

Tele-Transformation in North Carolina: Telehealth Policy Lessons Learned During the COVID-19 Pandemic and Beyond

Chart Pack

*North Carolina Department of Health
and Human Services*

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Introduction



North Carolina took early action to promote evidence-based, equitable delivery of Medicaid and CHIP services via telehealth during the COVID-19 pandemic.

The Department's telehealth response team recognized the important of expanding the Department's analytic capacity to measure and socialize the impact of the state's pandemic-related telehealth flexibilities.



The Department, in partnership with Community Care of North Carolina and the University of North Carolina Sheps Center, leveraged multiple data resources developed internally and with other State partners to understand changes in telehealth utilization, cost, and quality of care for Medicaid members. The findings from this evaluation are described in detail in this Chart Pack.

Summary of Findings



Telehealth use increased dramatically during the COVID-19 pandemic and is now more integrated into the Medicaid delivery system compared to the pre-pandemic baseline. The extent of integration is evidenced by higher utilization levels that persist more than two years after the start of the pandemic.



Though all demographic groups increased use of telehealth during the COVID-19 pandemic, utilization rates are lower for older, Black, Hispanic and rural dwelling members. Utilization rates were higher for individuals with chronic conditions.



Disparities in telehealth offer rates and use persist over time for Black and Hispanic members relative to White members.



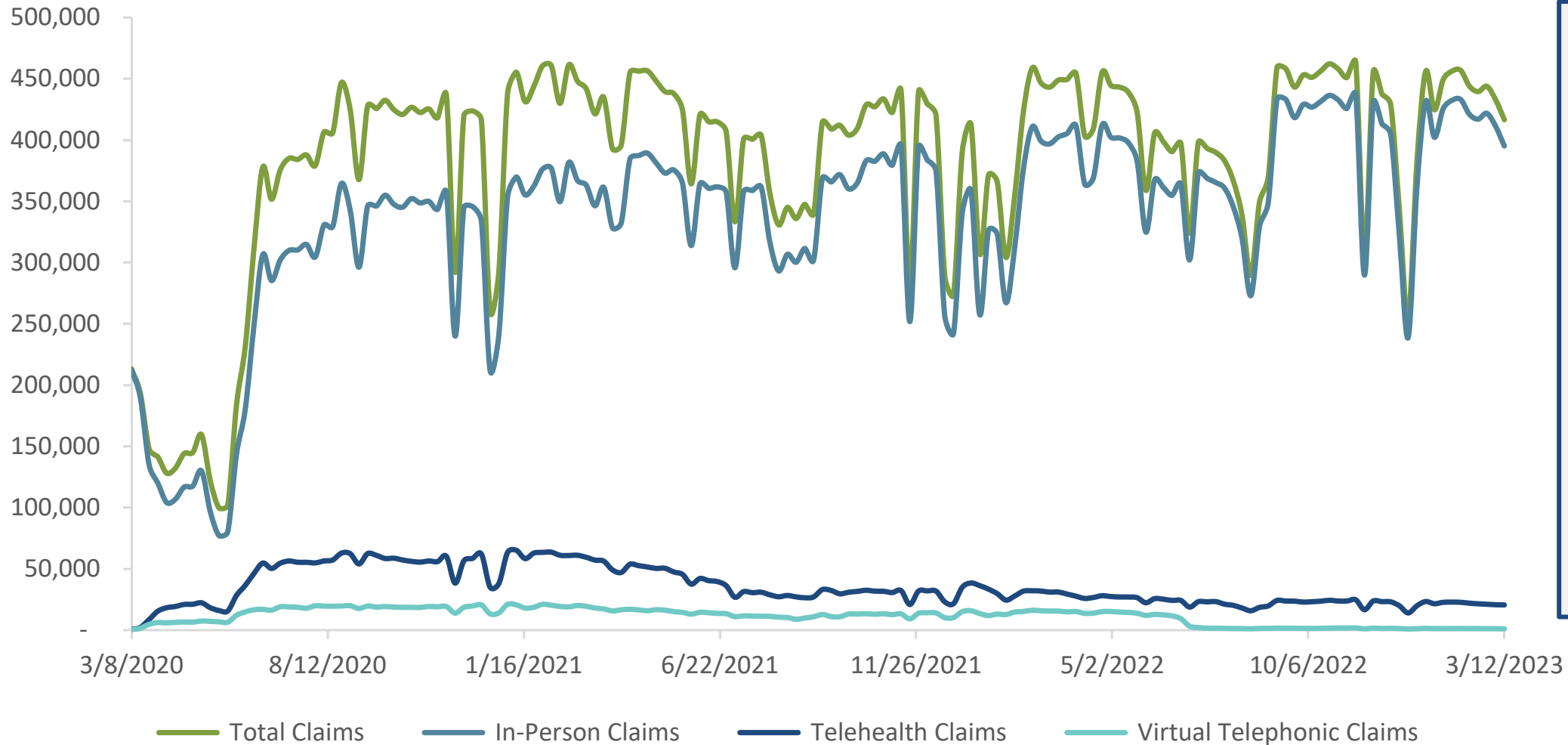
Telehealth may have helped members maintain access to needed behavioral health-related prescriptions and services as well as chronic disease care.



The vast majority of members reported high satisfaction with receiving services via telehealth and continued to utilize this modality when offered.

Overall Utilization and Key Demographic Groups

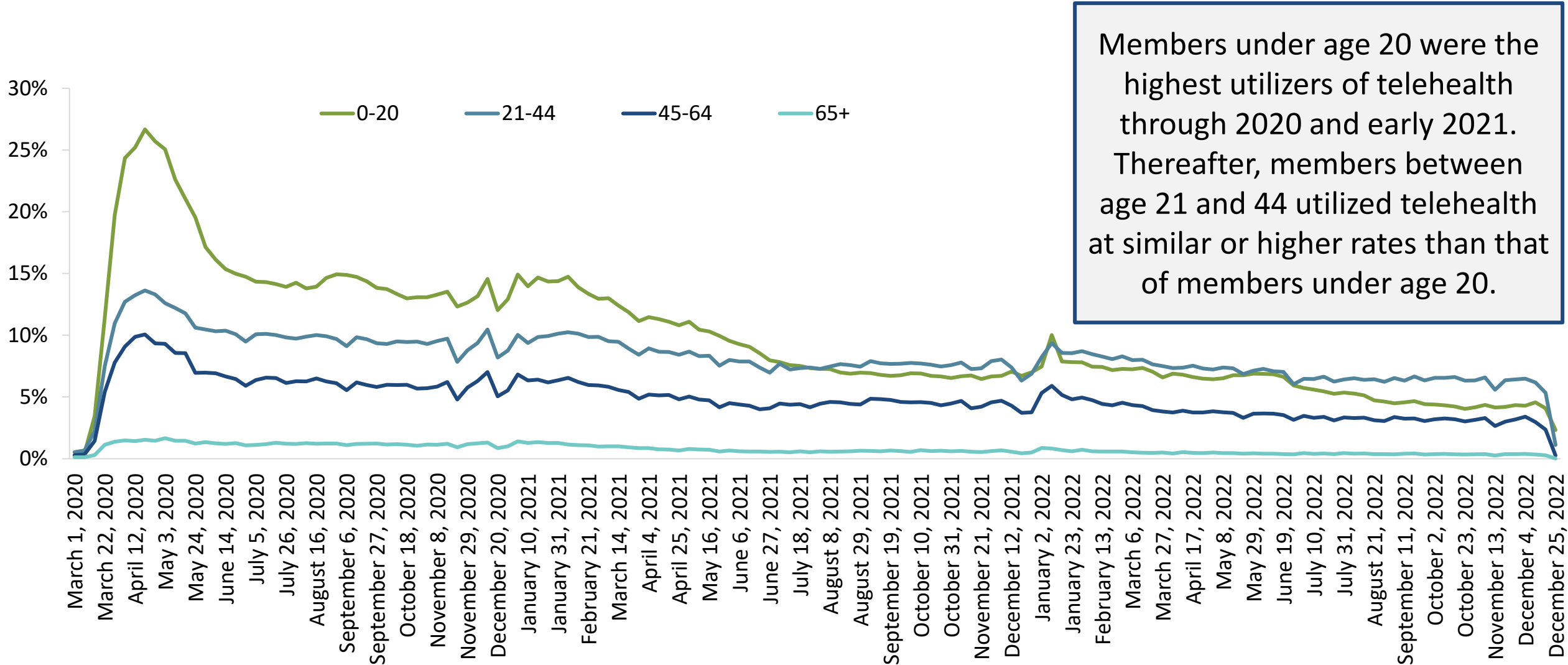
Telehealth, Telephonic, and In-Person Claims Volume 3/8/2020 – 3/12/2023



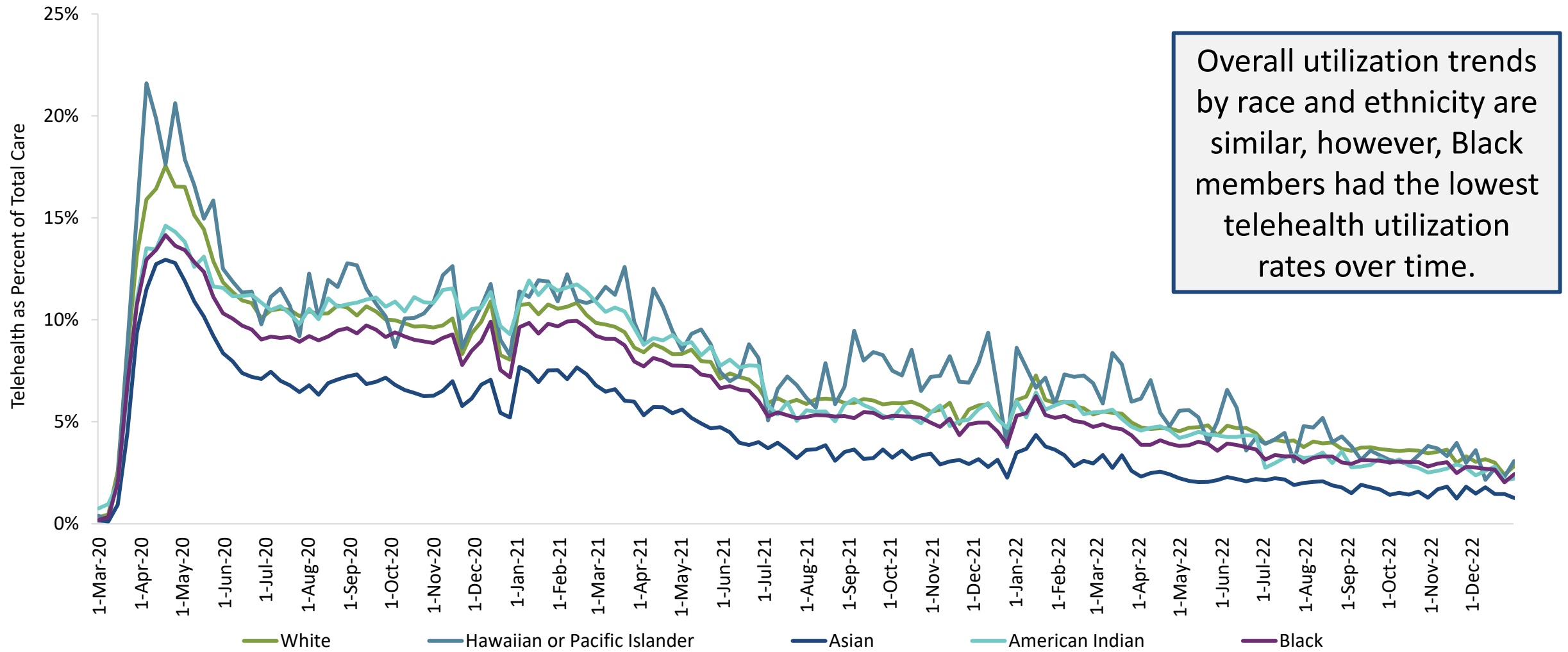
Telehealth claims volume increased dramatically during the COVID-19 pandemic and utilization remains higher than pre-pandemic levels.

Telehealth as a Percent of Professional Claims by Age Group

3/1/2020–12/31/2022



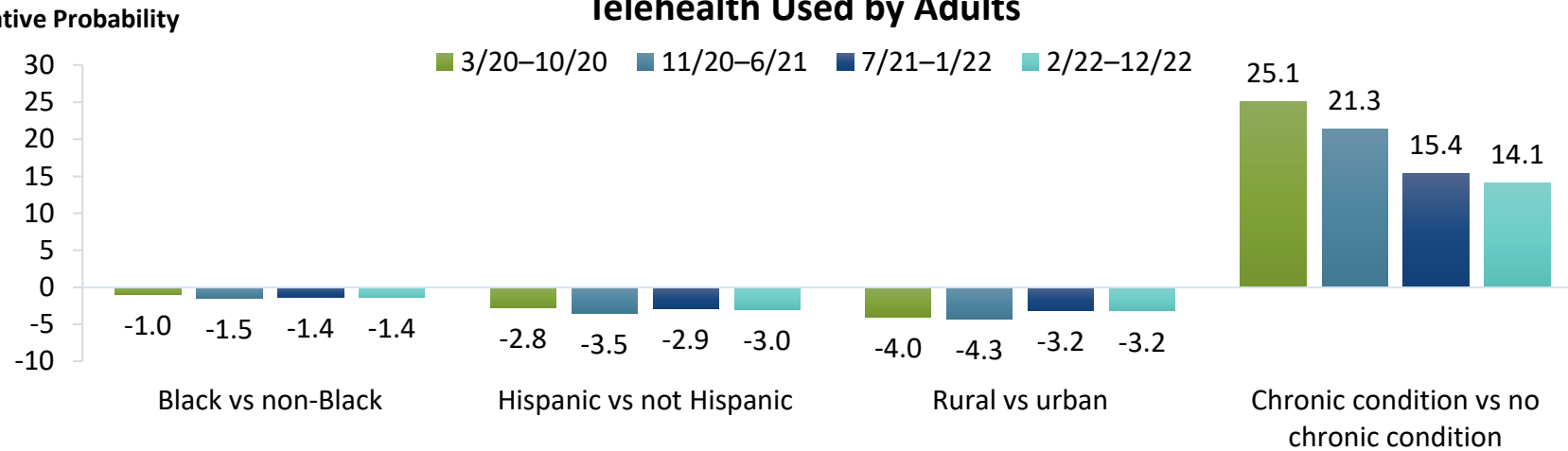
Telehealth as a Proportion of Total Care by Race 03/01/2020 – 12/31/2022



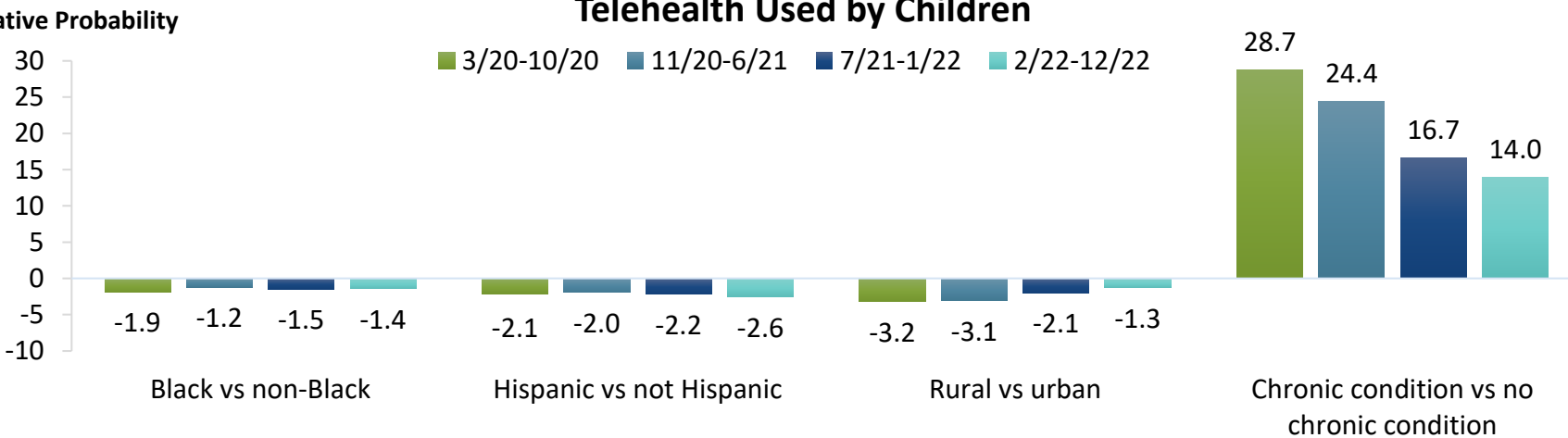
Note that sample size for Hawaiian or Pacific Islander, Asian and American Indian are small. Results should be interpreted with caution.

Relative Probability of Telehealth Use by Adults and Children Over Time – March 2020 to December 2022

Telehealth Used by Adults



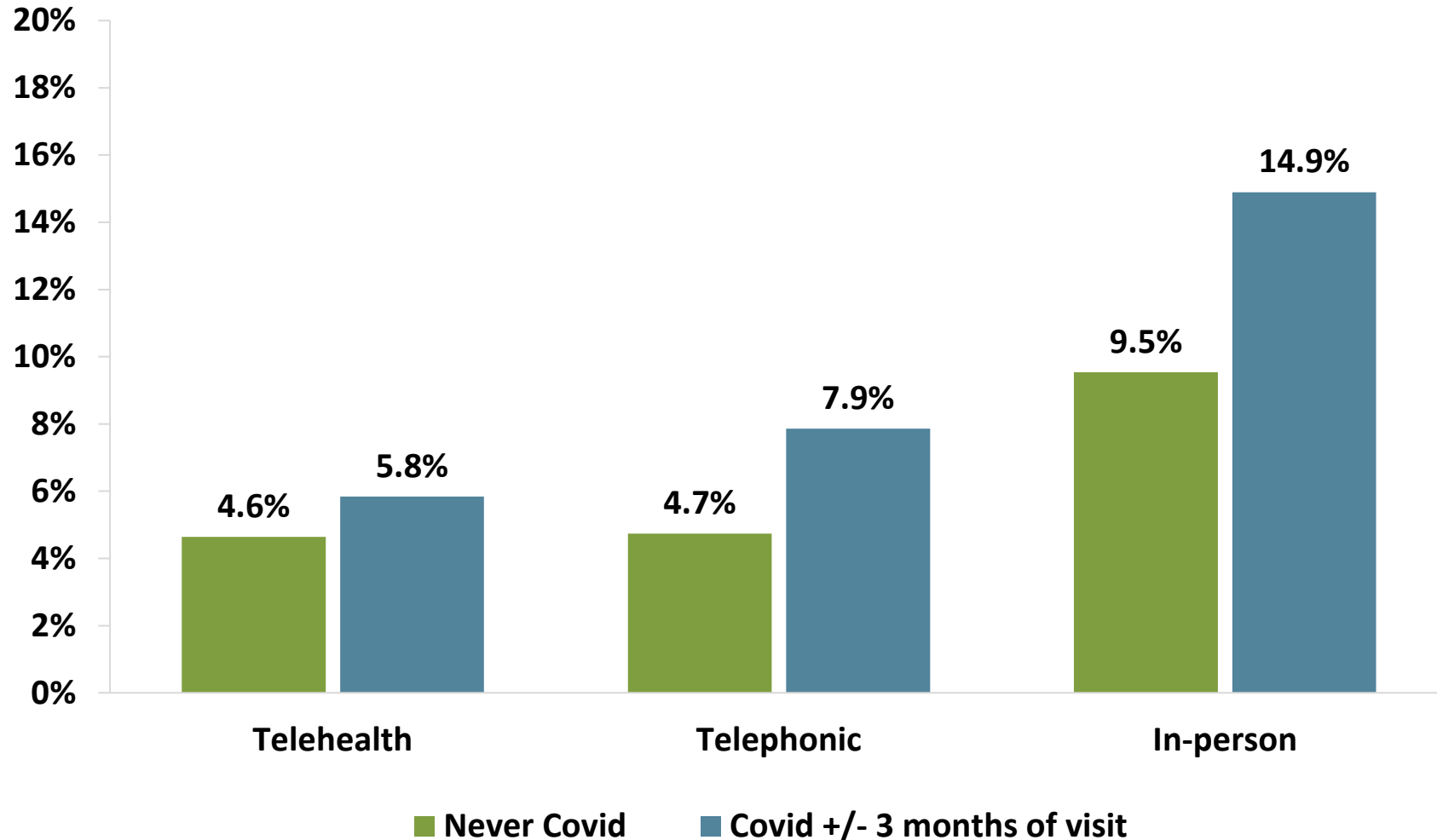
Telehealth Used by Children



- The relative probability of telehealth use by adult members was lower for Black (between 1.0-1.5 lower odds compared to non-Black members), Hispanic (between 2.8-3.5 lower odds compared to non-Hispanic members) and rural dwelling members (3.2-4.3 lower odds compared to urban members).
- Members with chronic conditions had a higher relative probability of telehealth use (between 14.1 and 25.1 higher odds compared to members without chronic conditions) (noting that this probability dropped over time, particularly in 2022).
- Similar trends were observed for children.

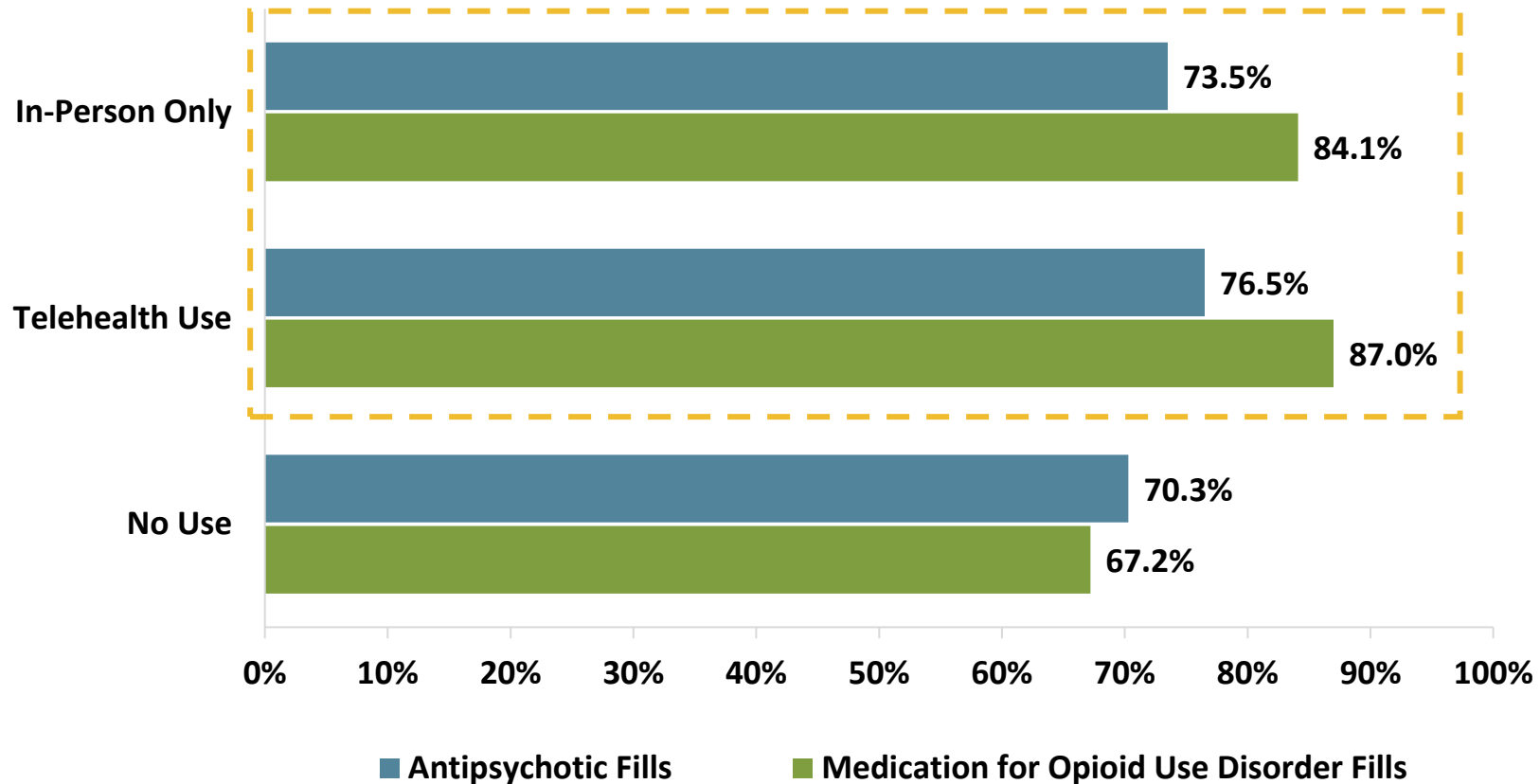
Access and Utilization Impact

Association of Visit Modality with ED Discharge, by COVID Status



- Outpatient visits conducted via telehealth or telephone were **not** correlated with increased ED discharge rates compared to in-person services, and, in fact, showed lower association with ED use (4.6% telehealth and 4.7% telephonic versus 9.5% in-person).
- These results hold true even for members who had COVID-19 within three months of the visit (5.8% telehealth and 7.9% telephonic versus 14.9% in-person).

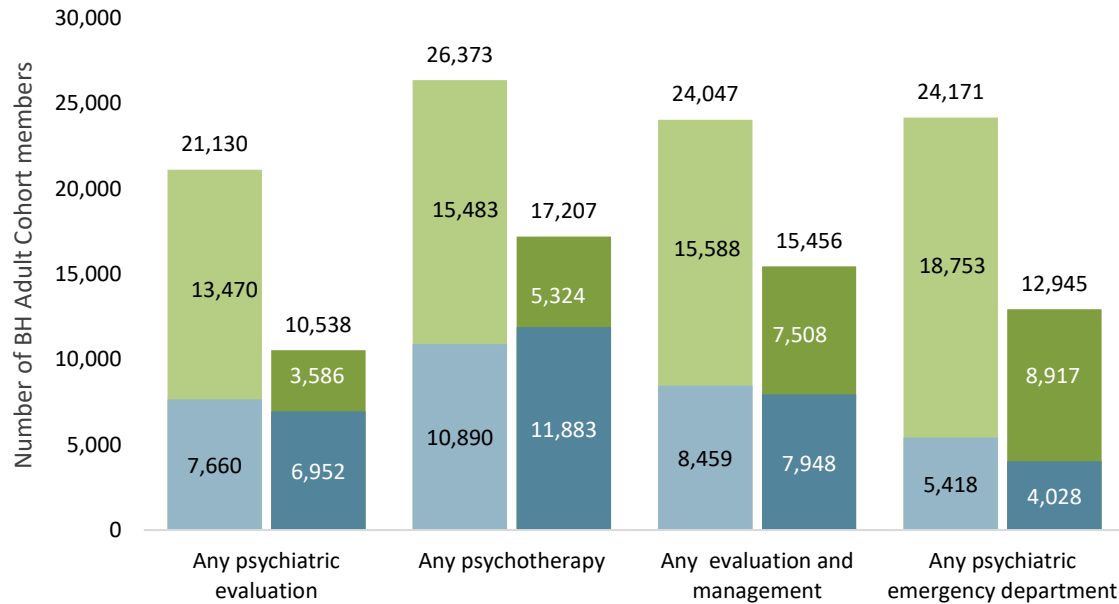
Relationship Between Modality of Care and Filling of Prescriptions for Antipsychotic and Opioid Use Disorder Medications



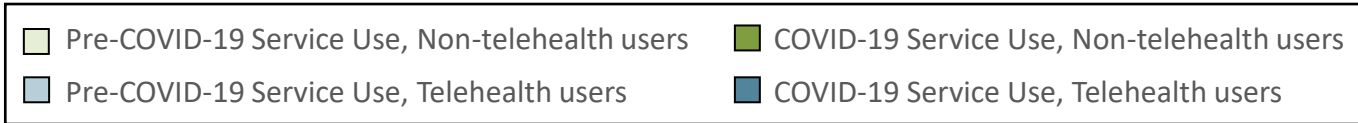
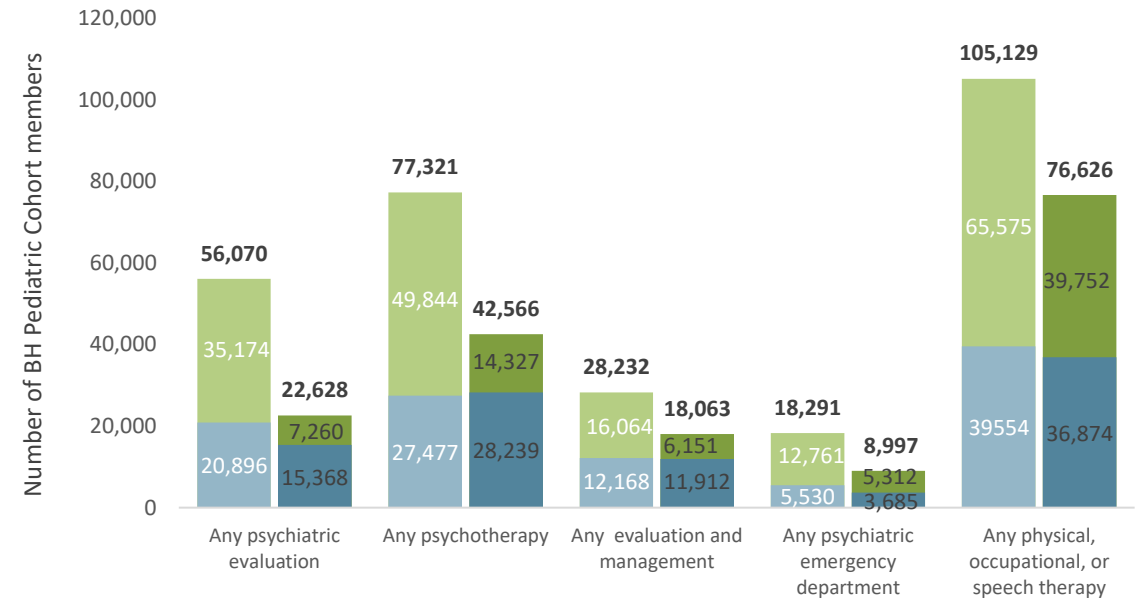
- Telehealth may help members maintain access to needed behavioral health-related prescriptions, to include antipsychotic medication and medications to support treatment of Opioid Use Disorder (OUD).
- Members who accessed care via telehealth were more likely to fill their antipsychotic (76.5%) or OUD (87%) medications compared to individuals who accessed in-person care (73.5% for antipsychotics, 84.1% for OUD) or no care (70.3% for antipsychotics, 67.2% for OUD), respectively.

Changes in Behavioral Health Service Use During the COVID-19 Pandemic by Telehealth User Status

Changes in Adult Behavioral Health Service Use



Changes in Pediatric Behavioral Health Service Use



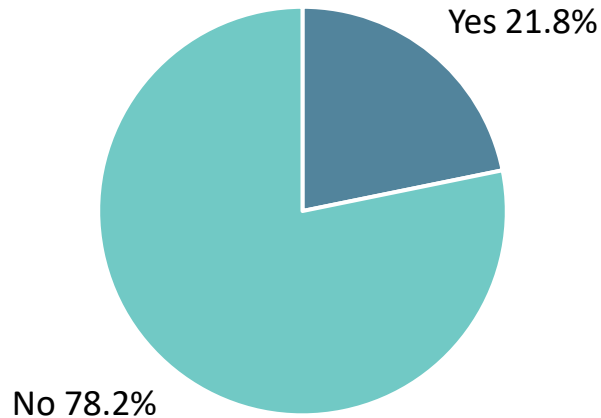
Telehealth may help both adults and children maintain access to behavioral health services (e.g., psychiatric evaluations, psychotherapy, evaluation and management services, psychiatric emergency department services). Among members who used telehealth during the COVID-19 pandemic, a greater proportion maintained their baseline, pre-COVID behavioral health utilization levels compared to members who did not use telehealth.

Member Experience and Equity *(Based on 2022 Consumer Assessment Health Plan Survey (CAHPS))*

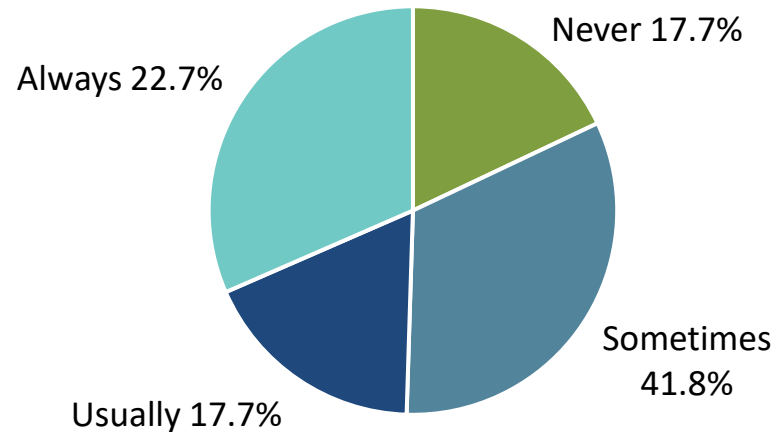
**Telehealth-related findings from the 2021
CAHPS Survey are available in the Appendix.**

Responses on Telehealth Offered and Utilized in the Last Six Months

Respondents Offered Telehealth Instead of an In-Person Appointment



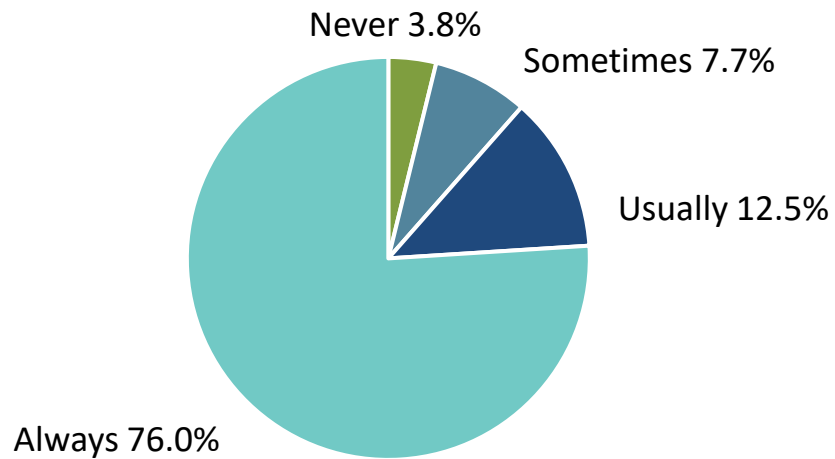
Respondents Who Utilized Telehealth When Offered



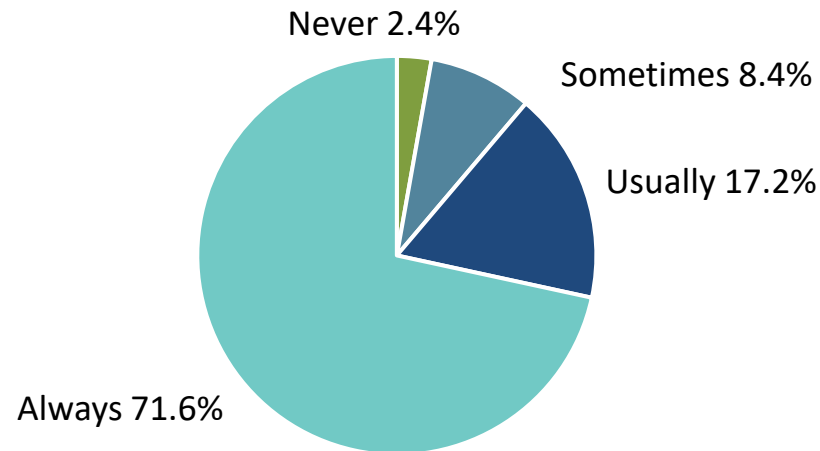
- In 2022, 21.8% of members were offered the option to receive services via telehealth in 2022 (down from 34% in 2021, see Appendix).
- Of members who were offered a telehealth appointment, only 18% would never utilize the modality (similar to the 2021 result).
- Over half of members (~60%) received care delivered in-person or at other times via telehealth (compared to ~50% in 2021). 23% always opted for telehealth when offered (down from 31% in 2021).

Responses on Telehealth Perceptions of Care in the Last Six Months

How Often Were Members' Questions Answered?

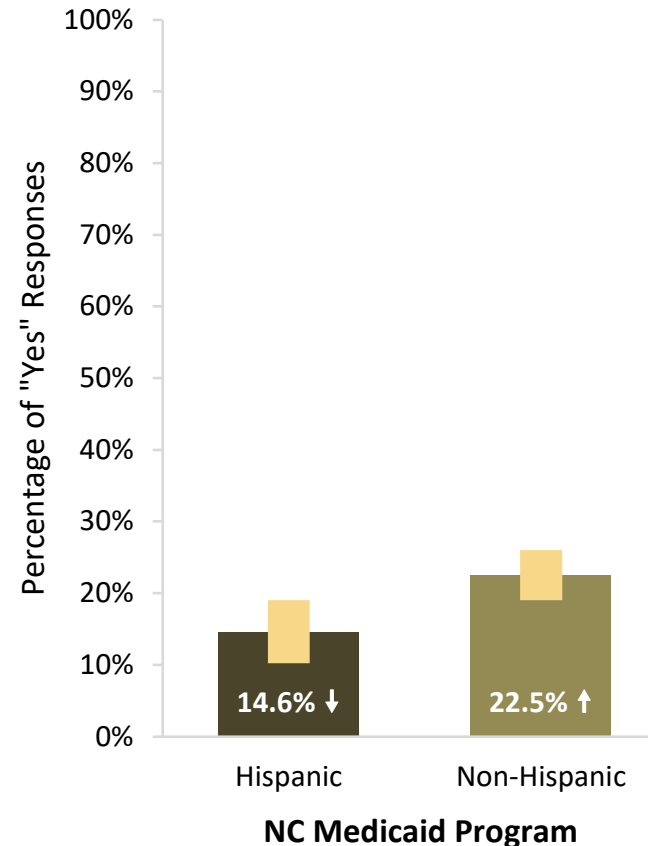
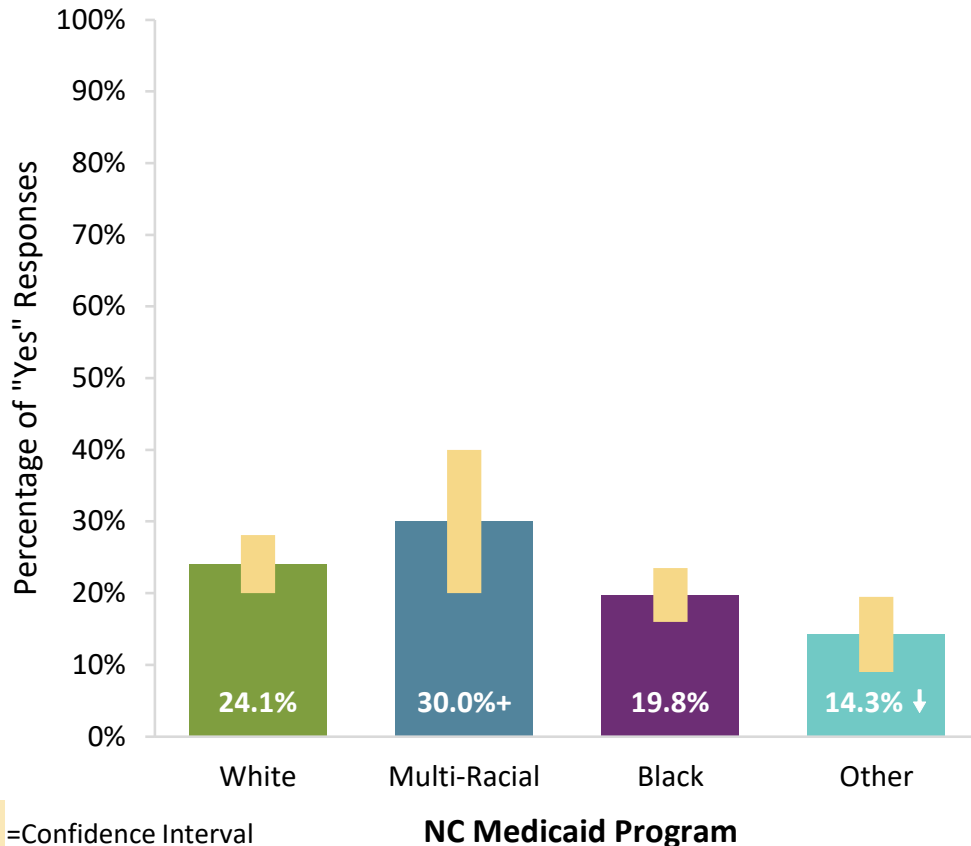


How Often Did Members Report Comfort About How to Take Care of Health at the End of the Visit



Nearly all members surveyed reported that their questions were answered (76%) and that they felt they could take care of their health at the end of the telehealth visit (71.6%)

Telehealth Offered in the Last Six Months Instead of an In-Person Appointment, by Race and Ethnicity



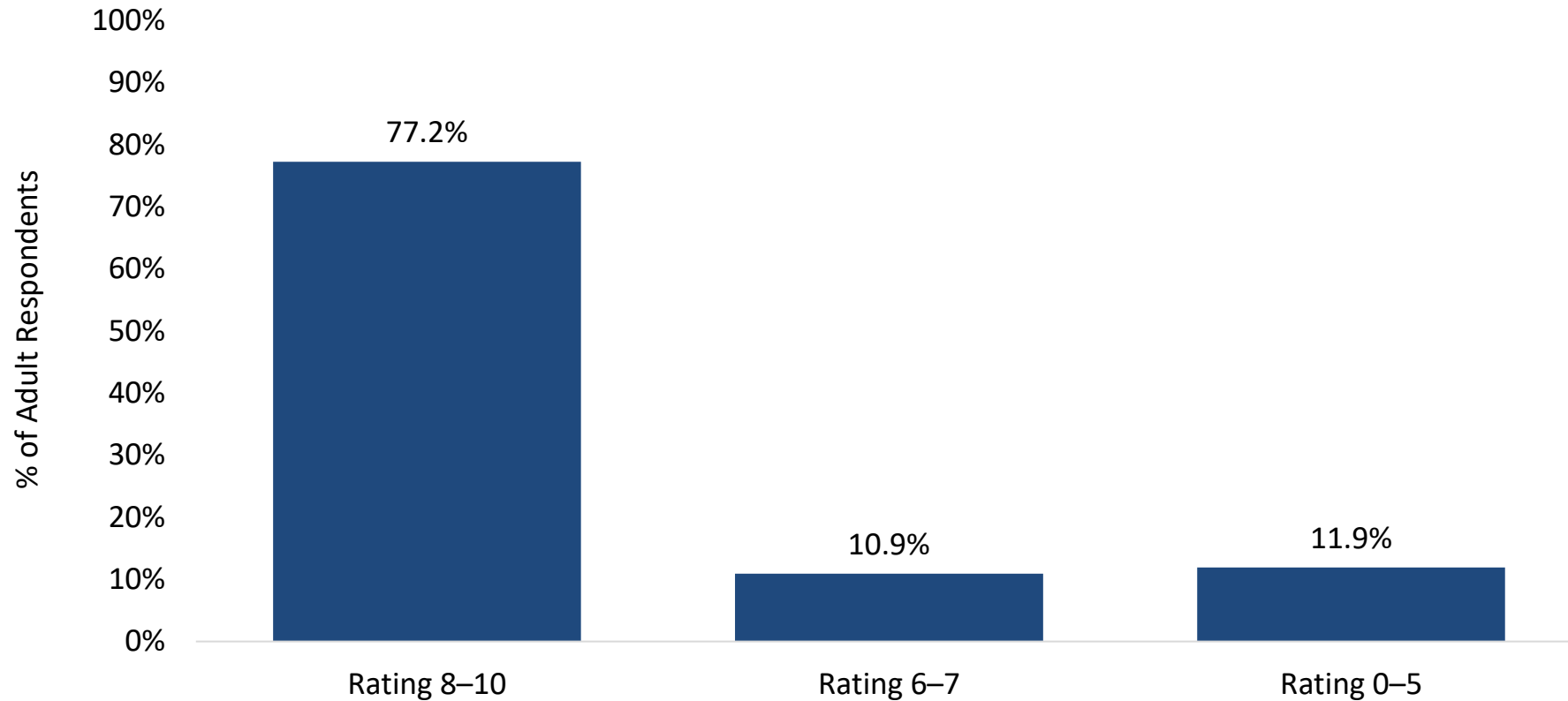
- Though the data does not show a significant difference between telehealth offer rates for Black and White members, there is a meaningful gap (19.8% Black vs. 24.1% White).
- There is a significant difference in offer rates for Hispanic versus non-Hispanic populations (14.6% Hispanic versus 22.5% Non-Hispanic).

↓ Indicates the demographic category score is significantly lower than the score of White. If no significant differences were found, no indicator appears on the figure.
 + Indicates fewer than 100 responses. Caution should be exercised when evaluating these results.

↑ Indicates the demographic category score is significantly higher than the demographic average score.
 ↓ Indicates the demographic category score is significantly lower than the demographic average score.

Experience with Overall Healthcare Received

Using any number from 0 to 10, where 0 is the worst health care possible and 10 is the best health care possible, what number would you use to rate all your health care in the last 6 months (among respondents who received telehealth services)?



Approximately 88% of members who received telehealth services reported high rates of satisfaction with care received (above 6). Only a small percentage (11.9%) reported ratings below 6.

Percent of Respondents Who Reported Technical Problems Using Telehealth

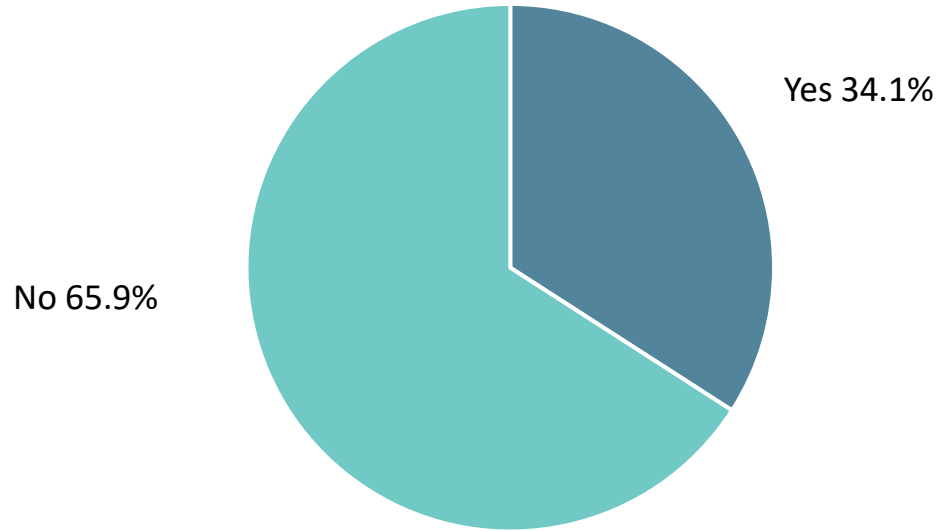
Responses	% (N/D)
Respondents may have selected more than one answer	
No technical issues	65.6% (63/96)
Member had trouble with phone	16.7% (16/96)
Doctor/Provider had trouble with computer	11.5% (11/96)
Results based on fewer than 11 responses were suppressed and noted with an "S." Results presented are based on respondents that answered "Sometimes," "Usually," or "Always" to choosing a telehealth appointment when offered. Respondents may choose more than one response to this question; therefore, percentages will not total 100%. (N/D) Indicates numerator and denominator.	

The majority of members reported not experiencing technical issues while receiving services via telehealth (65.6%). A minority of members reported that their provider experienced difficulties with their computer or phone (16.7% and 11.5% respectively).

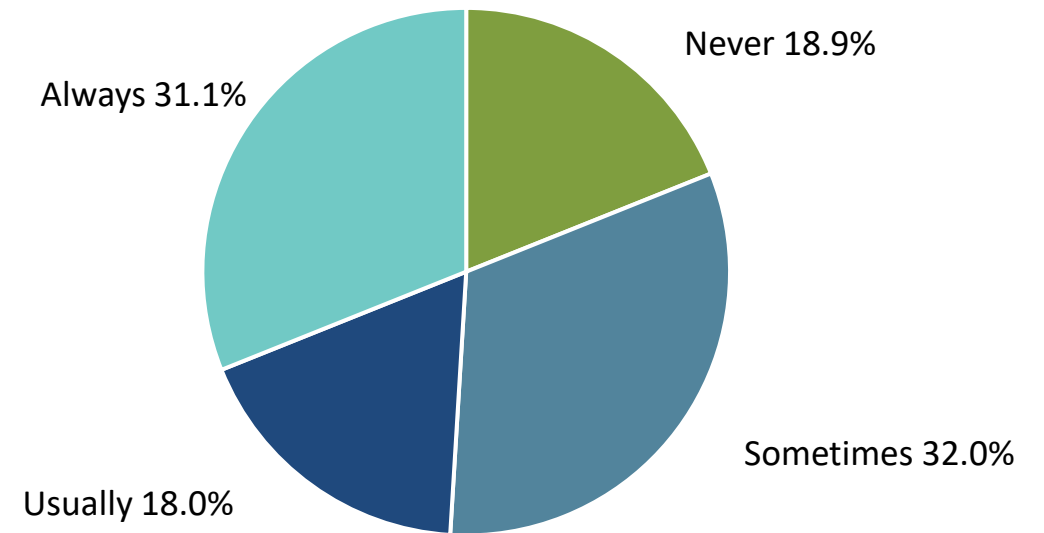
Appendix

2021 CAHPS Survey Results

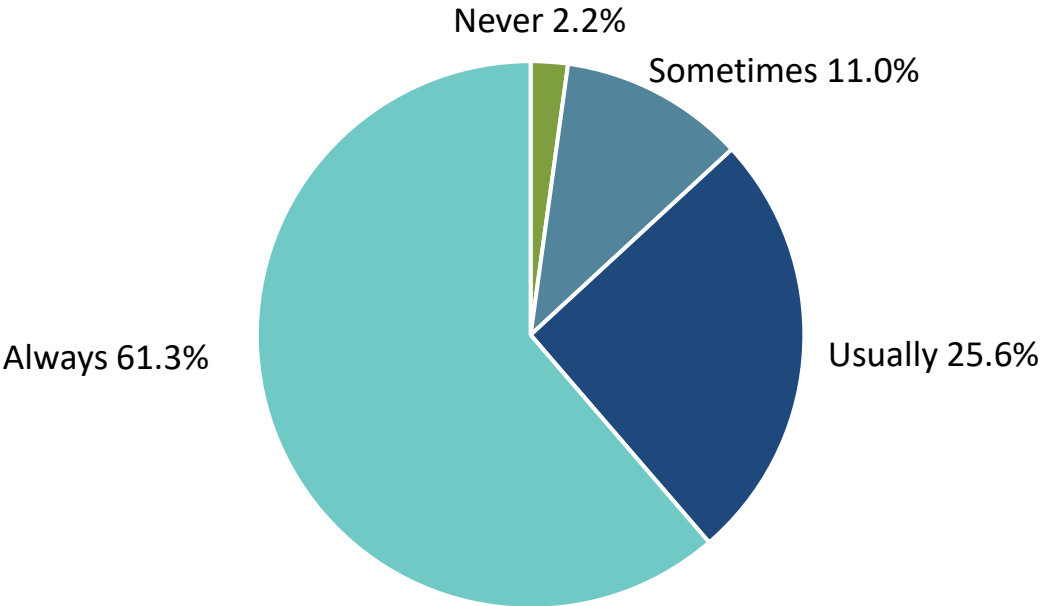
Respondents Offered Telehealth Instead of an In-Person Appointment



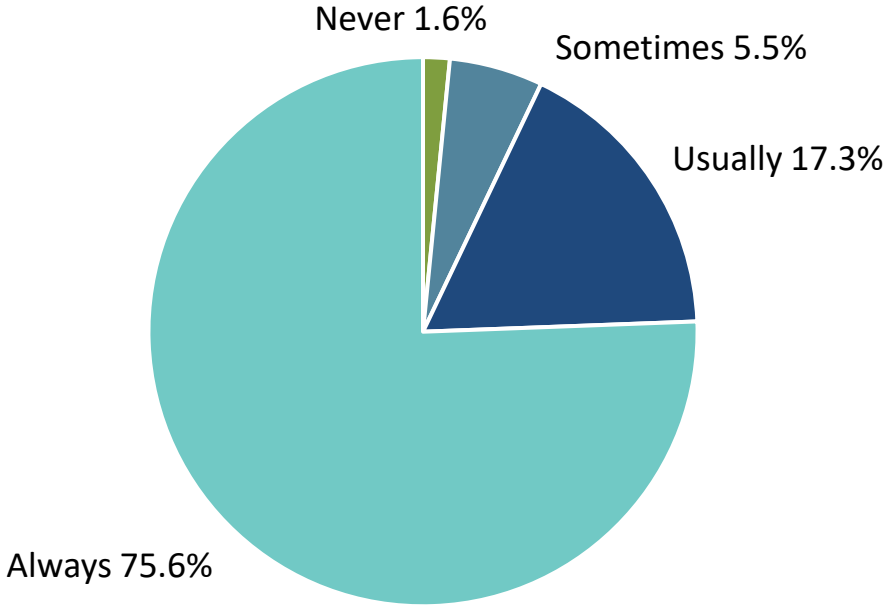
Respondents Who Utilized Telehealth When Offered



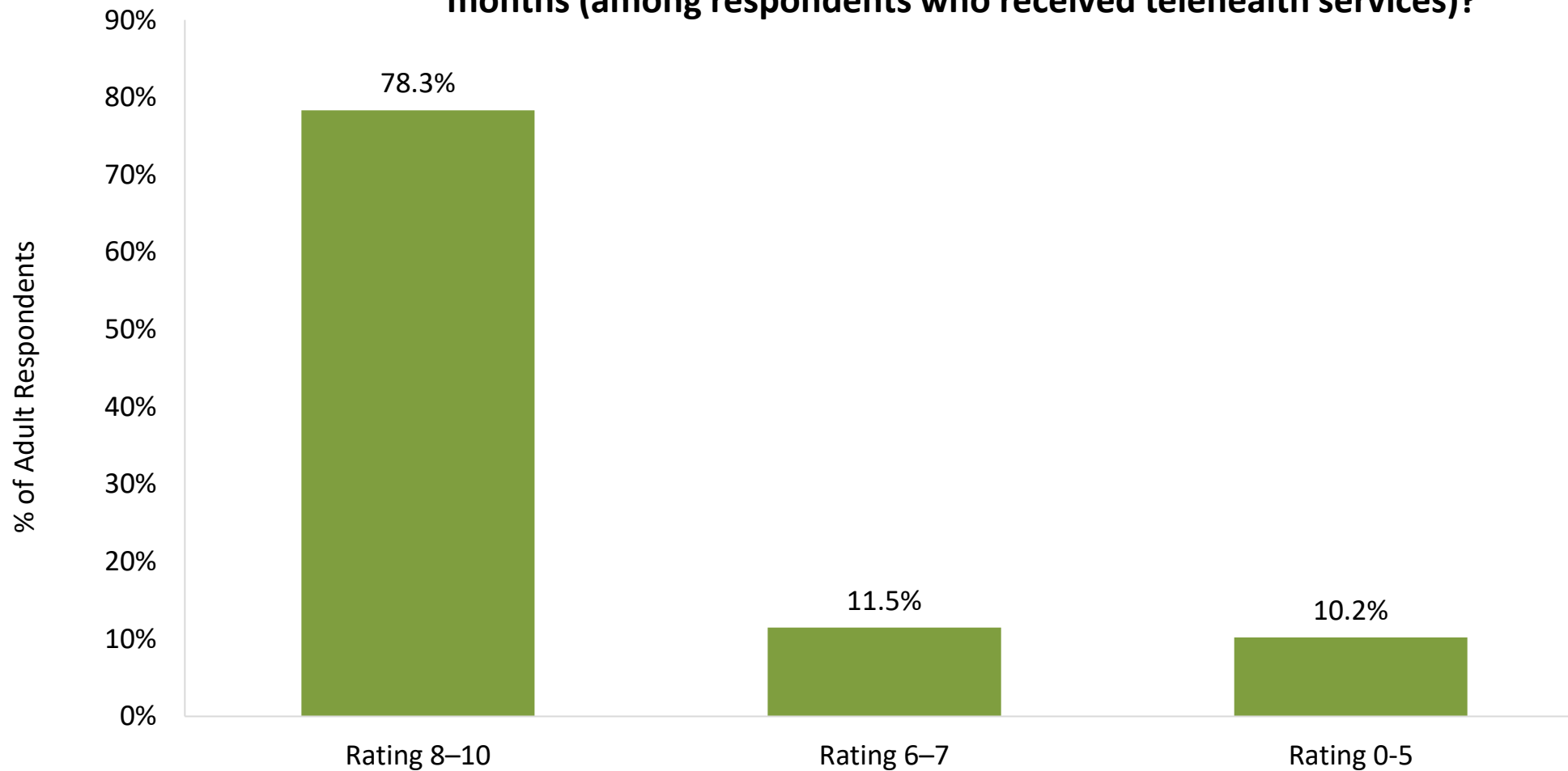
How Often Did Members Report Comfort About How to Take Care of Health at the End of the Visit



How Often Were Members' Questions Answered?



Using any number from 0 to 10, where 0 is the worst health care possible and 10 is the best health care possible, what number would you use to rate all your health care in the last 6 months (among respondents who received telehealth services)?



Percent of Respondents Who Reported Technical Problems Using Telehealth

Responses (Respondents may have selected more than one answer)	% (N/D)
No technical issues	68.9% (91/132)
Member had trouble with phone	8.3% (11/132)
Other problem	12.9% (17/132)
<p>Results presented are based on respondents that answered “Sometimes,” “Usually,” or “Always” to choosing a telehealth appointment when offered. Respondents may choose more than one response to this question; therefore, percentages will not total 100%. (N/D) Indicates numerator and denominator.</p>	

Methodological Notes

Methodology

Chart Title	Slide Number	Methodological Notes
Telehealth, Telephonic, and In-Person Claims Volume 3/8/2020 – 3/12/2023	6	Service utilization datasets are based on NC Medicaid final-day paid FFS (Fee-for-Service) and LME-MCO (Local Management Entity-Managed Care Organization) encounters with dates of service starting January 1 forward, with weeks defined as starting on Sunday and Ending on Saturday. Both Health Plans, Medicaid, and NC Health Choice are included in the analysis. The NC Medicaid Telehealth Billing Summary was used to as the master list for modality breakout into telehealth, virtual patient communication (telephonic) and general/in-person/in-office visits, in addition to referencing Medicaid COVID-19 Special Bulletins.
Telehealth as a Percent of Professional Claims by Age Group 3/1/2020–12/31/2022	7	Service utilization datasets are based on NC Medicaid final-day paid FFS (Fee-for-Service) and LME-MCO (Local Management Entity-Managed Care Organization) encounters with dates of service starting January 1 forward, with weeks defined as starting on Sunday and Ending on Saturday. Both Health Plans, Medicaid, and NC Health Choice are included in the analysis. The NC Medicaid Telehealth Billing Summary was used to as the master list for modality breakout into telehealth, virtual patient communication (telephonic) and general/in-person/in-office visits, in addition to referencing Medicaid COVID-19 Special Bulletins. Telehealth claims were then represented as a proportion of the total claims submitted for that service week. Member demographic data was used to create stratifications by age and race.
Telehealth as a Proportion of Total Care by Race 03/01/2020 – 12/31/2022	8	
Relative Probability of Telehealth Use by Adults and Children Over Time – March 2020 to December 2022	9	Claims and encounter data from March 2020-Dec 2022 were collapsed into four time periods for each person (3/2020 – 10/2020, 11/2020-6/2021, 6/2021 – 1/2022, and 2/2022 – 12/2022). Data was coded according to whether the beneficiary had any telehealth use during the time period, had no telehealth use but had outpatient use during the time period, or didn't have either telehealth or outpatient use during the time period. Race, ethnicity, urban/rural status and the presence of one or more chronic conditions using the Chronic Disease Payment System (CDPS) grouper were identified during each time period. We ran a set of logistic regression models on the use of telehealth as a function of Black race, Hispanic ethnicity, Rural residence, and the presence of one or more chronic conditions separately for each time period, and generated average marginal effects, which express the difference in probability of telehealth use for each group compared to the referent population (e.g., Black vs non-Black, urban vs rural).
Association of Visit Modality with ED Discharge, by COVID Status	11	Claims and encounter data from Jan 2019 – Jan 2022. We identified individuals who ever had a COVID diagnosis and recorded the date of the first COVID diagnosis (with all caveats about what COVID diagnoses in claims/encounter may be picking up). We ran a linear probability model of Emergency Department use in the month as a function of the type of telehealth use (telephonic, telehealth, in-person, or no outpatient use) in the month, controlling for Black race, Hispanic ethnicity, sex, age (in quadratic format), urban status, CDPS indicators, and time (in quadratic format), separately for individuals with a COVID diagnosis and a 5% random sample of those without a COVID diagnosis.
Probability of Medication Use Over the Course of the COVID-19 Pandemic	12	We used claims data Sept Jan 2019 – Nov 2020 for beneficiaries eligible for full benefits. Duals were excluded. We coded people on their use of service during the stay-at-home orders, indicating whether they used any telehealth service, used any OP service that was not coded as telehealth, or used neither in-person or telehealth services. We ran instrumental variables / two-stage residual inclusion binary models of antipsychotic fills in the first six months of the PHE among those who had at least one antipsychotic fill in the six months prior to the pandemic, and MOUD receipt in the first six months of the PHE among those who had received MOUD in the six months prior to the pandemic in order to control for the non-random selection in type of service received during stay-at-home orders time period.

Methodology

Chart Title	Slide Number	Methodological Notes
Changes in Behavioral Health Service Use During the COVID-19 Pandemic by Telehealth User Status	13	<p>We used claims data from 2019-2021 to identify youth <21 years and adult 21+ years of age diagnosed with a behavioral health (BH) condition and at least one BH-specific visit in the year prior to COVID-19, defined as March 1, 2019 to February 28, 2020. BH conditions were identified by searching all claims in the pre-COVID-19 time period for at least one inpatient or two outpatient visits on separate days with a BH diagnosis in any position on the claim. BH -specific service use was defined as having at least one claim for a BH service. We also required continuous enrollment during the study period (March 1, 2019 to March 31, 2021). We excluded those who were older than 64 years old, dually enrolled in Medicare at any point during the study period, missing county of residence, or institutionalized long-term (100 or more cumulative days in a long-term care facility, defined as place of service codes 13, 14, 32, 33, 51, 54-56, or 61). We additionally excluded those who used 1915(c) waiver services or intensive BH services (residential, intensive outpatient/partial hospitalization, intensive in-home, or other intensive services) at any point, as we expected their service and telehealth use would differ markedly from the rest of the BH cohort.</p> <p>Service use was assessed in two time periods: pre-COVID-19 (March 1, 2019 to February 28, 2020) and during COVID-19 (April 1, 2020 to March 31, 2021). We blanked the month of March 2020 due to the rapidly changing policies and logistics that occurred during that month in the United States. We identified telehealth use for BH-specific services by the procedure modifier codes GT, CR, and/or KX on those claims with CPT codes eligible for telehealth. The CR modifier used to identify telehealth could also be used for other COVID-related changes (e.g., changes in frequency requirements). Thus some visits coded as “audio only telehealth” may have been non-telehealth visits; therefore, our analysis may overestimate telehealth use and audio-only telehealth use specifically. We examined the possible extent of this and found it to be minimal. Telehealth users were identified as those with at least one BH -specific service delivered via telehealth during COVID-19. The number of telehealth visits and number of visits eligible for telehealth (based on CPT codes) were calculated per person by summing a maximum of one per day.</p>

Methodology

Chart Title	Methodological Notes
CAHPS Survey Items (slides 15-19; Appendix 2021 CAHPS results)	<p>All results for all CAHPS survey items have been weighted using the following methodology to ensure appropriate representativeness for all populations surveyed: Eligible population files were used to determine the eligible population size for each PHP, EBCI Tribal Option, and Medicaid Direct. A general sample probability weight was calculated for each general sample/population respondent using the formulas below.</p> <p>Where:</p> <p>GP_r = probability for respondent r from the general PHP sample/population</p> <p>GSS_p = general sample size for PHP/population p</p> <p>EP_p = eligible population size for PHP/population p</p> <p>w_{gsr} = weight for general sample respondent/population r</p> <p>Results for the adult and child populations were weighted separately.</p> <p>In all analyses (except for race and ethnicity comparisons) results from the Black and Hispanic oversamples were not used.</p> $GP_r = \frac{GSS_p}{EP_p}$ $w_{gsr} = \frac{1}{GP_r}$ <p>CAHPS Responses on Telehealth Offered in the Last Six Months</p> <ul style="list-style-type: none"> Member respondents were provided the following information preceding the telehealth questions within the CAHPS survey: <i>These questions ask about the care you got other than in person. These health care visits could be conducted using video by computer or mobile phone (e.g., Zoom, Facetime, Doxy.me), or a scheduled phone call with sound only (i.e., no video).</i> Respondents were then asked, <i>“In the last 6 months, were you offered a telehealth appointment instead of an in-person appointment?”</i>. If they answered <i>“No”</i>, they were instructed to skip all telehealth questions and proceed to the next section of survey items. If they answered <i>“Yes”</i>, they were asked, <i>“In the last 6 months, how often did you choose to use telehealth for your health care when it was offered by a doctor or other health provider?”</i>. If they answered <i>“Never”</i>, they were instructed to skip all telehealth questions and proceed to the next section of survey items. If they answered <i>“Sometimes”</i>, <i>“Usually”</i>, or <i>“Always”</i>, they were able to proceed with the remainder of telehealth survey questions. <u>Thus, all following telehealth questions assume that the respondents utilized telehealth services at least once.</u> Rates were determined for the telehealth questions by taking the number of responses per response option and dividing by the total number of responses per survey item. The only questions where this did not occur are the following: <ul style="list-style-type: none"> Respondents were asked, <i>“In the last 6 months, how often did your doctor or other health provider answer your questions during the telehealth visit?”</i>. Respondents had the option to select <i>“I did not have any questions that I needed answered”</i>, and if so, they were filtered out of the calculations for determining the frequency in which member respondents had their questions answered at a telehealth appointment. Respondents were asked, <i>“What technical problems did you have? Check all that apply.”</i>. As noted in the question, respondents could select more than one response option, therefore, rate percentages will not total 100%. <p>CAHPS Responses on Telehealth Offered in the Last Six Months Instead of an In Person Appointment, by Race and Ethnicity</p> <ul style="list-style-type: none"> Using results from the general samples and the Black and Hispanic oversamples where applicable, scores were stratified by race and ethnicity. Stratification was based on responses to the self-identified race and ethnicity questions, and were categorized as White, Black, Multi-Racial, and Other. For this analysis, the Other category includes: Asian, Native Hawaiian or other Pacific Islander, American Indian or Alaska Native, and Other. Ethnicity was categorized as Hispanic and Non-Hispanic using the self-identified results from the ethnicity questions. The ratings for Black, Multi-Racial, and Other respondents were compared to the ratings of White respondents. The ratings for Hispanic respondents and Non-Hispanic respondents were compared to each other using an average for the demographic category. For tests of significance, two types of hypothesis tests were applied to the results. First, a global F test was calculated to determine whether the difference between the comparison populations’ ratings was statistically significant. The F statistic was determined using the formula below: If the F test demonstrated differences (i.e., p value < 0.05), then a t test was performed. The t test determined whether each demographic category’s rating was statistically significantly different from the comparator (i.e., white respondents for race comparisons and the average of the Hispanic and Non-Hispanic demographic category for ethnicity comparisons). The equation for the differences is as follows: This analytic approach follows AHRQ’s recommended methodology for identifying statistically significant performance differences. <p>2022/2021 CAHPS Adult Patient Experience with Overall Healthcare Received</p> <p>Rates for this figure were determined by looking at responses among members who rated all their healthcare <u>and</u> responded to the survey question regarding if they had used telehealth services or not. Ratings of all healthcare were parsed into three categories:</p> <ul style="list-style-type: none"> Rating of 8-10 (i.e., positive rating) Rating of 6-7 (i.e., neutral rating) Rating of 0-5 (i.e., negative rating) <ul style="list-style-type: none"> Then, results were stratified based on if the member respondent reported utilizing telehealth at least once or not at all.