CASE STUDY

Dayton Children's Hospital Delivers COVID-19 Test Results in Less Than One Hour During Critical Holiday Season

- One of only 31 freestanding children's hospitals in the United States.
- Home to the Wright State University Boonshoft School of Medicine, Department of Pediatrics.
- Serves more than 320,000 children each year in 20 Ohio counties and Eastern Indiana.

Hospital cuts response time down from 24 hours to less than 60 minutes, despite the spike in demand and seasonal staffing shortages.

Anxious patients await test results during pandemic

In the summer of 2020, in response to the growing need for faster and easier COVID-19 testing, Dayton Children's Hospital set up three drive-thru sites that provided PCR testing for their patients that had a doctor's order. Results for PCR testing, considered the best COVID test available, took one to two days while antigen test results were accessible in four hours or less.

In order to get their test results, parents of patients had to go through several tedious steps. First, hospital staff would send parents a text alert to set up their online Epic MyChart patient portal during the registration process. Parents would have to complete this process within 24 hours in order to see the test results online. Then another text would notify them when their test results were ready.

The problem with this multi-step method was that not everyone completed the registration process so they could not get their test results remotely or quickly.

Patients did not like the complexity of the process and frequently forgot to complete the next step. Meanwhile, while they waited for their results, they were likely anxious, anticipating a positive result or behaved as if they had a negative result. Those who did not finish the registration process had to call their doctor for the results which took even more time.

The Results

61 Minutes

Average time from completing antigen test to sending text with test results was 61 minutes vs 4 hours

34 Minutes

Patients received text notifications of results as quickly as 34 minutes after taking a COVID-19 test

97% Satisfaction

Survey results report 97% of patients were happy with the time it took to get test results

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In mid-November, the drive-thru clinics started to offer a rapid 15-minute antigen test. By now, Dayton Children's knew they needed a faster but secure communication system to deliver these vital test results directly to their patients. Clearly, a better method for communicating test results was greatly needed.

Dayton offers faster test results for larger community

The Dayton Children's Clinical Information Systems department (CIS) worked with the Artera™ team to set up a new program to text COVID results. This was part of Dayton Children's strategic plan to be the community's primary resource for rapid testing. From the time Dayton Children's made the decision to implement the program, it only took three days before they were able to start sending test results via texts.

"It was a very, very quick turnaround. And it's been working really well," said Nikki Collier, Program Manager, Digital Engagement Operations. "Locally, there are many COVID testing places but we are the only one that will give you results within a couple of hours. Having the option to give patients their results so fast is what's making us the exception," Collier explains.

Artera enabled Dayton Children's to offer rapid antigen testing as a fee for service option in order to service their entire community, such as patient segments like adults over 21 years old that they don't typically serve. Since the antigen testing does not require a doctor's order, anyone could go through a drive-thru, pay a small fee, and quickly get the result. Collier notes, "Even people who were waiting for their PCR test results opted to do the quick antigen test at the same time to get an answer right away. It's really great to be able to offer that choice."

> ***"We've found that Artera is fairly intuitive, allowing us to quickly get things done and efficiently communicate with our patients."***
>
> **Dan Sweeny**
> **Director of Digital Engagement**

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With these rapid tests, individuals who provided a cell number received a text message with their results in an hour or less. If the patient or family had an active account with Dayton Children's, results were posted in their Epic MyChart patient portal and sent to the primary care provider if needed. Dan Sweeny, Dayton Children's Director of Digital Engagement said, "We've found that Artera is fairly intuitive to get things done quickly and communicate with our patients."

Improving the provider and staff experience

In addition to improving the patient experience, Artera also helped to alleviate the pressure on Dayton Children's staff. At the time, the hospital had a number of new, entry level staff members who were quickly trained on the Artera platform. Collier explains, "Implementing Artera really exceeded our expectations especially since it's so easy to train a user on it. We haven't had any problems so I think it was done really well." Getting new employees up to speed quickly was essential for Dayton Children's particularly since they were operating a high volume, drive-thru testing site.

In making holiday plans, many people wanted COVID tests in the days leading up to Christmas. Collier said, "We marketed this at the beginning of December and it just really exploded." Although communications during the holidays can be challenging especially during a pandemic, Dayton Children's was still able to text results to 503 people on December 23 and to 255 people on Christmas Eve.

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> **Nikki Collier, MHS**
> Program Manager, Digital Engagement Operations

Expanding strategic patient communications

Dayton Children's plans to expand their use of the Artera communications hub in other areas such as using Artera™ within their Epic system to text more complex messages to their patients regarding activating accounts. Sweeny notes, "We've certainly had lots of use cases come up to allow us to play with the platform and get comfortable with it." He added, "If we were still with our old vendor right now, we wouldn't have been able to do any of this."

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