



Empowering Clinicians with Real-Time Patient Data at the Point of Care

Overcoming point-of-care documentation delays and high administrative overhead through a secure, cross-platform tablet application featuring local data encryption and offline-first performance.

Overview

We engineered a secure, multi-platform HTML5 tablet application (iOS and Android) to serve as an agile portal for the client's 40 million patient records.

- Achieved a 50% reduction in clinician administrative time by replacing manual, paper-based workflows with real-time digital documentation and instant system updates.
- Introduced secure Patient Medical Record (PMR) interchange pipelines alongside local storage configurations, allowing clinicians to review charts and log care details while working completely offline.



70% clinicians are users of mobile applications. The ability to access healthcare records on the go motivates them to provide the best possible care and attention to patients

-HIMSS Analytics



Client Profile

Operating at a massive scale within the UK healthcare ecosystem, the client specializes in provisioning real-time information systems to expedite patient care. Their infrastructure acts as a vital utility for numerous healthcare provider networks, demanding maximum security, continuous availability, and flawless data synchronization.

Challenges: Point-of-Care Latency and Admin Fatigue

Delaying access to critical patient histories introduces severe friction into clinical environments:

- **Emergency Response Delays:** Clinicians lacked a secure method to instantly pull up historical health data during urgent mobile or off-site emergency interventions.
- **Administrative Saturation:** Heavy volumes of manual paperwork forced nurses and doctors to spend valuable point-of-care hours on back-office data entries.
- **Information Fragmentation:** Medical images, discharge summaries, and laboratory test results were siloed across different hospital systems, blocking cross-department collaboration.
- **Connectivity Hurdles:** District nurses visiting patients in rural or structurally shielded areas frequently encountered a total loss of cellular signal, making cloud-only solutions unviable.

QBurst Solution: Offline-Ready Mobile Patient Portals

We built a fully functional, highly responsive tablet framework that connects securely with legacy medical systems through structured web services. The application presents consolidated patient histories through an intuitive interface that balances graphical summaries with granular diagnostic records.

The technical implementation turned a complex data network into a smooth clinical tool:

- **Resilient Data Interchanging:** Deployed a standardized Patient Medical Record (PMR) interchange protocol to mirror and synchronize updates securely between the central servers and mobile endpoints.
- **Secure Offline Storage:** Engineered a localized database layer inside the application. Clinicians can load entire historical profiles, write new notes, and schedule appointments without active internet access; the system automatically pushes the changes back to the main servers when a connection is established.

- **Automated Clinical Alerts:** Programmed a real-time Quality and Outcomes Framework (QOF) engine that analyzes live patient parameters to instantly display critical clinical alerts on the tablet screen.
- **Hardened Endpoint Defense:** Implemented strict cryptography algorithms on the device cache. To maintain absolute compliance with strict health data regulations, the system executes an automated script that periodically wipes confidential data from the device memory.



It has been an exciting time with QBurst; really fast-paced execution and flexible all the way to meet the needs of our development challenges, which range from putting together a mobile team to getting resources on-site. We got the best quality resources and the best service. It has worked really well because of the approach we have taken and because of the right partner we have chosen.

– **Development Director,**

Leading Supplier to UK Healthcare Sector

Key Features

- **Consolidated History Visualization:** Displays multifaceted health histories seamlessly through automated tables, charts, and diagnostic graphs.
- **Task and Appointment Orchestration:** Enables district nurses and clinicians to easily assign field tasks and log real-time appointments.
- **Direct Multimedia Inspection:** Immediate point-of-care access to medical images, complex laboratory sheets, and historical patient discharge letters.
- **Universal Cross-Platform Codebase:** An HTML5 architecture optimized to perform identically as a native app container across iOS and Android.
- **Self-Contained Update Pipeline:** Built-in update mechanisms allow the client to deploy feature updates smoothly without user-side friction.

Impact

- **50% Drop in Admin Overheads:** Automating manual workflows saved half of the time previously lost to paper administration, allowing clinicians to focus on patient care.
- **Accelerated Emergency Response:** Real-time mobile access to historical charts provided critical diagnostic context during time-sensitive medical emergencies.
- **Integrated Healthcare Delivery:** Seamless record interchange across disparate clinical departments broke down institutional barriers, fostering a collaborative approach to medicine.
- **Empowered Field Mobility:** The robust offline feature set made the tool highly successful among busy mobile district nurses, ensuring constant utility regardless of external signal strength.
- **Flawless Regulatory Compliance:** The blend of active local encryption and periodic data-wiping cycles minimized enterprise risk, protecting millions of sensitive healthcare profiles.