Boston Children's Hospital

HALE FAMILY BUILDING

BERTHIAUME FAMILY BUILDING

POWERING CLINICAL MOBILITY & SEAMLESS HEALTHCARE COMMUNICATIONS WITH A HYBRID 5G NETWORK

Boston Children's Hospital (BCH), a global leader in pediatric healthcare, was implementing a clinical mobility platform and migrating to an enterprise electronic health record. As part of this upgrade, they wanted to enable secure communications that could seamlessly support both hospital-based and mobile healthcare delivery.

Pixel Health suggested deploying a secure and scalable 5G Cellular Hybrid Network infrastructure to meet BCH's current demands as well as future needs of their digital footprint.

Understanding the Challenges & Requirements

During the early planning phases of the EHR migration, leaders at BCH and their consultant partners at Pixel Health first worked to define the project scope to understand the current constraints and needs.

Key Takeaways

Boston Children's Hospital, Pixel Health, and T-Mobile for Business formed a strong collaboration that:

☑ Launched a unique hybrid cellular 5G network with a private, over-the-air APN (access point name) configuration providing seamless, secure communication inside and outside the campus

☑ Followed an Operating Expenses (OpEx) financial model to enable cost predictability and control

☑ Demonstrated a repeatable, scalable solution that will benefit other healthcare organizations

Addressing the limited capacity of the existing network infrastructure

Recognizing that their existing Wi-Fi system and network infrastructure wouldn't fully support a growing number of devices and advanced technologies, BCH needed a solution that could handle increased traffic on their network.

Developing a technology solution to support both hospital- and home-based healthcare

BCH was facing growing demands to serve patients with higher acuity outside of their facility but were limited by their existing Wi-Fi communications infrastructure. To reduce delays in care and improve overall efficiencies, BCH needed a solution that could keep up with a fast-paced environment and a workforce that is increasingly mobile.

Simplifying complex provider workflows to preserve time with patients

BCH was aware that new technologies may also introduce more complicated provider workflows. BCH wanted to streamline the technology and tools used by the clinicians and staff to enhance, not impede, their care of patients.

Building a secure solution to reduce cybersecurity risks

Given that hospitals are witnessing an unprecedented increase in cybersecurity attacks, BCH needed a highly secure, mobile, and unified communications strategy.

Collaborating to Create a Provider- and Patient-Centric Solution

After evaluating the challenges and needs with operational, technical, and clinical leaders and front-line staff, Pixel Health and T-Mobile for Business teams worked alongside BCH to design a robust system for a hybrid cellular 5G network. With this hospital-based primary 5G network, which would augment the existing Wi-Fi system and support BCH's communication goals, they will be able to:

- Increase network capacity and steadily manage high traffic volumes as BCH's needs grow over time.

- Deploy 4,000+ mobile devices to the care team to support staff mobility and enhance timely communication with patients, replacing the need for physicians to manage multiple, single-purpose tools.

- Experience faster transmission speeds and lower latency features to agilely support deployment of new technologies in the future.

- Seamlessly support telehealth and home-based care with uninterrupted, secure connectivity, which helps patients receive more intensive care and enables remote patient monitoring—without setting up VPNs or other complex systems in patients' homes.

- Provide critical backup as the 5G cellular network supports critical hospital functions while the Wi-Fi system serves as an important redundant network—without the need for BCH to spend millions of dollars to expand its Wi-Fi capacity.

Once fully deployed, the fast, highly secure 5G cellular network will support large volumes of communication traffic and will also:

Improve network security of mobile devices used by the BCH care team, both at the bedside and while on the move, with the advanced encryption and authentication features of 5G.

Deliver reliable communication for patients and visitors using the Wi-Fi network as the primary 5G cellular network handles a substantial volume of critical communications systems.

Position BCH to integrate current and future technologies that require the performance that only a 5G network can provide.

Remove the need for a substantial capital investment by structuring an operating expenses (OpEx) funding model that limits capital expenses and enables financial predictability and control.

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Synergizing Ideas and Collaborating for Progress: The Pixel Health and T-Mobile Advantage

Implementing a flexible and scalable solution, like 5G, within a health system is a complex undertaking. Pixel Health and T-Mobile offer unique solutions for healthcare systems seeking unconditional connectivity. With Pixel Health's healthcare consulting expertise guiding strategy and implementation and T-Mobile enabling fast and reliable 5G connectivity, we remove the complexity of enabling clinical mobility.

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Pixel Health can evaluate your network capacity and determine how to best support your strategic priorities. Learn how you can extend the reach of the care team and ultimately improve patient access and outcomes by contacting us today.

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