



Children's National.

On the Front Lines

Responding to a Global Pandemic

JANUARY 2021



Early Response

As COVID-19 emerged and gained traction in the U.S., Children’s National Hospital led the region in preparing for the impending public health emergency and launched some of the country’s first proactive initiatives to combat it. In addition to planning to care for our pediatric patient population, we sought and received regulatory approval to treat young adults up to age 29 to help reduce the burden of COVID-19 on the area’s adult hospitals.

The region’s first drive-up/walk-up pediatric collection site

As the first cases of COVID-19 emerged in the Washington, D.C., region, it became clear that national shortages of personal protective equipment (PPE) and testing supplies would make it challenging for individual primary care practices to safely test children for the virus. Our community pediatricians brought this issue to the forefront.

Within a week, Children’s National responded with a remote drive-up/walk-up collection site, allowing area physicians to refer patients up to the age of 22 for safe testing. It was the region’s first pediatric collection site and one of nation’s first. District of Columbia Mayor Muriel Bowser noted that it provided a “critical drive-up service ...[to] ensure our children can get tested and support the District’s efforts to flatten the curve.”

Testing site data published in the journal *Pediatrics* was among the first to document the true impact of the novel coronavirus on U.S. children, drawing special attention to its disproportionate impact on children and families of color.

Ready for testing

When testing demands rose, the hospital’s laboratory medicine division quickly became a linchpin to innovative management of the pandemic. Already a national leader in the use of state-of-the-art technology for pediatric laboratory testing, the hospital used its four existing PCR testing platforms to stand up one of the region’s first rapid-testing operations, turning around test results in three hours or less.

In March and April 2020, when tests and quick results were in high demand and short supply, Children's National deployed in-house rapid testing, rather than relying on overloaded offsite laboratories. We first made rapid testing available to symptomatic or exposed employees and hospital inpatients, then expanded it as concerns about potential testing supply shortages resolved.

Turnaround time for this testing system now averages 90 minutes and the team has completed more than 20,000 tests. Every patient scheduled for surgery or a procedure, or who will be admitted to the hospital first receives a rapid COVID-19 test. The ability to provide these tests gives thousands of vulnerable children and at-risk caregivers more access to safe testing and faster results.

Tackling shortages with in-house solutions

The pandemic's supply challenges were widespread. Shortages of a critical reagent for COVID-19 testing threatened our region's ability to continue critical COVID-19 testing. Researchers in our Center for Genetic Medicine Research successfully developed an in-house method to produce this essential testing substance, called "viral transport media." The hard-to-find ingredient preserves virus specimens for transport from the patient to a lab for testing. Using our lab's existing technology, the center made enough reagent for use in the hospital's COVID-19 rapid testing platforms and to provide more than 1,000 tubes to the D.C. Department of Health, also impacted by the shortfall. Production is ongoing and our team

produced more than 19,500 tubes of reagent as of September 2020.



Drive-up testing site

6 days
to launch
pilot site

More than
\$1M
donated in the
first 6 days

1,445
patients
tested



408
positive
results

We tested kids from:



Washington, D.C.

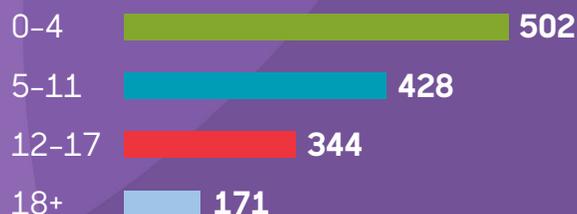


Maryland



Virginia

Patient age:



Telehealth builds a bridge to care for patient families

Prior to the pandemic, telehealth visits accounted for a small portion of our patient appointments. In the 30 days following our first COVID-19 cases, we trained more than 1,000 additional providers to provide appointments via telehealth platforms to safely meet our patients' needs. Training included doctors, nurses, nurse practitioners, nutritionists, interpreters in 50 languages, physical therapists, art therapists and every other specialty provider who cares for kids at Children's National.

We launched an internal resource hub for providers to support them in the quick transition to telehealth care. Telehealth visits jumped from 77 in February to more than 2,000 in March.

In May 2020, based on this success, the hospital was awarded nearly \$1 million from the Federal Communications Commission (FCC) to expand our telehealth platform to 15 additional health care sites serving children and young adults.

From the outset, telehealth was especially important for the community's children with chronic conditions who require regular care and monitoring but were unable to come to the hospital as usual. Without regular follow-ups, kids with these chronic conditions risked needing emergency or inpatient care at a time when Children's National and the rest of the region's hospitals were preparing to care for potentially hundreds or thousands of critically ill COVID-19 patients.

Telehealth offerings continue to grow. In September 2020, more than 1,400 providers offered some level of telehealth care, in addition to the return of many in-person clinic visits.

Throughout the pandemic, we promoted the importance of not delaying care for urgent and emergency needs, while letting our community know that telehealth was an important option for ensuring ongoing care and preventing treatable health issues from becoming more severe.

We expect that telehealth will remain a popular choice for many types of appointments even after the pandemic is no longer a threat.

Protecting patients in the building

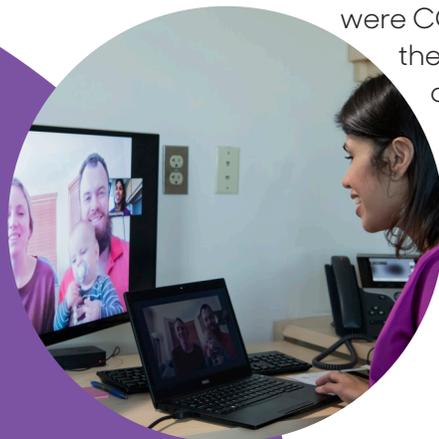
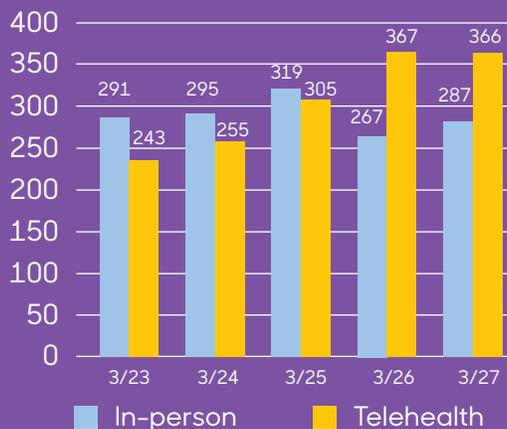
By implementing universal masking requirements and enforcing visitor and staff screening, the hospital took the steps necessary to reduce the risk of community spread within our facilities as we continued to care for children in the community throughout the pandemic. Increased cleaning, plexiglass at reception desks and reminders about hand hygiene and social distancing have become part of daily life.

Children's National was able to return to a robust surgical and procedure schedule early in the pandemic, thanks to developing rapid, high-volume COVID-19 testing. Beginning in April, we conducted pre-admission and pre-procedure COVID-19 testing for children scheduled for sedation or anesthesia for surgeries, procedures and diagnostic imaging, and since expanded the service to multiple convenient locations. Knowing the COVID-19 status of the patient helped the care team identify whether children

were COVID-19 positive even in the absence of symptoms, allowing us to delay care when possible or mitigate the risk when treatment was time sensitive. Even more important, our care teams were able to continue essential care for all children who tested negative.

In-person vs. Telehealth Visits

MARCH 2020





Research

Unlocking new insights

How does COVID-19 affect kids? Children’s National has been working tirelessly since the start of the pandemic to piece together the answer to this vital question. Our scientific and clinical research experts are studying the virus from every angle to understand how it impacts children and why it affects them differently than adults. Each new finding – and new question – supports the advancement of public health efforts to bring COVID-19 under control in the U.S. and around the world.

Kids can get COVID-19

Children’s National was among the first to publish findings that contradicted the prevailing view that the novel coronavirus did not seriously impact children. The research, published in the *Journal of Pediatrics*, found that children who contract the virus can become very ill – some of them critically. The findings highlighted the spectrum of illness in children and aimed to help doctors and parents better predict which patients are more likely to become severely ill.

Understanding the role of COVID-19 antibodies: Studies may help find the answers

The global pandemic has raised many questions, such as, “If I have been exposed to the virus, do I have antibodies in my blood?” and “If I have antibodies, can I still contract the virus?” To answer these questions, Children’s National is conducting multiple research studies to learn more about the virus and antibodies in children.

One study* helps researchers better understand how long it takes pediatric patients with the virus COVID-19 to clear it from their system and at what point they start to make antibodies against it. Findings revealed that children can have both the virus and antibodies in their bodies at the same time. Results showed the median duration of viral positivity to be 19.5 days, which is longer than the median time for detecting antibodies, which was 18 days. The study also found that kids ages 6 to 15 had a longer duration of viral positivity, a median of 32 days. These findings support continued diligence with basic infection control procedures such as hand hygiene, social distancing and masking, even when a child no longer shows symptoms or has antibodies.

Another study, conducted in partnership with DC Health, looks at the prevalence of antibodies to SARS-CoV-2 in people in the region. From June to July 2020, 1,900 employees completed surveys and received COVID-19 antibody testing. This ongoing study is currently enrolling Children’s National patients across the institution to study the rate of COVID-19 antibodies among well children and those with chronic medical conditions.

**Study name: Kinetics of viral clearance and antibody production across age groups in SARS-CoV-2 infected children.*

Understanding a mysterious new syndrome

COVID-19 established powerful motivation for global experts to assemble virtual gatherings to exchange information, compare experiences, make critical observations and share important lessons learned. Ricardo Muñoz, M.D., division chief of Cardiac Critical Care Medicine, was one of the first to host weekly meetings with international colleagues across six continents to present different viewpoints on the global experience with pediatric COVID-19.

It was in these meetings where some of the earliest reports of a strange new inflammatory condition in children were shared. Immediately, our experts got to work treating and studying what would be called multisystem inflammatory syndrome in children, or MIS-C. Children's National helped spotlight the phenomenon by giving National Public Radio (NPR) exclusive access to our pediatric intensive care unit where children with MIS-C were being treated.

"What we've found so far...is the vast majority of them don't have the virus...but we do find the antibody in a significant number of them," Robert DeBiasi, M.D., chief of Infectious Diseases at Children's National told NPR. "So that implies that this is post-infectious, or after you've cleared the virus."

Treatment and research around MIS-C is ongoing, as we work to understand not only its cause, but also the short-term and long-term health implications for children.

“Each of these pieces of information that we, our collaborators and other scientists around the world are working to gather is critical for developing policies that will slow the rate of viral transmission in our community.”

Roberta DeBiasi, M.D.
Division Chief, Infectious Diseases

Spotlighting health inequities

Children's National was among the first to present data validating a concerning but important trend: children of color facing socioeconomic barriers are more likely to become infected and severely ill with COVID-19. The findings, published in *Pediatrics*, paralleled similar COVID-19 health disparities found in adults. The study examined data collected from 1,000 children at our drive-up testing site at Trinity University.

"Children don't exist in a vacuum," Monika K. Goyal, M.D., Children's National pediatric emergency medicine specialist and lead author of the study, told the *New York Times*. "They live in homes where their parent or caregiver doesn't have the luxury of telecommuting, so they are at increased risk of exposure...They are also more likely to live in multigenerational households. It's all connected."

Dr. Goyal added, "There's nothing to indicate that there's some sort of genetic predisposition to COVID-19 based on race or ethnicity."

Pursuing new discoveries

While there is still much to learn, our Children's National team remains steadfast in our determination to discover and share the missing pieces to the puzzle. We continue to add to the collective body of knowledge with ongoing studies to assess how infections proceed in children and how antibodies develop both at the individual and population level.





Community Engagement & Advocacy

Providing a resource to primary care providers

In the pandemic's rapidly evolving saga, timely information about what we were seeing on the front lines became highly valuable. Children's National immediately partnered with the Pediatric Health Network (PHN) to offer a virtual town hall series aimed at educating pediatric primary care providers about COVID-19. Our experts helped guide primary care providers through this unprecedented time with real-time updates, presentations and answers to pressing questions. Our specialists weighed in on topics including strategies for general pediatric practices in COVID-19 pandemic times, implementing successful telemedicine visits, diagnosis and monitoring celiac disease, as well as guidelines for drive-up and walk-up specimen collection.

We created and presented highly-attended webinars as a reliable source of information and data-sharing and provided primary care providers with a resource to help maintain their practices from March through September.

Taking blood drives to communities to address a national shortage

One of the most concerning impacts of the pandemic was that blood drives were cancelled and visits to blood donation sites plunged, significantly decreasing supplies across the nation. Blood donations are essential to saving the lives of trauma patients, those with blood disorders such as sickle cell disease and conditions such as cancer.

To address this issue, Children's National Hospital took blood drives into the community so people could donate more easily. Our Bloodmobile hosted seven mobile blood donation drives

at the Westmoreland Congregational United Church of Christ in Bethesda, MD, resulting in more than 100 units of blood to support patients during the COVID-19 pandemic. We also began hosting blood drives at the new Children's National Prince George's County location to help cover a broader region.

Engaging youth and families as the world adjusted to the pandemic

In May 2020, Children's National identified the need for community outreach as children and teens struggled with depression from the inability to see friends, have social gatherings and complete in-person schooling.

Our Child Health Advocacy Institute (CHAI) hosted a three-part virtual youth town hall series for high school students that focused on adolescent health and the effects of the pandemic. Using social media outlets, Children's National made resources easily available. Topics included: 'What Does Coronavirus Mean to Me?'; 'Protecting My Mental Health'; and 'How Do I Take Care of Myself During the Pandemic?' Student attendee evaluations revealed that they found the information and resources very helpful and appreciated a resource that tailored specifically to them. In addition, CHAI partnered with youth programs in the community, including the DC Summer Youth Employment Program and Urban Alliance, to educate them about COVID-19 and safety. In total, more than 400 young people learned how to stay safe and healthy.

Children's National also presented virtual town halls to support families in our community. Video sessions were made available in English, Spanish and Amharic. Topics included COVID-19 education, mental wellness and community resources. More than 170 people engaged in the eight-part series, asking questions of panelists and offering input. All recordings for youth and family town halls are available on the COVID-19 resources page of the Children's National website, making them easy to access at any time.

Drive-up immunization clinic meets patients in their communities

Early in the pandemic, primary care providers and specialists saw extreme decreases in appointments. This meant missed wellness checkups, which are especially important for children and include regular vaccine administration. Lack of compliance with immunizations puts a child's health at risk and can lead to outbreaks of measles, mumps, polio or other highly contagious diseases.

Children's National met this problem head on with a solution. We launched a Drive-Up Immunization Clinic in the community in an innovative care delivery model, making it easy and convenient for parents to get this necessary care for their children. Ninety-one children received vaccinations during the first 10 clinics that began in late June.

Partnerships with the Medical Mobile Program, Medicaid HMOs and Children's School Services made this initiative possible. With no certain end to the pandemic, the drive-up immunization clinic will continue throughout flu season and possibly beyond.



Advocating for children living in poverty during a pandemic

Children's National pediatricians published a viewpoint in *JAMA Pediatrics* advocating for future COVID-19 legislation to address child health and well-being. The authors recommend that Congress expand critical programs for children in families with limited resources, including additional funding for Medicaid to cover rising demand, especially since children have lost educational, nutritional and social supports during the pandemic.



COVID-19 and children in immigrant families

COVID-19 does not discriminate and neither should the measures to lessen its impact. Olanrewaju Falusi, M.D., medical director of advocacy education at CHAI and Children's National pediatrician, along with other researchers, published a perspective in *Pediatrics* on how pediatricians can help mitigate exponential growth of health inequities for children of immigrant families during this pandemic. The authors assert that strategies within and beyond health care systems must incorporate policy and public health approaches that are compassionate, culturally relevant and equitable.



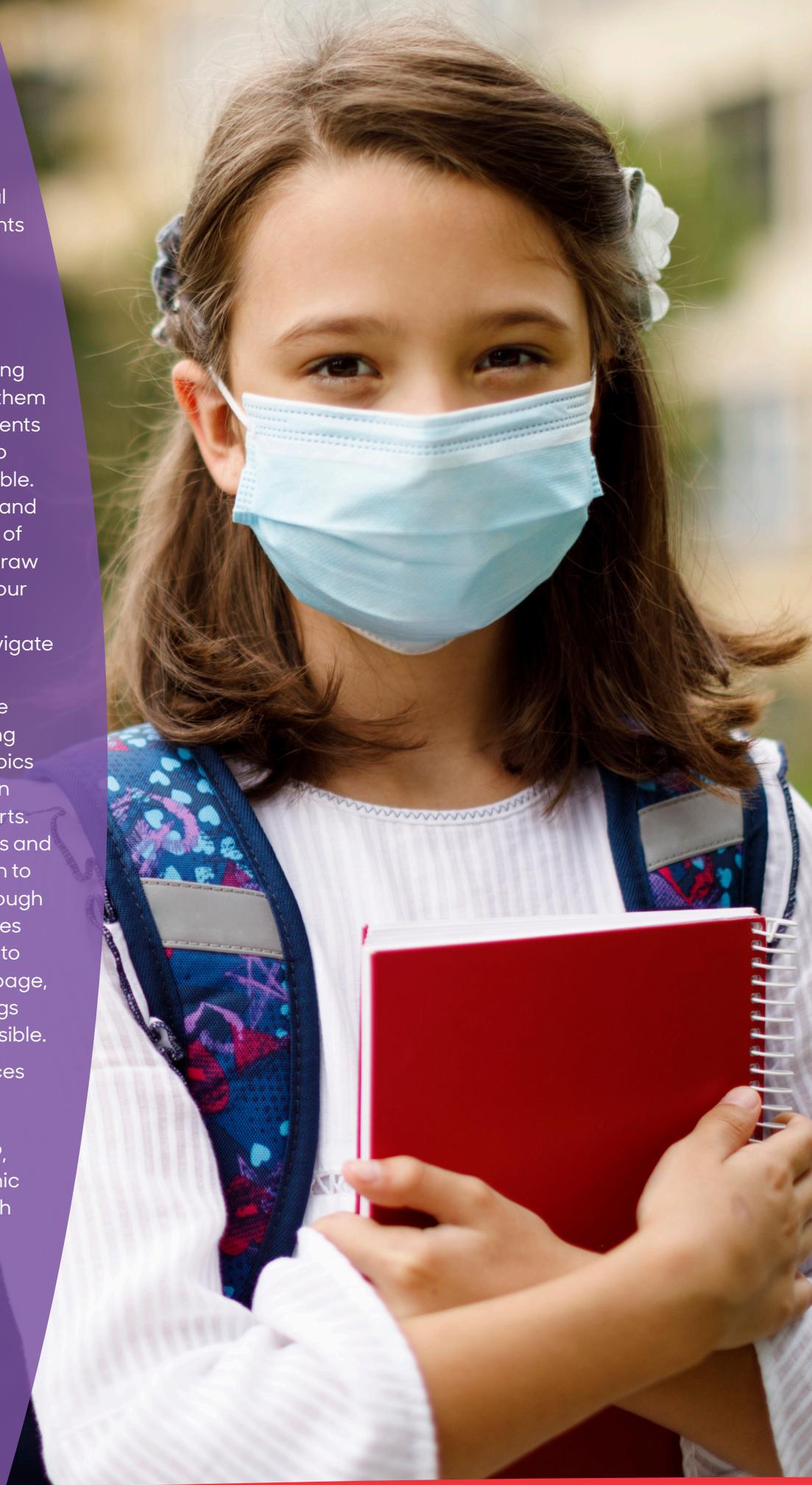
Returning to school safe and strong

Many schools shifted to virtual learning this fall, leaving parents to juggle working from home with helping their kids attend online classes and complete assignments.

Children's National is partnering with local schools to support them as they prepare families, students and educators for returning to school in the safest way possible. Our Returning to School Safe and Strong initiative is a collection of resources and services that draw on our pediatric experts and our frontline experience with the pandemic to help schools navigate this unprecedented time.

Offerings have included a free virtual webinar series featuring pediatric experts covering topics such as teacher apprehension and students returning to sports. Hundreds of teachers, parents and school administrators tuned in to the live sessions from July through September. Printable resources are posted to the new Return to School Safe and Strong web page, making the webinar recordings and helpful tools easily accessible.

Customized fee-based services are offered for more in-depth needs, including telehealth support, testing for COVID-19, antibody testing and pandemic preparedness consulting, such as how to best apply CDC guidelines to specific school environments/populations.





Ensuring Widespread Public Information Sharing

During this public health crisis, trustworthy up-to-date information is critical. We feel a responsibility to provide a steady stream of it from our pediatric experts. From the start, we had a unique perspective to share: Our region experienced a relatively high volume of pediatric cases early on. We engaged daily with local and national news outlets to help us deliver important information as the pandemic unfolded.

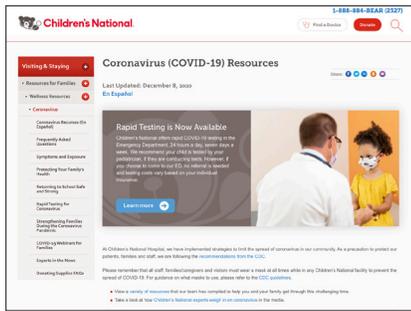
Children's National has been included in more than 2,800 stories across local, national and international media. We delivered information on protecting children and how to respond if symptoms develop. We quickly became a resource for parents' myriad issues and concerns. This included how to maintain healthy sleep habits, supporting ongoing learning and development, addressing mental health concerns and preparing for school, regardless of the format it might take.

Rise and Shine

The Children's National Rise and Shine website is a resource for parents that aims to help kids live healthy, happy lives. On March 10, 2020, Children's National started posting COVID-related content on the site. During the next 6-month period, the majority of new content – 77% – was COVID-related.

Children's National pediatric experts weighed in on hand hygiene, mental health, tips for distance learning, explaining COVID-19 to children and much more. Parents may submit questions and a response from a pediatric expert will be posted. From March to September, Rise and Shine saw a 40% increase in visitors compared to the previous six months.





Children's National website: A resource hub

It became clear early in the pandemic that families were struggling to keep up with all of the new and evolving information they were hearing. Children's National created an information hub on [Childrensnational.org](https://www.childrensnational.org) to make COVID-19 resources easily accessible. This is a one-stop-shop for parents searching for answers. Content is broken out into multiple sections to keep it user-friendly. Content includes the safe return to school, viral symptoms and exposure and other frequently asked questions and our COVID-19 webinars. Families can trust that this information is timely and accurate.

Between March 2020 and January 2021, the 491 pieces of content on social media have reached more than **7.5 million users**

Social Media Timeline

- 3.11 Facebook Live with infectious disease expert Dr. Nada Harik** – at the start of the pandemic, Dr. Harik participated in a Facebook Live session where she described the novel coronavirus, shared symptoms and answered questions from parents about protecting their families. The video received 28k views.
- 3.23 Drive-up testing announcement** – Children's National announced the first drive-up/walk-up testing site via social media, where parents learned of this new site for their child to be tested for COVID-19. More than 150 users shared the post to their own Facebook feeds.
- 4.01 Kids Guide to Coronavirus** – this short video covered school closings, germs, hand washing and social distancing, giving parents a way to speak to their children about the changes in their lives.
- 4.13 Health Heroes video** – in an effort to generate safe content while staying socially distant, a Health Heroes video featured staff from all over the hospital sharing hand sanitizer.
- 4.15 Telehealth Campaign** – as in-person visit volumes decreased, Children's National began to urge families to schedule their telehealth appointments and shared "A Kid's Guide to Telehealth."
- 5.07 Youth Town Halls and webinar promotion** – the CHAI and leadership teams began scheduling live webinars aimed at youth, parents and teachers to cover topics related to return to school.
- 5.11 Pandemic Parenting** – this six-part video series featured Children's National experts discussing topics ranging from sleep during the pandemic to mental health and myth busters. Relevant topics were sourced from parent-submitted questions. The videos reached more than 65k users collectively.
- 7.15 Patient testimonial** – to ease the minds of parents making appointments during the pandemic, we shared a mother's video account of her child's first visit back to the hospital since the start of the pandemic.
- 8.06 Reengagement campaign** – Children's National began running ads reassuring families of the safety precautions the hospital implemented in order to begin scheduling in-person appointments. The social media campaign received 733 clicks and concluded at the end of September.