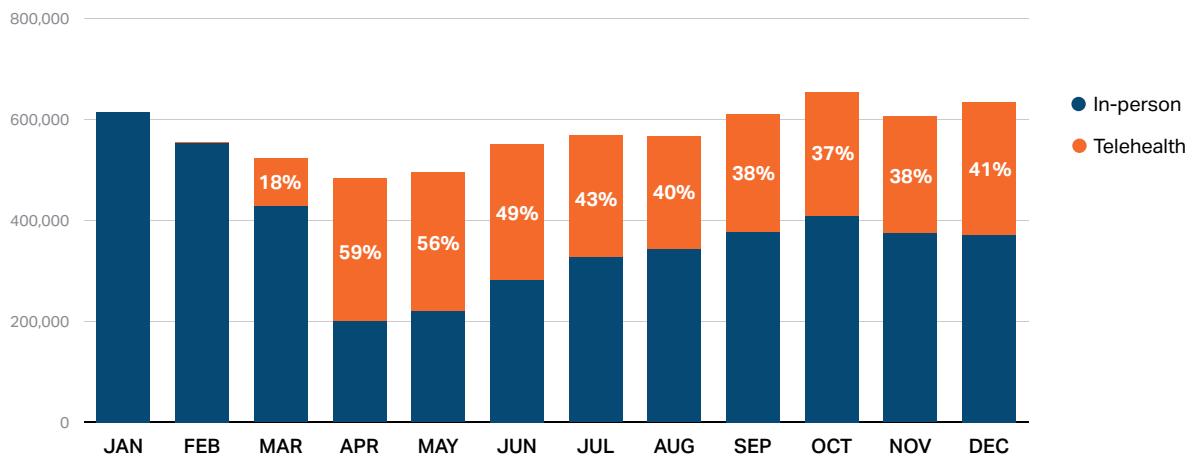
Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2020, V 10.0.

Exhibit 30: Percent of ambulatory visits that were telehealth by month and type of condition, 2020
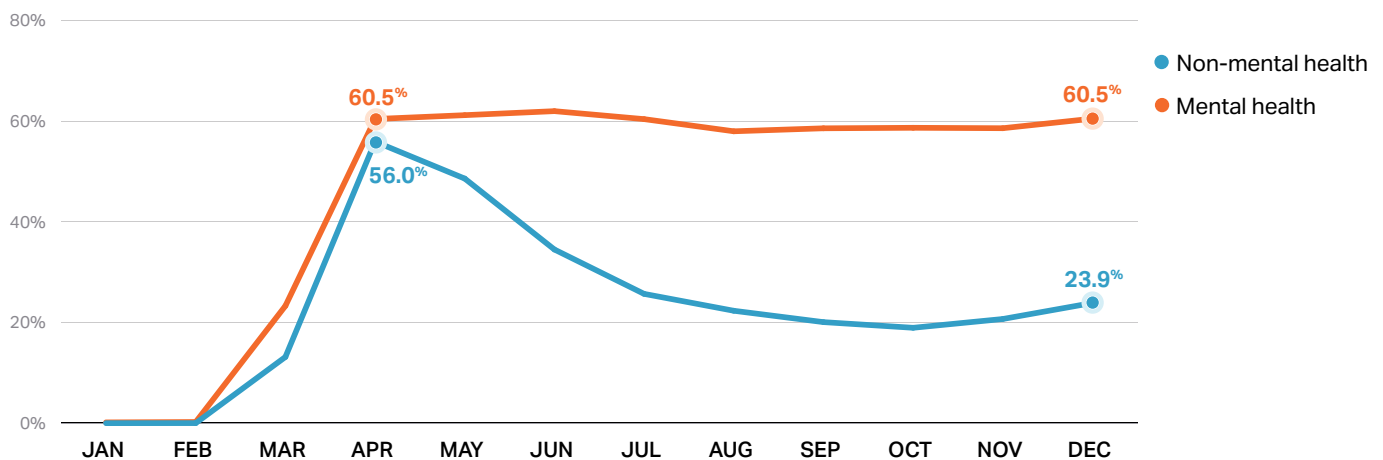
Notes: Clinical areas were adapted from Clinical Classification Software Refined (CCSR).
Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2020, V 10.0

UTILIZATION TRENDS IN 2021 AND BEYOND

While claims data beyond 2020 were not available at the time of publication, a recent study that examined telehealth utilization in Massachusetts through the end of 2021 found that while telehealth use has fluctuated during the pandemic, with more patients turning to telehealth during and following surges of COVID-19 cases, overall telehealth utilization has trended somewhat downward since the end of 2020.[31] Using claims data from 1.8 million Massachusetts commercial, Medicare, and MassHealth members, the researchers found that the share of ambulatory visits that were conducted via telehealth decreased from roughly 45 percent in January 2021 to less than 30 percent in late 2021 (**Exhibit 31**).

By type of service, the study found that the percent of behavioral health visits delivered by telehealth remained near 80 percent at the end of 2021. The percent of chronic disease and primary care visits conducted via telehealth dropped from 70 percent in the spring of 2020 to below 50 percent in early 2021 and 25 percent or less by the end of 2021. Use of telehealth in preventive care for both adults and children has fallen to 10 percent or less by early 2021 (**Exhibit 32**).

Despite these drops, use of telehealth remains far higher than before the pandemic and appears to have stabilized in recent months.

Exhibit 31: Number of in-person and telehealth visits for alarge sample of Massachusetts commercial, Medicare and MassHealth patients, 2019-2021
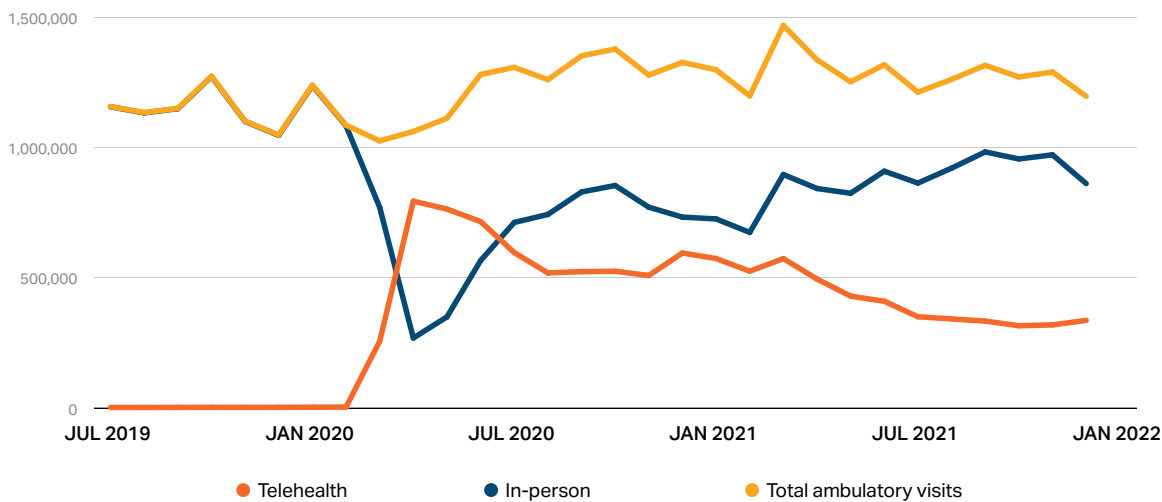
Notes: Sample consists of data from 1.8 million Massachusetts patients, including commercial (45 percent of sample), MassHealth (31 percent), Connector (12 percent), Medicare Advantage (9 percent) and Dual Eligible plans (4 percent). Data shown include visits for adult PCP office visits, adult and child prevention visits, behavioral health visits, and chronic care visits. Data for behavioral health visits only include commercial insurance. **Source:** Peltz A, et al. Bridging the Digital Divide: Advancing Telehealth Equity. Nov, 2022. Presented at the MAHP 2022 Annual Health Conference. Published with permission.

Exhibit 32: Percent of visits conducted via telehealth by type of service for a large sample of Massachusetts commercial, Medicare and MassHealth patients, 2019-2021
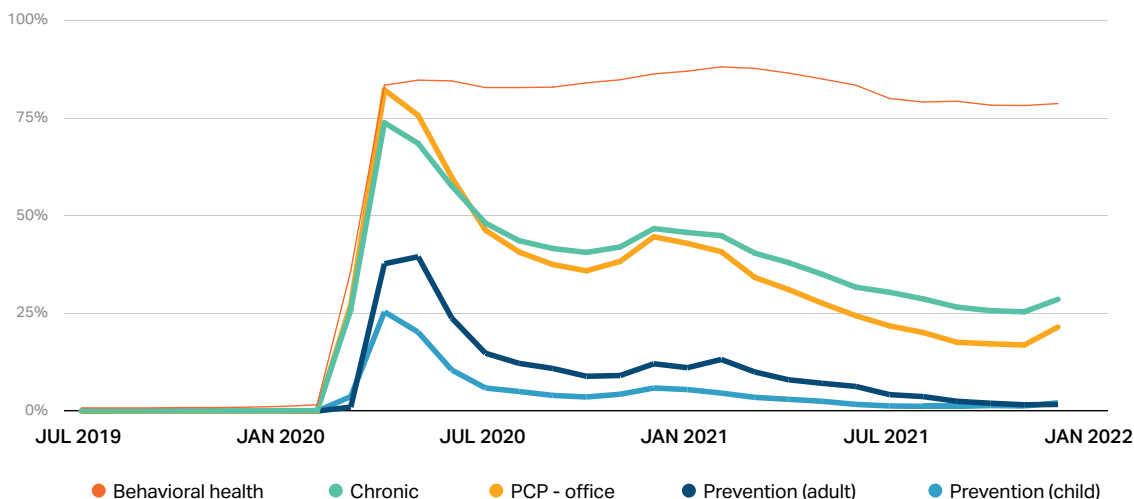
Notes: Sample consists of data from 1.8 million Massachusetts patients, including commercial (45 percent of sample), MassHealth (31 percent), Connector (12 percent), Medicare Advantage (9 percent) and Dual Eligible plans (4 percent). Data for behavioral health visits only include commercial insurance. **Source:** Peltz A, et al. Bridging the Digital Divide: Advancing Telehealth Equity. Nov, 2022. Presented at the MAHP 2022 Annual Health Conference. Published with permission.

SECTION II:
STAKEHOLDER PERSPECTIVES AND QUALITATIVE SOURCES

While claims data can offer extensive information on telehealth utilization and spending, they do not provide the full picture of how telehealth has changed provider practice and patient experience. To supplement insights from claims data, the HPC conducted a series of stakeholder interviews in the fall and winter of 2022.[xi] The HPC also sought input from the HPC's Advisory Council, which represents a diverse set of Massachusetts health care stakeholders, and from researchers and relevant state agencies and councils including the Division of Insurance, the Center for Health Information and Analysis, MassHealth, and the Rare Disease Advisory Council. The following section presents findings from this process, organized by theme and supplemented whenever possible with relevant citations to surveys and other published sources.

BENEFITS OF TELEHEALTH

All stakeholders the HPC engaged with agreed that telehealth has had a positive impact on patient access during the COVID-19 pandemic and recognized telehealth as an important tool in future health care delivery. Beyond the obvious benefits of telehealth during the pandemic, stakeholders noted that telehealth can help maintain access for patients in other scenarios that are both extreme (e.g., a weather event that closes health care facilities) or more mundane (e.g., when patients have sick children to care for at home). Some stakeholders noted that telehealth can be useful in geographic areas where the availability of certain providers (e.g., medical specialists and/or behavioral health providers) does not meet patient demand. Telehealth may be especially beneficial for patient populations with specific needs, such as individuals with mobility issues who find in-person visits challenging or people with chronic conditions who must interact frequently with the health care system.

Telehealth can also substantially reduce patient travel and time burden. A national study on time use found that Americans spend an average of 45 minutes traveling and waiting for health care services, more than 50 percent of the time spent actually receiving care (76 minutes).[32] In Massachusetts,

reducing travel time can be especially important for patients who need services that tend to be concentrated in the Boston area. For example, a parent and caregiver of a child with several rare diseases shared that they used to drive an hour to Boston more than hundred times each year for in-person visits. Having the ability to conduct some visits virtually has significantly improved their quality of life.

Some providers noted that care management for chronically ill patients can be improved with the use of remote monitoring devices, which give providers access to patients' physiological data in reliable and consistent formats. Most of the providers with whom the HPC engaged reported being in the early stages of identifying device vendors or implementing such programs only for a small set of chronic conditions.

PROVIDER ADOPTION OF TELEHEALTH

Providers described a rapid pivot to telehealth at the onset of the pandemic after having modest to no telehealth offerings before that time. Many providers focused their early telehealth efforts on behavioral health, primary care, and chronic disease care. Over time, some were able to add specialty telehealth services, such as teledermatology, telestroke, teleneurology, telehealth partial hospitalization programs, and emergency telepsychiatry.

In the early months of the pandemic, many providers instituted a "virtual first" policy in which patients either were only offered telehealth appointments or had a telehealth visit first to assess if an in-person visit was necessary. After the initial period of restrictions to in-person care, providers varied in their approaches to determine the best modality of care. Some provider organizations developed specialty-specific clinical guidelines or used computer algorithms to help their clinicians decide when a telehealth visit was clinically appropriate. Other organizations provided minimal guidance (e.g., only limiting in-person care if the patient exhibited symptoms of COVID-19) and largely deferred the decision to use telehealth to individual clinicians.

All providers noted the importance of patient preference as a crucial factor for determining how care is delivered. Some providers noted that some of their patients prefer receiving care in person for the fuller, more personal clinical experience, even though in-person visits are generally more time-consuming for patients than telehealth visits, usually without involving any more face-to-face time with their

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xi   Atrius Health, Associated Industries of Massachusetts, Baystate Health, Blue Cross Blue Shield of Massachusetts, Boston Medical Center, Cape Cod Healthcare, Community Care Cooperative, Massachusetts Broadband Institute, Massachusetts Health & Hospital Association, Massachusetts League of Community Health Centers, Massachusetts Medical Society, Northeast Telehealth Resource Center, Physician Performance LLC, and Point32.

clinicians. Multiple surveys have found that while patients are highly satisfied with their telehealth experience, many patients (in some surveys, a majority) still prefer in-person visits.[33,34,35,36] A national survey of commercially insured members conducted in March 2021 found that while 66.5 percent of participants wanted to have the option of video visits in the future, 53.0 percent preferred an in-person visit when asked to choose between an in-person or a video visit.[37]

No providers reported that telehealth had reduced their total operating expenses. Instead, they described the need to maintain the ability to offer in-person care and telehealth. Providers noted that offering an additional modality of care has so far not changed their need for physical space or administrative staff. Clinicians, particularly those who do not specialize in behavioral health, often conduct telehealth services from their offices because they have both in-person and telehealth visits on the same day, requiring support staff to perform tasks such as scheduling telehealth visits and assisting patients with technical issues. In addition, some providers indicated that they have incurred additional expenses for establishing the technology infrastructure to offer telehealth.

They also noted that the clinician time required for a telehealth visit is the same as for an in-person visit.[xii] Still, some providers noted that telehealth has reduced their no-show rates and improved their practice efficiency by allowing providers to schedule and fill telehealth appointments at short notice.

PROVIDER CHALLENGES

Several providers described their foray into telehealth as a "learning experience" and noted that nearly three years into the pandemic, they are still in the process of refining how they offer this modality of care. For example, one provider organization noted they had recently switched to a new telehealth platform because it provides integration with interpreter services and non-clinical staff functions. Some providers noted that adding a new modality of care while maintaining in-person care has introduced workflow challenges, and they continue to develop systems and processes to incorporate telehealth efficiently into their practice. For example, while the technology of messaging through patient portals is not new, one provider organization expressed that

the number of online messages from patients has increased substantially since the beginning of the pandemic.[xiii] While some requests from patients can be addressed by support staff (e.g., scheduling or medication refills), others require evaluations from clinicians, which may increase their overall clinical load.

Moreover, ambiguity around what constitutes a telehealth "visit" has implications for both providers and patients related to billing and cost-sharing. Depending on the nature of the interaction (e.g., need for clinician time to make a diagnosis) and how it may change during the communication (e.g., patient raises a new clinical concern when a provider calls to report test results), providers may consider these communications to be appropriately characterized as telehealth visits, even when many patients do not perceive an unscheduled communication with a provider as such. Overall, providers commented that they strive to be clear with patients when a communication is considered a telehealth visit but acknowledged that it can be confusing for patients.

Providers also commented on the complexity and the lack of uniformity in billing and documentation requirements from payers, which increase providers' administrative burden without adding value to patient care. Correct billing procedures may include a combination of procedure codes, modifiers, and place of service codes, and payers frequently updated their billing guidelines during the pandemic to reflect reimbursement and coverage decisions as well as new federal and state policies.

Lastly, several providers highlighted the challenge of providing telehealth services to patients who are not physically located in Massachusetts. Some of these patients may need care temporarily while out of state on vacation or to provide care for a sick family member in another location. Other patients – college students who attend school in another state, retirees who spend winters in warmer climates, and patients who work in Massachusetts but live in a nearby state – are out of state more regularly. Licensure rules from the Board of Registration in Medicine (BORIM), like most other states, require that physicians may practice medicine – in person or via telehealth only to patients physically present in Massachusetts.[38] In the early months of the pandemic, all states waived some aspects of their licensure requirements to facilitate access to care, which in some other states allowed clinicians to provide telehealth services to their patients when they are out of state.[39] However, many

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xii   Two provider stakeholder groups noted that clinicians typically spend more time for a telehealth visit than an in-person visit because they have to manage contacting and connecting with the patient electronically and arranging follow-up visits, functions that are either done by administrative staff or are not necessary for an in-person visit.

xiii   The HPC could not systematically evaluate the volume of patient portal messages in the claims, which are considered one type of asynchronous telehealth, as not all providers bill for such services.

licensure-related flexibilities have since expired as states end their pandemic emergency declarations.[xiv] Multiple providers described patients who live in bordering states driving just over the Massachusetts state line to conduct telehealth appointments from a parking lot.

Providers generally agreed that for patients with an established relationship with their clinicians, requiring them to be physically located in Massachusetts for their telehealth visits disrupts continuity of care without clinical benefit and can, in some cases, completely negate the convenience of telehealth. Analyses examining the use of interstate telehealth among Medicare beneficiaries suggest that while only a small share of patients received telehealth services from an out-of-state clinician (5 percent in one analysis using 2021 data), most of these patients have an established relationship with these clinicians.[40,41] These findings suggest that restricting interstate telehealth use disrupts continuity of care and negates the benefit of telehealth for patients who might otherwise stand to benefit the most from it – those located far from their health care provider.

AUDIO VS. VIDEO VISITS

Providers generally agreed that video is their preferred mode for telehealth visits, as it enhances clinicians' ability to engage with patients, recognize visual cues, and conduct visual assessments when clinically necessary. However, nearly all stakeholders emphasized the importance of audio visits given that it is the only option available for some patients, such as those without reliable internet or a connected device with a camera. Several stakeholders commented that disparities in access could worsen if payers stopped reimbursing audio visits or paid for them at a lower rate. Some providers noted that the ease of a phone call makes audio visits more attractive to elderly patients and others with lower digital literacy. In addition, audio can serve as a backup if a patient is having trouble initiating a video visit or when a video visit is interrupted due to connectivity issues. For these reasons, all providers strongly supported continued coverage and reimbursement for audio visits.

The use of audio visits varies considerably by provider and their patient population – in stakeholder conversations, estimates of the proportion of telehealth visits conducted via audio ranged from 30 percent to 80 percent. While claims data could not be used to assess the relative volume of audio and video visits in Massachusetts due to current coding practices, which largely do not distinguish between these modes

xiv   Given the licensure requirements, provider malpractice insurance may not cover telehealth services when patients are out of state.

of care, the HPC analyzed Massachusetts-specific data from the U.S. Census Bureau's Household Pulse Survey, which included a question regarding audio and video telehealth use from July 2021 to August 2022. The highest rates of video visits occurred for younger adults aged 18-39 (60.2 percent), Asian individuals (59.9 percent), white individuals (54 percent), those with a college degree (62.3 percent), and those earning $100,000 or more (64.1 percent) (**Exhibit 33**). Video use was lowest among patients 60 and above (40.2 percent), Hispanic individuals (42.4 percent), non-Hispanic Black individuals (44.1 percent), those with a high school diploma or less education (38.0 percent), and those earning under $35,000 (38 percent). These findings are consistent with national data that show substantial disparities by demographic subgroups in the use of audio vs video visits.[42,43]

Exhibit 33: Percentage of Massachusetts adult patients who reported having a video appointment, among those who reported having a telehealth appointment with a doctor, nurse, or other health professional in the last four weeks, 2021-2022

Demographic characteristics		Percent of adult patients who reported having a video appointment
AGE	18-39	60.2%
	40-59	53.5%
	60 and above	40.2%
RACE AND ETHNICITY	Hispanic or Latino	42.4%
	Non-Hispanic white	54.0%
	Non-Hispanic Black	44.1%
	Non-Hispanic Asian	59.9%
	Two or more races and other races, not Hispanic	49.5%
EDUCATION	High school, GED or less	38.0%
	Some college/ associate's degree	50.2%
	Bachelor's degree or higher	62.3%
INCOME	Under $35,000	38.0%
	$35,000–$49,999	42.1%
	$50,000–$74,999	52.4%
	$75,000–$99,999	51.0%
	$100,00 and more	64.1%

Notes: Those who did not report the mode of their telehealth visits were excluded from the denominator. Survey results were averaged from July 21, 2021 to August 8, 2022.

Source: HPC analysis of the U.S. Census Bureau Household Pulse Survey.

PERSPECTIVES ON REIMBURSEMENTS

Nearly all providers highlighted the uncertainty of future telehealth reimbursement policies as a challenge to fully plan and invest in this modality of care. While Massachusetts law mandates that behavioral health services delivered via telehealth be reimbursed at parity with in-person services in perpetuity, reimbursement parity for primary care and chronic disease management provided by telehealth ended on January 1, 2023. Provider stakeholders supported continued payment parity in these clinical areas, citing their overall operating costs (which have not been reduced as a result of providing telehealth services) and ongoing technology costs for telehealth infrastructure. One provider commented that lower relative reimbursements for telehealth could create perverse incentives for providers to require in-person visits when telehealth may be clinically appropriate and convenient for patients.

While payers and payer organizations generally agreed that telehealth is analogous to in-person visits in some clinical areas and should be reimbursed at parity (e.g., behavioral health), there may be quality and patient experience concerns in other clinical areas. Additionally, some payers argued that while implementing telehealth services requires significant upfront investments, the marginal costs of telehealth services, such as overhead expenses, should be lower in the long term compared to in-person services, which should be reflected in lower reimbursements. The HPC found alignment between payers and some providers on global payment arrangements, which can give providers flexibility to incorporate telehealth based on individual patient needs and incentivize providers to adopt high value use of telehealth into their practice.

PATIENT BARRIERS TO TELEHEALTH

According to stakeholders, low digital literacy and a lack of access to technology, including connected devices and reliable internet, were the biggest barriers for patients to access telehealth services. These stakeholder observations are corroborated by published research, which finds that lack of internet access is associated with fewer telehealth visits.[44] According to the Census Bureau's American Community Survey, 7.3 percent of Massachusetts households do not have a computer and 11.8 percent do not have a broadband internet subscription.[45] In addition, there are significant disparities in access by demographic characteristics and geography. For example, Black, Hispanic, and Native American residents in Massachusetts are more than twice as likely to not have an internet subscription compared to white and Asian residents, and 14.9 percent of residents age 65 and older live in households that do not have a computer. [46] In Hampden County, an estimated 17.6 percent of households do not have an internet subscription, compared to Middlesex County and Norfolk County (8.6 percent and 8.3 percent, respectively).[29] In order to care for patients with limited technology access and digital literacy, providers described patient education as a major element of establishing and continuing their telehealth services. Other providers implemented new and innovative programs to bridge the digital divide. For example, the FQHC Telehealth Consortium, created by the Massachusetts League of Community Health Centers and Community Care Cooperative, a Massachusetts-based Accountable Care Organization, used public and private funding for a smart phone pilot, which provided connected devices to over 1,500 patients in the first nine months of the pandemic.[47]

In addition to barriers created by a lack of technology access and know-how, telehealth platforms, patient portals, and other patient communication materials are not always designed with an emphasis on equity and inclusivity. For example, one provider stakeholder group described ongoing challenges with telehealth platforms that cannot accommodate live interpreter services. Telehealth use has been found to be lower among patients with low English proficiency, and appointment reminders and other patient communication materials are often only available in English, adding to the difficulty of reaching this patient population.[48] Lastly, existing telehealth technology may be inaccessible to people with certain disabilities, including those with vision or hearing impairment. According to a report by the American Foundation for the Blind, 70 percent of survey respondents attempted to use telehealth and of those, 57 percent reported having accessibility challenges with the telehealth platforms.[49]

SECTION III: SUMMARY AND POLICY CONSIDERATIONS

Telehealth is an essential tool that has helped patients maintain critical access to care during the COVID-19 pandemic and offers considerable opportunities to continue transforming care delivery after the pandemic. Future policymaking on telehealth should balance quality, access, and affordability. In accordance with Chapter 260 of the Acts of 2020, the HPC makes the following recommendations to improve patient access and quality of care while maximizing the cost-saving potential of telehealth. Among these recommendations, the HPC urges the legislature to prioritize three actions regarding the billing and payment of telehealth services: **extending payment parity for certain high value telehealth services, prohibiting unnecessary facility fees for telehealth services,** and **reducing telehealth billing complexity.**

BILLING AND PAYMENT

Payment decisions regarding telehealth can have significant implications for future health care utilization and spending. Proponents of payment parity, such as providers who operate in both virtual and in-person environments, argue that telehealth requires similar clinical effort and has not reduced provider practice expenses.[xv, 30] In contrast, payers and others have cautioned against payment parity, citing concerns of overuse and the risk of not being able to realize the full savings potential from a mode of care that should ultimately be lower-cost.[50,51,52] Given that telehealth is a promising and evolving field of care delivery, and that the health care system continues to innovate and optimize its use, the HPC recommends an extended, temporary period of state-mandated payment parity for certain high value services, after which payment may be best determined by providers and health plans. Other priority HPC recommendations in this section include prohibiting baseless facility fees and requiring billing standardization.

- **PRIORITIES FOR ACTION** **Extend Payment Parity for Certain High Value Telehealth Services:** The Commonwealth should extend the sunset for the payment parity mandate on a limited basis (e.g., for two years) for primary care and chronic disease management. The additional time would allow providers to continue improving their telehealth platforms and workflow, and to develop

efficient hybrid care models that take advantage of the lower resource needs for some telehealth visits relative to in-person visits. A two-year extension is consistent with recently passed federal legislation, which extended Medicare telehealth policies until December 31, 2024.[6]

- **PRIORITIES FOR ACTION** **Prohibit Unnecessary Hospital Fees:** Consistent with HPC's long standing recommendation to limit facility fees for certain common ambulatory services (e.g., E&M services) in hospital outpatient departments, the Commonwealth should prohibit providers from charging facility fees for telehealth services to improve market fairness and consumer protections.[xvi] Connecticut has banned the use of telehealth facility fee, regardless of whether the provider is located on hospital campus during the telehealth visit.[53]

- **PRIORITIES FOR ACTION** **Reduce Telehealth Billing Complexity:** Consistent with HPC's previous recommendation on administrative complexity, coding rules and documentation requirements for telehealth services should be standardized across payers–including audio-only services–to reduce unnecessary administrative complexity in the health care system and their associated costs. Inconsistent requirements consume significant provider time and resources without adding value to patient care.

- **Continue Payment Parity between Audio and Video Visits:** Health plans should continue payment parity between audio and video visits to ensure that audio-only telehealth remains a viable mode of care delivery for patients facing barriers to care. Audio-only telehealth is important for patients with low digital literacy and/or no reliable internet connection/cellular data, who are more likely to be people of color, elderly patients, and those living in lower income or rural areas.[54]

- **Promote Alternative Payment Methods (APMs):** Health plans and providers should continue to collaborate and adopt APMs that enable providers to incorporate a range of telehealth services and modalities into their practice. These payment arrangements can give providers flexibility to utilize telehealth based on individual patient needs and incentivize them to adopt cost-effective use of telehealth, as applications of telehealth evolve.[55]

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xv   Clinical effort, practice expenses, and malpractice expenses are common factors included when considering the cost of care delivery. For example, CMS determines outpatient payment rates based on these three factors. Malpractice expenses do not typically differ between telehealth and in-person visits.

xvi   Using APCD commercial claims, the HPC found that 3.6 percent of telehealth encounters in 2020 included a facility claim.

ACCESS TO CARE AND HEALTH EQUITY

While wide adoption of telehealth during the COVID-19 pandemic has reduced access barriers for some patients (e.g., transportation burdens for those with mobility issues), it has not benefitted others as much as it could. This report and other research demonstrate that there are disparities in telehealth access and use by geography, race and ethnicity, as well as other patient characteristics such as English language proficiency. Policies, resources, and an explicit focus on inclusive telehealth delivery from all stakeholders are necessary to remove the technology and structural barriers to telehealth.

- **Ensure Continuity of Care when Patients are Out of State:** The Commonwealth should consider policy changes and interstate solutions that would enable providers to deliver telehealth services to established patients who live in a nearby state or who are out of state temporarily. Interstate licensure compacts, which are legislatively enacted agreements between states, are one mechanism that can facilitate the practice of medicine across state lines, but other mechanisms also exist.[56] As of November 2022, 16 states have adopted long-term or permanent pathways that enable out-of-state providers to deliver telehealth in their state without obtaining a full license. Eight states allow out-of-state providers to register or obtain a waiver for the provision of telehealth services, and eight states issue special telehealth licenses or permits.[57]

- **Invest in Equitable Access to and Innovative Applications of Telehealth:** Populations that stand to gain the most from telehealth technology, such as people of color and rural residents, are disadvantaged due to existing inequities in digital access and literacy, also known as the "digital divide." The Commonwealth should develop policies and resources to foster patient digital literacy and to increase access to affordable high-speed internet and connected mobile devices. Specifically, the HPC recommends dedicated funding to the Massachusetts Broadband Institute and the HPC to pilot innovative applications of telehealth (e.g., remote monitoring devices) and to broaden the reach of telehealth to underserved patient populations.

- **Design Technology for Inclusive Telehealth Delivery:** Development and adoption of telehealth platforms that incorporate accessibility features to meet varying patient needs should be prioritized, such as the ability to integrate interpreter services, closed captioning, and high-contrast display.

- **Support Training and Capacity-Building for Clinicians and Support staff:** Providers are encouraged to devote resources aimed at increasing access to telehealth services in traditionally underserved patient populations, including investing in the capability to consistently provide high quality video visits in addition to audio, translating patient portals and other patient communication materials in multiple languages, and training clinicians and support staff to better assist patients experiencing technical difficulties.

CONSUMER TRANSPARENCY

Broad expansion of telehealth has enabled providers to adopt a wide range of telehealth services and receive payments for some services that were traditionally unbillable, such as certain phone calls and messages through patient portals. However, billing practices vary by provider and payer, which can create patient confusion over what counts as a visit, what is covered, and what their cost-sharing obligation is. While Chapter 260 of the Acts of 2020 already includes important consumer protection provisions, such as the mandate that cost-sharing for telehealth services cannot exceed the amount charged for equivalent in-person care, more efforts on patient education and transparency are needed.

- **Increase Patient Education and Transparency on Telehealth Coverage and Cost-Sharing:** To increase transparency and protect patients from receiving unexpected bills, health plans should create accessible materials to educate patients on their telehealth benefits and cost-sharing requirements. Providers should clearly disclose any billing changes in their practice and notify patients in advance of their potential cost-sharing obligation in certain situations, such as when a phone call or other electronic exchange is converting into a telehealth visit.[xvii]

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xvii For example, UCSF Health and Cleveland Clinic are among provider organizations that recently started billing for certain MyChart messages, and both define the type of the messages that would be billed on their website and provide cost-sharing estimates.

AREAS FOR FUTURE RESEARCH AND MONITORING

To continue building the evidence base for clinically appropriate and high value use of telehealth, the HPC highlights the following areas for future research and monitoring:

- **Telehealth's impact on spending post-pandemic:** While telehealth does not appear to significantly raise total spending based on our analysis using 2020 data, the HPC and others will continue to examine the utilization and spending impact of telehealth beyond the pandemic, including potential variation by race and ethnicity as data collection improves in the future.

- **Quality and outcomes:** It is important to ensure that providers deliver quality and value through telehealth services. As this modality of care matures, further research

is needed on quality and patient outcomes by population, setting, and clinical condition.

- **Third party telehealth platforms and other emerging telehealth models:** In addition to telehealth services delivered by traditional clinicians and provider systems, there are a growing number of fully virtual third-party telehealth providers (e.g., Teladoc, Doctor on Demand) and alternative digital health platforms (e.g., Omada and Livongo, which offer digital coaching for patients with chronic conditions) increasingly being adopted by health plans, employers, and patients. As telehealth technology and business landscapes continue to evolve, it is important to understand how these services are incorporated into plan designs and their impact on spending and premium so that payment and other regulatory policies remain relevant in the future.

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APPENDIX A: IDENTIFYING TELEHEALTH

Services provided via telehealth were identified using a combination of professional claim site of service codes, CPT codes, and CPT code modifiers. Within relevant ambulatory sites of care included in the analysis, a claim line with any of the following was identified as indicating a telehealth service:

Professional claim site of service code	02
CPT code	G0071, G0406, G0407, G0408, G0425, G0426, G0427, G0459, G0508, G0509, G2010, G2012, G2025, G2061, G2062, G2063, Q3014, T1014, 0188T, 98966, 98967, 98968, 98969, 98970, 98971, 98972, 99358, 99359, 99421, 99422, 99423, 99441, 99442, 99443, 99444
CPT code modifier	FR, FQ, G0, GT, GQ, V3, 93, 95

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