Journal of Applied Research on Children: Informing Policy for Children at Risk

Volume 13
Issue 1 *The Importance of Sleep for Child Wellbeing*
Article 3

2022

Better Sleep Through Screen Time: The Role of Telehealth in Sleep Care for the School-Aged Child

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INTRODUCTION

It all starts with a good night's sleep. For children, an appropriate amount of sleep daily, at their preferred circadian timing, optimizes physical and psychological health.[1] Their job is to learn and grow, and insufficient or poor-quality sleep can undermine their performance.[2,3] In the classroom, being well-rested is not a luxury but a requirement. However, as many as 30% of children are reported to struggle with sleep.[4] Children diagnosed with attention-deficit/hyperactivity disorder (ADHD), autism spectrum disorder, and other neurodevelopmental challenges carry an even greater burden of disordered sleep.[5-7] These vulnerable populations have an uphill battle when the school day starts after a night of poor sleep. Children suffer from the same sleep disorders as adults including the spectrum of obstructive sleep-disordered breathing, sleep-related movement disorders, circadian rhythm disorders, insomnia, and disorders of hypersomnia. There is a paucity of trained sleep medicine providers and an even smaller subset who provide care to children.[8] They are often concentrated in large pediatric centers in busy urban/metropolitan areas and are overbooked with long wait times. Pediatric sleep medicine providers must balance time between seeing patients, reading overnight sleep studies, teaching, research, and advocating for better sleep health for their communities. They must also run their clinics efficiently to care for as many children as time allows. Appointments are limited and scheduled at times that require a child to miss school and/or a parent to miss work. This can be too great a cost for certain families, and these children may go without sleep consultations. Others will be empirically recommended medications deemed "natural and safe" for "better sleep," although there is still a gap in regulation and safety data.[9] The intention is noble, to help these children, and one can certainly understand the dilemma parents and primary care providers face. Children need dedicated pediatric sleep care, yet accessing it can be timely and costly, often making it feel unattainable. One tool to address subspecialty workforce shortages and improve access to needed care is telehealth.[10] When describing care provided with the assistance of technology, the terminology is still evolving and can be confusing. For purposes of this report, telehealth refers to the care of patients delivered using communications technology. This includes "virtual visits," which we define as live interactive audio-video interactions completed using a secure encrypted video platform ("virtual platform").

The pediatric sleep medicine department at Advocate Children Hospital (ACH), part of Advocate Aurora Healthcare (AAH), bridges two main campuses approximately 30 miles apart, in Park Ridge, Illinois, and

Oak Lawn, Illinois. We were attuned to the barriers in accessing pediatric sleep care early on. Aiming to mitigate the time families spend traveling to and from visits, waiting room and post-visit downtime, and missed opportunities at school and work, a small pilot study of virtual care visits was started in 2019. These visits were first offered one half-day per week but were later integrated into other scheduled clinical times. The priority was given to urgent visits for follow-up of severe sleep study results, follow-up visits for behavioral sleep issues, and those patients with geographic limitations. Insurance coverage for telehealth was determined prior to scheduling to avoid out-of-pocket costs for families. Although volumes were initially low, our department grew to be more comfortable with the technology, regulations, and clinical flow needed for remote sleep care, setting the stage for rapid growth when needs shifted.

As stay-at-home orders associated with the SARS-CoV-2 pandemic were instituted, insurance providers relaxed regulations on patients' eligibility for virtual visits. With a telehealth workflow already in place, our clinic seamlessly transitioned to an entirely virtual platform without needing to cancel any appointments, while still offering in-person clinical availability as needed. Having this flexibility allowed us to meet patient and provider needs consistently despite unpredictable changes due to COVID positivity or the need for quarantine, and to provide care without interruption. Dedicated clinical hours did not change, but we noted shifts in the number of completed visits, patient distance from the clinic, and disorders seen.

To understand these shifts, a systematic approach was adopted. Before the pandemic, the SPROUT (Supporting Pediatric Research on Outcomes and Utilization of Telehealth) research collaborative was developed in conjunction with the American Academy of Pediatrics. This group reviewed existing healthcare quality standards and reorganized them into a framework by which to evaluate pediatric telehealth. This framework, named the STEM profile (SPROUT Telehealth Evaluation and Measurement), assesses four major domains of virtual care: health outcomes, health delivery (quality and cost), individual experience (patient and provider), and program implementation with key performance indicators.[11] Several intriguing trends emerged in the context of the STEM framework and point to future directions that our department, pediatric sleep medicine providers, and the telehealth sector may consider to help optimize pediatric sleep health.

The process of collecting and combing through the output from a real-time clinic can be imperfect, with missed data sets, confounding factors, and documentation discrepancies. This is especially true when collecting clinical data from a small pediatric sleep medicine department as

it continues providing high-quality care while transitioning to a new mode of health care delivery amid a global pandemic with ever-changing regulations. The data presented in this paper is not from a randomized trial nor a controlled case study. This is an observational report of the changes seen in our pediatric sleep medicine department from 2019 to 2021, which happened to include a nationwide shift in the way that healthcare is accessed and covered. The changes described are only reflective of what occurred in our limited scope. However, what these changes may portend for the future role of telehealth in the pediatric sleep health sector is fascinating.

METHODS

Using the STEM framework, we conducted a retrospective cohort observational study using a convenience sample of patients who had a scheduled pediatric sleep medicine clinic visit between June 1, 2019 and June 30, 2021. Using electronic health record (EHR) data tools, the following data points were gathered: visit date, visit type, encounter type, billing codes associated with the visit, appointment status, problem lists, medical history diagnoses associated with the patient, age of the patient at the time of visit, race, sex, ethnic group, and zip code. The appointment type (virtual or in-person) was manually coded by reviewing the visit type and encounter type. All telephone, video, or other electronic visits were coded as “virtual”.

We used all available visits, primary, and secondary diagnoses to identify children with attention deficit disorder/ADHD, obesity, autism, learning difficulties, developmental delay, circadian rhythm disorders, sleep-related breathing disorders (SRBDs), insomnia disorders, parasomnias, disorders of hypersomnia, restless legs syndrome (RLS), periodic limb movement disorder (PLMD), and “other sleep issues” to identify if appointment type had any impact on the type of diagnoses seen in the sleep clinic. Patients who had more than one diagnosis (such as parasomnia and insomnia) were included in both the parasomnia and insomnia disorder subgroups.

Distance data was calculated using Bing Maps with the patient’s zip code as the starting point. We tested two destinations- the address of the closest clinic location and the address of the patient’s scheduled clinic location. The distance was measured in miles. Distance data was used to investigate the relationship between travel distance (for both destinations) and appointment type across time categories. Patients located greater than 150 miles from a clinic destination were eliminated from the dataset. To

assess the impact of the pandemic on patient travel and appointment status, the data was categorized as pre-pandemic (June 1, 2019 -March 31, 2020) and pandemic (April 1, 2020-June 30, 2021). This will be denoted as "time category".

Appointment status data was used to compare the number of patients who completed, canceled, no-showed, and left without being seen across years and appointment types. To aid in statistical analysis and to further describe the patient population, age data was grouped into four categories: infant (<1 year), toddler (1-4 years old), school-age (5-12 years old), and teenager/young adult (13 years and older).

All tests used α=.05 to denote statistical significance. Nonparametric tests were used due to the data not being approximately normally distributed.

Mann-Whitney U tests were conducted to investigate relationships between:

- Distance to appointment location and time category.
- Distance to appointment location and appointment type.
- Age and time category.
- Age and appointment type.
- Distance to closest clinic and appointment type.
- Distance to closest clinic and time category.

Chi-squared goodness of fit was performed to investigate relationships between:

- Clinical diagnosis categories and appointment type.
- Clinical diagnosis categories and appointment type across all age groups.
- Appointment status 2019 vs 2021 clinic sample.
- Time category and appointment status.
- All categorical data are present in the demographics section.
- Appointment status and appointment type.

All statistical analyses were conducted using the SPSS statistical software version 26. The Institutional Review Board (IRB) at AAH approved this project and classified it as nonhuman subjects research due to the limited protected health information (PHI) accessed.

RESULTS

Clinical Efficiency

The last entirely pre-pandemic year for ACH was 2019. **Figure 1** demonstrates the demand for pediatric sleep services at ACH based on the

number of referrals. It also shows the total number of visits performed. While virtual visits were offered, they comprised only 2.9% of all completed visits.

With the abrupt transition to primarily telehealth care in March 2020, significantly more patients utilized virtual visits to access sleep support (**Figure 2**), and this comprised a significant proportion of total scheduled visits (**Figure 3**). This continued to increase into 2021, even as stay-at-home mandates relaxed.

Although pediatric sleep care was now being provided on a new platform, as seen in **Figure 4**, the overall number of scheduled clinic visits increased and stayed at this new increased level into 2021.

The collected data on all visits from June 2019 to June 2021 demonstrated no statistically significant differences in age, gender, race, or ethnicity among patients seen virtually or in-person (**Table 1**).

As many clinicians are aware, scheduled visits do not always turn into completed visits. **Table 2** provides a breakdown of how many scheduled visits were completed, canceled, designated as a “no show”, or designated as an outlier (a patient left without being seen). In 2019, the last pre-pandemic year, with most visits performed in-person, only 56.08% of scheduled visits were completed. Although few virtual visits were scheduled, the completion rate was similar at 50%. Many in-person visits were given the designation of canceled (33.14%) or not arriving for the visit without communication with our team (“no show”, 10.78%). The scheduling flow of our department allows even a last-minute cancellation to reschedule their appointment for another time. This may artificially inflate the total number of scheduled visits and underestimate the “no-show” rate. It also does not account for the valuable clinical time unexpectedly lost that day.

With the onset of the pandemic three months into 2020, many in-person visits (approximately 3 months’ worth) needed to be canceled and then rescheduled as virtual encounters. The breakdown of scheduled visit outcomes in 2020 was therefore challenging to assess. However, an intriguing takeaway was the high completion rate (73%) and low cancellation rate (18%) for virtual visits. Given the way this heterogeneous data was collected, it was not possible to determine if these changes were statistically significant compared to 2019 data. However, the trend is worth following. Looking to 2021, a predominantly virtual year for our department, the completion rate for scheduled visits (64.26%) was lower than that of 2020 (73%) but still above that of 2019 (56%). While very few (11) in-person visits were scheduled in 2021, 90% of them were cancelled. Not captured in this data set was that many of those in-person patients then rescheduled their visits (sometimes for the same day/time), preferring to see the same provider on a virtual platform.

Geographic Catchment

As seen in **Figure 5**, ACH has two main hubs located approximately 30 miles apart. For in-person visits, patients can select which location they prefer but are limited to the days and times providers are present. They must then travel to the location with their child on the day of the visit, with all the inconvenience this entails. With virtual visits, most of these barriers are eliminated. Patients can schedule their appointment at any time/day a provider has availability, unbound by location. They can enter their virtual clinic room through an EMR-provided web or phone application or may request to simply receive a secure link via text or email to route them into the virtual visit.

Table 3 demonstrates the driving distance between patients' homes and the nearest ACH hub, while **Table 4** demonstrates the distance to the actual ACH site at which a provider would have been present that day. With virtual visits, patients choose a date/time for their visit without having to consider location. Prior to the pandemic, there was no significant difference in how far away patients were located (from the nearest ACH site nor the ACH site providing care that day), regardless of how they accessed care. However, once virtual visits increased after March 2020, patients accessing virtual care were located on average 2.2 miles farther away ($p=0.002$) from the nearest ACH site and would have needed to drive an additional 9.2 miles ($p<0.000$) to be seen on that clinical day. Even with statistical significance, neither distance fully accounts for valuable time spent en route.

Underlying Diagnoses

Table 5 highlights some of the common comorbidities patients have when presenting for sleep medicine consultation and follow-up. A significantly greater proportion of children had a diagnosis of ADHD when seen virtually versus in person (20.5% vs 15.9%, $p=0.006$). This was only statistically significant in the school-age group ($p=0.012$).

Managed Diagnoses

Table 6 highlights the sleep disorders managed in our pediatric sleep medicine clinic from 2019 to 2021. The prevalence of several diagnoses differed based on how care was accessed. Patients seen virtually had increased rates of circadian rhythm disorders ($p=0.025$), insomnia

(p=0.024), and "other sleep disorders" (p=0.00001, outlined in **Table 7**). Increased rates of parasomnias were also noted (p=0.009). For patients diagnosed with insomnia, statistical significance was seen only in the school-age cohort (p=0.045).

DISCUSSION

The inspiration to present these data sets started with intriguing trends seen in our department while providing clinical care. However, we acknowledge that while 2019 serves as our "in-person" control, it also serves as a "pre-pandemic" control. As mentioned earlier, the shifts seen may be reflective of a transition to virtual care, changes amid a pandemic, or very likely both. The data presented and discussed here should be viewed as the beginning of an exploration of what can be possible when we start to provide pediatric sleep care differently.

Efficient and Convenient Care

During the SARS-CoV-2 pandemic, a glimmer of light was the opportunity to provide high-quality care virtually, fostering social connectedness amid physical distancing.[12,13] This opportunity was embraced by our small pediatric sleep medicine department, and after noting substantial improvements in clinical efficiency, we established telehealth as the foundation of our care model. Visit completion rates jumped from 56% to 73% from 2019 to 2020. This may have been due to the stay-at-home orders at the start of the pandemic. Children were no longer in school, many parents needed to work from home, and common activity destinations were shut down. Families simultaneously had "nothing to do" and yet were overwhelmed by it. Virtual encounters were a novel activity, an escape from the monotony of home life, or a chance to finally speak with someone with whom they did not reside. It may also have been reflective of the acute "coronasomnia", sleep challenges arising from the unique stresses of that time,[14] for which families desperately sought support. As masks and vaccines allowed a gradual return to normal life, notably with in-person classrooms, the clinical efficiency did not continue its early-pandemic high. The visit completion rate for virtual visits came down in 2021 to 64%, but it did not return to that of in-person visits in 2019. This suggests that virtual care still offers the promise of greater visit completion over in-person care. Unfortunately, the statistical significance of these differences could not be calculated. Our department will continue to follow this trend closely and power further data collection to assess for significance.

The 2021 in-person cancellation rate is intriguing. Patients scheduled for initial consultations or follow-up visits with our department are offered the option of in-person care if that is their preference. It is telling, however, that 10 out of 11 of these requested visits were canceled. Several of these families called the department the same day, requesting to keep their appointment but perform the visit virtually. This flexibility is possible only with telehealth.

With care simply a click away, one can see how an increase in clinical efficiency is likely due to the adoption of telehealth practices, rather than solely the artifact of a pandemic. Forgotten appointments, traffic, and last-minute change of plans all necessitate canceling an in-person visit. Fitting a virtual appointment into one's day is far simpler: have a child join from one device while at school with a parent on another device at work, pull over the car and join from a smartphone, allow a child to relax in their own living room while a parent engages with the provider uninterrupted, etc. This freedom significantly enhances a patient's/family's individual experience and increases satisfaction. The provider's time is also used more efficiently, improving productivity and individual experience. Small clinics, as well as major health care systems, should consider the substantial industry benefit derived from telehealth for future program implementation.

The geographic catchment data demonstrates that patients accessing care virtually are located significantly farther away, 2.2 miles to the nearest location and 9.2 miles from the clinic available that day, than those opting for in-person care. This distance may correspond to prolonged time spent in travel, given variance in setting (rural, suburban, urban, etc.) and traffic congestion. Our department currently offers appointments Monday through Thursday from 8 am to 5 pm. This is also school, work, extracurricular and homework time. It is precious, and for a busy family, every minute counts. Their ability to choose a mode of healthcare delivery shapes their entire care experience. Our team will continue to explore this area and consider if measurements of time spent to and from visits are possible.

Supporting the School-Aged Child

In our department, the prevalence of ADHD was higher in virtual encounters compared to in-person visits (20.5% vs 15.9%, p=0.006). While research will likely emerge on the prevalence of ADHD during the COVID pandemic, data already suggests that children with known ADHD had increased rates of sleep disturbance during this time.[15] This may explain the shift seen in our data. Our team will continue to follow these trends as more in-person

care is performed to better elucidate key driving factors. Our data demonstrated that more children with ADHD sought sleep care virtually in 2020/2021. This was significant only in the school-aged cohort. When children enter structured learning environments, there is a heightened expectation of increased attention and appropriate behavior. Children with ADHD have the most to lose from missed school time compared to their neurodevelopmentally normative peers,[16] and yet they need sleep support at greater rates. The low barriers to utilizing telehealth make it more likely that families will access care for these vulnerable children. Our department will continue to follow children with ADHD who access their sleep support with virtual versus in-person care to assess outcomes.

Another major shift reflected in the data was the change in sleep disorders managed with telehealth. More patients were diagnosed with parasomnias (14.6% vs 10.8%, p=0.009) and "other sleep disorders" (23.6% vs 16.1%, p=0.00001), likely tied to the increased stress levels, shifting schedules, and significant decreases in physical activity, leading to worldwide "coronasomnia."[14] The increase in circadian rhythm disorders (10.5% vs 7.8%, p=0.025) might reflect the dissipation of mandated Monday-Friday wake times due to at-home work and learning. School-aged children were allowed to sleep on schedules dictated by their internal rhythms, which often run on the later side, a major factor in the push for later school start times.[17] For some, sleep quality improved during the pandemic with this ability to sleep on their own schedule.[18,19] In cases when parents struggled to have a child fall asleep at an "old bedtime," realizing that the wake time had also shifted to later revealed a circadian rhythm disorder. The increase in these sleep disorders may have been secondary to the SARS-CoV-2 mandates, but the flexibility afforded by telehealth to recognize and treat them has opened a door for continued use in pediatric sleep.

The significant increase in insomnia (17.2% vs 13.8%, p=0.024) was also a shift seen in sleep disorder diagnoses as families were able to access sleep care virtually. Without anchored wake times, daytime obligations, or physical activity to build sleep pressure and with increased stress during an evolving pandemic, more children struggled with insomnia. This was only significant in the school-aged cohort. When it comes to sleep disorders, certain parental observations garner an unquestioned visit to a sleep professional. Snoring, witnessed apneas, restless sleep, and parasomnias (sleep terrors, sleepwalking, etc.) top the list. These are dramatic and leave little room for doubting the need to be evaluated. When it comes to difficulty initiating or maintaining sleep (the definition of insomnia), this potentially chronic condition goes underrecognized and underdiagnosed.[20] This is

unfortunate, as newer data suggest that pediatric insomnia often continues well into adulthood.[21] For a family to take time from work and school to see a specialist requires crossing a threshold of concern. Unfortunately, the nighttime and secondary daytime effects of chronic sleep loss from insomnia are subtle. They often masquerade as challenges in the home, at school, or both.[22-24] Insomnia does not carry a sense of urgency to be addressed. Many will attempt to treat behavioral sleep issues with sleep hygiene, which alone has not clearly been shown to be effective.[25] Others will try over-the-counter medications or supplements that lack safety data and regulation.[26] Telehealth may remove some barriers to accessing care, allowing for more timely sleep consultation.

CONCLUSION

Children can receive evidence-based care for behavioral sleep concerns, and that is exactly what they did in 2020 and 2021 in our department. Families utilized virtual care for sleep issues that might have been put on the back burner if they had needed to get into a car or bus. With telehealth, sleep logs can easily be sent back and forth electronically, and closer follow-up is possible with decreased demands for travel. Theoretically, telehealth is an ideal instrument for managing behavioral sleep issues. What some commercial products are attempting to accomplish with automated smartphone application-based algorithms,[27] we can provide with "screen time" with a board-certified pediatric sleep medicine specialist. Future studies will need to continue assessing outcomes using this mode of care delivery.

While nuanced, the data collected by our pediatric sleep medicine department from 2019-2021 suggests that with telehealth, several key improvements are seen in the delivery of sleep care and in the patient/family and provider experience. While we can hypothesize about the shift in overall outcomes, especially in school-aged children with ADHD or insomnia, future studies will be designed for these assessments. As we continue to ask and answer these questions, one certainty is that our program will continue to offer virtual visits along with in-person care. We will also advocate for continued coverage by payers. We hope to continue thoughtfully building our program to serve as a hybrid model of care delivery for all sleep medicine providers who aim to take phenomenal care of children.

ABBREVIATIONS

AAH: Advocate Aurora Health

ACH: Advocate Children's Hospital
ADD/ADHD: attention deficit disorder/attention-deficit/hyperactivity disorder
EMR: electronic medical record
SPROUT: Supporting Pediatric Research on Outcomes and Utilization of Telehealth

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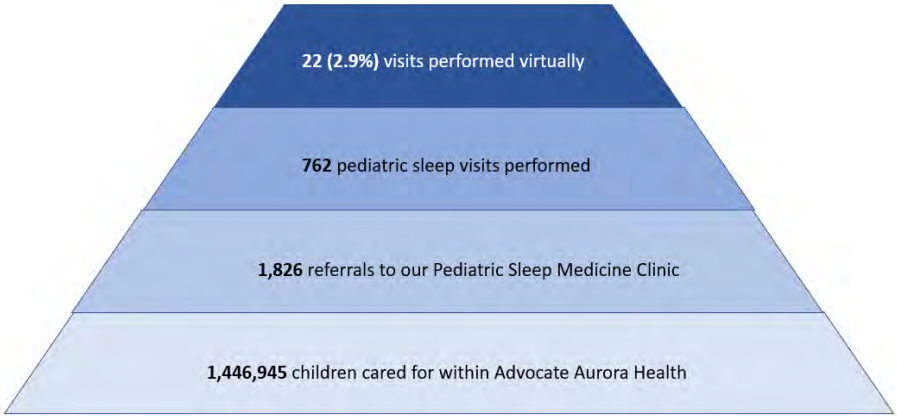

Figure 1. Schematic demonstrating the magnitude of children cared for within Advocate Children's Hospital (part of Advocate Aurora Health) and the limitations of a pediatric sleep medicine department in 2019.

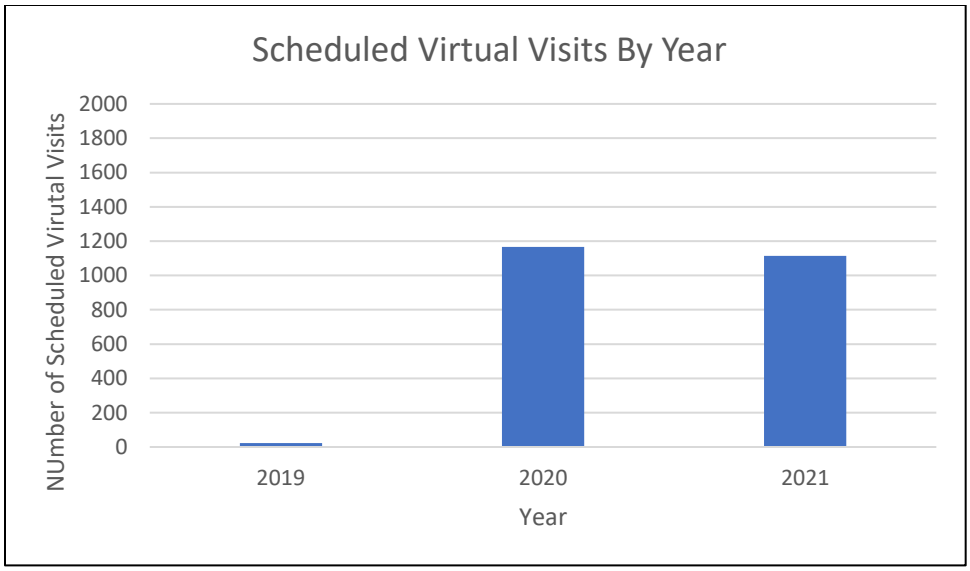

Figure 2. The number of scheduled virtual visits per year seen prior to and during the SARS-CoV-2 pandemic, including projection for 2021.

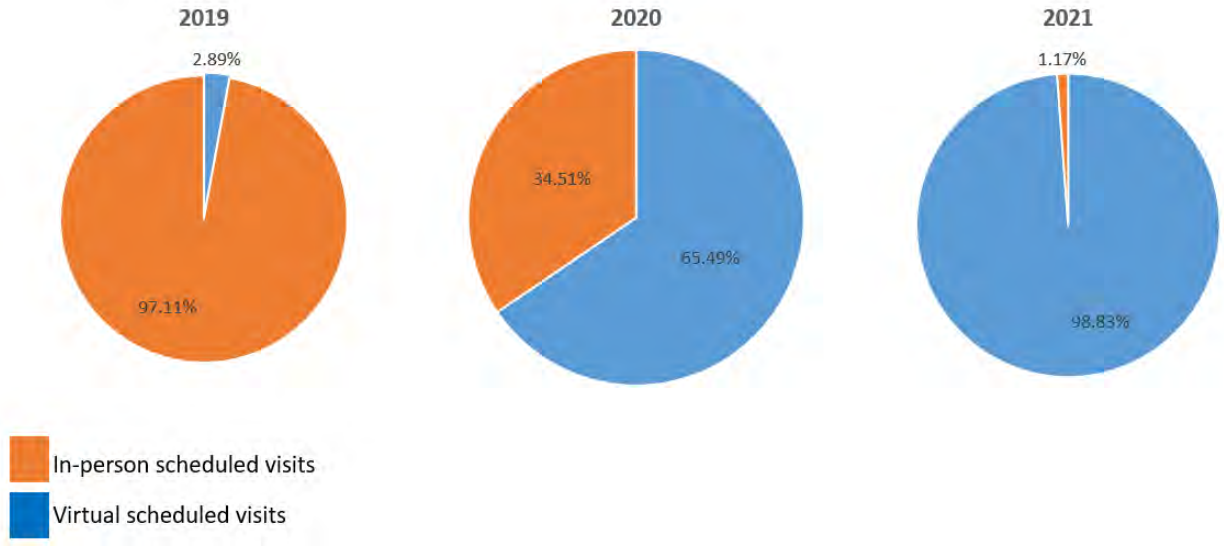

Figure 3. The shifting proportion of clinical visits scheduled as virtual visits, 2019-2021

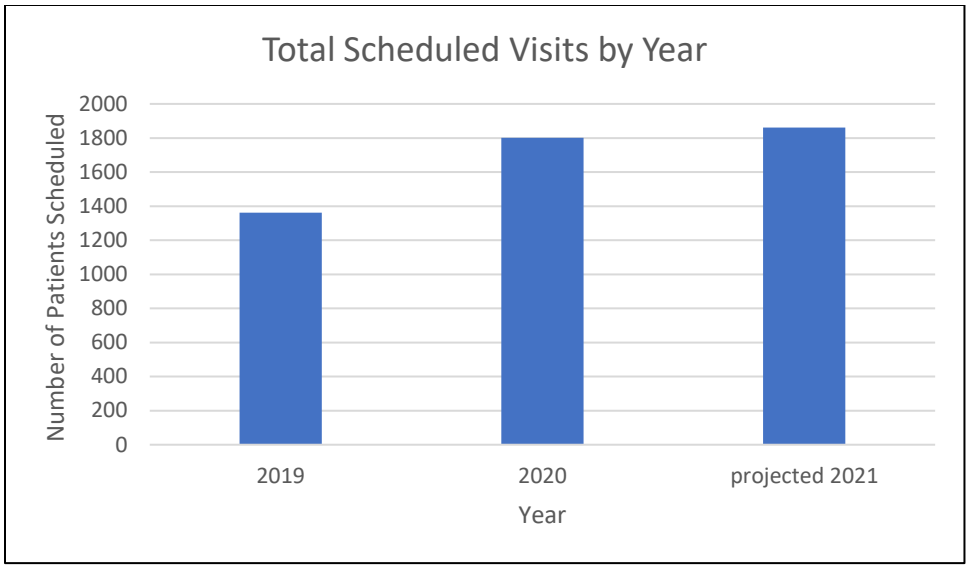

Figure 4: The number of scheduled visits per year seen prior to and during the SARS-CoV-2 pandemic, including a projection for 2021.

		IN PERSON VISITS	VIRTUAL VISITS
Age in years (SD)		10 (6)	10 (6)
Age Breakdown	**Infant (0-12 months)**	11.10%	9.20%
	Toddler (1-6 yo)	19.90%	18.40%
	School Age (6-12 yo)	36.90%	38.20%
	Adolescent (13+ yo)	32.10%	34.20%
Sex	**Female**	39.9%	39.0%
	Male	60.1%	61.0%
Race	**American Indian or Alaskan Native**	0.70%	0.8%
	Asian	3.60%	3.6%
	Black/African American	20.30%	19.8%
	More than one race	1.0%	1.4%
	Other Pacific Islander	0.8%	1.0%
	Patient Refused or Unknown	15.6%	16.5%
	Causasian	58.0%	56.9%
Ethnic Group	**Hispanic/Latino Origin**	23.9%	22.6%
	Not of Hispanic or Latino Origin	60.6%	60.6%
	Patient Refused or Unknown	15.5%	16.8%

Table 1: Demographic distribution of patients seen in-person and with virtual visits

2019 clinic visits	IN PERSON	VIRTUAL
Completed	56.08%	50.00%
Cancelled	33.14%	18.18%
No-Show	10.78%	31.82%
Left Without Being Seen	0.00%	0.00%
2020 clinic visits		
Completed	41.42%	73.01%
Cancelled	49.19%	18.85%
No-Show	9.39%	8.05%
Left Without Being Seen	0.00%	0.09%
2021 clinic visits		
Completed	9.09%	64.26%
Cancelled	90.91%	27.99%
No-Show	0.00%	7.64%
Left Without Being Seen	0.00%	0.11%

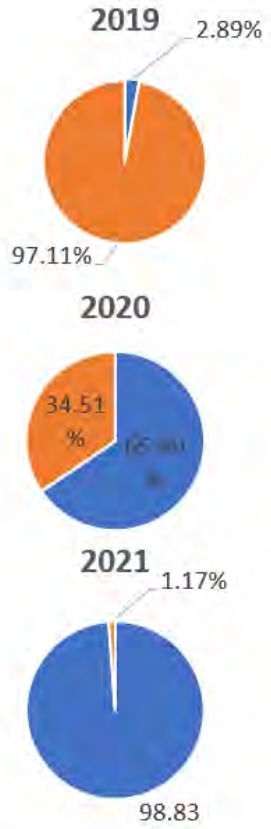

Table 2: The distribution of clinic-visit outcomes with in-person versus virtual care over 3 years, including the SARS-COV-2 pandemic (March 2020-present) with the increase of offered virtual visits.

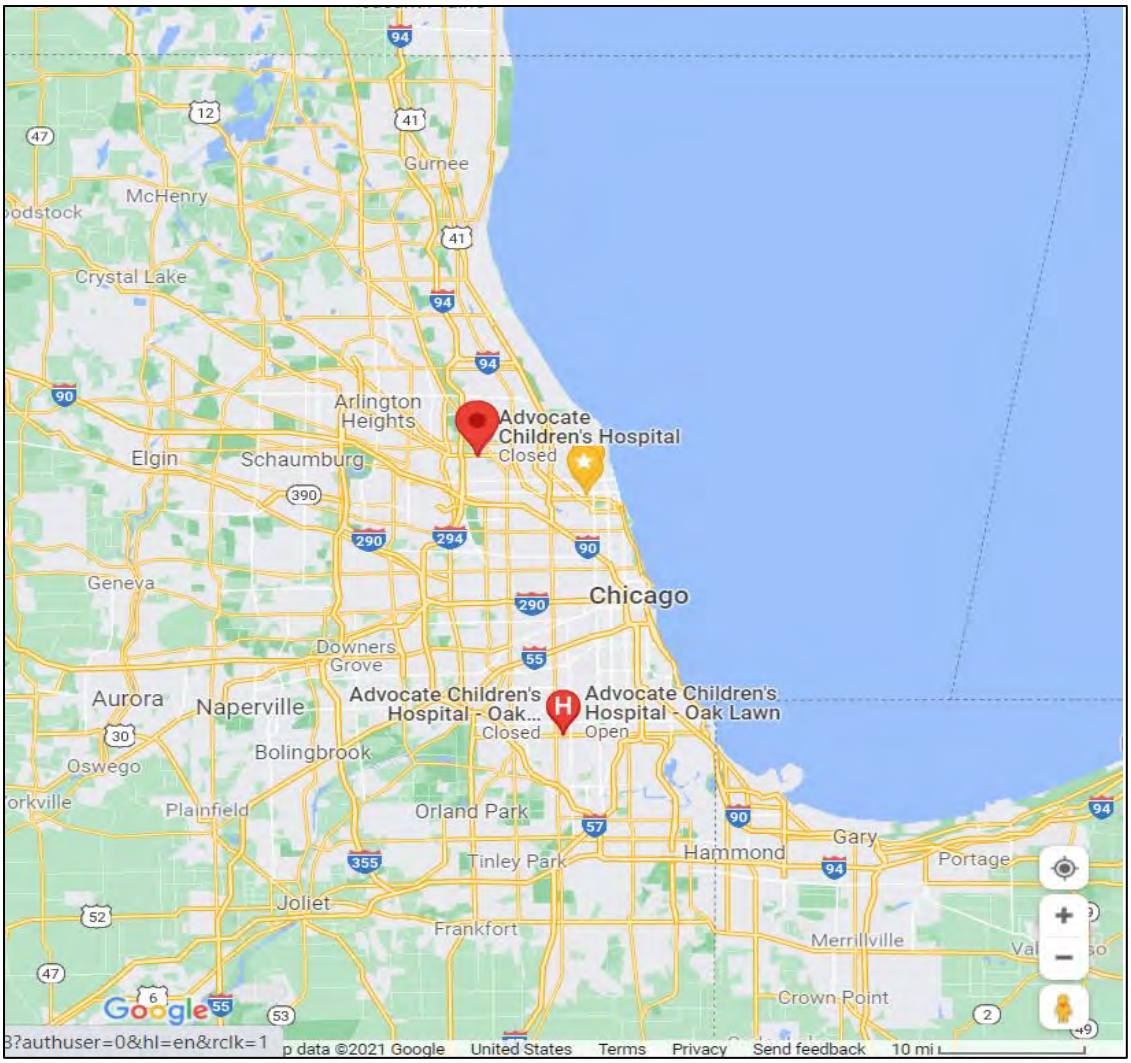

Figure 5: Map of the Chicago area, highlighting the two main campuses of Advocate Children's Hospital.

Distance from the nearest Advocate Children's Hospital	In-Person	Virtual
Pre-pandemic	19.5 miles	17.6 miles
Current status	16.1 miles	18.3 miles

Table 3: The driving distance in miles from a patient address in the electronic medical record to the nearest Advocate Children's Hospital location

Distance from the scheduled ACH clinic site that day	In-person	Virtual
Pre-pandemic	20.9 miles	23.2 miles
Current status	18.3 miles	27.5 miles

Table 4. The driving distance in miles from the available ACH pediatric sleep clinic that day

Medical history	In-person	Virtual
Learning difficulties	1.80%	2.10%
Developmental delay	13%	10.50%
Attention deficit/hyperactivity disorder	15.90%	20.50%*
Autism spectrum disorder	10.60%	13.10%

Table 5. The incidence of underlying medical disorders among patients seen in the pediatric sleep clinic. The asterisk denotes a statistically significant shift from In-Person visits.

Managed diagnosis	In-person	Virtual
Sleep-disordered breathing	31.4%	31.1%
Circadian rhythm disorder	7.8%	10.5%*
PLMD	6.2%	7.7%
RLS	4.5%	5.2%
Insomnia	13.7%	17.2%*
Hypersomnia	1.2%	1.1%
Other sleep	16.1%	23.6%*
Parasomnias	10.8%	14.6%*

Table 6. The incidence of managed diagnosis seen in the pediatric sleep clinic. Asterisks denote a statistically significant shift from In-Person visits.

Unhealthy sleep habit
Sleep inertia
Sleep disturbances
Sleep disturbance
Sleep disorder, unspecified
Sleep disorder not due to a substance or known physiological condition, unspecified
Sleep disorder
Sleep difficulties
Sleep deficient
Sleep concern
Severe morning sleep inertia
Poor sleep
Other sleep disorders not due to a substance or known physiological condition
Other sleep disorders
Infant sleeping problem
Other psychoactive substance use, unspecified with psychoactive substance-induced sleep disorder (CMS/HCC)
Restless sleeper

Table 7. Inclusion criteria for “other sleep disorders”.