



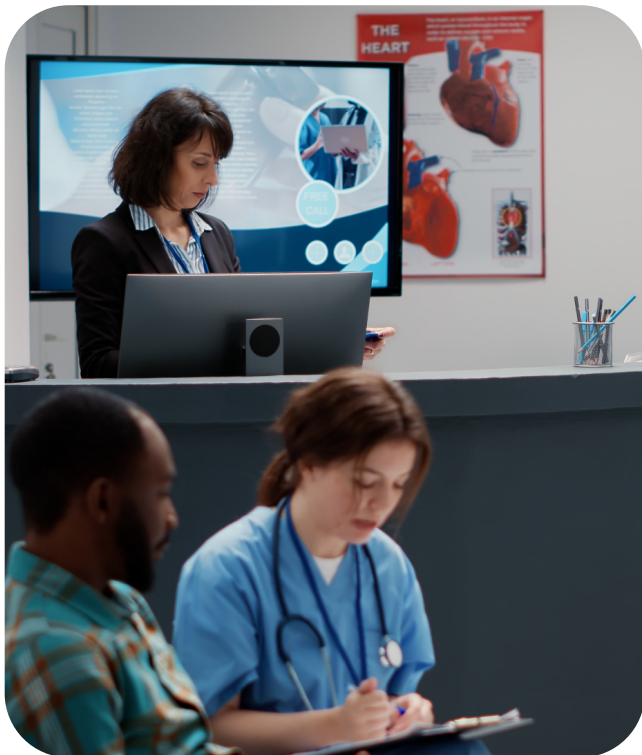
Standardizing Care with a Managed Android Communication and ED Check-In Suite

Eliminating bedside communication gaps and Emergency Department triage bottlenecks through a secure, kiosk-controlled Android tablet ecosystem featuring integrated SIP telephony.

Overview

We engineered a unified, enterprise-managed Android tablet application suite tailored specifically for shared clinical environments and high-throughput emergency care.

- Deployed clinician-initiated virtual rounding tools paired with robust SIP-based telephony integration, enabling secure inbound and outbound patient connectivity.
- Enforced rigid device governance by implementing automated kiosk mode controls and a dedicated administration dashboard, slashing device maintenance overhead and eliminating tablet misuse.



Client Profile

This prominent US academic health system operates multiple inpatient facilities and specialized outpatient centers. Driven by a large workforce of healthcare professionals, researchers, and educators, the organization leverages technology-driven innovation to establish cutting-edge benchmarks for medical workflows and patient-centered hospitality.

Challenges: Communication Silos and Device Configuration Drift

Deploying consumer-grade mobile hardware into a high-stakes hospital ecosystem introduced critical operational friction:

- **Delayed Rounding Cycles:** Relying on traditional, manual workflows slowed down real-time clinician-to-patient check-ins and delayed critical care updates.

- **Patient Isolation Risks:** Inpatients faced restricted communication capabilities, complicating their ability to stay easily connected with family members and off-site caregivers during extended hospitalizations.
- **Configuration Drift Across Fleets:** Shared tablets across nursing units frequently suffered from altered user configurations, creating reliability gaps and demanding heavy IT maintenance.
- **Emergency Department Triage Bottlenecks:** High-volume admission windows created operational gridlock during initial ED check-in due to paper-heavy or slow intake screens.
- **Device Misuse Vulnerabilities:** Deploying shared mobile hardware without strict containment layers exposed devices to non-approved app usage, compromising security and operational focus.

QBurst Solution: Managed Clinical Android Workflows

We designed and developed an end-to-end suite of managed Android applications optimized to run seamlessly on the hospital's fleet of shared tablets. The architecture balances clinician oversight, patient accessibility, and ironclad IT control.

The deployment unifies separate care workflows into specialized digital tracks:

Inpatient Virtual Rounding & Telephony Core

Constructed a secure, web-linked workflow that allows clinicians to initiate immediate high-definition video sessions directly to designated patient tablets. This facilitates rapid virtual rounding and patient evaluation; to prevent disruption, the session control is strictly clinician-led, meaning patients receive and join rounds but cannot initiate outbound video calls. Simultaneously, we built a Session Initiation Protocol (SIP) telephony layer, assigning dynamic telephone numbers to bedsides so patients can place outbound calls to loved ones or handle incoming phone traffic seamlessly.

Automated ED Triage Intake Portal

Engineered a lightweight, guided check-in application tailored specifically for the extreme high-throughput pressures of the Emergency Department. The interactive interface walks incoming patients through an intuitive registration flow, mapping intake parameters directly into backend databases to dramatically lower wait times.

Admin Console & Rigid Kiosk Governance

To preserve enterprise security, the entire application stack is locked down using custom Android kiosk configuration parameters. This software-defined shield isolates the operating system, restricting the hardware entirely to approved clinical applications. A standalone administrative utility app was deployed alongside the suite, enabling on-floor medical staff to quickly reset configurations, standardize local tablet settings, and verify device readiness between patient rotations.

Key Features and Technical Highlights

- **Clinician-Led Video Architecture:** A secure, web-integrated streaming protocol designed to execute instant rounding connections to patient hardware.
- **SIP-Integrated Telephony Layer:** Enterprise network voice integration facilitating reliable, multi-channel inbound and outbound telephone routing.
- **Secure Enterprise Kiosk Subsystem:** Prevents users from escaping core workflows, safeguarding the tablet from unauthorized configuration changes.
- **High-Throughput ED Ingest UI:** A frictionless user interface crafted to accelerate data entry and triage routing during peak medical volume windows.
- **On-Floor Administration Tooling:** Empowers unit managers to audit fleet health, inspect software builds, and standardize system properties instantly without routing devices back to central IT.

Impact

- **Accelerated Clinician Engagement:** Transitioning to clinician-initiated video rounding minimized local transit times, ensuring swift, real-time doctor-to-patient communication.
- **Alleviated Patient Isolation:** Providing direct SIP-based voice routing lowered patient anxiety by establishing a clear, continuous link to external family support networks.
- **Stabilized Fleet Operations:** Standardizing device configurations through the custom admin controller eliminated configuration drift, guaranteeing that every tablet is enterprise-ready upon boot.
- **Optimized Emergency Throughput:** Digitalizing the ED intake pipeline successfully cleared triage registration lines, distributing patient flows smoothly even during unexpected surge periods.
- **Ironclad Device Governance:** Enforcing automated kiosk barriers neutralized compliance risks and prevented application misuse across shared clinical assets.