

REMOTE ACCESS, REAL IMPACTS:

ASSESSING TELEHEALTH ATTITUDES AND USAGE IN NORTHWEST COLORADO



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INTRODUCTION



Telehealth is the use of remote communication technology that allows patients to communicate with a health care provider, eliminating the need for an in-person appointment. Examples of common telehealth modalities include the use of a telephone, text messaging, email, or video chat to communicate directly with a health care provider. Other telehealth technologies include the use of remote monitoring devices that track metrics like heart rate, blood pressure, blood sugar, or other vital signs.

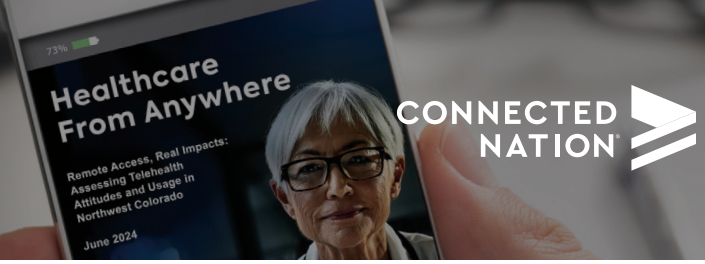
To ensure that all Coloradans have equitable access to health care services, state leaders must determine what challenges residents face when using telehealth services. Some Coloradans might have concerns about the quality of care they could receive during a telehealth visit, while an inability to connect to the internet may prevent others from using these services. To close the telehealth gap, state leaders must first define what gaps exist and then build a plan to address those needs.

To that end, the Colorado Office of eHealth Innovation conducted a survey of 800 adults in rural Colorado households in the northwest portion of the state. The purpose of the survey was to examine how Coloradans are using

telehealth services, the barriers that prevent some households from using those services, and how best to connect rural residents to the benefits that are possible through telehealth usage. The results of the survey uncovered challenges faced by rural Coloradans as they try to connect to telehealth services.



INTRODUCTION



Among the key findings from this study:

Nearly 9 out of 10 households (87%) report that they subscribe to home internet service, 82% subscribe to a mobile internet service on their smartphone or mobile device, and 2 out of 5 (42%) use the internet somewhere other than their home.

Nearly 3 out of 4 respondents (72%) have used some form of telehealth service to interact with their health care providers. These telehealth users go online most often to interact with their primary care physicians, followed by specialist care providers and dental care providers.

The most popular use of telehealth services is through telephone calls in place of in-person visits, followed by online chats and email with health care providers.

More than 1 in 3 respondents (38%) use remote monitoring health services such as remote blood pressure monitoring, reminders to follow a health plan, or remote blood sugar monitoring.

Most telehealth users agree that telehealth services saved them time and money; their remote health care professionals were proficient in the use of telehealth tools; and the service they received was as good as they would have received during an in-person visit.

Nearly 2 out of 3 telehealth users (64%) said that accessing telehealth services prevented visits to a doctor or health care provider; on average, they report saving 5.8 health care visits in the past year.

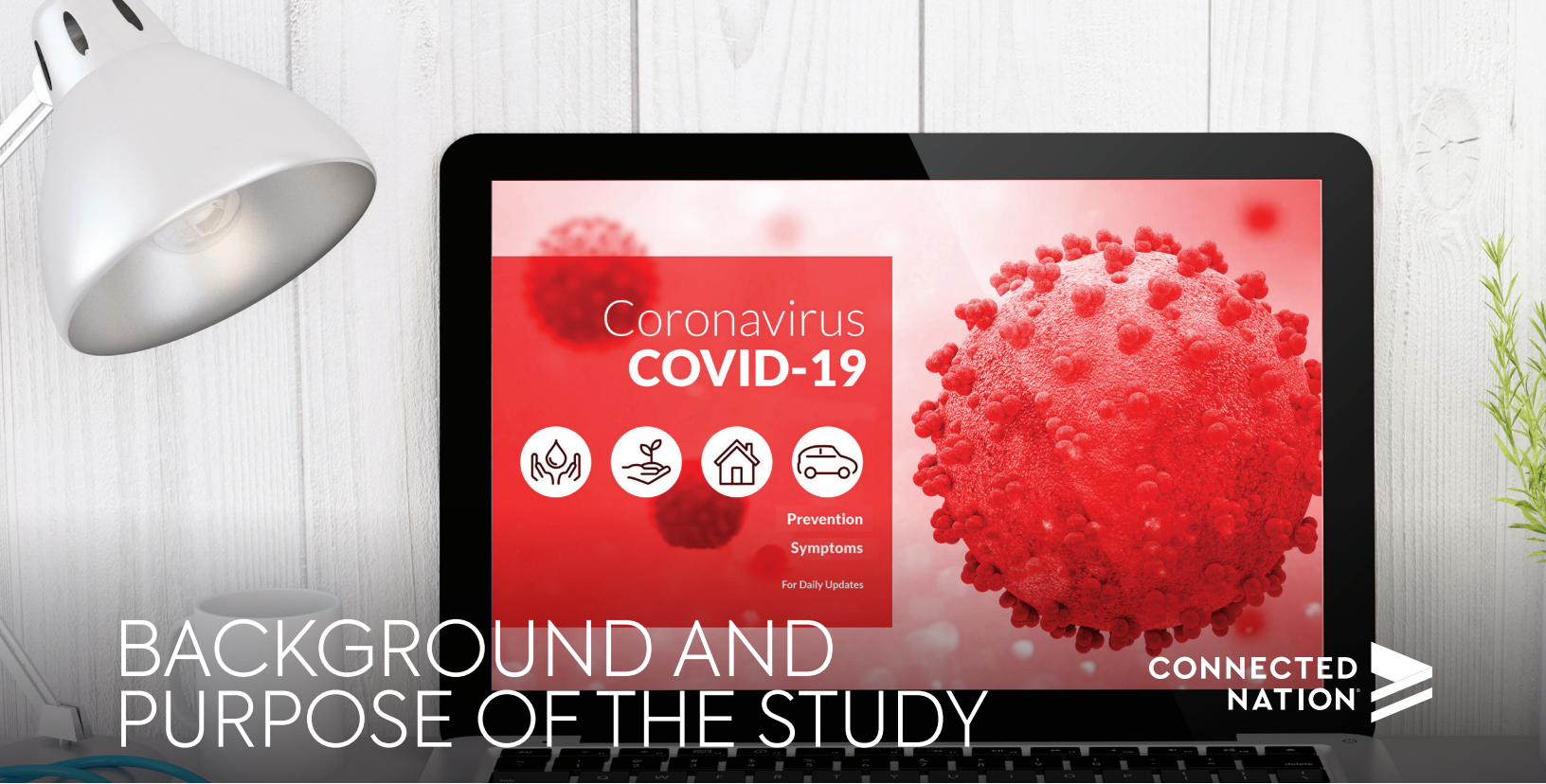
Despite these potential benefits, 7 out of 10 individuals who have not used telehealth services (72%) say their health care providers do offer telehealth services, but they have chosen not to use them, or they would not use telehealth services even if their providers did offer them.

More than 1 in 4 non-telehealth users (29%) say the ability to schedule a same-day visit would have a major impact on their decision to use telehealth – higher than any other benefit.

Some of the top concerns about using telehealth services include concerns about data privacy; fears that health issues may not be adequately addressed or identified online; and concerns about the quality of care that might be provided through telehealth services.

Despite these concerns, 4 out of 5 respondents (81%) say they anticipate using telehealth services as frequently or more often than they do now.

Based on these findings, this study offers a series of short- and long-term recommendations to improve telehealth usage, particularly among rural households. Through education and improved infrastructure, more Coloradans can begin experiencing the benefits of telehealth.



BACKGROUND AND PURPOSE OF THE STUDY

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Although telehealth has been used for decades, utilization surged during the peak of the COVID-19 pandemic. Telehealth claims represented only 1.3% of all health care claims in 2019; by April 2020, amidst the pandemic, telehealth accounted for 49.4% of all health care claims ([source](#)). Because of these unique circumstances, patients and providers became more comfortable utilizing these services to meet their needs. Today, telehealth is seen as a more feasible health care option that has the potential to improve the health and well-being of communities by creating a pathway toward easier access to care.

Patients can have difficulties attending in-person health care appointments for a variety of reasons. Some factors that could make health care prohibitive include time constraints (inability to take time off work or difficulty finding childcare), regional health care shortages (increasing the time it takes to travel to the facility), and cost considerations (traveling to the appointment and the cost of the appointment itself).





Telehealth can be used as a tool to remove some of these barriers. According to results from “A COVID-19 Telehealth Impact Study—Exploring One Year of Telehealth Experimentation”, convenience and cost were the primary determinants of patient satisfaction with telehealth use; 3 out of 4 patients stated telehealth eliminated the transportation barrier, 65% didn’t have to take time off work, and 67% saved money with a telehealth appointment as opposed to an in-person visit ([source](#)). This patient feedback highlights the need for telehealth options as it may be the most convenient and cost-effective form of health care for many patients.

For rural communities, in particular, telehealth can play a crucial role. These communities have limited health care resources, so the distance between a patient’s home and a health clinic is much greater than that in urban areas. Unfortunately, this trend will likely continue to worsen. A recent study from the American Hospital Association found that 136 rural hospitals closed nationwide from 2020 to 2021 ([source](#)). As these facilities close their doors, the remaining clinics face greater demand from patients without any

increase in resources. Telehealth can connect patients with health care providers further from where they live, including specialists who may otherwise be unreachable. Remote care can also eliminate the need for frequent health care visits in circumstances where telehealth is an option.

Although telehealth could greatly benefit the overall health of rural communities, some barriers limit its utilization. One significant barrier to telehealth in these remote areas is a lack of broadband infrastructure. According to Colorado’s Digital Access Plan, nearly 1 in 4 (23%) Colorado households without internet do not subscribe because they lack availability ([source](#)). Other common barriers include the cost of service (49%), limited ownership of internet-connected devices (26%), and a lack of digital skills necessary to operate internet-connected devices (19%). Without internet access, patients cannot utilize telehealth effectively. For that reason, only 36% of Coloradans in rural areas used the internet for telehealth, compared to 52% of Coloradans in urban areas ([source](#)). To optimize the effectiveness of telehealth and other remote health care resources, barriers such as these must be addressed.





SURVEY DETAILS

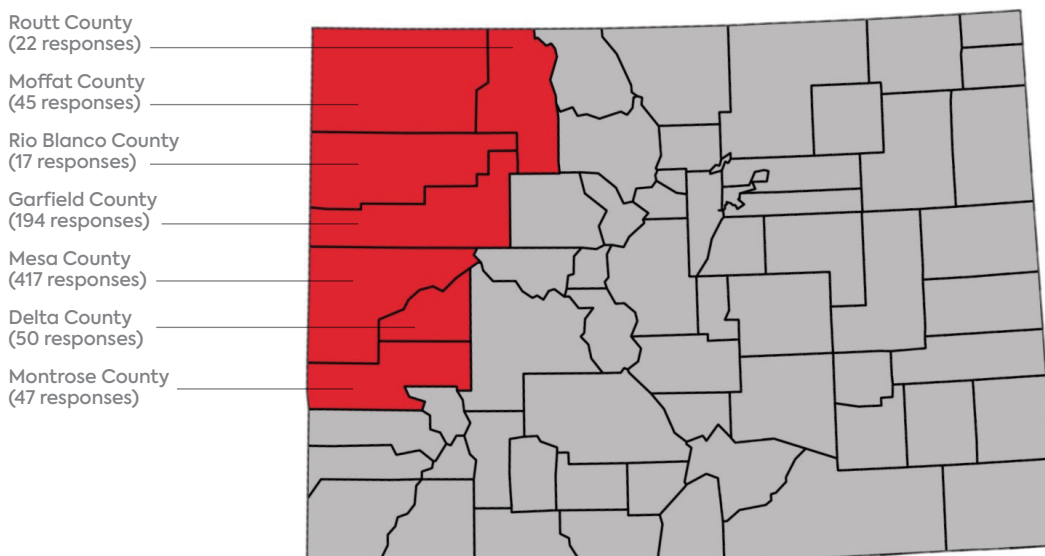


To explore how best to improve telehealth access and usage, the Colorado Office of eHealth Innovation conducted a survey of households in the northwest portion of Colorado.

Altogether, 800 adults living in households across seven counties in northwest Colorado participated in the survey between April and May 2024. On average, the survey took participants 13 minutes to complete. This study asked households to discuss their telehealth usage and perceptions.

The seven-county region includes Delta, Garfield, Mesa, Moffat, Montrose, Rio Blanco and Routt counties. Figure 1 below depicts the surveyed counties and the number of responses gathered in each of these counties (additionally, eight respondents confirmed that they lived in the region but did not identify their county of residence).

Figure 1. Counties Surveyed





DELTA COUNTY

Delta County's population as of 2020 is 31,196. According to the U.S. Census Bureau's American Community Survey (ACS), the county has a median income of \$56,349 and an employment rate of 47.4%. ACS data also indicate that 11% of the population is without health coverage ([source](#)).

According to Federal Communications Commission (FCC) ([source](#)), 86.3% of the population has access to the internet, although the broadband adoption rate is 59.6%. Device ownership among county residents is at 88.4%.

The county has one hospital located in the city of Delta and a limited number of primary care providers. The most significant health conditions in Delta County are heart disease, cancer, chronic illness, and unhealthy lifestyle behaviors, which persist at above-average rates compared to the rest of the state. The county also has a larger aging population consisting of those age 65 and above who have difficulty finding care that meets their needs ([source](#)).



GARFIELD COUNTY

Garfield County's population as of 2020 is 61,685. According to ACS data, the county has a median income of \$82,772 and an employment rate of 70.7%. ACS data also indicate that 17.5% of the population is without health coverage.

According to FCC data, 95.9% of the county has access to the internet, although the broadband adoption rate is 67.2%. Ownership of devices that connect to the internet is at 95.2% among county residents.

In terms of health care, the county has two hospitals – Valley View Hospital in Glenwood Springs and Grand River Medical Center in Rifle. Local health care providers indicate that the cost of services is one of the primary prohibitors to receiving care, along with a lack of service providers, limited specialty care, and insurance issues ([source](#)). Other barriers mentioned are a lack of health literacy among patients and a need for bilingual providers in the area.

The most prominent health issues in the region include cancer, heart disease, and stroke, which are the leading causes of death in the county. Other areas in need of improvement in the region are family planning, mental health resources, and substance abuse treatment ([source](#)).



MESA COUNTY

Mesa County is located south of Garfield County with the most populous city being Grand Junction. It is the largest among the seven counties surveyed with a total county population at 155,703. The county has a median income of \$70,711 and an employment rate of 59.5% (ACS). ACS data also indicate that 8.1% of the population is without health coverage.

According to FCC data, 89.8% of the population has access to the internet, although the broadband adoption rate is 74.8%. Device ownership among county residents is at 94.4%.

Mesa County is considered a regional health care hub, unlike the other counties in the northwest region of Colorado. There are three area hospitals – Saint Mary’s Medical Center and Community Hospital in Grand Junction, and Family Health West Hospital in Fruita. However, barriers to health care access persist. The three primary barriers are cost, availability of timely services, and personal obstacles like transportation issues or the inability to take time off work. According to the Mesa County community health needs assessment, 1 in 4 county residents were unable to get a doctor’s appointment as soon as they thought one was needed ([source](#)).



MOFFAT COUNTY

Moffat County is in the most northwestern corner of the state, with Craig as the most populous city. The total county population is 13,292. The county has a median income of \$63,983 and an employment rate of 59.7% (ACS). ACS data also indicate that 10.1% of the population lacks health coverage.

According to FCC data, 78.7% of the population has access to the internet, although the broadband adoption rate is only 57.9%. Ownership of devices connecting to the internet is 93.4% among residents.

Moffat County has one local hospital – the Memorial Hospital at Craig in the city of Craig. The top three health concerns among providers in Moffat County are the need for behavioral health service providers, access to health care, and socioeconomic factors. The population ratio to primary care physicians is a staggering 4,000:1, indicating an extreme shortage of providers in the area ([source](#)). The study also indicates hospital stays among some patients could have been prevented if other health resources were available in the area.



MONTROSE COUNTY

Montrose County's population as of 2020 is 42,679. According to the U.S. Census Bureau's American Community Survey (ACS), the county has a median income of \$62,817 and an employment rate of 52.9%. ACS data also indicate that 13.3% of the population lacks health coverage.

According to FCC data, 85.6% of the population has access to the internet, although the broadband adoption rate is only 59%. Device ownership among county residents is at 89.8%.

The county's primary community health care needs revolve around access to care. Currently, there are limited affordable care options for mental health and behavioral health services, primary care providers, and specialty health care providers. ([source](#)).



RIO BLANCO COUNTY

Rio Blanco County is south of Moffat County with the most populous cities being Rangely and Meeker. It has the smallest population of the seven counties surveyed, at only 6,529 residents. The county has a median income of \$69,882 and an employment rate of 56.4% (ACS). ACS data also indicate that 9.3% of the population is without health coverage.

According to the FCC data, 56.5% of the population has access to the internet, and the broadband adoption rate is 68.1%. Device ownership among county residents is at 94%.

Rio Blanco County has two local hospitals – Rangely District Hospital in Rangely and Pioneers Medical Center in Meeker. The most significant health needs in Rio Blanco are mental health services, cancer treatment services, resource development, suicide prevention, and youth drug and alcohol abuse prevention and treatment ([source](#)). Like other rural counties in Colorado, access to care and affordable services are issues for many residents. There is a need to enhance local medical resources, including advancing the use of mobile technology, like telehealth, to increase health care access among residents ([source](#)).



ROUTT COUNTY

Routt County is east of Moffat County with the most populous city being Steamboat Springs. The county's total population is 24,829. Its median income is \$95,144 and its employment rate is 65.6% (ACS). ACS data also indicate that 8.5% of the population is without health coverage.

According to FCC data, 92% of the population has access to the internet, although the broadband adoption rate is 74%. Device ownership among county residents is at 96.2%.

Routt county has one local hospital – the UC Health Yampa Valley Medical Center. Similarly to Routt's neighboring county to the west, Moffat, the primary health concerns are behavioral health, access to care, and socioeconomic factors ([source](#)).



SURVEY RESULTS



This report outlines the results of computer-assisted telephone interview (CATI) surveys of adults living in Delta, Garfield, Mesa, Moffatt, Montrose, Rio Blanco, and Routt counties, Colorado. Surveys were conducted with live interviewers.

The incidence rate of the survey was 88%, while the cooperation rate was 28%. While most respondents were reached on their cell phones, 15% of respondents answered over a landline connection. The final data set contains 800 survey responses from households in northwest Colorado.



DEVICE OWNERSHIP

According to responses gathered through this survey, more than 4 out of 5 households (82%) own a computer, while nearly every household reported owning at least once cellular phone (Figure 2).

Figure 3 illustrates the breakdown of computer ownership by the age of the respondent, their household income, and whether there are children present in their home. Computer ownership rates tend to decrease among older respondents. More than 9 out of 10 respondents (96%) between

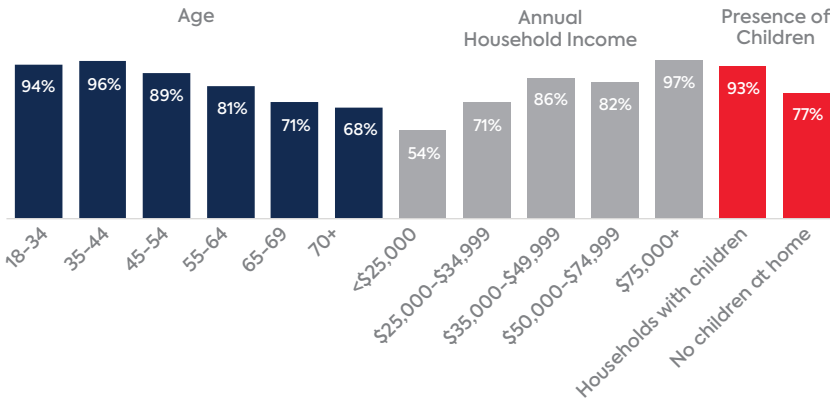
the ages of 35 and 44 own a computer. Meanwhile, only 2 out of 3 respondents over the age of 70 (68%) have a computer at home.

Households with higher annual incomes are more likely to have a computer at home – with rates as high as 97% for households making over \$75,000 a year and as low as 54% for households making less than \$25,000 a year. Households with children are more likely to have a computer at home (93%) than households without children (77%).

Figure 2. Device Ownership



Figure 3. Respondents Who Own a Computer



HOME INTERNET ADOPTION

To utilize telehealth services, individuals need a reliable internet connection of some kind. Unfortunately, many Coloradans (especially in rural areas) lack the connectivity necessary to make use of online health care applications. Figure 4 shows that almost 9 out of 10 responding households (87%) subscribe to home internet service, while more than 4 out of 5 (82%) subscribe to a data plan on their cell phones or mobile devices.

In addition, over 2 in 5 respondents (42%) use the internet someplace other than home, such as a restaurant, family member's home, or at work.

Older respondents are less likely to have internet connections at home; fewer than 3 out of 4 (72%) respondents over the age of 70 subscribe to home internet service, compared to 98% of respondents between the ages of 35 and 44 (Figure 5).

While adoption rates are relatively consistent across income levels, only 57% of households making under \$25,000 have home internet connections. Households with children are more likely to have home internet than households without children – with rates of 95% and 84%, respectively.

Figure 4. How Respondents Access the Internet

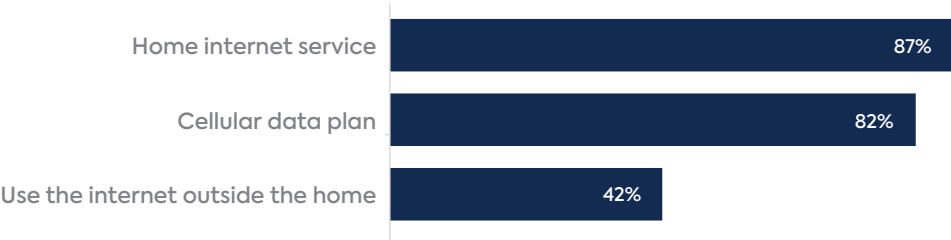
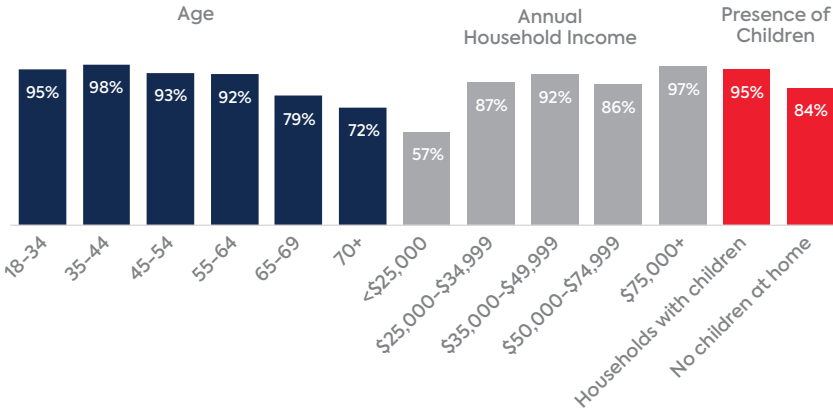


Figure 5. Respondents Who Subscribe to Home Internet Service



HOME INTERNET ADOPTION (CONTINUED)

Some mobile internet plans have limits on the amount of data available to use (before service stops or slows down considerably), while other plans are unlimited. Among respondents who subscribe to a mobile plan, more than 1 in 5 (21%) report having had their service restricted or slowed down sometime in the prior 12 months (Figure 6).

Home internet connections do not necessarily remain the same over time. On average, 1 in 7 households who currently subscribe to home internet service (14%) report that there was a time in the last 12 months when they did not have home internet service. Similarly, while 13% of respondents do not currently have internet at home, 1 in 4 of those households (25%) did have home internet access sometime in the last 12 months (Figure 7).

Figure 6. Respondents Who Had Their Cellular Internet Slowed Down

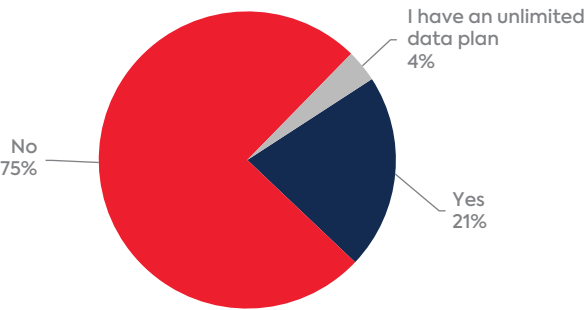
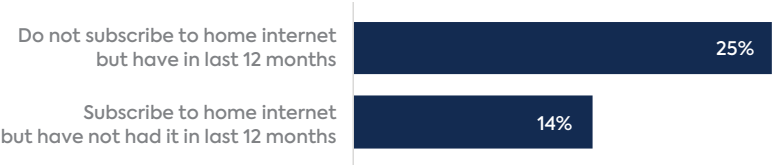


Figure 7. Respondents Who Experienced Internet Insecurity



TELEHEALTH SERVICES USED

Altogether, 72% of respondents have used some form of telehealth service, meaning that more than 1 in 4 respondents (28%) have not. Older respondents (over 65), those with annual household incomes below \$25,000, and respondents from households without home internet service are all less likely to use telehealth services than their peers (Figure 8).

Telehealth users interact with health care providers at different rates and in different ways.

Respondents are more likely to interact with primary care providers online than any other health care professional— with 64% indicating that they had used telehealth services for this purpose (Figure 9). After primary care providers, respondents are most likely to interact with specialists (46%) and dental care providers (38%) via telehealth. Fewer respondents interact with physical, occupational and speech therapists (21%), mental health care professionals (18%), and substance abuse treatment professionals (12%).

Figure 8. Respondents Who Do Not Use Telehealth

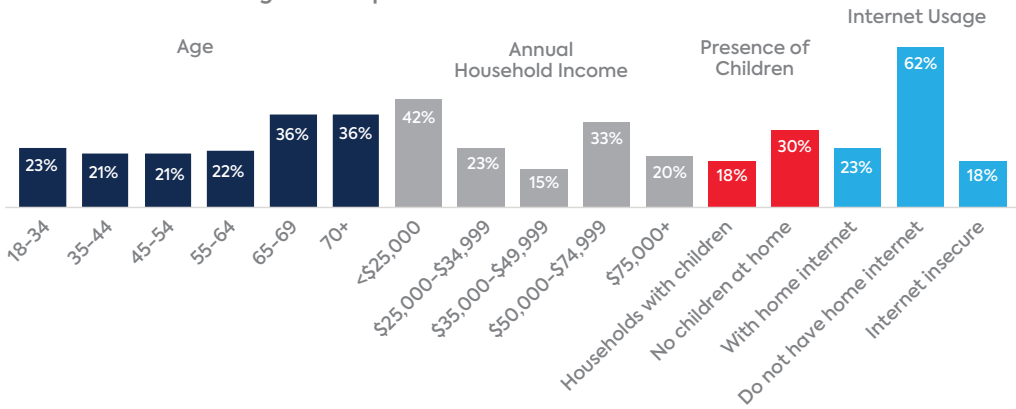
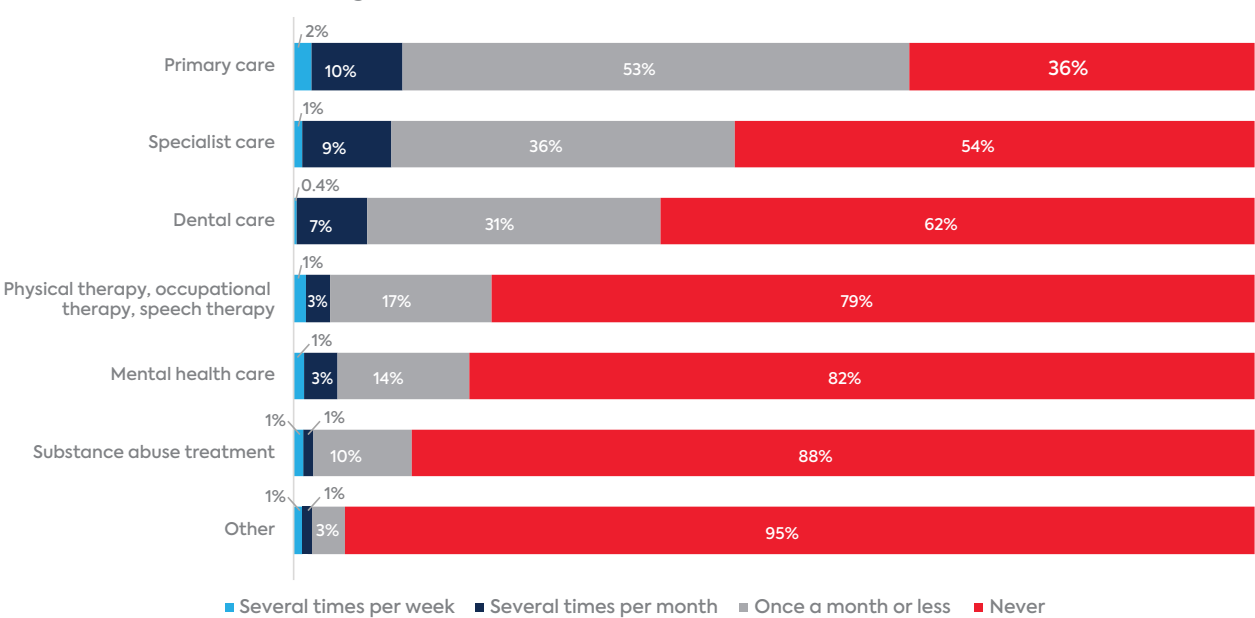


Figure 9. Online Interactions with Health Care Providers



TELEHEALTH SERVICES USED (CONTINUED)

While many of these providers were seen online at similar rates across various demographic groups, a few key differences stand out.

With regards to dental care, respondents from households making between \$35,000 and \$50,000 interact with providers online most – at 61%. Interestingly, over 1 in 5 (21%) of these respondents interact with dental providers via telehealth several times per month. Among respondents from households making over \$50,000 a year, only 3% of respondents interact with these providers online more than once a month.

Respondents from households between the ages of 45 and 54 are the most likely to interact with dental care providers online; online the most at 43%, this includes in which 12% of these respondents who stated they connect with their provider online several times a month.

Respondents from households making less than \$25,000 a year are much more likely to say that they interact with a mental health professional via telehealth – roughly 2 in 5 (38%) reported using telehealth services for these interactions. In contrast, only about 1 in 5 respondents from households making \$25,000 or more per year interacted with mental health professionals online.

Respondents between 65 and 69 are more likely to use telehealth to connect with mental health care providers. Roughly 1 in 4 (26%) of these respondents use online mental health services, followed by 1 in 5 (20%) of respondents between the ages of 55 and 64.

Figure 10. Online Interactions with Dental Providers by Household Income and Age

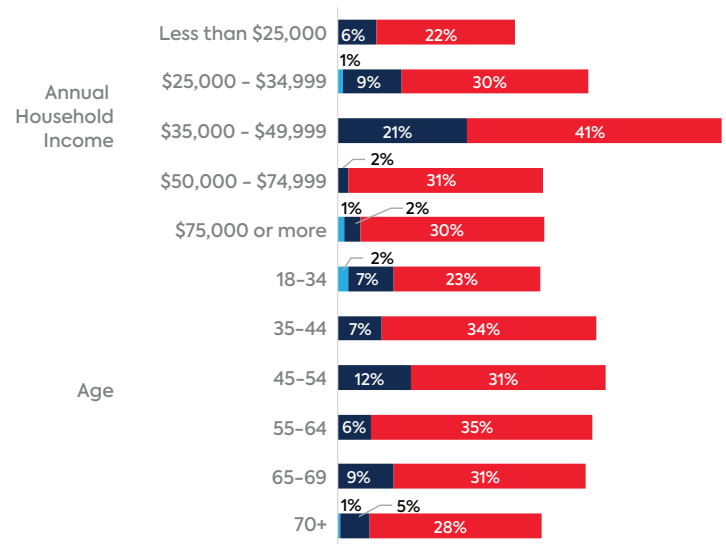
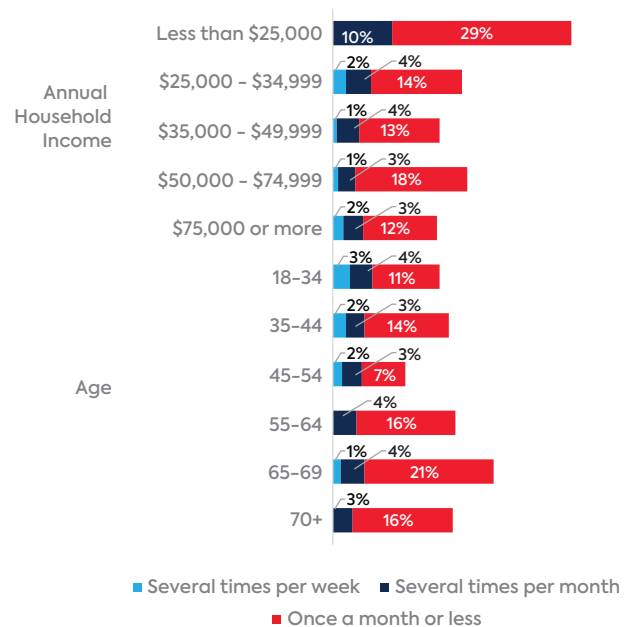


Figure 11. Online Interactions with Mental Health Providers by Household Income and Age



TELEHEALTH SERVICES USED (CONTINUED)

Online interactions with primary care providers also vary with respect to the respondent's household income (Figure 12). Respondents living in households making less than \$25,000 a year use telehealth services to visit their primary care providers most frequently; over 1 in 10 respondents from this group (11%) use this telehealth service several times per week. Respondents between the ages of 45 and 54 are the most likely to use telehealth to interact with their primary care providers. More than 1 in 10 (11%) of respondents in this age group use telehealth several times a month to connect with primary care services online.

Broken down by household income, substance abuse treatment via telehealth exhibits a similar pattern to dental care. More than 1 in 4 households earning between \$35,000 and \$49,999 a year (27%) use telehealth services to interact with substance treatment providers (Figure 13).

Respondents between the ages of 18 and 44 use telehealth for substance abuse treatment the most. Roughly 1 in 5 (19%) of respondents in these age groups receive online treatment for substance abuse.

Figure 12. Online Interactions with Primary Care Providers by Household Income and Age

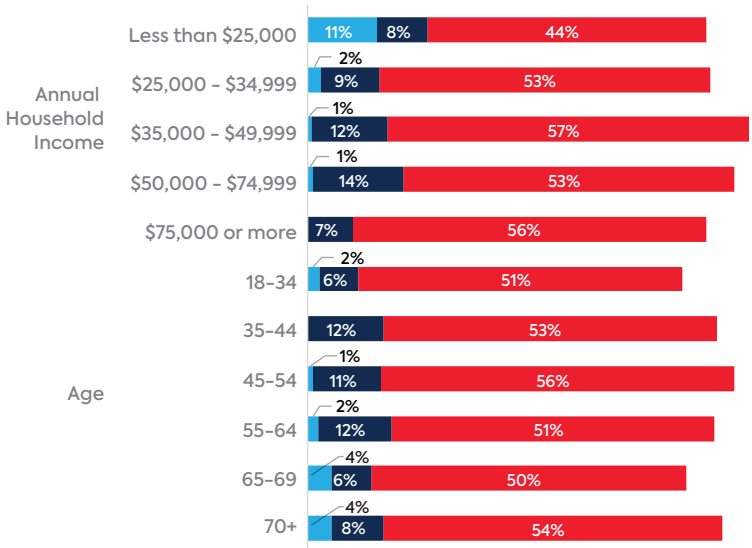
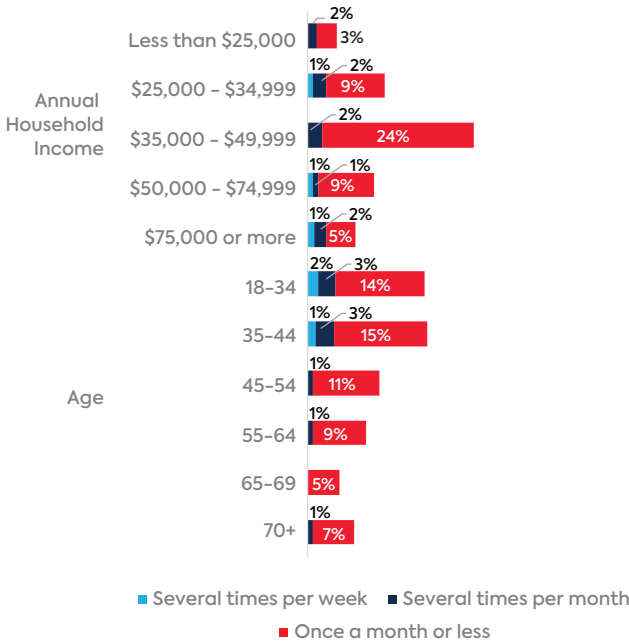


Figure 13. Online Interactions with Substance Abuse Treatment Providers by Household Income and Age



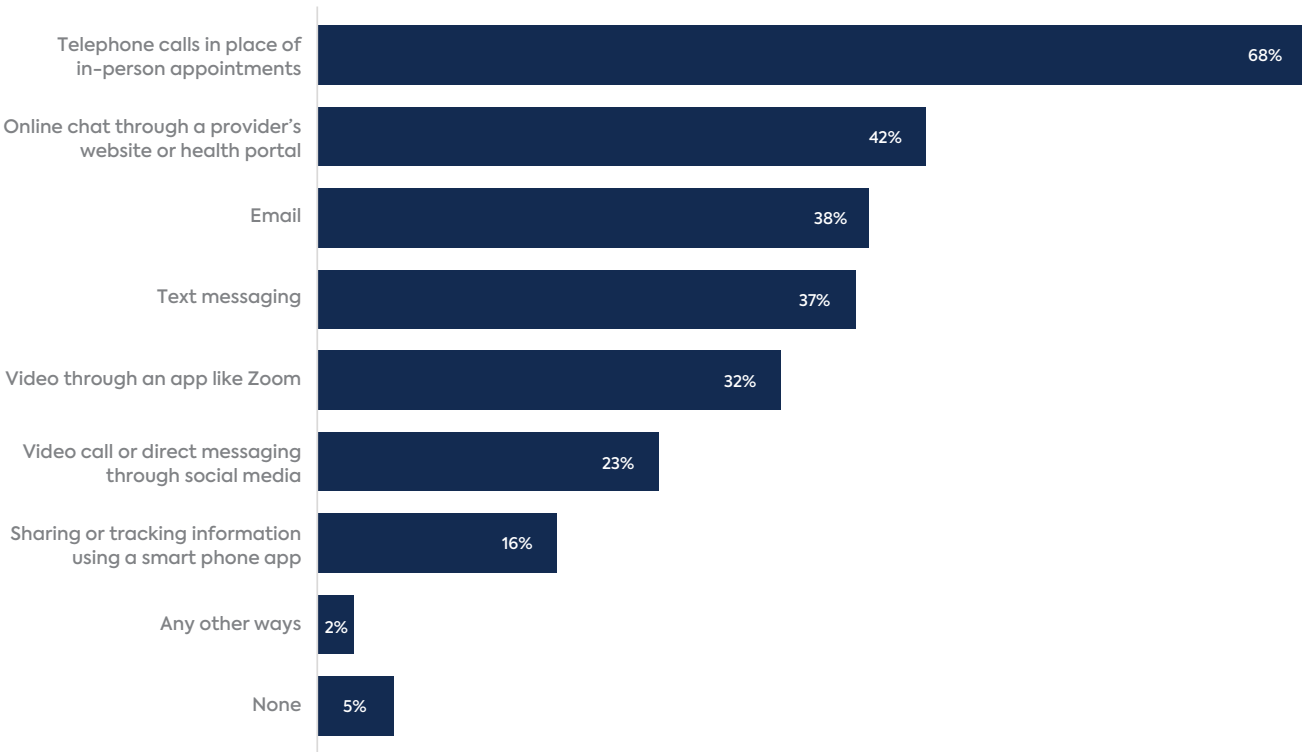
TELEHEALTH SERVICES USED (CONTINUED)

When communicating with these health care providers, respondents utilize several different telehealth modalities. Some of these include email, text messaging, telephone calls, video calls, online chats, and smartphone applications. Figure 13 shows the rates that survey respondents interacted with different modalities of care.

The most common modality used to communicate with health care providers is telephone calls, which over 2 out of 3 survey respondents (68%) use. Roughly 2 out of 5 respondents (42%)

communicate with health care providers via an online chat through their provider's website or health portal. Similar numbers of respondents utilize email (38%) and text messaging (37%) to communicate with providers. Fewer respondents reported that they utilize video chats through an app like Zoom (32%), video calls or direct messaging through social media (23%), and sharing or tracking information using a smartphone app (16%). Overall, about 1 in 20 respondents (5%) have not utilized any of these modalities. (Figure 14)

Figure 14. Modalities of Online Interactions with Health Care Providers



TELEHEALTH SERVICES USED (CONTINUED)

Additionally, nearly 3 out of 4 respondents (72%) say that their health care providers offer online portals through which they can access medical records, make appointments, or request consultations.

More than 1 in 3 respondents (38%) say they have used remote monitoring or similar online health services in the past 12 months (Figure 15).

On average, these respondents have each used 2.2 different remote monitoring services in the prior 12 months. In addition, nearly 1 in 8 (12%) say someone in their household could have benefited from using such services during that time.

Households with children and those with annual household incomes between \$35,000 and \$74,999 tend to use more of these services than other adults surveyed (Table 1).

Figure 15. Use of Remote Monitoring Health Services

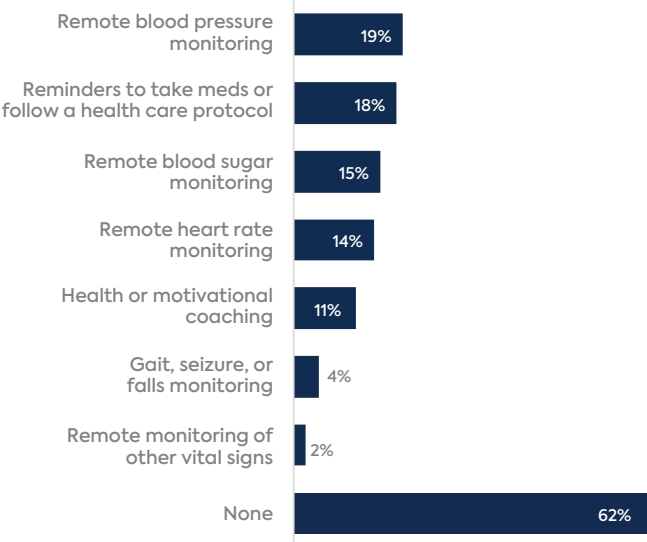


Table 1. Remote Monitoring Usage by Demographic

	Remote blood pressure monitoring	Reminders to take meds or follow a health protocol	Remote blood sugar monitoring	Remote heart rate monitoring	Health or motivational coaching	Gait, seizure, or falls monitoring
Households with children	24%	21%	19%	17%	10%	3%
No children at home	16%	17%	13%	12%	11%	5%
Age 18-34	14%	21%	12%	13%	13%	1%
Age 35-44	20%	18%	17%	14%	9%	1%
Age 45-54	26%	17%	23%	14%	13%	3%
Age 55-64	16%	16%	14%	16%	11%	5%
Age 65-69	22%	20%	21%	10%	13%	7%
Age 70+	16%	16%	8%	16%	8%	9%
Annual Household Income Less than \$25,000	12%	11%	6%	9%	1%	11%
Annual Household Income \$25,000-\$34,999	18%	17%	14%	9%	8%	8%
Annual Household Income \$35,000-\$49,999	34%	33%	21%	18%	14%	2%
Annual Household Income \$50,000-\$74,999	22%	20%	26%	16%	10%	7%
Annual Household Income \$75,000 or More	8%	12%	10%	9%	11%	3%

PERCEPTIONS OF TELEHEALTH

Telehealth users were asked about their experiences with those telehealth services. These respondents gave their opinions about whether telehealth saved them time and money, whether the practitioner seemed capable and comfortable with the technologies, whether the service was more convenient than an in-person medical appointment, and whether the quality of care was as good as an in-person visit. Figure 16 illustrates the extent to which respondents agreed with these statements.

Survey respondents had positive views about their experiences with telehealth. Overall, 9 out

of 10 telehealth users (90%) indicate that the practitioner seemed proficient and comfortable using telehealth services. A slightly smaller number of telehealth users (87%) agree that telehealth saved them time – including 61% who strongly agreed with that statement. Roughly 4 out of 5 telehealth users (79%) agree that using telehealth services was more convenient than an in-person visit. Furthermore, about 3 out of 4 respondents agree that telehealth services are as good as an in-person visit (75%) and that telehealth services have saved them money (74%).

Figure 16. Respondents' Perceptions about Telehealth Interactions



PERCEPTIONS OF TELEHEALTH (CONTINUED)

Most respondents agree that their practitioner seemed proficient in using telehealth. However, younger respondents, middle-income respondents, and respondents from households with children agreed with this statement at the highest rates (Figure 17).

Most respondents agree that telehealth has saved them time (Figure 18).

However, respondents aged 70 or older, respondents from households making less than \$25,000 a year, and respondents from households without children are less likely to agree with this statement.

Figure 17. Respondents Who Agree
"The Practitioner Seemed Proficient in Using Telehealth"

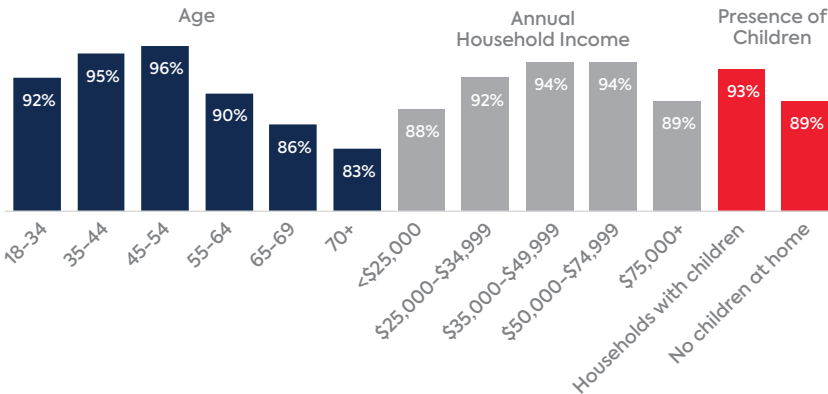
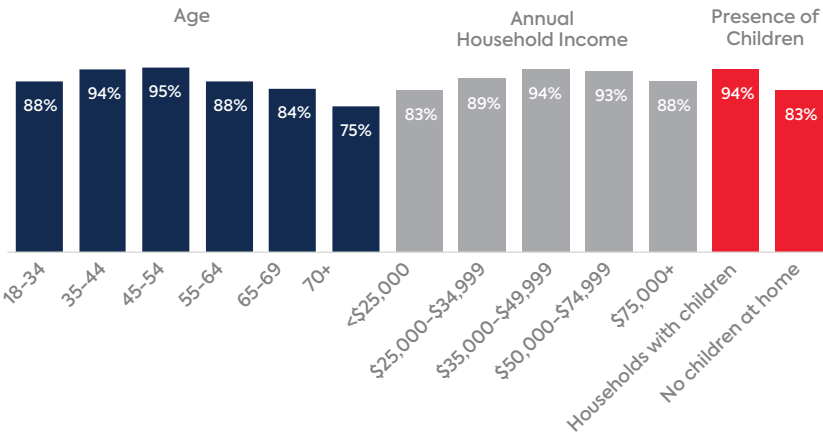


Figure 18. Respondents Who Agree: "Telehealth Saved Me Time"



PERCEPTIONS OF TELEHEALTH (CONTINUED)

A large majority of respondents – ranging from 84% to 87% of those under the age of 65 – agree that telehealth is more convenient than in-person visits (Figure 19).

However, only about 2 out of 3 respondents between the ages of 65 and 69 (68%) agree with that statement, and even fewer respondents over the age of 70 agree (63%). Additionally, respondents from households making under \$25,000 a year (73%) and respondents from

households without children (76%) are less likely to agree that telehealth services are more convenient.

Additionally, telehealth users say that these services can prevent unnecessary trips to the doctor's office. Almost two-thirds (64%) of households say accessing telehealth services online prevented trips to the doctor or a medical center (Figure 20).

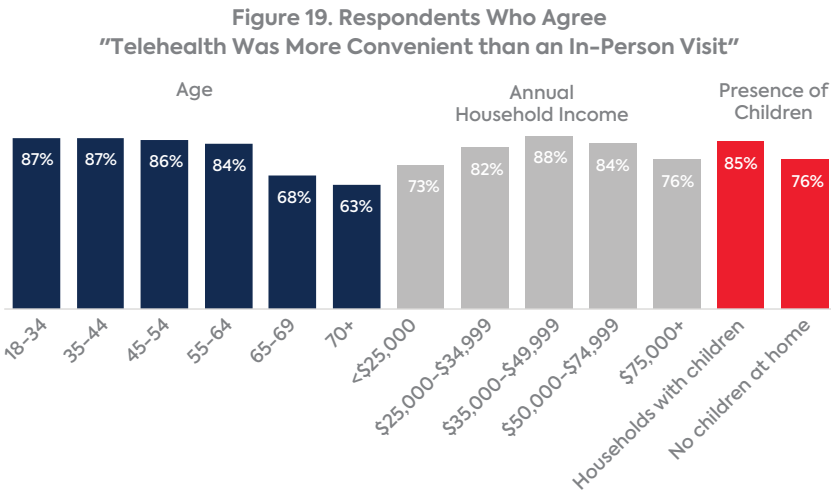
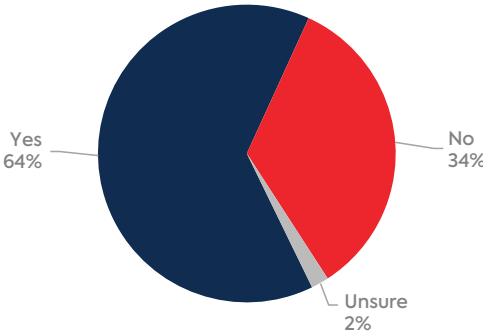


Figure 20. Respondents Who Say Accessing Telehealth Services Prevented Visits to a Doctor or Health Care Provider



PERCEPTIONS OF TELEHEALTH (CONTINUED)

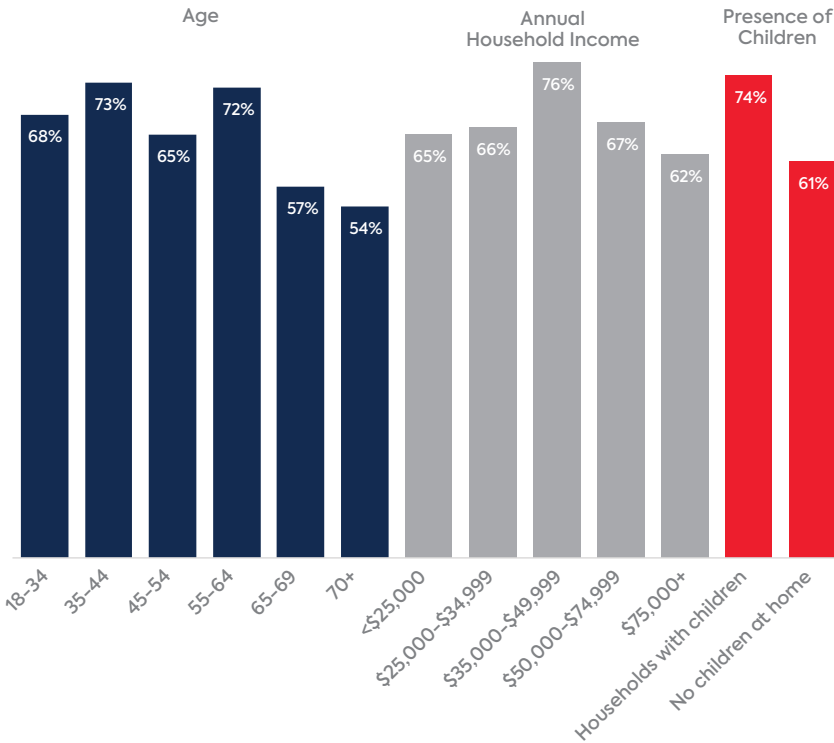
On average, these individuals report that telehealth services saved them 5.8 trips to a doctor or other health care provider in the past year by empowering them to seek out health care services or information online.

Younger telehealth users, those earning between \$35,000 or \$49,999, and telehealth users with

children at home are the most likely to say that interacting with health care providers or seeking out health information online prevented trips to a doctor or other health care provider (Figure 21).

See Appendix A for additional analyses of the perceived benefits of telehealth.

Figure 21. Telehealth Users Who Say Telehealth Has Prevented Trips to a Doctor or Health Care Provider



INTEREST IN USING TELEHEALTH SERVICES AMONG NON-TELEHEALTH USERS

More than 1 in 4 respondents (28%) do not use telehealth services. Among these respondents, more than 1 in 5 (21%) say their health care providers do not offer telehealth services, but they would be willing to use those services if they were offered (Figure 22).

Another 7 out of 10 individuals who have not used telehealth services (72%) say their health care providers do offer telehealth services but they have chosen not to use them, or they would not use telehealth services even if their providers did offer them.

Non-telehealth users whose annual household incomes are less than \$50,000 are more than twice as likely to say they would use telehealth services if they were available to them. Additionally, households with children are more than twice as likely to say they would use telehealth services if their health care providers offered them (Figure 23).

Figure 22. Interest in Using Telehealth Services Among Non-Telehealth Users

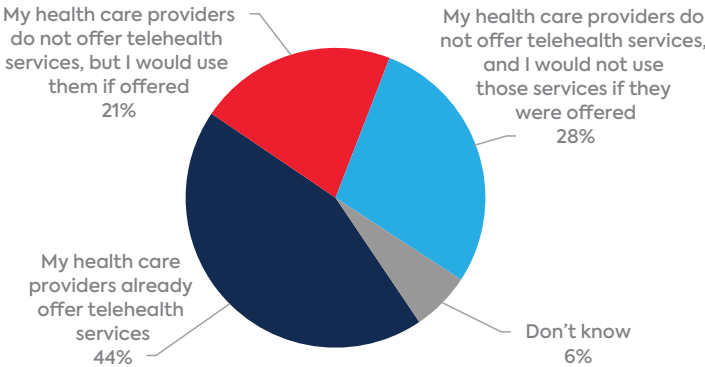


Figure 23. Interest in Using Telehealth Services by the Presence of Children



INTEREST IN USING TELEHEALTH SERVICES AMONG NON-TELEHEALTH USERS (CONTINUED)

Among those who do not use telehealth services, some potential benefits could have a significant impact on their decision to use those online tools. Nearly 3 out of 10 non-telehealth users (29%) said that if telehealth services would allow them to make a same-day appointment with a health care provider, that would have a major impact on their decision to use those services (Figure 24).

One-quarter of non-telehealth users say the ability to see their regular health care provider and avoiding commutes for safety reasons would have a major impact on their decision.

Others say the affordability of using telehealth services, avoiding commutes to save time and money, and the ability to see a health care provider while taking less time off from work would have a major impact on their decision to use telehealth services.

Younger respondents, those with annual household incomes between \$25,000 and \$75,000, and households with children are more likely to say that the ability to schedule a same-day visit would have a major impact on their decision to use telehealth services (Figure 25).

Figure 24. Telehealth Benefits and Their Impact on Patient Decisions

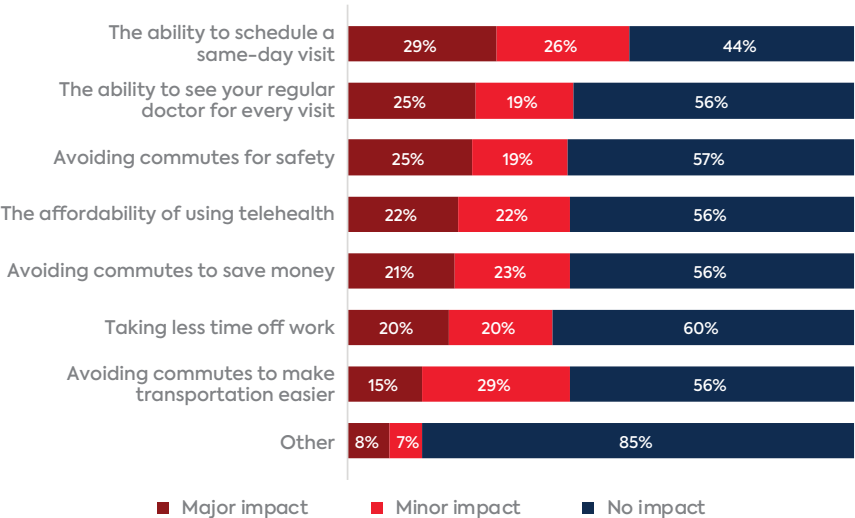
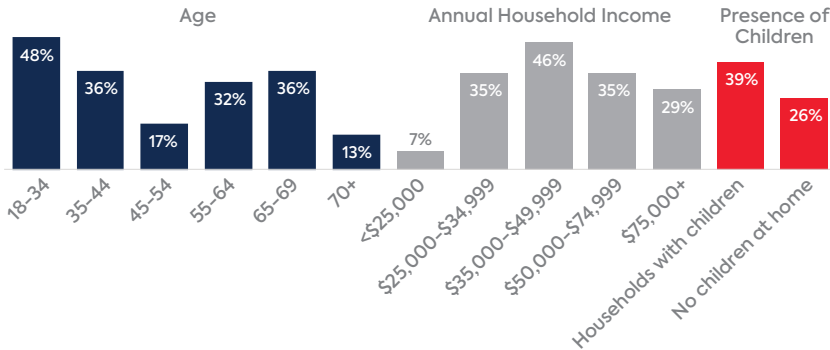


Figure 25. Benefits that Would Have a Major Impact On the Decision to Use Telehealth Services: The Ability to Schedule a Same-Day Visit



INTEREST IN USING TELEHEALTH SERVICES AMONG NON-TELEHEALTH USERS (CONTINUED)

The ability to see their regular health care provider would have the greatest impact on respondents between the ages of 35 and 44, those who have an income between \$35,000 and \$49,999, and respondents who have children in the home (Figure 26).

Respondents who say avoiding commutes for safety would have a major impact on their decision to use telehealth are younger, have an annual household income between \$25,000 and \$49,999, and have children at home (Figure 27).

See Appendix A for further analysis of telehealth benefits and their impact on patient decisions.

Figure 26. Benefits that Would Have a Major Impact On the Decision to Use Telehealth Services:
The Ability to See Your Regular Health Care Provider for Every Visit

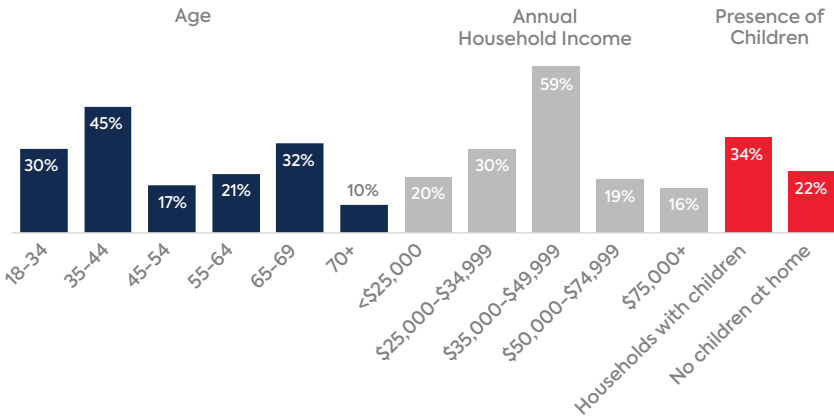
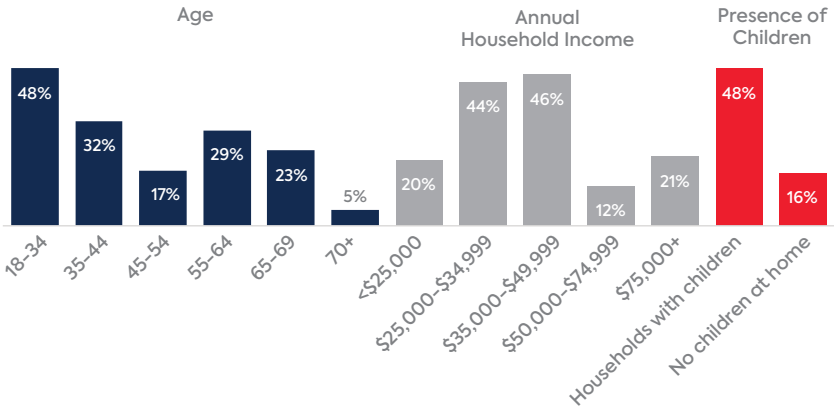


Figure 27. Benefits that Would Have a Major Impact On the Decision to Use Telehealth Services:
Avoiding Commutes for Safety



CONCERNS ABOUT TELEHEALTH

The three aspects of telehealth usage that respondents are most concerned about are the privacy of their information (41%), the possibility that health issues will not be addressed appropriately online (23%), and the quality of the telehealth service provided online (22%), as illustrated in Figure 28 below.

Respondents who have not used telehealth report that they are most likely to be very or somewhat concerned about the privacy of their information while using telehealth services (60%), the quality of telehealth services (51%), the potential for health issues to not be addressed online (44%), and the willingness of their insurance to pay for online health services (44%), as illustrated in Figure 29 below.

Figure 28. Concerns About Using Telehealth Services

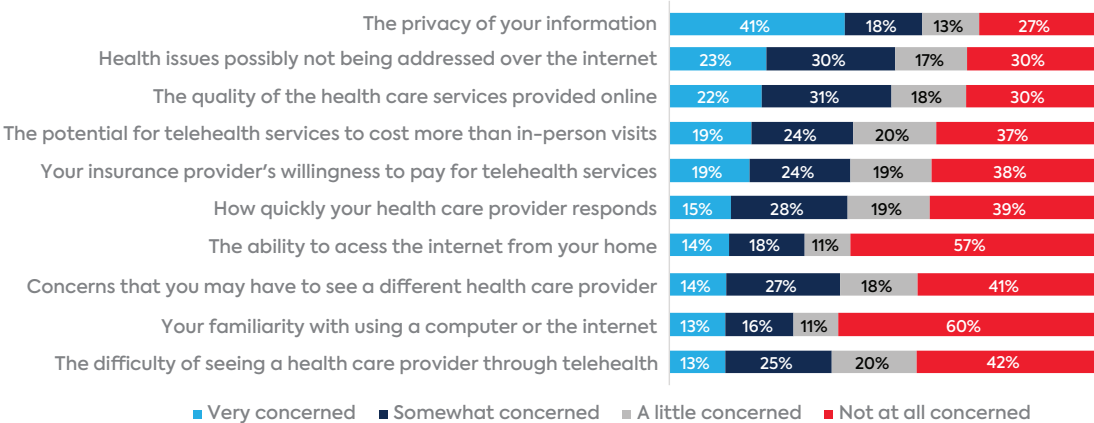
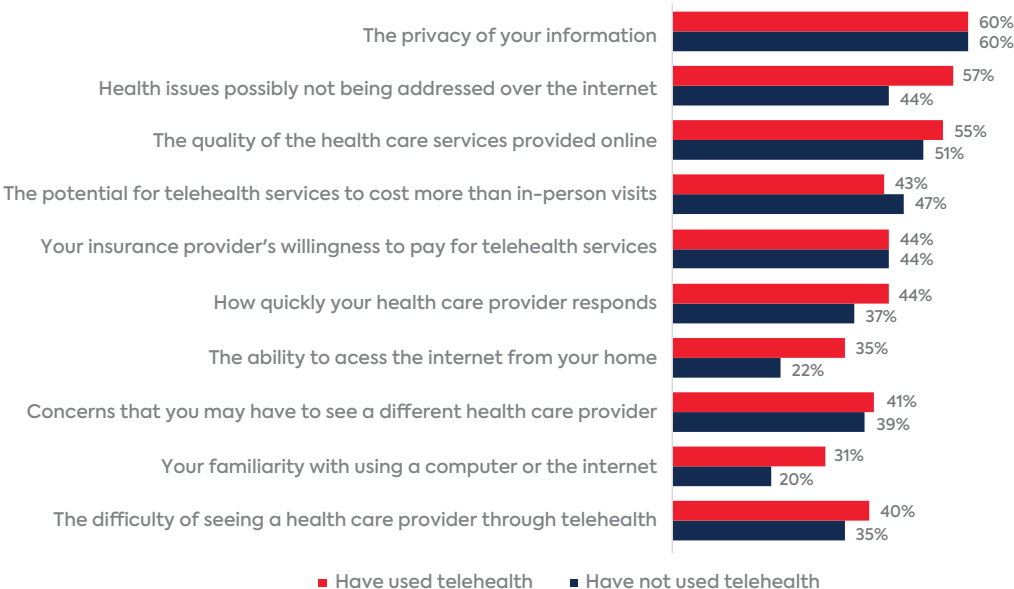


Figure 29. Telehealth Concerns Among Telehealth Users and Non-Users



CONCERNS ABOUT TELEHEALTH (CONTINUED)

The greatest share of individuals aged 65 to 69 and those with annual household incomes between \$50,000 and \$74,999 cite patient privacy as their top concern (Figure 30).

The possibility of health issues not being addressed online was the greatest concern among those whose incomes fall between \$35,000 and \$49,999 and among those between the ages of 65 and 69 (Figure 31).

Respondents with annual household incomes between \$35,000 and \$49,999 and those between the ages of 35 and 44 express the greatest concerns regarding the quality of telehealth services (Figure 32).

Further analyses regarding concerns about telehealth usage can be found in Appendix A.

Figure 30. Respondents Very or Somewhat Concerned About the Privacy of a Patient's Information

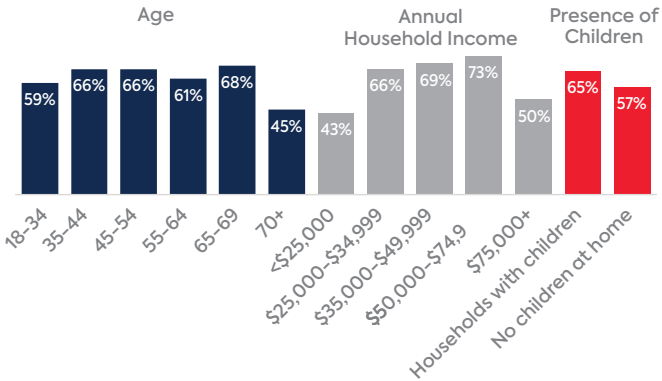


Figure 31. Respondents Very or Somewhat Concerned That Health Issues May Not Be Addressed or Misdiagnosed Online

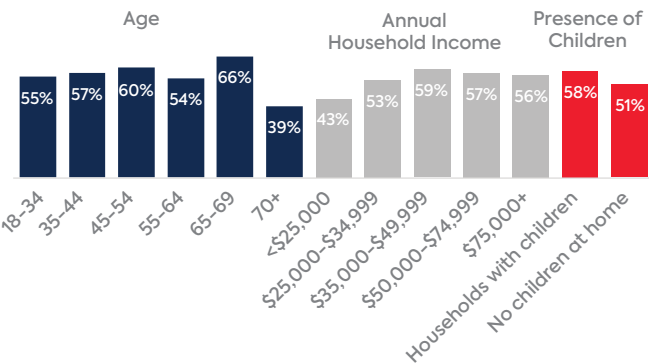
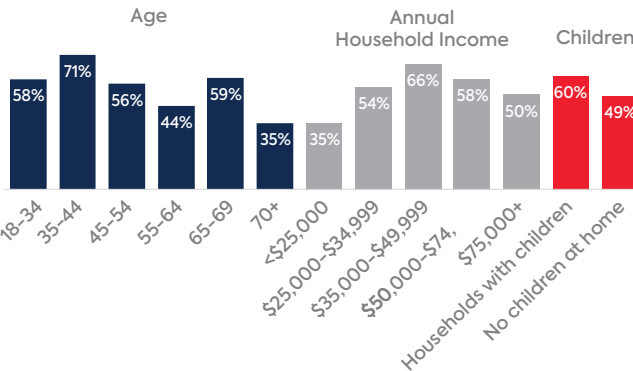


Figure 32. Respondents Very or Somewhat Concerned About The Quality of the Health Care Service Provided Online



FUTURE TELEHEALTH PLANS

When asked how often respondents plan on using telehealth in the future, roughly two-thirds of households (63%) plan on using telehealth at the same frequency they are using it currently. Nearly 1 out of 5 respondents (19%) plan on using telehealth more frequently, while 7% plan on using it less frequently (Figure 33).

More than 1 in 5 telehealth users (21%) plan on using telehealth more frequently in the future, compared to 14% of non-telehealth users (Figure 34).

Respondents with annual household incomes of \$75,000 or more, as well as those ages 45–64, are the most likely to say they intend to use telehealth services more frequently in the future (Figure 35).

In contrast, older respondents (ages 70+) and those with annual household incomes below \$25,000 are the least likely to say they plan to use telehealth services more frequently in the future. These individuals may require further incentives or information before they access telehealth services.

Figure 33. How Frequently Respondents Plan to Use Telehealth

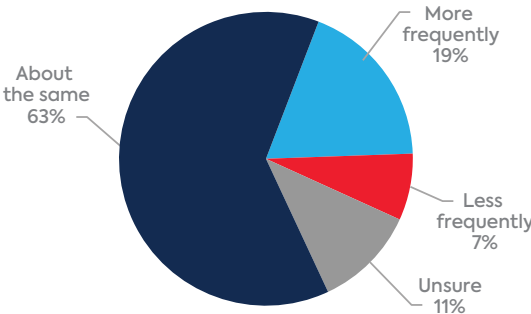


Figure 34. How Respondents Plan on Using Telehealth in the Future

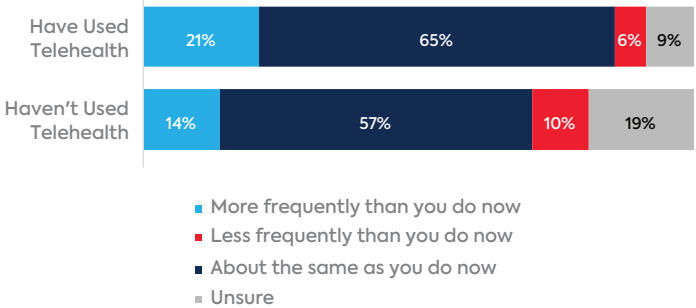
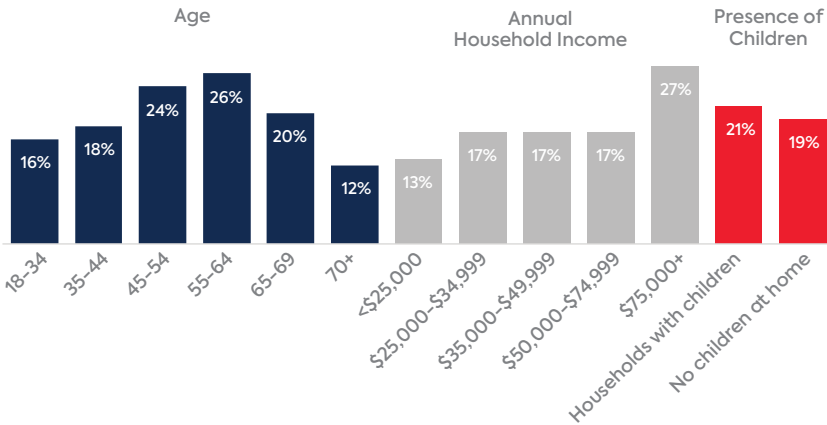


Figure 35. Respondents Who Intend to Use Telehealth Services More Frequently in the Future





CONCLUSIONS AND RECOMMENDATIONS



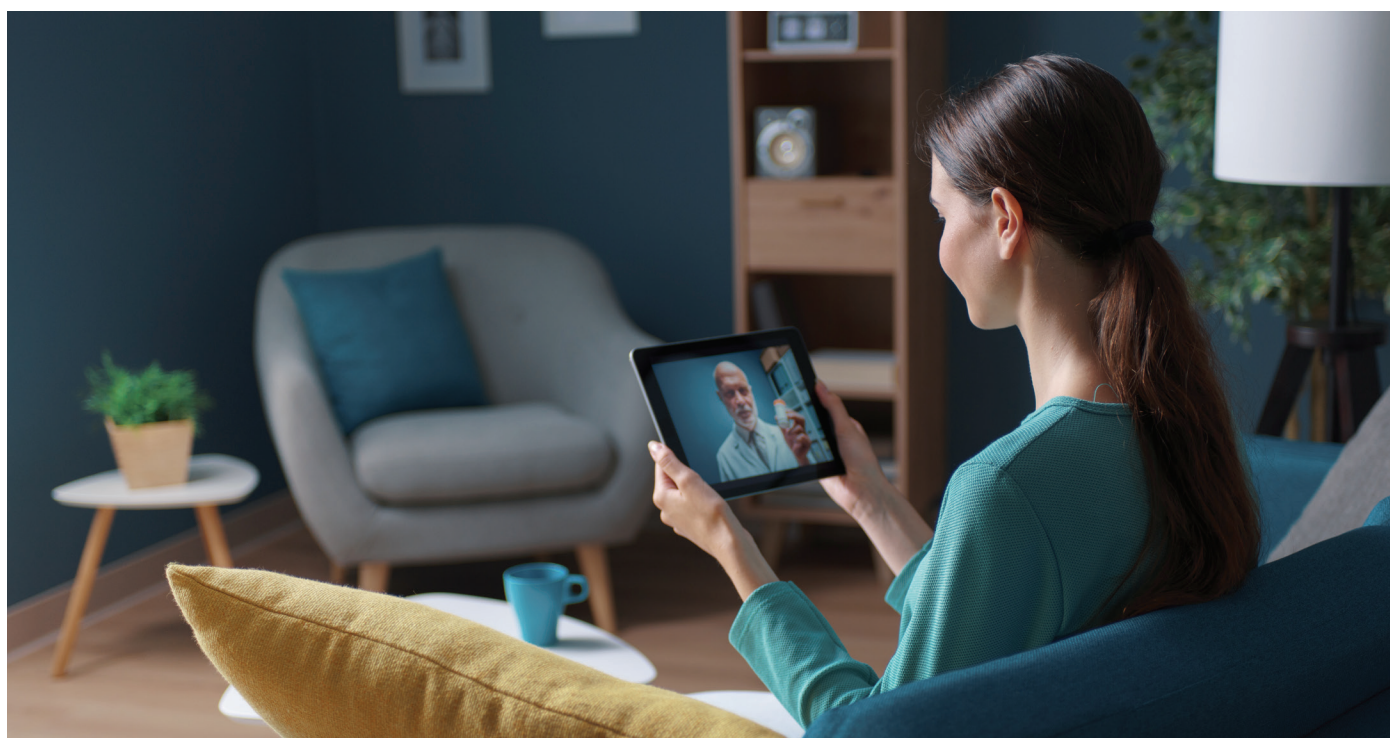
This effort to understand and overcome the challenges related to promoting telehealth access and usage comes at an important time — as federal funds become available to promote digital equity and access, rural households lose health care providers, and telehealth technologies becomes a preferable choice for a growing number of Americans. As the Colorado Office of eHealth Innovation works to close that telehealth gap, this research points to several recommendations.

- 1 FURTHER STATEWIDE RESEARCH WILL HELP ENSURE THAT THE CHALLENGES FACED BY ALL COLORADANS ARE ADDRESSED.**
- 2 CONSUMER AWARENESS IS NEEDED ABOUT THE QUALITY AND EFFICACY OF TELEHEALTH SERVICES OFFERED TO PATIENTS.**
- 3 CONSUMER AWARENESS CAMPAIGNS NEED TO BE DEVELOPED TO ADDRESS THE CONCERNS OF SPECIFIC POPULATIONS WHO CURRENTLY DO NOT USE TELEHEALTH.**
- 4 ANY CAMPAIGN TO INCREASE TELEHEALTH AWARENESS AND USAGE SHOULD BE COMPREHENSIVE AND GO BEYOND THE HEALTH CARE INDUSTRY.**

1 FURTHER STATEWIDE RESEARCH WILL HELP ENSURE THAT THE CHALLENGES FACED BY ALL COLORADANS ARE ADDRESSED.

While this important study identifies residents' needs and attitudes toward telehealth in the northwest part of the state, households in other parts of the state may face different challenges. Every community is unique, and just because one rural part of the state faces a particular set of challenges, that is no guarantee that other rural areas (let alone urban areas like Denver or Colorado Springs) will have the same needs.

For example, Mesa County (the county accounting for the largest number of households in this study) has a median household income of \$70,711, compared to the statewide median of \$87,598. Variances such as these could result in varied challenges and attitudes toward telehealth services in different parts of the state. When designing statewide solutions, the entire population must be accounted for. For that reason, a statewide study using a similar methodology to look at these same challenges would ensure that any statewide solution takes those varying needs into consideration.



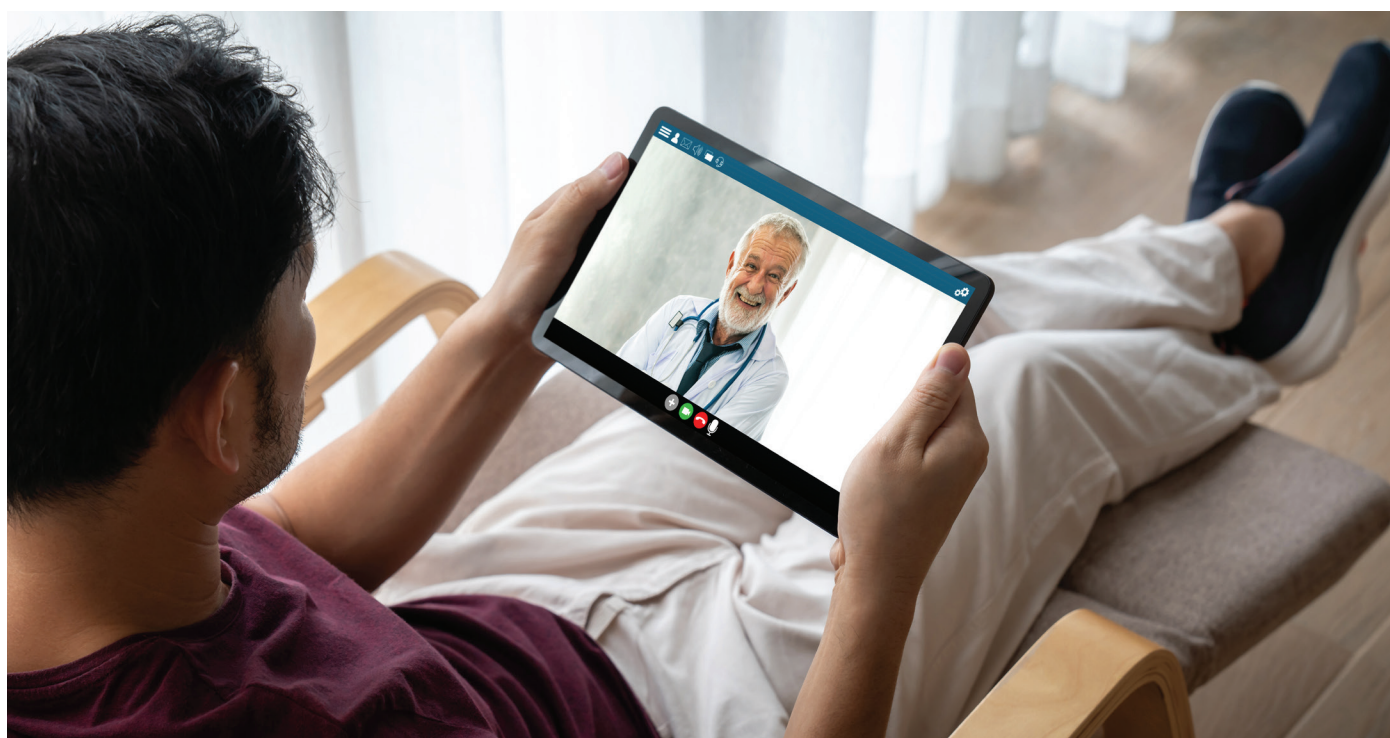
2

CONSUMER AWARENESS CAMPAIGNS NEED TO BE DEVELOPED TO ADDRESS THE CONCERNS OF SPECIFIC POPULATIONS WHO CURRENTLY DO NOT USE TELEHEALTH.

The vast majority of telehealth users report being satisfied with the health care they have received through telehealth services. Nearly 3 out of 4 respondents agree that using telehealth services saved them money, while even larger majorities agree that telehealth services saved them time, were more convenient than an in-person health care visit, and the quality of care they received was as good as an in-person visit.

Despite these positive perceptions, more than 7 out of 10 non-telehealth users say they would not use telehealth services even if their health care providers offered them. They cited concerns about data privacy, the quality of care rendered through telehealth, and whether telehealth services are covered by their insurance as the key issues that prevent them from using telehealth services.

One way to address this resistance is through an awareness campaign. Sharing the potential benefits of these services by reaching out to non-telehealth users on social media, in print, and via public service announcements on television and radio could offer reassurance that the issues that concern them most are not being experienced by telehealth users.



3

CONSUMER AWARENESS CAMPAIGNS NEED TO BE DEVELOPED WITH CULTURAL SENSITIVITY TO ADDRESS THE CONCERNS OF SPECIFIC POPULATIONS.

As seen in this study, different demographic groups report differing perceptions, challenges, and needs related to telehealth services. For example, younger populations and households with children are more likely to be swayed by the benefits of using telehealth services, such as the ability to schedule same-day visits, the ability to avoid commuting back and forth to a doctor's office, and the ability to take less time off from work to see a health care professional.

Designing awareness campaigns that help specific populations by using culturally sensitive and relevant messaging is important. Individuals who are older (aged 65+), have lower annual household incomes (below \$25,000 per year), and those who do not have children at home are the least likely to use telehealth services. As such, outreach campaigns should incorporate language that will resonate with these populations and use media that will be seen by these groups.

Older residents are less likely to subscribe to home internet service, so advertising campaigns through traditional media (such as television and radio commercials) may be more effective. Reaching out to at-risk populations at locations where they are most likely to see the media (such as flyers posted at community centers, government assistance offices, or senior centers) can make it more likely that households who are the least likely to use telehealth services see the messages. Sharing social media posts, creating flyers, and recording advertisements in multiple languages can ensure that language barriers do not limit who can learn about the benefits that telehealth services can offer. Inclusion matters, so campaign images that reflect the spectrum of races, ethnicities, genders, and disabilities in Colorado will help promote the idea that telehealth can benefit everyone.

The messages presented to each population should highlight the benefits that would have the greatest positive impact on their decision to use telehealth. For example, the largest share of older respondents say the ability to schedule a same-day visit with a health care provider would have a major impact on their decision to use telehealth. Alternatively, the largest share of lower-income households say avoiding commutes to and from a health care provider would have a major impact on their decision. These potential benefits should be promoted in advertising campaigns that seek to increase telehealth usage among these populations.

Streamlining the messages used in a public service campaign will improve the likelihood that the right audience will see and be swayed by the benefits that telehealth services can offer them.

4

ANY CAMPAIGN TO INCREASE TELEHEALTH AWARENESS AND USAGE SHOULD BE COMPREHENSIVE AND GO BEYOND THE HEALTH CARE INDUSTRY.

Coloradans face a variety of challenges with regard to telehealth access and usage, and many of those go beyond the scope of the health care industry. Internet access, digital skills education, and cost issues all present challenges that must be addressed to ensure that everyone who wants to access telehealth services can do so.

For those reasons, any campaign to promote telehealth services must go beyond simply making people aware of the benefits offered by health care providers. Ensuring that residents have reliable access to affordable broadband service and the devices they need to use those telehealth services are crucial. This need means that multiple organizations, state agencies, and public-private partnerships must collaborate to ensure that all Coloradans are not only aware of the potential benefits of using telehealth services, but they are also able to access those applications.



APPENDIX A: FURTHER ANALYSES



IN ADDITION TO THE ATTACHED REPORT, SEVERAL OTHER QUESTIONS WARRANT FURTHER ANALYSIS BY DEMOGRAPHIC GROUP. THESE ANALYSES ARE INCLUDED ON THE FOLLOWING PAGES.

I. PERCEPTIONS OF TELEHEALTH

Older respondents, respondents from households making over \$75,000 a year, and respondents from households without children are less likely to say that telehealth was as good as an in-person medical visit (Figure A1).

Older respondents are less convinced that telehealth saved them money. For those over the age of 70, only 55% agreed with that statement. Meanwhile, 80% of respondents under the age of 65 think telehealth saved them money. Households without children are less convinced that telehealth saved them money (69%) compared to households with children (83%) (Figure A2).

Figure A1. Respondents Who Agree
"Telehealth Was Just as Good as an In-Person Visit"

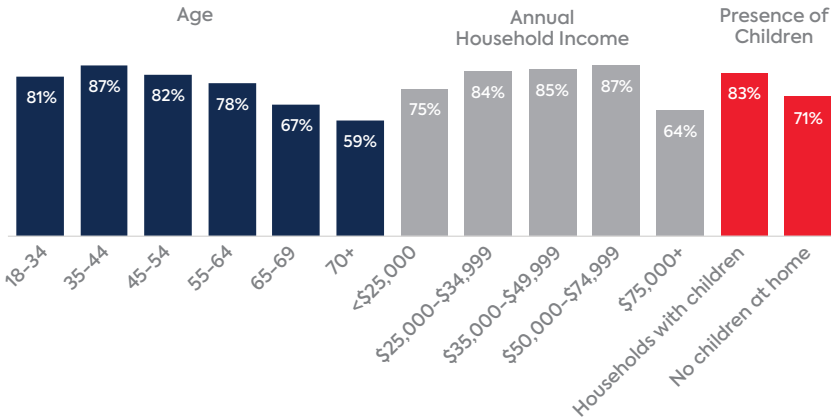
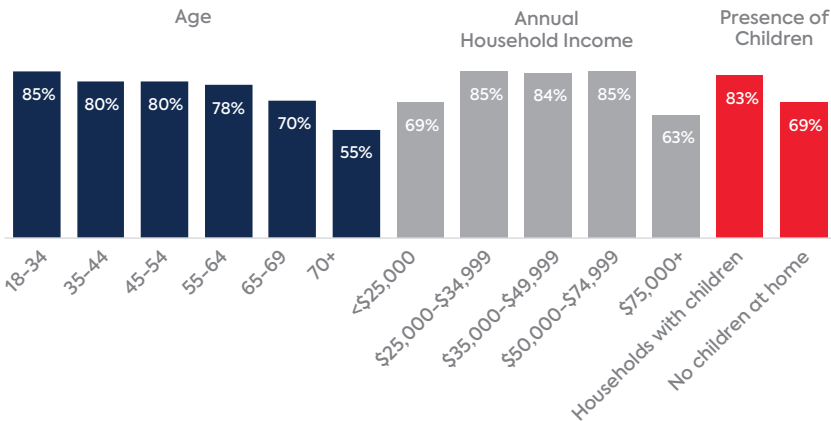


Figure A2. Respondents Who Agree: "Telehealth Saved Me Money"



II. TELEHEALTH BENEFITS AND THEIR IMPACT ON PATIENT DECISIONS

Younger respondents between the ages of 18 and 44, those with an annual household income between \$35,000 and \$49,999, and households with children are more likely to say that affordability of services will impact their decision to use telehealth (Figure A3).

Respondents who say avoiding commutes to save money would have a major impact on their decision to use telehealth were most likely between the ages of 18 and 54, have an annual household income between \$25,000 and \$50,000, and have children in the household (Figure A4).

Figure A3. Benefits that Would Have a Major Impact On the Decision to Use Telehealth Services: The Affordability of Using Telehealth

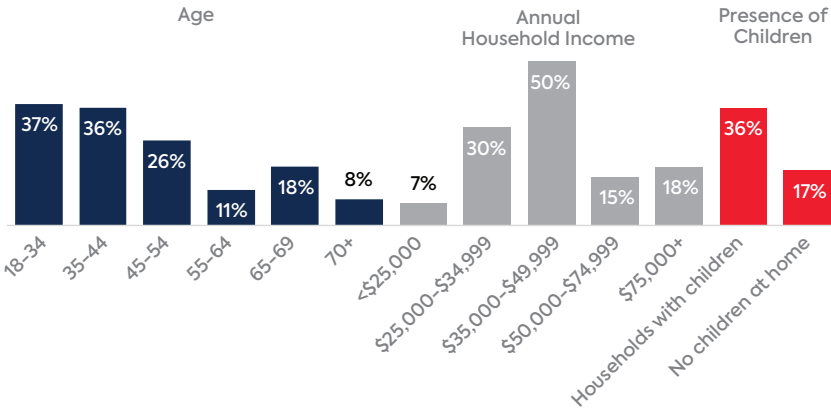
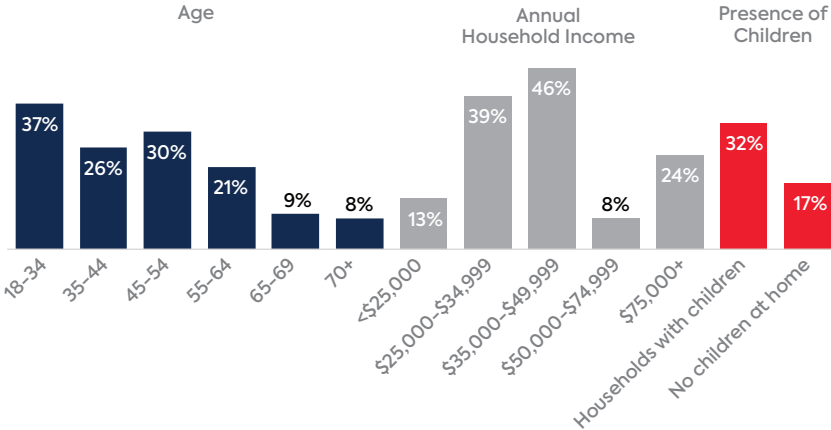


Figure A4. Benefits that Would Have a Major Impact On the Decision to Use Telehealth Services: Avoiding Commutes to Save Money



II. TELEHEALTH BENEFITS AND THEIR IMPACT ON PATIENT DECISIONS (CONTINUED)

Respondents who say the ability to take less time off work would have a major impact on their decision to use telehealth were most likely between the ages of 18 and 54, have an annual household income between \$25,000 and \$49,999, and have children in the household (Figure A5).

Avoiding commutes to make transportation easier was most important among respondents who have an annual household income between \$35,000 and \$49,999 (Figure A6).

Figure A5. Benefits that Would Have a Major Impact On the Decision to Use Telehealth Services: The Ability to Take Less Time Off from Work

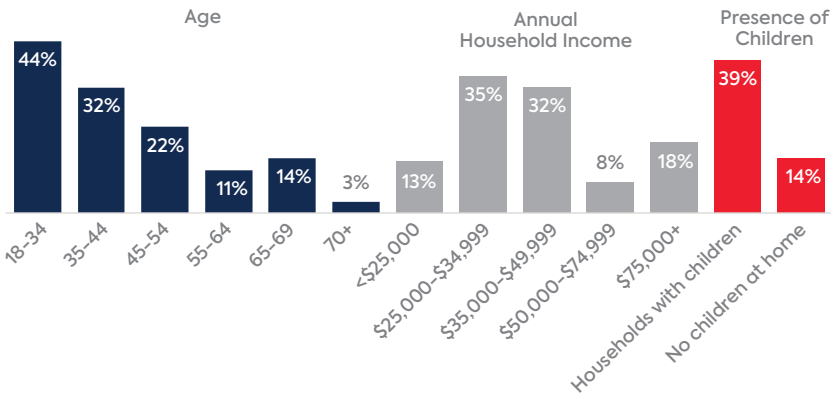
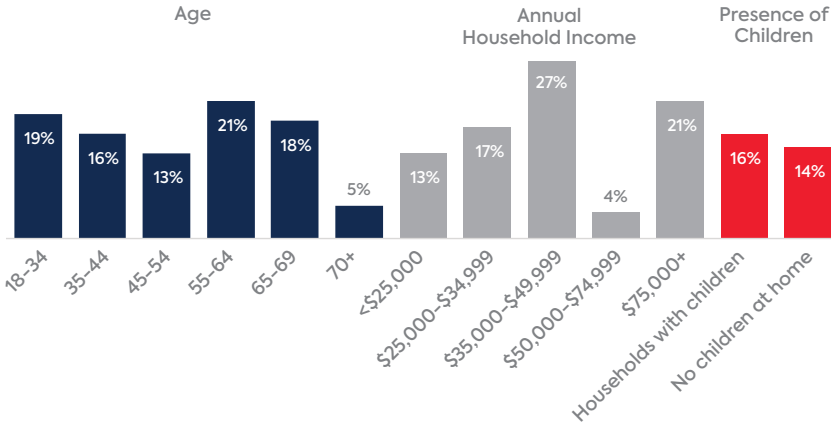


Figure A6. Benefits that Would Have a Major Impact On the Decision to Use Telehealth Services: Avoiding Commutes to Make Transportation Easier



III. CONCERNS ABOUT TELEHEALTH

Respondents between the ages of 45 and 54 are the most likely to report concerns about the cost of telehealth services (Figure A7).

Respondents aged 65–69 are the most likely to express concerns about whether their insurance provider would cover telehealth visits (Figure A8).

Figure A7. Respondents Very or Somewhat Concerned About Telehealth Services Possibly Costing More Than In-Person Visits

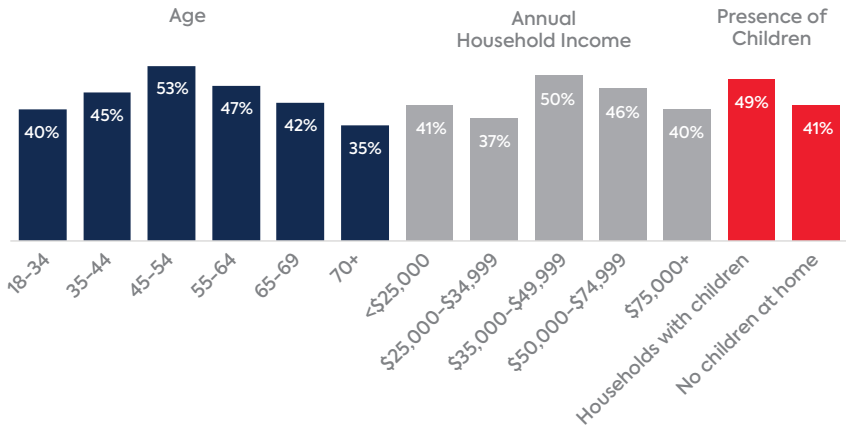
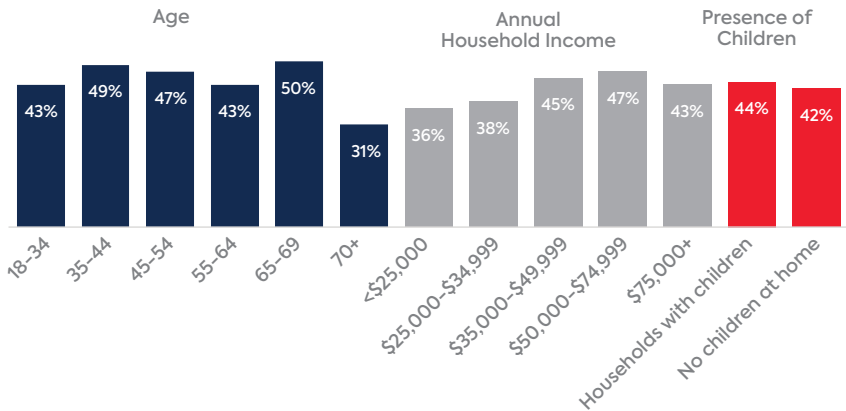


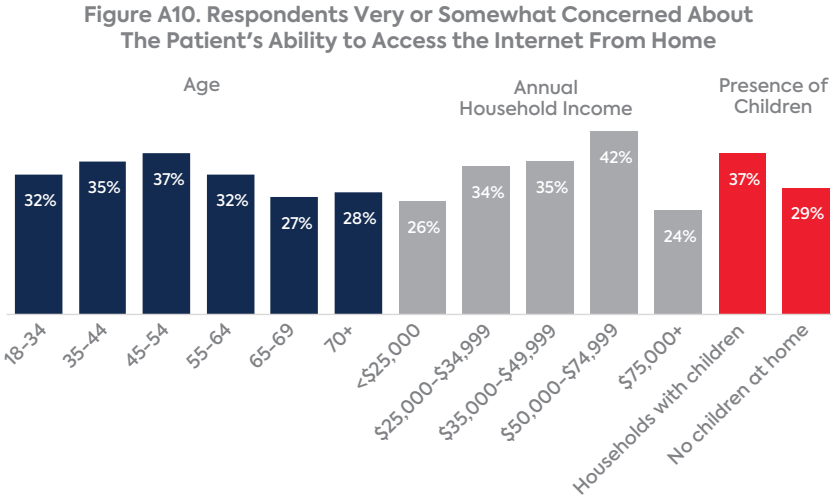
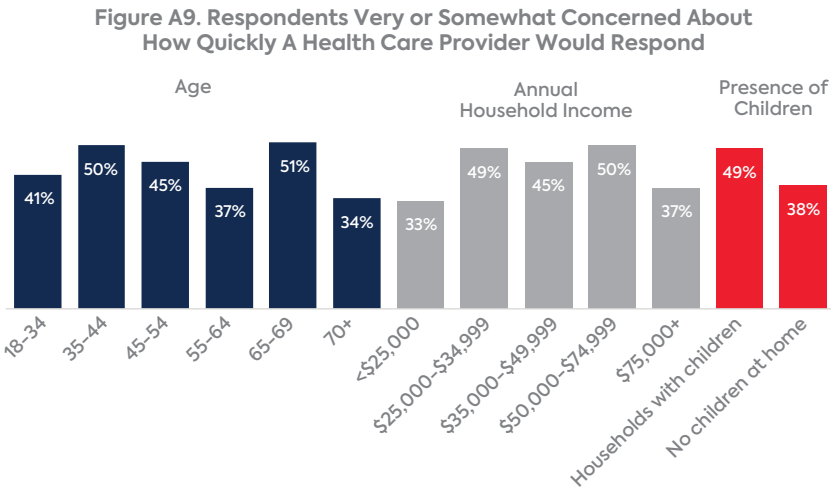
Figure A8. Respondents Very or Somewhat Concerned About An Insurance Provider's Willingness to Cover Telehealth Services



III. CONCERNS ABOUT TELEHEALTH (CONTINUED)

Respondents aged 65–69 are the most likely to express concerns about how quickly a health care provider would respond to online requests (Figure A9).

Internet access is cited as a concern by more than 2 out of 5 respondents with annual household incomes between \$50,000 and \$74,999 (Figure A10).



III. CONCERNS ABOUT TELEHEALTH (CONTINUED)

One-half of those with annual household incomes between \$35,000 and \$49,999 cite concerns that they might have to see a different health care provider than their regular doctor. (Figure A11).

Respondents earning between \$50,000 and \$74,999, as well as those aged 45–54 and 65–69, are the most likely to voice concerns about their familiarity with computers or the internet as a barrier to using telehealth services (Figure A12).

Figure A11. Respondents Very or Somewhat Concerned That The Patient May Have to See a Different Health Care Provider

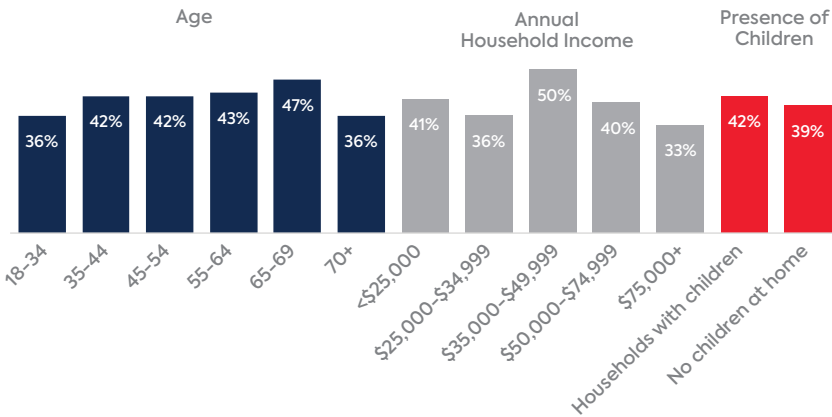
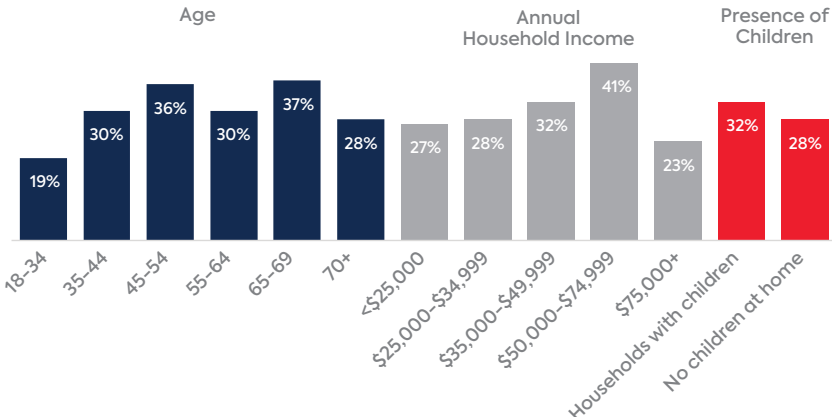


Figure A12. Respondents Very or Somewhat Concerned About The Patient's Familiarity With Computers or the Internet



III. CONCERNS ABOUT TELEHEALTH (CONTINUED)

Respondents between the ages of 35 and 44 and those aged 65–69 expressed the most concern regarding the difficulty of seeing a health care provider through telehealth (Figure A13).

