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CASE STUDY

Boston Children's Hospital improves mobile access and accountability with a shared device model

Challenge

- Limited oversight into where devices were, who had them, and whether they were returned
- No reliable way to manage inventory across departments and shifts
- Simultaneous large-scale initiatives – including an EHR transition (from Cerner to Epic), 5G buildout, and nurse call changes – increased operational complexity

Solution

- Adopted a shared iOS device model with Imprivata
- Built deployment plans department-by-department, role-by-role, and shift-by-shift
- Gained centralized visibility, role-based access, and stronger control over device use and recovery

Results

- Reduced device loss to approximately 2% over two years
- Enabled centralized oversight across thousands of shared devices
- Improved clinician access to communication, alerts, and mobile clinical workflows while helping IT reallocate underused devices instead of buying more

Organization snapshot

Location: Boston, Massachusetts

Industry: Pediatric healthcare

EHR: Epic

Facilities: 5

Mobile environment: Approximately 4,000 devices, including 3,700 phones and 250 iPads, supporting about 2,000 daily users

Overview

Boston Children's Hospital needed a more controlled and scalable approach to mobile access. As the organization expanded its use of mobile tools for clinical communication and workflow, its legacy environment made it difficult to know where devices were, who was using them, and whether inventory matched actual demand. At the same time, Boston Children's was managing several major initiatives at once, including a move from Cerner to Epic, a 5G buildout, and a new nurse call system. Rather than layering more complexity onto an already fragmented environment, the team used the transition as an opportunity to modernize mobile operations around an accountability-driven, shared-device model.

Today, Boston Children's supports a large shared mobile fleet across five facilities, including 3700 phones and 250 iPads used by roughly 2,000 people each day. That scale made oversight, consistency, and access management central requirements from the start.

Challenge: Replacing a chaotic legacy environment with a manageable, scalable model

Before the rollout, Boston Children's relied on a legacy mobile system built around devices with little day-to-day visibility into location, usage, or accountability. As Mike Villavicencio, Lead Clinical Mobility Analyst, and implementation lead for the hospital's mobile fleet, put it, "We really didn't have oversight on what was happening on a day-to-day basis."

That gap showed up in basic operational questions the team could not easily answer: which department had which phone, whether a phone had been returned, and whether a missing device was truly lost or simply untracked. Inventory management was similarly unclear. If devices were unavailable, the organization had limited confidence about whether it needed more phones or just better control over the phones it already had.

The timing added pressure. Boston Children's was not implementing mobile changes in isolation. The organization was simultaneously moving from a Cerner EHR to Epic, building out 5G, and introducing a new nurse call integration and user system. With so many dependencies in motion at once, the team needed an approach that would not just replace devices, but support broader workflow and infrastructure changes.

They considered a one-device-per-user model, but ultimately concluded that a shared model would be easier to manage, more cost-effective, and more flexible for supporting different roles and use cases across the hospital. As Villavicencio explained, "The shared model proved to be, I think from a management standpoint, easier to maintain and lower cost, and really allowed us the flexibility to manage what the users see on a day-to-day basis."

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Solution: Designing shared mobile access around departments, shifts, and operational realities

Boston Children's implemented a shared device strategy with Imprivata, using shared iPhones and iPads to support clinical communication and mobile workflows. The technical deployment was important, but the larger success factor was operational discipline.

The team did not size the environment using rough estimates. Instead, they went department-by-department to understand how devices were actually needed and used. Villavicencio said, "We went to every department, and we actually tracked out every role within each department, specifically by shift, to account for how many users we would have at a given time." That level of detail helped Boston Children's calculate demand across first, second, and third shifts, plan for shift changes, and build in buffer capacity so devices would be available when one shift ended and another began.

That planning extended beyond user counts. Boston Children's also assessed the physical environment to determine where charging stations could go, whether power and networking were available, and how mobile infrastructure would coexist with other competing demands for space. These details mattered because device access had to fit into real care settings, not just a spreadsheet. The team also worked closely with clinical informatics and other stakeholders to align the rollout with clinical workflows and departmental dependencies.

Once deployed, the shared model gave staff a simpler, faster way to begin their shift. Users can now tap their badges to check out a phone and then access the apps and workflows relevant to their role, including Epic applications and other approved third-party tools. Password autofill reduces repeated credential entry, while role-based app provisioning helps users see what they need without expanding complexity across the entire fleet.

For IT, the model replaced guesswork with visibility. Boston Children's gained a centralized dashboard showing how many phones were checked out, how many were overdue, whether devices were disconnected, and whether devices had crossed thresholds that suggested they might be lost. The shared environment also made it easier to enforce policy, secure devices, and manage issues consistently across thousands of devices.

Results: Better accountability, stronger visibility, and more useful mobility at scale

The most immediate change was control. Boston Children's now has centralized visibility into a large, shared fleet spread across five facilities. Instead of operating without clear oversight, the team can monitor device status, identify overdue phones, and act before small problems turn into larger operational issues. This matters, especially because the mobile environment is supported by a relatively small team – five people – who, thanks to the shared model, have been able to manage the program alongside other responsibilities, which makes large-scale administration more practical.

The rollout also improved accountability. Because device checkout is tied to individual users, Boston Children's was able to reduce device loss to approximately 2% over two years. Villavicencio connected that improvement directly to ownership and recovery processes, saying, "The cost savings are huge. It's because you have accountability."

Operationally, the devices have become embedded in daily care workflows. Staff use them for unified communications, alarms, nurse call alerts, lab alerts, and access to patient information on the go. Instead of relying on stationary desktops or waiting for access to a workstation on wheels, clinicians can move through the hospital while staying connected to the people, information, and notifications they need, which was a crucial driver of adoption.

The shared model also helped Boston Children's get more value from its device inventory. Using analytics, the team identified 120 devices that were consistently underused and could be repurposed for other clinics rather than replaced with net-new purchases. Requests for shared iPads also increased two- to three-fold after they went live, with use expanding into additional departments and specialties. That suggests the model is not only manageable, but useful enough to drive broader adoption across the organization.

Looking ahead

Boston Children's continues to expand their shared mobile program, with additional devices and SmartHubs planned for deployment. The longer-term value is greater than having more devices in more places. Boston Children's has established a repeatable way to manage shared mobile access as a clinical and operational system: one built around departmental realities, shift-based demand, centralized oversight, and shared accountability.

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