POST-COVID PEDIATRIC TELEHEALTH USAGE:

Parental Attitudes and the Impact of **Social Determinants of Health**

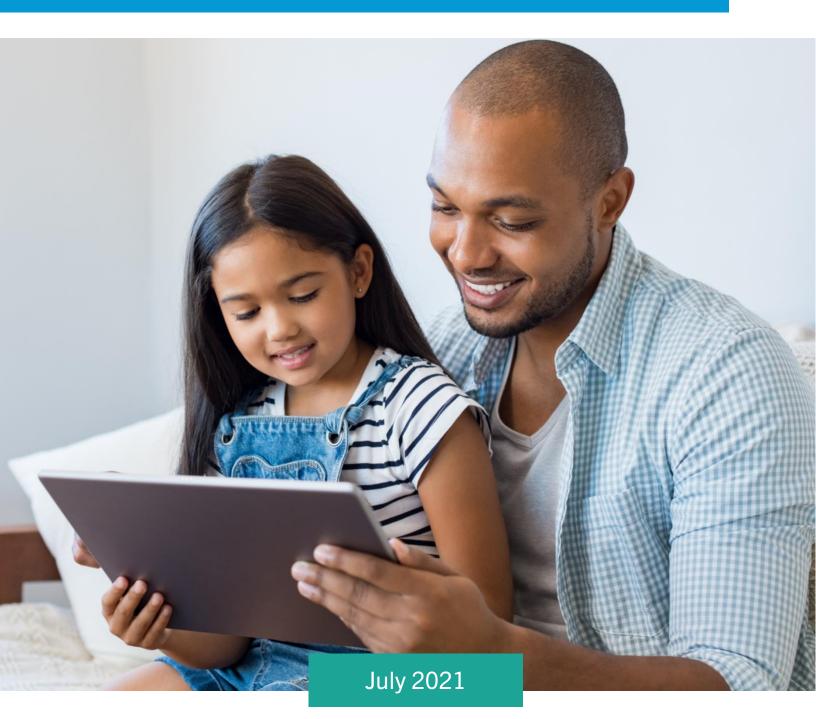






TABLE OF CONTENTS

| Executive Summary | 3 |
|---|----|
| What Is the Current State Of Pediatric Telehealth? | 5 |
| Survey: U.S. Families' Use of Telehealth Technology | 7 |
| Addressing Disparities, Improving Patient Experience, and Redefining Health | 10 |
| Survey Methodology | 12 |
| References | 12 |

EXECUTIVE SUMMARY

The COVID-19 pandemic has dramatically increased the use of telemedicine, revealing it to be a powerful tool in the effort to create more efficient, convenient, and high-quality care. Moreover, telehealth has been shown to hold transformational possibilities for improving care specifically for underserved populations, particularly for families with children.

This new public opinion survey and report, developed by Nemours Children's Health and Amwell, reveals significant changes in usage and attitude that could have far-reaching implications. The survey data demonstrate how expanded telehealth could reduce disparities in healthcare that result from non-medical factors, known as the social determinants of health (SDoH) for families who face insecurities in economic, social, environmental, and cultural conditions that influence how we live, work, and grow.

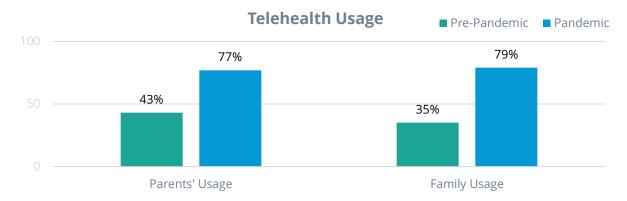
This report offers new data that help identify groups who would most benefit from telehealth and why they are not taking full advantage of it. It also touches on policy changes by government, payors, and health systems that could greatly improve their access.

The survey was conducted by Dynata, a research and analytics firm, on behalf of Nemours and Amwell from March 19–31, 2021, one year after the start of the global pandemic, among more than 2,000 U.S. parents of children under age 18.

The survey's key findings mirror previous research in pediatrics that shows telehealth is being increasingly incorporated into healthcare clinics and is widely accepted. Among the significant new findings:

Parents Embraced Telehealth for their Children During COVID-19

• Telehealth use by parents increased by a remarkable 50 percentage points--from only 22% from a survey in 2017 to 72% who now report that they use or have used it for themselves or their children. Parents who use telehealth say it allows them to avoid possible COVID exposure (54%), access care more easily (40%), and feel more comfortable than with inperson care (38%). During the pandemic, telehealth use by parents reached 77%, compared to 43% beforehand. For families, usage reached 79% compared to 35% pre-pandemic. A substantial majority of parents (61%) say they will be more willing to use it in the future, including 29% who previously were not users.



The Important Role of Non-medical Determinants of Health

Most parents who face adverse SDoH (70%) express concern about telehealth barriers, such as lack of the required technology (32%) or not being able to understand the healthcare provider during a remote visit (31%). These barriers will need to be overcome to ensure equitable, long-term use. Almost half of all families (46%) are grappling with adverse SDoH such as inability to pay for medical appointments, yet they are using telehealth. In fact, families earning less than \$50,000 were the second-largest cohort of telehealth users in the survey.

A Positive Influence on Balancing Caregiving

Telehealth appears to have an unexpected positive effect on family dynamics: Almost 90% of
parents think telehealth can help them participate together or be even more involved in
their child's care compared with in-person visits. Moreover, almost half (49%) of fathers say
telehealth could help them be more involved in medical appointments, which could help
shift household division of labor. Communicating with parents about various possible
benefits of telehealth may help promote increased usage.

Healthcare Providers as Critical Enablers

 More than one-quarter (28%) of parents say they do not use telehealth because they have never been offered it, and 12% say they have never heard of it. Providers can help build awareness of telehealth by making sure all patients and families are familiar with the service and its benefits. Moreover, almost half (41%) of parents who do not use telehealth say they do not see the need for it. Providers can play a key role in educating parents about the ease of use and convenience.

Insurance as a Serious Limiting Factor

• Nearly two-thirds of parents (64%) said that insurance coverage for video visits is "essential" or "extremely important" to their future use of telehealth. Indeed, non-users of telehealth were more likely to be uninsured than users, by a margin of 11% vs 7%.

In summary, our findings show that telehealth is a viable healthcare delivery option that can further support medical care for children. During COVID-19, the federal government and many states issued emergency authorizations to expand reimbursement and coverage, align privacy regulations with digital health, and make telehealth widely accessible. To sustain these positive effects, all healthcare stakeholders must advocate at both the state and national levels to make these positive changes permanent.

WHAT IS THE CURRENT STATE OF PEDIATRIC TELEHEALTH?

Now more than ever, the use of electronic and telecommunication technology is playing an increasingly important role in the healthcare of our children. **Telehealth** specifically refers to the use of digital technology and phone access to deliver healthcare information, often for direct patient care but also for professional training and administrative tasks. Telehealth also includes "virtual" doctor visits via computer or the use of mobile phone apps to enter information that help doctors monitor patients and their symptoms.

During the pandemic, Nemours saw enormous growth in usage of its CareConnect telehealth platform, with average daily use skyrocketing from 1,150 visits in February 2020 to more than 28,000 in April 2020. Additionally, a survey of physicians and consumers conducted by Amwell showed that telehealth usage was up considerably in 2020, with 22% of consumers and 80% of physicians having a virtual visit last year, up from 8% and 22%, respectively, in 2019.

Ultimately, telehealth has been critical not only in helping families maintain their children's health but also in preventing the spread of the coronavirus by allowing people to access healthcare while following social distancing countermeasures.

Research suggests numerous benefits from telehealth in helping people lead healthier, happier lives. For instance, telehealth often:¹⁻³

- Helps patients improve health outcomes.
- Is easy to use.
- Is fast and reliable.
- Can help save time and money that otherwise would be spent traveling to and from healthcare appointments.
- Provides an option for patients who have health or mobility problems, lack transportation, or live too far away from their doctor.
- Is more accessible than in-person visits.
- Can help improve communication and collaboration between patients and doctors.
- Can reduce costs incurred by healthcare organizations for patient services.

Can Telehealth Help Address Healthcare Inequities?

Identifying the barriers to successful and positive telehealth experiences is crucial to making telehealth maximally effective, safe, and useful or beneficial for patients. Understanding its limitations is also vital to leveraging telehealth and making healthcare more equitable. As much as 80% of our physical health and mental well-being is bound to **social determinants of health** (SDoH)—the social, economic, environmental and cultural factors that influence how we live, work, and grow. As SDoH includes things like the quality and safety of our home environment and neighborhood, income and economic stability, lack of reliable transportation, and food or housing insecurity. Negative SDoH can have a seriously adverse effect on health and well-being—for instance, when people cannot easily access or afford healthcare.

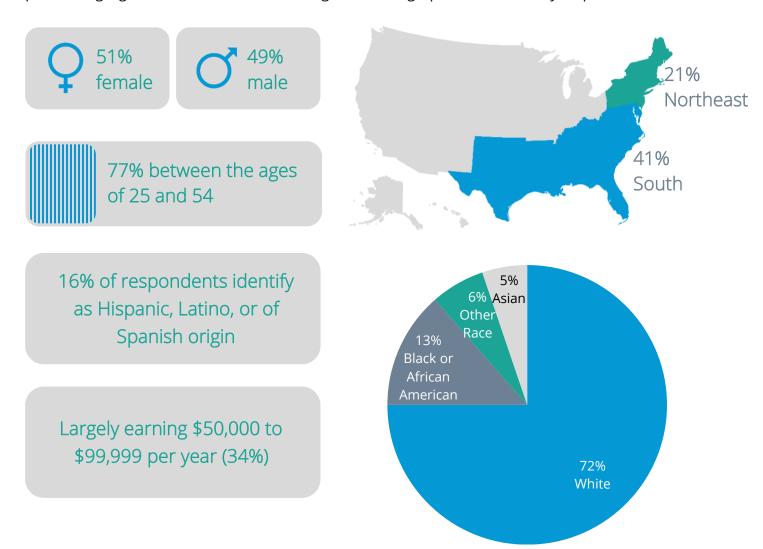
On a population level, telehealth can close gaps in healthcare access, provision, quality, and outcomes. But to do that, we need a clear picture of who is and is not using telehealth services, as well as the reasons why. This will inform policy and practice changes needed to help telehealth achieve its full potential.

SURVEY: U.S. FAMILIES' USE OF TELEHEALTH TECHNOLOGY

To enhance the national conversation about the current state of pediatric telehealth use, Nemours and Amwell commissioned Dynata to conduct an online nationwide survey of U.S. families to better understand:

- To what extent parents are or are not engaging in telehealth services for their children.
- How the COVID-19 pandemic is affecting parents' attitudes toward telehealth, and actual use for their children as well as for themselves.
- The possible role of social determinants of health in impacting who does and does not use telehealth.

This nationally representative sample included U.S. adults (n=2,056), with a subgroup of parents/legal guardians of children under age 18. Demographics of the survey respondents include:



Several key concepts and questions arose from the survey findings:

Parents are taking advantage of telehealth—particularly since the onset of the pandemic. And even though many parents report experiencing adverse SDoH, they are still utilizing telehealth. But barriers to telehealth access still exist for these parents and need to be addressed.

- More than two-thirds of American parents of children under 18 (72%) report ever having
 used telehealth for themselves or their children, compared with 22% in 2017. In the current
 survey, almost one-third of respondents (31%) report using telehealth for both themselves
 and their child, almost one-quarter (23%) for themselves only, and 18% for their child only.
- COVID-19 created a surge in telehealth services for both parents and their children. Indeed, 43% of parents used telehealth for themselves before the pandemic, compared with 77% during the pandemic. Similarly, 35% of parents used telehealth for their children prior to COVID-19, whereas 79% did so during the pandemic.
- Parents looked to telehealth during COVID-19 for their children's well-child visits (35%), urgent care (34%), and prescription renewals (30%). Less frequently, parents also accessed follow-up care (28%) and mental health services (21%) via telehealth.
- Nearly half (48%) of parents report at least one adverse SDoH impacting their ability to live a healthy life (e.g., unemployment, unsafe community, lack of transportation), whereas 28% report more than two SDoH and 15% report more than three. The most commonly reported adverse SDoH experienced in the last six months was the inability to pay for or get to a doctor's appointment (27%).
- When looking at a cluster of parents who had experienced no adverse SDoH in the previous six months versus a cluster who had experienced at least one, certain patterns emerged:
 - Parents who had experienced at least one adverse SDoH were more likely than those who had not to have ever used telehealth for their child (20% vs 14%) or for themselves and their child (28% vs 23%).
 - o They were also more likely to say they would use telehealth more frequently post-COVID-19 than the no-SDoH cluster of parents (37% vs 14%).
- Despite this, parents experiencing adverse SDoH worry about challenges to using telehealth, like not having the right apps on their phone (25%), a language barrier with the provider (24%), uncertainty about insurance coverage and co-pays (19%), and unreliable internet (16%).

The healthcare industry also plays a crucial role in parents' use of telehealth. Insurance coverage appears to be a driving factor in parents' telehealth use and will likely continue to be.

- Insurance coverage of telehealth visits is clearly a top consideration among parents. Almost two-thirds (64%) say having video visits covered by insurance was "essential" or "extremely important" to their future use. And parents who also report adverse SDoH are more likely to say that being covered by insurance is important.
- Non-users of telehealth were more likely to be uninsured than users (11% vs 7%).

 Telehealth access and coverage through Medicaid may be particularly important for people facing adverse SDoH. During the COVID-19 pandemic, the federal government took unprecedented steps to increase reimbursement and coverage of telehealth, but these are temporary provisions and many vary by state. It is unclear whether federal and state governments will actually make these measures more permanent.

Providers can help improve access to telehealth by making sure all parents are offered the opportunity to engage these services. They also can help parents recognize the full benefits--not just the obvious benefits—which might make parents more likely to use telehealth.

- Healthcare providers appear to be enablers to parents' telehealth use. Over one-quarter (28%) of parents say they do not use it because they have never been offered the chance;
 12% say they have never heard of telehealth; and 8% say it is not available through their insurer, employer, or healthcare provider.
- Parents who do use telehealth do so because it offers a way to avoid potential COVID exposure (55%), provides easy access (41%), and is more comfortable than face-to-face services (38%).
- But 41% of parents say they do not use telehealth because they have not needed it, suggesting that they might not understand its full value. Rather than citing telehealth merely as a tool to help with obvious challenges—lack of transportation, unforgiving schedules, living in a remote location—healthcare providers can also point out its less-obvious benefits, such as improving parent–child relationships or family quality of life. This might make parents even more interested in using telehealth.
 - o For instance, almost 90% of parents think telehealth visits would allow them to be equally or more involved in their child's healthcare compared with in-person care.
 - Telehealth also could become a bridge in the household labor divide, as 49% of fathers say that telehealth would allow them to be more involved in their child's healthcare compared with in-person appointments.

USING TELEHEALTH SERVICES TO ADDRESS DISPARITIES, IMPROVE THE PATIENT EXPERIENCE, AND REDEFINE HEALTH

Nemours and Amwell understand that families are widely diverse in their healthcare needs and life circumstances, so healthcare delivery must cater to their specific situations. Recognizing this, Nemours has a long track record of investing in technology solutions to help improve the lives of its patient-families—from using electronic health records-based tools to identify and monitor SDoH, to launching digital tools and healthcare programs that connect families with providers and resources.

By screening for and tracking information on non-medical needs such as adverse SDoH, Nemours is better able to identify and respond to gaps in care access and outcomes. For example, in 2020, Nemours piloted an SDoH assessment tool in primary and specialty care clinics and is currently analyzing findings and refining the tool for permanent implementation by the end of 2021. By thinking creatively and relying on innovative technology solutions like those provided by Amwell, Nemours is working to advance pediatric healthcare, research, and prevention efforts to benefit all patient-families, regardless of their challenges. Some of the ways Amwell and Nemours are partnering to leverage technology to improve patient-families' healthcare access and thus better meet their needs (especially those who are medically underserved) include the following:



Connecting Around the Clock

One service of Nemours CareConnect, which uses Amwell technology, allows parents and children to see a Nemours board-certified pediatrician in the home 24/7/365 via their smart phone, tablet, or computer. CareConnect has also been installed in some schools to aid nurses in tending to students with minor injuries and healthcare issues. The COVID-19 pandemic caused a swift increase in those accessing CareConnect, with nearly 30,000 visits occurring in April 2020 versus only 800 remote visits during April 2019. More than 25,000 patients have enrolled in CareConnect since its inception.



One-Stop Shopping

The recently developed Nemours App combines CareConnect with Nemours' electronic medical records system and with KidsHealth® family-friendly health education content into one digital platform. The app features a patient portal that allows families to access medical records, schedule appointments, manage medications, view test results, communicate with providers, and more. Content includes how-to videos, patient education materials, and diagnosis-specific information integrated into a patient's care plan. Since its launch in August 2020, the app has had an average user rating of 4.8 out of 5 stars and has attracted over 138,000 users linked to 187,000 Nemours patients. It has garnered extremely positive feedback from users, especially regarding its convenience and ease of use.



Giving It Our Best Shot

At the outset of the COVID-19 pandemic, Nemours understood the importance of ensuring all children remain up to date on vaccinations. We consequently developed an immunization program that fused our telehealth services with telephone outreach and brief in-person visits to provide examinations and immunizations in outdoor spaces. As a result, more than 4,200 immunizations were administered. Vaccination education materials were added to the KidsHealth® website and accessed by more than 10 million visitors in the immediate response phase of this hybrid program. And more than 820,000 emails were sent to patient-families to provide education about changes in healthcare services and safety protocols as a result of the pandemic, resulting in 125% more patient-family engagement.

Physical, sexual, or emotional abuse is one of the most devastating and impactful experiences for a person. Throughout the COVID-19 pandemic, families under isolation and emotional and financial stress have become more vulnerable to experiencing child abuse and neglect, underscoring the important role of healthcare providers in identifying and intervening in such instances. ^{6,7} As a reflection of this, Nemours is adapting its telehealth services to ensure healthcare professionals look for signs of abuse and neglect in pediatric patients, such as by observing the home environment and, where possible, asking patients directly about possible mistreatment. As needed, telehealth services also can be used to provide families with resources and direct support (including social services) to not only stop the abuse but to better cope with many other stressors.

SURVEY METHODOLOGY

Dynata was engaged by Nemours and Amwell to conduct an online survey within the United States from March 19–31, 2021, among 2,056 U.S. adults ages 18 and older who are parents of children under age 18. This online survey is not based on a probability sample and therefore no estimate of theoretical sampling error can be calculated. Complete survey methodology, including weighting variables and subgroup sample sizes, available upon request.

REFERENCES

- 1. Wang CJ, Ma J, Zuckerman B, Car J. The Opportunities for Telehealth in Pediatric Practice and Public Health. Pediatric Clinics. 2020;67(4):603-11.
- 2. Tomines A. Pediatric telehealth: Approaches by specialty and implications for general pediatric care. Advances in pediatrics. 2019;66:55-85.
- 3. Utidjian L, Abramson E. Pediatric telehealth: opportunities and challenges. Pediatric Clinics. 2016;63(2):367-78.
- 4. Centers for Disease Control and Prevention. Frequently asked questions. What are social determinants of health. December 2019. Retrieved from: https://www.cdc.gov/nchhstp/socialdeterminants/faq.html#what-are-social-determinants
- 5. Magnan S. Social determinants of health 101 for health care: five plus five. NAM Perspectives. 2017. Retrieved from: https://nam.edu/social-determinants-of-health-101-for-health-care-five-plus-five/
- 6. Usher K, Bhullar N, Durkin J, Gyamfi N, Jackson D. Family violence and COVID-19: Increased vulnerability and reduced options for support. Int J Ment Health Nurs. 2020. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7264607/
- 7. Repine A, Macaulay J, Deutsch SA. COVID-19 and child abuse: practical steps to address child safety. Consultant. Published online March 15, 2021. doi:10.25270/con.2021.03.00010. https://www.consultant360.com/article/consultant360/role-pediatric-health-care-provider-identifying-and-preventing-child-abuse