

## Overview

Atrium Health is a large health system with over 60,000 employees spread across more than 900 care facilities, including 45 hospitals, which cares for patients in both urban and rural settings. It is a complex network, so providing consistent care in the face of the novel Coronavirus-19 posed a challenge. Atrium Health's Central Market, located in the greater Charlotte area of North Carolina, watched as hospitals and ICUs around the country filled to capacity and strove to find an innovative way to treat the COVID-19 patients in their community. In April, they launched a two-unit virtual hospital, which freed up hospital beds for the most complex patients and allowed for some acute COVID-19 patients to recover in their homes, thus limiting community spread and stretching their capacity. To date, about 95% of Atrium's COVID-positive patients have been touched by the Virtual Hospital, and the vast majority were able to recover safely in their own homes.

## COVID-19 Outbreak in the Greater Charlotte Area

Even before the COVID-19 pandemic, the average capacity of Atrium Health's Central Market hovered at 102%, leaving little capacity for an influx of COVID-19 cases. At the pandemic peak in the area, Atrium Health projected a need for 30-50% additional hospital beds. The leadership team recognized that keeping community transmission low, while caring for patients in their homes would be crucial to maintaining capacity.

Atrium also committed to proactive management of COVID-19 patients across the care continuum, and within one weekend Atrium had a plan for the Virtual Hospital.

## The Virtual Hospital

Within ten days of the initial idea, the team was able to see their first COVID-19 patient. The Virtual Hospital had two "floors," one more acute than the other. For the observation-focused "floor," a nurse would do a telephonic assessment every other day and patients had access to the GetWell Loop for engagement and feedback. The acute care, or second floor, was more involved, including using home monitoring kits (including oxygen saturation meters, blood pressure monitors, and thermometers) and advanced therapies (EKG monitoring, IV, respiratory protocols, and other treatments), and these patients had access to community paramedicine and nurse home visits. The acute care patients also received daily virtual provider rounds. On both levels of care, patients had access to 24/7 virtual physician call coverage.



Also critical was the communication of the Virtual Hospital to help patients understand how to access care. They focused their messaging strategy around culturally relevant educational materials, particularly for the Spanish-speaking community who was disproportionately affected by COVID-19, as well as very clear instructions regarding Atrium's testing strategy and treatment options.

## Impact

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Atrium Health has performed about 173,900 COVID tests, and as of early July, are averaging a 9% positive rate. A high percentage of the positive patients have been admitted to the virtual hospital, and to date they have cared for approximately 15,700 patients. So far, only about 3 % of patients who started in the Virtual Hospital had to be transferred to the physical hospital, allowing Atrium to preserve needed capacity for the sickest patients. The biggest challenge the team has faced with the Virtual Hospital was helping patients to manage their fear and anxiety around the COVID diagnosis. They use the GetWell Loop service, which is a virtual health monitoring and medical information service. Patients with confirmed positive COVID-19 cases are then monitored by a remote health care team and receive daily messages with medical information and advice. Thanks to the GetWell Loop and regular check-ins with clinicians, patients felt cared for, with one stating, “It was easy to access medical professionals. They took time to speak with me and generally cared about me. It was great. My questions were answered quickly. The reminders were helpful. It relieved my stress. I was healthy before COVID, so this was new. The quick responses were sure and definite. Glad to know someone was keeping an eye on me throughout this whole experience and I wasn’t alone.” The Virtual Hospital is proving to increase patient satisfaction, and as an added benefit, patients cared for at home did not face the same restrictions on visitors and could stay with their families and in familiar surroundings.

## Lessons Learned

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One aspect that led to a successful deployment of the Virtual Hospital is that Atrium Health kept their workforce intact, virtually cross-training nurses and

other providers and redeploying staff as necessary. It did take a few weeks for Atrium to develop routine and regular communication with their staff, and to create new workflows for the Virtual Hospital and its connection within the continuum of care. Atrium Health also credits their success to securing senior leadership support early, as they rapidly developed the protocols necessary to implement the Virtual Hospital.

For those interested in developing their own virtual hospital, Atrium suggests beginning with the end in mind. The staff knew their COVID patients should receive the care they needed throughout the course of their illness. This became their rallying cry. Atrium assembled their team of people with the shared goal of caring for their community and with qualities like flexibility, courage, diligence, and hard work. As a result, all of the traditional silos and turf battles

disappeared. When a patient was in trouble, all team members rallied around their common mission and vision. In order to overcome a pandemic surge like that of COVID-19, it is important encourage and nurture a team that can

think beyond the scope of day-to-day responsibilities and work towards a unified goal of better care for all patients regardless of the hospital or health system size.



# Atrium Health

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