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Telemedicine Use in Children Aged 0–17 Years: United States, July–December 2020

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Abstract

Objective—This report presents national estimates of telemedicine use for U.S. children in the 12 months before the interview, and because of the coronavirus pandemic.

Methods—Data from the National Health Interview Survey collected during July–December 2020 were used to estimate telemedicine use for children aged 0–17 years. Beginning in July 2020, the parent or adult who is knowledgeable and responsible for the Sample Child’s health care was asked whether the child had an appointment with a doctor, nurse, or other health professional by video or by phone during the past 12 months. Those who answered yes were asked whether any of these appointments were done by video or by phone because of the coronavirus pandemic. Estimates for both measures were examined by sociodemographic and geographic characteristics and selected health conditions.

Results—Approximately 12.6 million children—corresponding to 17.5% of children aged 0–17 years—used telemedicine in the past 12 months (a period that included both time before and during the coronavirus pandemic). Telemedicine use varied by sociodemographic and geographic characteristics, including age of the child, family income, and region of the country. Approximately 10.2 million children—corresponding to 14.1% of children aged 0–17 years—used telemedicine in 2020 because of the pandemic. Telemedicine use because of the pandemic varied by sociodemographic characteristics, including education of the parents living with the child and geographic location, specifically region of the country and urbanization level of residence. Telemedicine use in the past 12 months and because of the pandemic was higher for children with current asthma, a developmental condition, and disability.

Keywords: COVID-19 pandemic • health care utilization • telehealth • National Health Interview Survey

Introduction

Telemedicine is a way for health care providers to deliver clinical health care to patients remotely through a computer or telephone, without an in-person office visit (1). Although telemedicine is often used interchangeably with the term “telehealth,” telehealth is a broader term that includes both telemedicine and the delivery of nonclinical services such as provider meetings and educational training (2,3). Viewed as a cost-effective alternative to more traditional face-to-face health care services, telemedicine has been used since at least the late 1990s for remote monitoring of chronic conditions (4,5), and to help improve physician access to and health care outcomes in rural communities for patients with a wide range of health conditions (6,7). Additionally, telemedicine has played a critical role in administering health care during natural disasters and public health emergencies, such as the 2014 Ebola outbreak (8) and Hurricanes Harvey and Irma (9). Most recently, in 2020, the Centers for Disease Control and Prevention issued guidance for health care providers to adopt social distancing practices in clinical settings to reduce the spread of COVID-19, and specifically recommended that health



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care facilities and providers offer clinical services virtually through processes including telemedicine and telehealth (10).

In pediatric settings, based on pre-pandemic reports, telemedicine has helped to address the unique health care needs of children and adolescents, such as providing access to care for children with special health care needs (11,12), increasing access to health care for children living in rural or clinically underserved communities (13), and maintaining school-based asthma management (14). The national response to the COVID-19 pandemic has included changes in U.S. laws determining reimbursement for virtual health care services (15), which expanded use of telemedicine across the United States and redefined how health care is delivered (16). There are few population-based estimates of telemedicine use, particularly for vulnerable populations such as children (17). This report provides nationally representative estimates of telemedicine use in children aged 0–17 years, using data from the National Health Interview Survey (NHIS) for July–December 2020. Prevalence estimates of child telemedicine use are presented for the 12 months before the interview, and because of reasons related to the coronavirus pandemic.

Methods

Data source

Data from NHIS collected during July–December 2020 were used to generate the estimates presented in this report. NHIS is a nationally representative household survey of the U.S. civilian noninstitutionalized population. It is conducted continuously throughout the year by the National Center for Health Statistics (NCHS). Interviews are typically conducted in respondents' homes, but follow-ups to complete interviews may be conducted over the telephone. One "Sample Adult" aged 18 and over and one "Sample Child" aged 17 years and under (if any children live in the household) are randomly selected from each household to provide information about various health topics. Information about the

Sample Child is collected from a parent or adult who is knowledgeable about and responsible for the health care of the Sample Child.

Data collection procedures in 2020 were disrupted because of the COVID-19 pandemic: From April to June, all interviews were conducted by telephone only, and from July to December, interviews were attempted by telephone first with follow-ups to complete interviews by personal visit. Additionally, starting in August 2020, changes in sampling procedures to reinterview Sample Adults who participated in the 2019 NHIS resulted in a smaller-than-usual annual number of Sample Child interviews (18). During 2020, data for 5,790 Sample Child interviews were collected, and the Sample Child response rate was 47.8%. For more information about NHIS, visit: <https://www.cdc.gov/nchs/nhis.htm>.

Measures

Telemedicine use

Beginning in July 2020, NHIS added several questions in response to the COVID-19 pandemic. Two of the questions added were about the Sample Child's use of telemedicine: 1) whether the Sample Child had an appointment with a doctor, nurse, or other health professional by video or by phone during the past 12 months; and for those who responded yes, 2) whether any of the Sample Child's appointments by video or by phone were because of reasons related to the coronavirus pandemic. It is worth noting that the World Health Organization declared a COVID-19 pandemic in March 2020, so the reference period "in the past 12 months" from the time of interview (July–December 2020) used in the initial telemedicine question includes both pre-pandemic and pandemic periods. The reference period of the second telemedicine question is during the pandemic, starting in March 2020.

Selected sociodemographic and geographic characteristics

Family income—Based on the ratio of a family's income in the previous calendar year to the appropriate poverty

threshold (given the family's size and number of children) defined by the U.S. Census Bureau. Imputed income was used when family income was not provided.

Parental education level—Based on the parent with the highest level of education living with the Sample Child, regardless of that parent's age.

Race and Hispanic origin—Based on responses to two questions that determine Hispanic or Latino origin and race. Children categorized as Hispanic may be of any race or combination of races. Children categorized as non-Hispanic White, non-Hispanic Black, or non-Hispanic Asian indicated one race only. Estimates for children of another race or of multiple races are not shown due to sample size limitations.

Region—Based on four regions used by the U.S. Census Bureau, which groups states and the District of Columbia as: 1) Northeast (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont); 2) Midwest (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin); 3) South (Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia); and 4) West (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming).

Urbanization level—Categorized by collapsing the 2013 NCHS Urban–Rural Classification Scheme for Counties (19) into three areas: 1) large metropolitan areas, which are central and fringe counties (or county equivalents) in metropolitan statistical areas (MSAs) of 1 million or more people; 2) medium and small metropolitan areas, which are counties (or county equivalents) in MSAs of 250,000–999,999 people and counties in MSAs of less than 250,000 people; and 3) nonmetropolitan areas, which are counties (or county equivalents) in micropolitan statistical areas and noncore counties.

Selected chronic conditions

Current asthma—Based on a positive response to the questions asked about all Sample Children, “Has a doctor or other health professional ever told you that [child’s name] had asthma?” and “Does [child’s name] still have asthma?”

Current developmental condition—A combined measure was created based on responses to a set of separate questions about whether the Sample Child had ever been diagnosed with and currently has the following developmental condition(s): 1) attention-deficit/hyperactivity disorder or attention-deficit disorder; 2) autism, Asperger’s disorder, pervasive developmental disorder, or autism spectrum disorder; 3) intellectual disability; or 4) any other developmental delay. The first two sets of developmental conditions were asked of children aged 2–17 years, and the latter two conditions were asked of all children. The Sample Child respondents were first asked whether they had ever been told by a doctor or other health professional that the Sample Child had the condition(s) listed in 1–4, and for each question with a positive response, a follow-up question asked whether the Sample Child currently has the respective condition(s). Current developmental condition refers to children aged 2–17 years currently having at least one of these conditions.

Disability—Based on the Washington Group Short Set Composite Disability Indicator for children aged 2–4 years and 5–17 years. Children aged 2–4 years with disability is based on the responses “a lot of difficulty” or “cannot do at all” for at least one of the questions asking about the Sample Child’s difficulty seeing, hearing, walking, dexterity, communication, learning, and playing, or the response “cannot do at all” to the question about controlling behavior. Children aged 5–17 years with disability is based on the responses “a lot of difficulty” or “cannot do at all” for at least one of the questions asking about the Sample Child’s difficulty seeing, hearing, walking, self-care, communication, learning, remembering, concentrating, accepting change, controlling behavior, and making friends, or the response “daily” to questions asking how often the Sample Child feels “anxious, nervous, or worried or feels

depressed.” The combined disability measure for children aged 2–4 and 5–17 years is dichotomous, indicating presence or absence of a disability. For more information about the Washington Group on Disability Statistics, see <https://www.washingtongroup-disability.com/>.

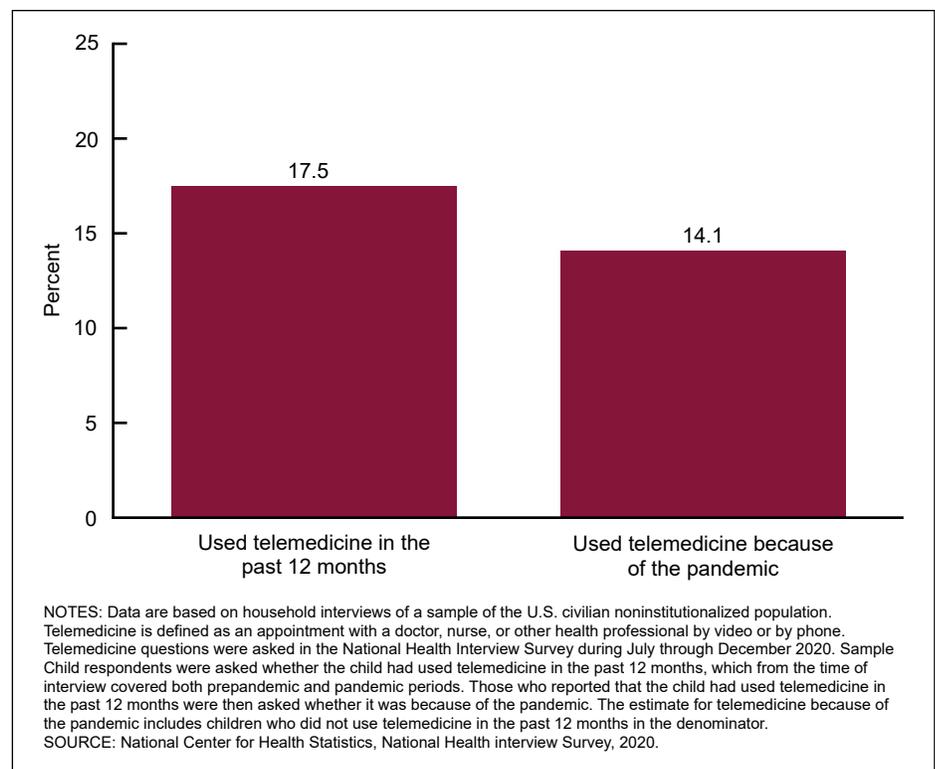
Statistical analyses

Prevalence estimates and the number of U.S. children during July–December 2020 who had used telemedicine in the past 12 months (prepandemic and during the pandemic), and the prevalence of U.S. children who used telemedicine because of the pandemic in 2020 overall and by selected sociodemographic and geographic characteristics, are presented in [Table 1](#) and [Figures 1](#) and [2](#). Telemedicine use because of the pandemic is an estimate of all sample children because it includes in the denominator those children who did not use telemedicine in the past 12 months. Among children who used telemedicine in the past 12 months, most used telemedicine because of reasons related to the coronavirus pandemic (80.9%). Prevalence estimates and the number of children who used telemedicine in the past 12 months and because of the pandemic are presented by

selected health conditions in [Table 2](#) and in [Figures 3–5](#).

Point estimates and their corresponding variances were calculated using SAS-callable SUDAAN version 11.0 (20) to account for the complex sample design of NHIS. The 95% confidence intervals were generated using the Korn–Graubard method for complex surveys. The Sample Child annual weight was set to zero for observations collected in quarters 1 and 2 (when the telemedicine questions were not asked in the survey), and the Sample Child annual weight was multiplied by two for observations collected in quarters 3 and 4 (when telemedicine questions were asked in the survey). Linear and quadratic trends by age, family income, and urbanization level were evaluated using orthogonal polynomials in logistic regression. Differences between percentages were evaluated using two-sided significance tests at the 0.05 level. Some percentage point differences that did not reach statistical significance at the 0.05 level likely due to sample size may also be discussed. All estimates presented meet NCHS data presentation standards for proportions (21).

Figure 1. Percentage of children aged 0–17 years who used telemedicine in the past 12 months, and who used telemedicine because of the COVID-19 pandemic: United States, July–December 2020



Results

Nationally, during July–December 2020, approximately 12.6 million children—corresponding to 17.5% of children aged 0–17 years—used telemedicine in the past 12 months (Table 1 and Figure 1). Telemedicine use by children did not vary by sex or race and Hispanic origin of the child. A significant quadratic trend was observed between age and telemedicine use in the past 12 months, which decreased from 19.9% in children aged 0–4 years to 14.8% in children aged 5–11 years, before increasing to 18.7% for children aged 12–17. Telemedicine use in the past 12 months was highest for children with family incomes below the federal poverty level (20.5%) and at or above 400% of the federal poverty level (19.8%), and lowest for children with family incomes at 100%–199% of the federal poverty level (13.6%). The prevalence of telemedicine use in the past 12 months was 18.3% among children with a parent who had more than a high school education, compared with 15.4% among children with a parent with high school education, GED (general equivalency diploma), or less; however, this difference was not significant. Telemedicine use by children varied by region, with children living in the Northeast more likely to have used telemedicine in the past 12 months (22.4%) than children living in the Midwest (14.7%) and the South (15.3%). Although telemedicine use in the past 12 months in children living in the West (20.1%) was comparable with telemedicine use in children living in the Northeast, differences in telemedicine use between children living in the West and those living in the Midwest or the South were not significant. Telemedicine use in the past 12 months was highest in children living in large metropolitan areas (18.6%) and lowest in children living in nonmetropolitan areas (13.1%), but a linear trend was not significant.

Nationally, approximately 10.2 million children—corresponding to 14.1% of children aged 0–17 years—used telemedicine in 2020 because of the pandemic (Table 1 and Figure 1). Children with a parent who had more than a high school education were more likely to have used telemedicine because of the

pandemic (15.4%) than children with a parent with a high school education, GED, or less (11.0%). Children living in the Northeast (20.1%) and in the West (16.0%) were more likely than children

living in the South (11.4%) to have used telemedicine because of the pandemic, while children living in the Midwest (12.6%) were less likely than children living in the Northeast to have used

Figure 2. Percentage of children aged 0–17 years who used telemedicine because of the COVID-19 pandemic, by urbanization level and region: United States, July–December 2020

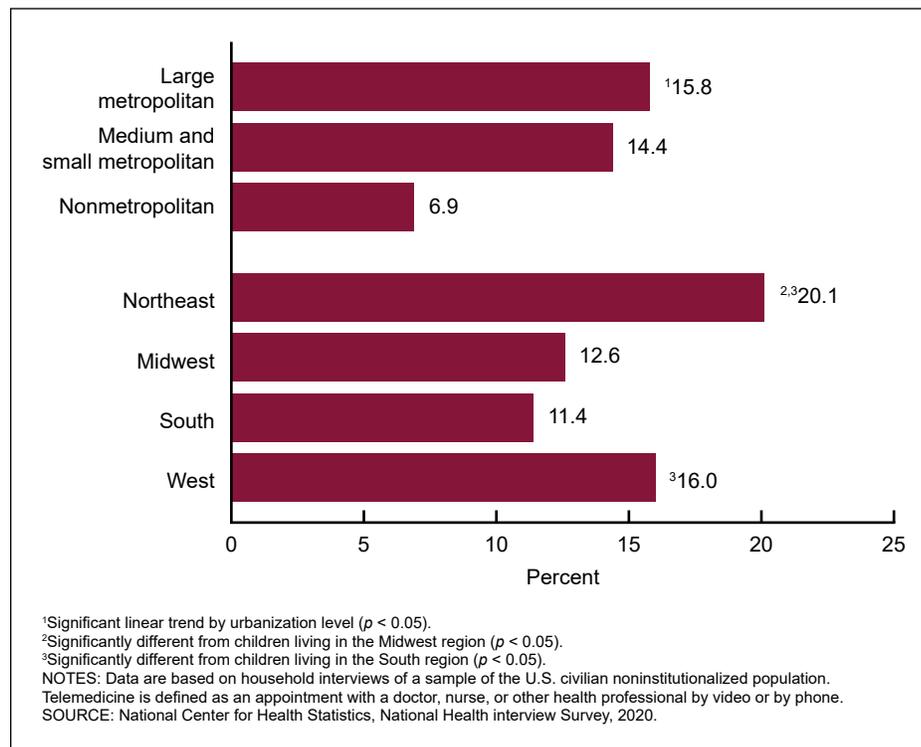
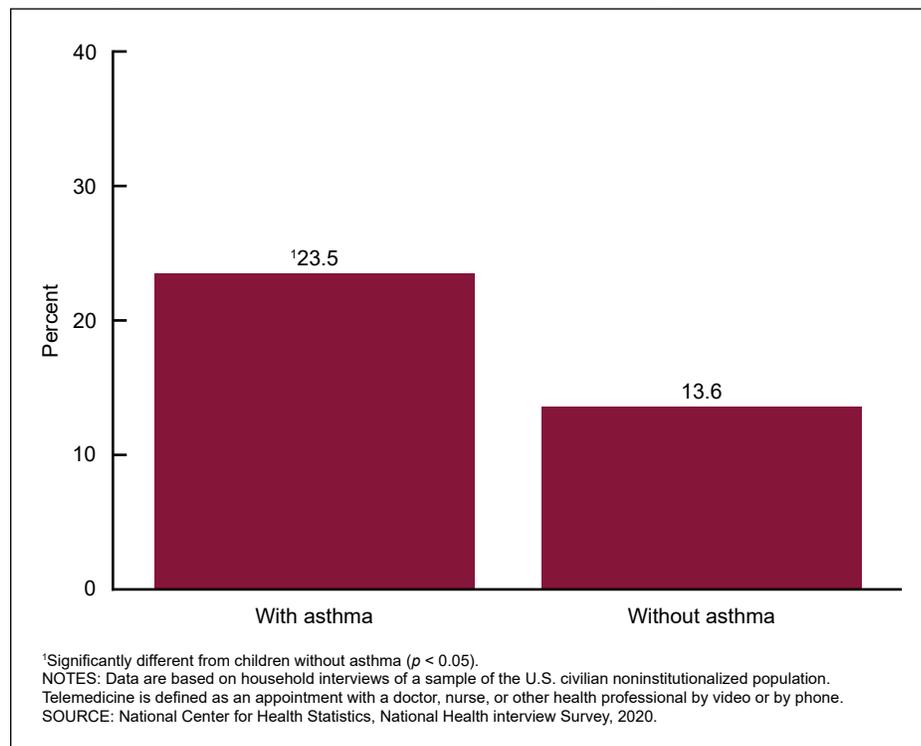


Figure 3. Percentage of children aged 0–17 years who used telemedicine because of the COVID-19 pandemic, by current asthma status: United States, July–December 2020



telemedicine because of the pandemic (Figure 2). The percentage of children who had used telemedicine because of the pandemic decreased with urbanization level, from 15.8% in large metropolitan areas to 14.4% in medium to small metropolitan areas, and then to 6.9% in nonmetropolitan areas. Telemedicine use because of the pandemic was highest for children with family incomes at or above 400% of the federal poverty level (17.2%). Differences in the percentages of children who had used telemedicine because of the pandemic were not significant by sex, Hispanic origin and race, and age.

The percentage of children aged 0–17 years who used telemedicine in the past 12 months was higher for children with current asthma (26.3%) than those without asthma (17.0%), although this difference was not significant (Table 2). Children with current asthma (23.5%) were significantly more likely to have used telemedicine because of the pandemic than children without current asthma (13.6%) (Figure 3).

Among children aged 2–17 years, 16.7% used telemedicine in the past 12 months, and 13.8% used telemedicine because of the pandemic (Table 2). Children aged 2–17 years with a current developmental condition or disability were more likely to have used telemedicine in the past 12 months and to have used telemedicine because of the pandemic compared with children without a current developmental condition or disability, respectively (Table 2). One in three (32.5%) children aged 2–17 years with a current developmental condition had used telemedicine in 2020 because of the pandemic, compared with more than 1 in 10 (11.1%) children without a developmental condition (Figure 4), a nearly threefold difference. Additionally, children aged 2–17 years with disability (29.8%) were more than two and one-half times as likely to have used telemedicine because of the pandemic compared with children without disability (11.4%) (Figure 5).

Discussion

Telemedicine questions were introduced into the NHIS survey in July 2020 as one of the emerging public

health topics affecting the United States related to the COVID-19 pandemic, which was declared in March 2020 by the World Health Organization. Telemedicine is one practice that supports

Figure 4. Percentage of children aged 2–17 years who used telemedicine because of the COVID-19 pandemic, by developmental condition: United States, July–December 2020

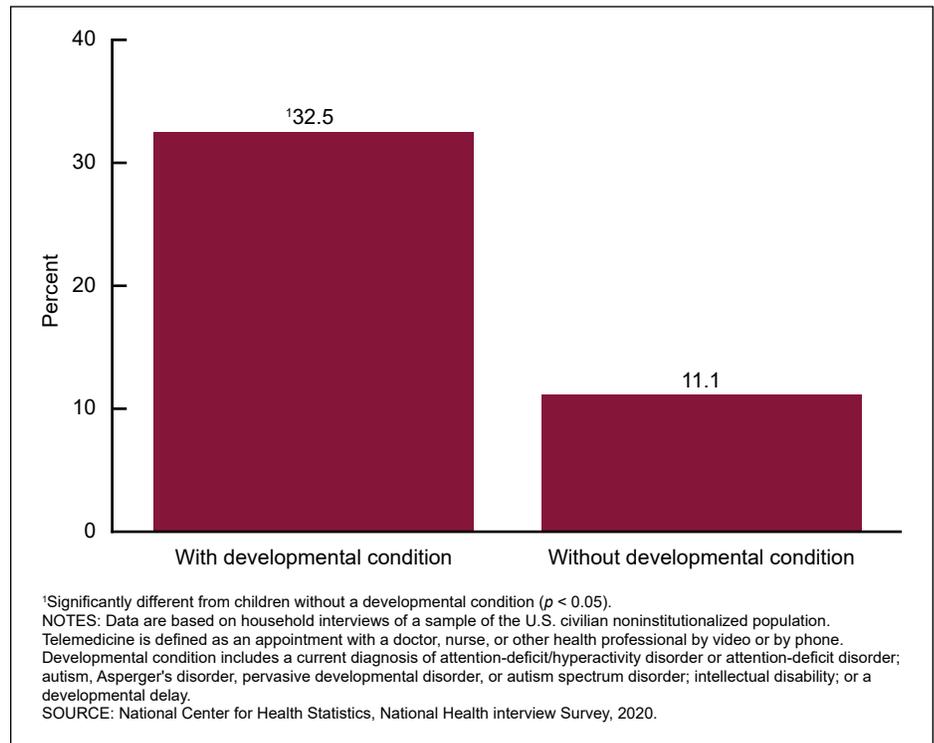
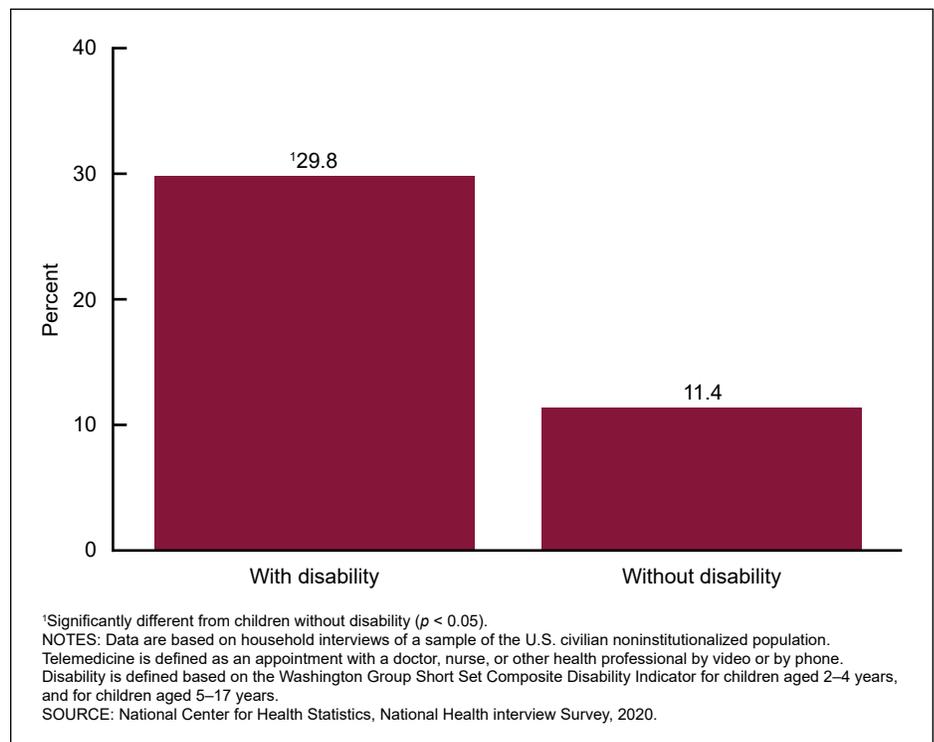


Figure 5. Percentage of children aged 2–17 years who used telemedicine because of the COVID-19 pandemic, by disability: United States, July–December 2020



social distancing and decreases contact between health care staff and other patients for the receipt of health care services (10,16). This report provides nationally representative estimates of telemedicine use in children for the 12 months preceding July–December 2020 and during the pandemic.

During July–December 2020, an estimated 12.6 million children, corresponding to about 17.5% of children aged 0–17 years, used telemedicine in the past 12 months, a period that included both prepandemic and pandemic times. Telemedicine use in the past 12 months varied by several sociodemographic characteristics, including the age of the child, family income, and geographic location of residence.

An estimated 10.2 million children, corresponding to 14.1% of children, used telemedicine because of the pandemic during the first year of the pandemic. Telemedicine use because of the pandemic also varied by several characteristics among children, including education of the parents living with the child and geographic location, specifically region of the country and urbanization level of residence.

The patterns of telemedicine use in the past 12 months and telemedicine use because of the pandemic differed by race and Hispanic origin, although the difference between these measures by race and Hispanic origin was not significant. The prevalence of children who used telemedicine in the past 12 months (before and during the pandemic) by the race and Hispanic-origin group included in these analyses was similar, although a lower prevalence of telemedicine use because of the pandemic was observed in Hispanic and non-Hispanic Black children compared with non-Hispanic White and non-Hispanic Asian children. Future studies with larger samples could examine racial and ethnic variations in the use of and access to telemedicine in children, and as it relates to the federal government, state Medicaid programs, and private insurers' expansion of claims coverage and reimbursement for broader virtual health care services in response to the COVID-19 pandemic (15).

NHIS does not ask questions about reasons for seeking medical care.

However, these analyses found that children who had been diagnosed with asthma or a developmental condition and children with disability were more likely to have used telemedicine compared with children without these conditions or disability in a domain of functioning. Specialties such as behavioral and mental health care, preventive care, developmental screening, chronic condition management, presurgical visits, and follow-up appointments after hospitalizations or in-person emergency care may have been more suitable for virtual care across age groups (22–24).

Socioeconomic differences were observed in the use of telemedicine in the past 12 months (prepandemic and during the pandemic), and in the use of telemedicine because of the pandemic. For example, the percentage of children who used telemedicine in the past 12 months (before and during the pandemic) was highest among those with the lowest and highest family incomes, while telemedicine use because of the pandemic remained higher among children with the highest family income, although differences by income were not statistically significant. Furthermore, the percentage of children who used telemedicine was higher in children whose parents had more than a high school education, although this difference was statistically significant for telemedicine use because of the pandemic and not for telemedicine use in the past 12 months. The challenges facing pediatric telemedicine include family members' ability to properly use technology (25). During times of public health emergencies, disparities in comfort of use and access to telemedicine technologies may be more noticeable by socioeconomic status.

Geographic differences observed in the use of telemedicine because of the pandemic were consistent with findings from another study that examined the percentage of telehealth visits provided by federally funded health centers during June–November 2020 (26). The study found that the overall average percentage of telehealth visits was significantly higher in health centers in the Northeast and West compared with the South, and significantly higher in urban centers compared with rural health centers (26).

Compared with urban centers, rural health centers may be more likely to face barriers relating to technological issues and lack of infrastructure to support telehealth; staff in rural health centers may experience discomfort or have less experience with telehealth technology; and patients living in rural areas may be less likely to have access to quality landline and cell phone data transmission, stable telephone service, and broadband coverage (25–27).

These findings show that both telemedicine use in the past 12 months and telemedicine use because of the pandemic were lower in nonmetropolitan areas compared with metropolitan areas. However, the percentage point difference between metropolitan and nonmetropolitan areas was wider for the use of telemedicine because of the pandemic than for telemedicine use in the past 12 months. Urbanization level is related to region, and a greater proportion of the population living in the South and the Midwest live in nonmetropolitan or rural areas compared with the population living in the Northeast and West regions (19). Rates and peak waves of COVID-19 cases per capita varied by region during 2020 (28). This study could not examine calendar pattern in the use of telemedicine in 2020; however, regional variation in telemedicine use because of the pandemic and the lower percentage of telemedicine use because of the pandemic in nonmetropolitan regions may be related to the reallocation of health care resources to address COVID-19 cases. Before the COVID-19 pandemic, rural health centers were more likely to face workforce and other health resource shortages, serve high-risk populations with limited resources, and struggle with funding (29).

It is important to note that the information presented in this report is not without some limitations. NHIS responses are reported by the parent or guardian responsible for and knowledgeable about the child's health and may be subject to recall bias. Additionally, NHIS did not collect information about the number of telemedicine appointments received, the extent to which the child received both in-person and telemedicine care, or perceived quality of care received

through telemedicine. The introduction of the telemedicine questions for the first time in NHIS in the later part of 2020 prevented the ability to assess the use of telemedicine before and during the pandemic separately. This also resulted in the availability of telemedicine data for only one-half of the annual sample of children. Additionally, NHIS sampling changes because of the COVID-19 pandemic that reallocated interviewing resources to the Sample Adult interviews in the later part of 2020 reduced the number of Sample Child interviews that could be completed. The reduced sample size for Sample Child interviews may have reduced the power to detect statistically significant differences in telemedicine use by sociodemographic characteristics (for example, Hispanic origin and race), and limited the number of health measures (for example, health coverage, health status, or diabetes) that met NCHS reliability standards, and thus were excluded from this report.

One strength of this study is that it presents nationally representative estimates of telemedicine use in children in the past 12 months and because of the pandemic. The results of this study may inform programs that address how telemedicine use during public health emergencies may be unequally utilized by populations in different geographic areas or with different incomes and in children whose families may have lower education levels.

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Table 1. Percentage and number of children aged 0–17 years who used telemedicine in the past 12 months, and who used telemedicine because of the pandemic, by selected sociodemographic characteristics: United States, July–December 2020

Sociodemographic characteristic	Used telemedicine in the past 12 months		Used telemedicine because of the pandemic	
	Percent (95% confidence interval)	Number of children	Percent (95% confidence interval)	Number of children
Total	17.5 (15.5–19.6)	12,578,767	14.1 (12.4–16.1)	10,170,517
Sex				
Male	17.0 (14.1–20.3)	6,252,275	13.4 (10.8–16.3)	4,920,532
Female	18.0 (15.2–21.1)	6,326,492	14.9 (12.3–17.9)	5,249,985
Age (years)				
0–4	¹ 19.9 (15.5–24.9)	3,772,607	15.1 (11.4–19.5)	2,865,430
5–11	14.8 (11.8–18.1)	4,097,243	12.1 (9.3–15.4)	3,358,749
12–17	18.7 (15.4–22.3)	4,708,917	15.6 (12.7–19.0)	3,946,337
Hispanic origin and race				
Hispanic	17.5 (13.5–22.1)	3,242,902	13.0 (9.9–16.6)	2,407,038
Non-Hispanic White	17.9 (15.0–21.0)	6,708,850	15.2 (12.5–18.1)	5,689,563
Non-Hispanic Black	17.6 (11.7–24.9)	1,610,037	13.0 (7.7–20.0)	1,187,064
Non-Hispanic Asian	18.4 (11.1–27.8)	579,937	16.5 (9.6–25.7)	521,863
Parent's education				
High school, GED, or less	15.4 (11.7–19.8)	2,991,898	² 11.0 (7.9–15.0)	2,145,651
More than high school	18.3 (16.0–20.9)	9,349,447	15.4 (13.2–17.8)	7,870,004
Family income				
Below 100% of the federal poverty level	³ 20.5 (14.7–27.2)	2,609,042	14.7 (9.4–21.4)	1,870,869
100%–199% of the federal poverty level	13.6 (9.7–18.4)	2,256,483	11.9 (8.1–16.6)	1,974,599
200%–399% of the federal poverty level	16.3 (12.9–20.3)	3,393,120	12.4 (9.5–15.8)	2,574,116
400% or above the federal poverty level	19.8 (16.6–23.2)	4,320,122	17.2 (14.2–20.5)	3,750,934
Region				
Northeast	22.4 (16.7–29.0)	2,547,859	20.1 (14.6–26.6)	2,283,184
Midwest	⁴ 14.7 (10.7–19.5)	2,237,236	⁴ 12.6 (8.7–17.3)	1,912,423
South	⁴ 15.3 (12.4–18.6)	4,273,427	^{4,5} 11.4 (9.0–14.1)	3,168,994
West	20.1 (16.4–24.2)	3,520,245	16.0 (12.7–19.8)	2,805,916
Urbanization level				
Large metropolitan	18.6 (16.0–21.4)	7,233,423	⁶ 15.8 (13.3–18.6)	6,157,664
Medium and small metropolitan	17.5 (14.1–21.3)	4,072,248	14.4 (11.5–17.7)	3,349,500
Nonmetropolitan	13.1 (8.1–19.8)	1,273,096	6.9 (4.0–10.9)	663,352

¹Significant quadratic trend by age ($p < 0.05$).²Significantly different from children with parents who had more than a high school education ($p < 0.05$).³Significant quadratic trend by poverty level ($p < 0.05$).⁴Significantly different from children living in the Northeast region ($p < 0.05$).⁵Significantly different from children living in the West region ($p < 0.05$).⁶Significant linear trend by urbanization level ($p < 0.05$).

NOTES: Data are based on household interviews of a sample of the U.S. civilian noninstitutionalized population. Telemedicine is defined as an appointment with a doctor, nurse, or other health professional by video or by phone. Telemedicine questions were asked in the National Health Interview Survey during July through December 2020. Sample Child respondents were asked whether the child had used telemedicine in the past 12 months, which from the time of interview covered both prepandemic and pandemic periods. Those who reported that the child had used telemedicine in the past 12 months were then asked whether it was because of the pandemic. The estimate for telemedicine use because of the pandemic includes children who did not use telemedicine in the past 12 months in the denominator.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2020.

Table 2. Percentage of children who used telemedicine in the past 12 months, and who used telemedicine because of the pandemic, by selected health conditions: United States, July–December 2020

Health condition	Used telemedicine in the past 12 months		Used telemedicine because of the pandemic	
	Percent (95% confidence interval)	Number of children	Percent (95% confidence interval)	Number of children
Children aged 0–17 years	17.5 (15.5–19.6)	12,578,767	14.1 (12.4–16.1)	10,170,517
With asthma	26.3 (17.4–36.8)	998,435	¹ 23.5 (14.9–33.9)	891,200
Without asthma	17.0 (15.0–19.2)	11,580,332	13.6 (11.8–15.6)	9,279,317
Children aged 2–17 years	16.7 (14.5–19.0)	10,670,189	13.8 (11.9–15.9)	8,837,366
With developmental condition	¹ 40.1 (32.1–48.5)	3,303,298	¹ 32.5 (25.0–40.8)	2,677,200
Without developmental condition	13.3 (11.2–15.5)	7,366,891	11.1 (9.2–13.2)	6,160,166
With disability	¹ 35.5 (27.3–44.3)	2,999,436	¹ 29.8 (22.4–38.0)	2,515,910
Without disability	13.8 (11.7–16.1)	7,670,754	11.4 (9.5–13.5)	6,321,456

¹Significantly different from children without this condition ($p < 0.05$).

NOTES: Data are based on household interviews of a sample of the U.S. civilian noninstitutionalized population. Telemedicine is defined as an appointment with a doctor, nurse, or other health professional by video or by phone. Telemedicine questions were asked in the National Health Interview Survey during July through December 2020. Sample Child respondents were asked whether the child had used telemedicine in the past 12 months, which from the time of interview covered both prepandemic and pandemic periods. Those who reported that the child had used telemedicine in the past 12 months were then asked whether it was because of the pandemic. The estimate for telemedicine because of the pandemic includes children who did not use telemedicine in the past 12 months in the denominator. Developmental condition includes a current diagnosis of attention-deficit/hyperactivity disorder or attention-deficit disorder; autism, Asperger's disorder, pervasive developmental disorder, or autism spectrum disorder; intellectual disability; or a developmental delay. Disability is defined based on the Washington Group Short Set Composite Disability Indicator for children aged 2–4 years, and for children aged 5–17 years.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2020.

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