

Telehealth Insights From an Integrated Care System

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THE COVID-19 PANDEMIC DRAMATICALLY accelerated telehealth expansion trends that were already underway,¹ as policy makers instituted new telehealth flexibilities and coverage changes to allow people to get care while staying safe at home. Federal policy makers extended many Medicare telehealth flexibilities for 2 years, but by the end of 2024, they must determine whether to extend them.

Policy makers must consider multiple questions. How will telehealth use shift as pandemic restrictions recede? Will telehealth replace some in-person care or will it lead to greater overall use of care? How does the quality of care provided through telehealth compare to in-person care? How accessible is telehealth for the full diversity of patients?

As researchers have explored these issues, several themes have emerged. Evidence suggests that many patients like having the option to use telehealth^{2,3} and that telehealth visits may be substituting for in-person visits rather than adding to the total numbers of visits.^{4,5} Telehealth appears to improve care access and can result in similar health outcomes to in-person care.^{4,7} Research has found lower telehealth use among groups including older adults; Spanish-speaking populations; Hispanic/Latino, Asian, and Black adults; and populations with lower household incomes or limited broadband access.⁸⁻¹⁰ Organizational infrastructure, clinician capacity, payment approaches, and broadband and device access are noted as important influences on telehealth use.^{5,8,9,11-13}

Recent utilization data and research from Kaiser Permanente, the nation's largest private integrated health system, add to these insights. Past studies have often analyzed experiences of health systems that were only beginning to use telehealth during the pandemic or used relatively small data sets. In contrast, Kaiser Permanente has been offering telehealth for more than a decade, and as an integrated health system, we can analyze care experiences and health outcomes among our 12.7 million members across care delivery modalities over time. These analyses add context and perspectives as telehealth policy decisions are debated.

BACKGROUND AND METHODS

Kaiser Permanente is a value-based integrated care system that serves 12.7 million members across California, Colorado,

ABSTRACT

The COVID-19 pandemic accelerated telehealth expansion trends as policy makers instituted flexibilities and coverage changes. Federal telehealth flexibilities expire, however, at the end of 2024. To decide whether to extend those flexibilities, policy makers need information about consumer telehealth preferences, impacts of telehealth on care usage and quality, and telehealth accessibility for the full diversity of patients.

Research from one of the nation's largest integrated, value-based health systems provides insights. Findings suggest that telehealth utilization has dropped since the peak of the pandemic but remains higher than prepandemic levels. Telehealth appears to be replacing in-person visits rather than leading to more total visits. Patients generally prefer in-person care but many like having the option to use video- and phone-based telehealth, and both video- and phone-based care appear to be helping patients access primary care. An integrated, value-based care approach may assist a diverse range of patients in accessing telehealth services. Action is still needed, however, to ensure that the full diversity of patients can easily access telehealth offerings.

Based on experiences within our health system, we recommend that policy makers maintain public and private payer coverage for video- and phone-based telehealth services; encourage well-designed value-based payment models to simplify and expand telehealth access; improve broadband accessibility and broadband and device affordability so that all patients can access telehealth services; and hold digital health to equivalent high standards for care quality, safety, patient satisfaction, clinical outcomes, and health equity as in-person care.

Georgia, Hawaii, Maryland, Oregon, Virginia, Washington, and the District of Columbia. Compared with the US population overall, a higher proportion of Kaiser Permanente members are Hispanic/Latino (27.8% vs 18.2%) or Asian (15.3% vs 5.6%), a lower proportion are Black (10.0% vs 12.2%) or White (43.3% vs 60.1%), and a higher percentage live in socially vulnerable communities (20.1% vs 18.8%).¹⁴

Our system is composed of 3 interconnected entities: a health plan, hospitals, and self-governed, multispecialty medical groups that contract exclusively with the health plan. We typically use a capitated payment approach, which gives us flexibility to invest in prevention and long-term infrastructure supports such as telehealth.

Telehealth can refer to synchronous or asynchronous care that is provided when a patient and clinician are not in the same location.¹⁵ We have been expanding our use of telehealth for more than a decade, creating a system in which our members can choose to use telehealth options or in-person visits based on their needs and preferences.¹⁶ In 2012, approximately half (52%) of our outpatient interactions with members were being delivered by phone or secure email. By 2019, 62% of outpatient interactions were delivered in this way.

Given our integrated care model, we have access to large amounts of member data over long time periods that we can analyze. To understand impacts on primary care visits, we conducted an analysis focused on synchronous telephone and video outpatient primary care visits between a patient and a member of their care team. We used electronic health record data from 2019 to analyze Kaiser Permanente outpatient utilization for our 12.7 million members from before the COVID-19 pandemic. We then compared this with outpatient utilization during the peak of the pandemic and, as the pandemic subsided, through 2023. We also reviewed recent studies by Kaiser Permanente researchers and a recent study by external researchers analyzing our and other health systems' experiences.

FINDINGS

Telehealth utilization has dropped since the peak of the pandemic, but it remains higher than pre-pandemic. Analysis of Kaiser Permanente utilization data found that in 2019, 18% of our primary care visits were delivered through phone and video visits (**Figure**). This rose dramatically during the first year of the pandemic, peaking in 2020 at 59%. Phone and video visits dropped somewhat from 2021 through 2023, but they continue to be popular in our health system. More visits were provided via telehealth in 2023 compared with before the pandemic (32% vs 18%). Video visits have increased, but even in 2023,

a higher percentage of primary care visits were phone based compared with video based (26% vs 6%).

Telehealth appears to be replacing in-person visits rather than leading to more total visits.

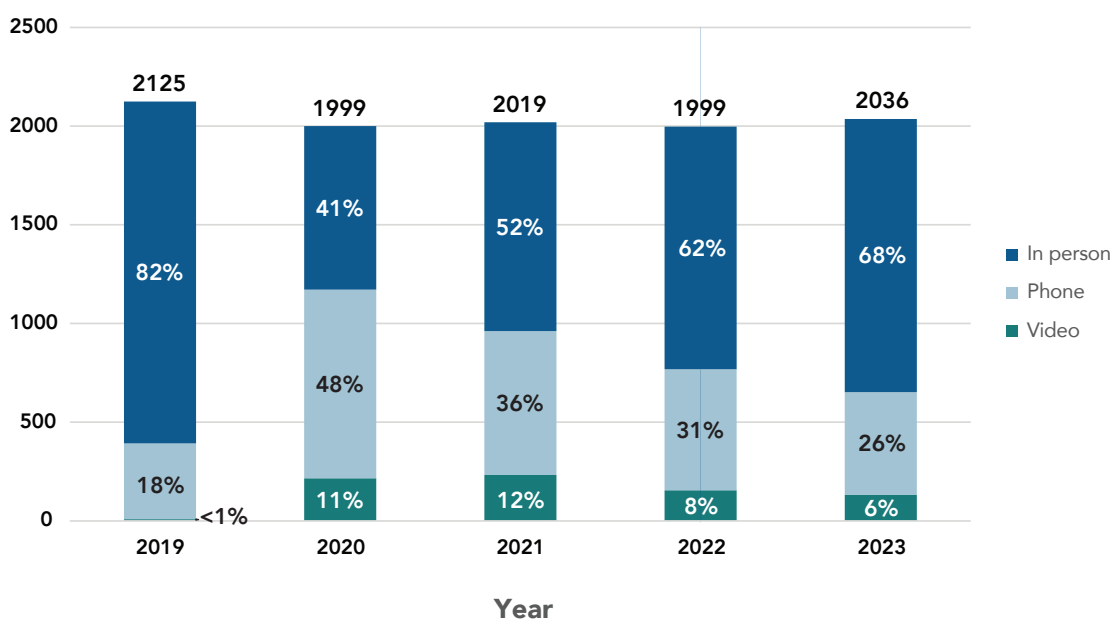
In-person primary care visits decreased from 2019 to 2023 (82% to 68%) as telehealth visits increased (18% to 32%), but total primary care visits per 1000 members stayed at a similar level. Total usage decreased very slightly, perhaps as patient needs are being met through secure emails with physicians, patient phone calls to nurses who provide triage and self-care advice, and other interactions within our system.

People generally prefer in-person visits, but they like having the option to use telehealth.

Kaiser Permanente researchers assessed telehealth preferences through a survey available by mail, online, or by phone in English. From a random sample of patient-initiated telehealth adult primary care visits, 1000 surveys were completed among 1680 eligible participants. The majority said they preferred in-person visits both before and after the pandemic (69% vs 57%).¹⁷ Almost two-thirds (63%), however, said they were interested in using telehealth for their care at least some of the time.¹⁷ Phone visits continue to be an important option for many, with 19.5% saying they preferred a telephone visit over a video or in-person visit.¹⁷ Other studies by Kaiser Permanente researchers have found that patients with limited English proficiency were less likely than other patients to choose both phone and video for primary care visits.^{18,19} Once these patients experienced a video visit, however, they were similar to other patients in their likelihood of using a video visit again.¹⁹

Many people in our system use phone-based telehealth. As noted in our care utilization analysis, higher percentages of primary care visits in 2023 were phone based compared with video based. Kaiser Permanente researchers have found that some demographic groups, including people living in lower socioeconomic status neighborhoods or in areas with lower rates of internet access, were more likely to use phone-based telehealth.^{18,20} This may be related to access and affordability of broadband internet and internet-enabled devices.

Both video- and phone-based telehealth can help patients access primary care. Looking at 2020 data on video- and phone-based telehealth and adjusting for key sociodemographic and clinical factors, Kaiser Permanente researchers found that return visits after video and phone visits were not common, and emergency events were rare. Video visits were slightly less likely than phone visits to lead to additional follow-up office visits (11.8% vs 12.5%), emergency department visits (1.2% vs 1.5%), or

FIGURE. Primary Care Visits per 1000 Members by Modality, Adjusted for Age and Sex

hospitalizations (0.15% vs 0.19%), and a little more likely to result in medication being prescribed (37.4% vs 33.9%) and laboratory/imaging orders being placed (31.3% vs 27.4%).²¹ Review of 2021 data found similar results. Video visits were a little less likely than phone visits to lead to additional follow-up office visits (6.2% vs 7.6%), and this was higher than after initial in-person visits (1.3%). Emergency department visits rarely happened after in-person, video, or phone visits (1.6% vs 1.8% vs 2.1%).²²

Another recent Kaiser Permanente study explored variation by telehealth modality for different health conditions, adjusting for sociodemographic and clinical factors. Compared with phone visits, video visits resulted in only slightly higher rates of medication orders (46.6% vs 44.5%), laboratory orders (19.5% vs 17.2%), imaging orders (17.3% vs 14.9%), and antibiotic orders (7.5% vs 5.2%). This trend was seen across health conditions, with the largest differences in medication ordered for skin conditions, where visual information may be particularly helpful.²³

An integrated, value-based approach can help a diverse range of patients access telehealth services.

Researchers not affiliated with Kaiser Permanente used medical and pharmaceutical claims data from a large purchaser of health benefits, the California Public

Employees' Retirement System (CalPERS), to explore CalPERS members' telehealth experiences across multiple health plans.²⁴ CalPERS health coverage is available to current employees and contractors of the state of California, retirees, and surviving family members, and some California local government entities offer CalPERS coverage.^{24,25} The study included 1.1 million adults with CalPERS insurance coverage, and it excluded people 65 years and older, those who receive supplemental Medicare coverage, and those outside California.²⁴

The researchers found that telehealth use within Kaiser Permanente's value-based, integrated care system was higher than in other systems, both before and during the pandemic. People with lower incomes, people of color, and people whose primary language was not English were more likely to use telehealth if they were enrolled in Kaiser Permanente.²⁴ The researchers suggest that reimbursement through capitation incentivizes expanded outreach and use of telehealth offerings.²⁴

Action is needed, however, to ensure the full diversity of patients can easily access telehealth offerings.

Even though these findings point to the advantages of a value-based, integrated system, many people still face challenges accessing digital health services. One study by

Kaiser Permanente researchers found that older adults and Black, Asian, and Hispanic/Latino adults using primary care services were less likely to use telehealth for primary care visits compared with other adults,²⁶ highlighting the need to improve access to telehealth services.

DISCUSSION AND FUTURE DIRECTIONS

As a health system with long-standing experience in telehealth and access to large amounts of data across care modalities over time, we find that our members' telehealth utilization remains relatively high post pandemic, with telehealth replacing rather than adding to in-person visits. Both video- and phone-based telehealth are facilitating care access, but more action is needed to promote equitable access.

Public policies can improve telehealth coverage, access, and quality. Because video- and phone-based telehealth both appear to be effectively helping people access care,^{3-7,17,21-23,26} and because not everyone can easily use video-based telehealth services currently,^{3,5,8-12,17-21} policy makers should maintain public and private payer coverage for both services to ensure continued access from home or other convenient locations. Shifting to value-based care arrangements could reduce the need to make determinations about precise payment levels for different modalities and circumstances because these arrangements focus less on volume and short-term costs and more on long-term investments in prevention, care quality, and patient outcomes.^{11,13} Capitated, value-based payment models may support expanded telehealth access for a broader diversity of patients.^{13,24}

Ensuring equitable access to telehealth services will require a focus on broadband accessibility and broadband and device affordability and usability.^{3,8,11-13} Policy makers are exploring opportunities to expand high-speed broadband access to areas without access; address digital redlining, in which communities of color are offered lower-speed and less-affordable broadband options^{11,27}; and provide additional subsidies to make broadband service and internet-enabled devices more affordable to people with lower incomes. Federal and state agencies can also promote inclusive digital access by providing resources, such as digital navigators and skill development programs in a variety of languages, to support new users of digital tools and improve users' experiences.

Digital health should be held to the same high standards for clinical quality, patient safety, patient satisfaction, clinical outcomes, and health equity as in-person care. Quality leaders are currently discussing how to incorporate telehealth standards²⁸ into health

care quality measurement and how to incorporate health equity into overall quality measurement.²⁹ More research is needed into differences in telehealth access and care quality by race/ethnicity, coverage type, age, and other demographics.⁶ Policy makers should incentivize use of disaggregated data across groups, along with measures designed to eliminate inequities in care quality and outcomes. In addition, policy makers should continue supporting digital health research and explore opportunities to promote digital health improvements and equitable care and outcomes through value-based payment programs, risk adjustment methodologies, and quality incentives.

Everyone who is interested should be able to participate in our increasingly digital world, within and beyond the health care system. Experiences within our value-based, integrated care system show the potential for leveraging telehealth to make health care services more accessible, convenient, and equitable. ▀

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