



An integrated platform to deliver urgent medical care at home

As a startup business, the healthcare provider aimed to provide a full range of clinical responses matched to patient acuity for those in need of urgent medical care at home. For the program to be successful, it needed to be patient-centric and highly adaptable. For example, a typical visit may involve many participants in addition to the patient and the provider, including the caregiver, triage nurse, EMS (dispatcher, paramedic), overseeing physician, etc.

Given the critical nature of its business, the customer required a partner who could ensure high-quality software delivery and support with minimal disruptions. With growing security concerns in the industry, they also needed expertise in implementing and maintaining secure platforms, ensuring compliance with industry standards while safeguarding sensitive patient data.

Techlogix put together a team of highly capable consultants having diverse skill sets that rapidly built and launched the core integrated platform. Our engagement has surpassed four years of successful platform evolution and ongoing production support.

Customer
Urgent Medical Care Provider

Industry
Healthcare

Offering
Innovation & Platform Engineering

About the Client

Our client is a Massachusetts based Mobile Integrated Healthcare provider that delivers urgent medical care in the comfort and safety of a patient's home, avoiding unnecessary and expensive visits to the Emergency Department and the Inpatient Hospital admissions that may follow.

The Challenge

Having successfully piloted their home care service delivery model, the customer identified the need for a fully integrated platform to replace their existing set of several third-party applications. This fragmented setup limited their ability to streamline operations and deliver a cohesive digital experience to their users.

Further, the platform needed to integrate seamlessly with critical systems, including an electronic health record (EHR) system, scheduling tools, and a call center solution. As they prepared to rapidly expand their operations to other states, the customer required an enterprise-grade platform that was scalable, cost-effective, and most importantly, fully compliant with healthcare regulations.

The Solution

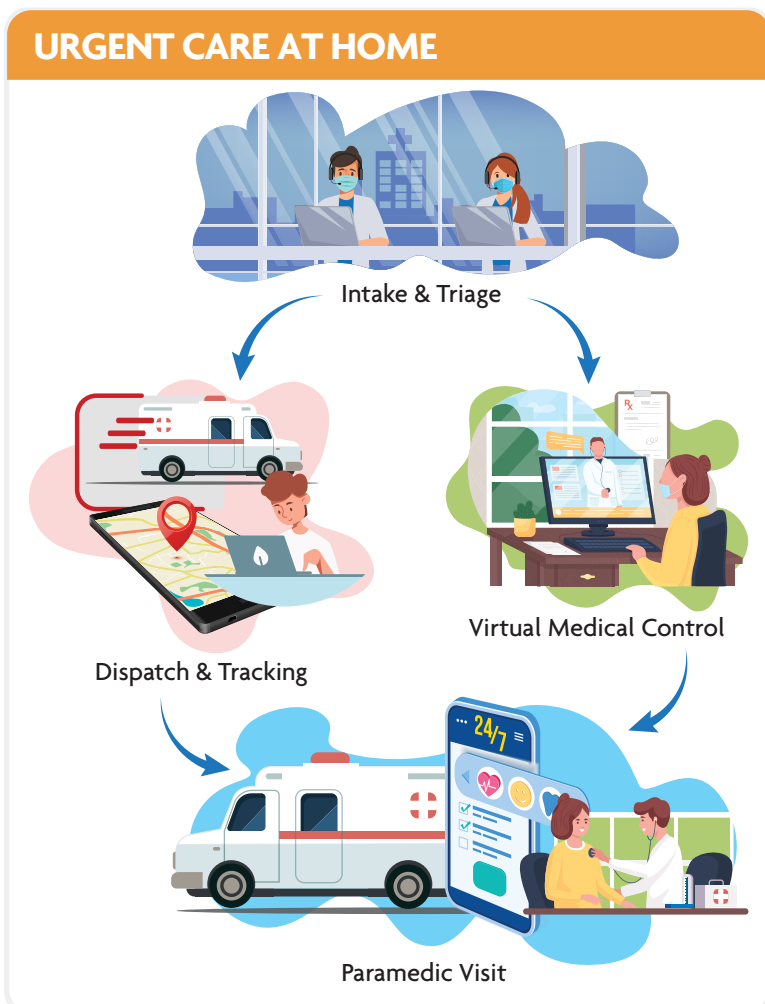
The customer sought a development partner who had deep understanding of the healthcare IT domain, and could embrace an iterative process, allowing for continuous refinement of the platform's design and functionality as new requirements emerged. This flexible approach would enable the platform to stay relevant and responsive to shifting business goals, avoiding delays and inefficiencies typically associated with rigid development processes.

After reviewing multiple proposals, the customer selected Techlogix and we collaboratively embarked on this ambitious initiative. The first cut of the integrated platform was rolled out in production in 3 months from inception!

The end-to-end platform includes:

- **Central Dashboard:** A unified interface for the nursing team to orchestrate and monitor the complete workflow of visits, from the initial request by providers, patients, or caregivers to the arrival of a paramedic at the patient's location who delivers the service with a physician available online to provide virtual medical control.
- **Patient Portal and Mobile App:** Enables patients to request and track their visits with ease.
- **Referring Provider Portal and Mobile App:** Allow providers to request and track their patients' visits and receive clinical notes and other feedback from the home care service delivery team.
- **Paramedic Mobile App:** Empowers on-the-go paramedics to receive visit requests, provide geo-tracking and status updates, communicate virtually with physicians, and document the visit.
- **Physician Portal:** Enables physicians to track visits, seamlessly integrate with their electronic medical records (EMR), deliver comprehensive care, and document their interactions with patients.
- **Integrated EHR System:** Ensures compliance with healthcare regulations by enabling seamless integration of patient data across modules.
- **Integration with Payment Partner:** Facilitates secure and efficient processing of payments for services rendered, ensuring a smooth and hassle-free payment experience for both patients and providers.

Since its initial launch, platform development and support have been ongoing for four years, ensuring continuous improvements, scalability, and alignment with the evolving needs of the business and regulatory landscape.



Our Methodology

Techlogix employed a mature development methodology that consisted of the following key elements:

Platform Conceptualization

During the 6-week long platform conceptualization phase, the two teams came together to deeply understand the problem and the solution space. The Techlogix team focused on building mock ups (prototypes) of the proposed solution that provided an opportunity to visualize the platform at a high level and enabled the teams to quickly converge to a unified vision.

Minimum Viable Product

As part of the definition, the teams agreed on a Minimum Viable Product (MVP) that could be rolled out in production initially to migrate the existing operations on to the new platform. Within 3 months the MVP was designed, built and rolled out. It supported an end to end workflow of an MIH visit to be completed.

Agile Development

We employed an agile development methodology that enabled iterative, incremental software development. New product features, portals and apps were released every five weeks. This approach allowed feedback and new ideas to be rapidly incorporated into the product.

As the platform grew in functional complexity, an automated testing capability was developed, and an extensive suite of automated regression test scripts were run repeatedly to report on any defect that may have been introduced with new development.

Multi-disciplinary Team

Experts from multiple disciplines collaborated from the start of the project. The team included members from business strategy, clinical operations, technical architecture, program management, software development, data science, quality assurance and DevOps.

The Technology

The platform is built on an advanced microservices architecture on Microsoft Azure Platform as a Service (PaaS). Using NoSQL Database to support clinical documents, the platform is highly customizable and scalable.

Built on the HL7/FHIR interoperability model, and using standard clinical data (ICD10, SNOMED, CPT, LOINC), the platform is designed to integrate with external systems to exchange clinical information. The platform ensures the security of information, meeting all HIPAA standards.

Benefits

Reduced Time

The integrated platform coordinates the visit across all stakeholders involved in service delivery (triage nurse, dispatcher, paramedic and virtual medical control physician) resulting in reduced time to schedule and deliver the visit. A real-time dashboard provides detailed information on the status of each visit enabling the delivery team to easily reschedule visits to accommodate changes and to remove any bottlenecks in the service delivery process.

Enhanced Visibility and Reporting

Every step of the delivery process is instrumented to capture performance related data, thereby providing deep visibility and enforcement of service level agreements across the entire organization. Management dashboards visualize this data showing patterns of performance and providing an opportunity to improve and optimize the process.

Increased Customer Satisfaction

The platform has made the entire experience of the visit much smoother for the patient as well as the referring provider. Being able to request a visit through an easy to use app and then being able to track the visit at each step, the users now feel comfortable engaging with the service more frequently.

The screenshot displays a list of three reviews in a light gray container. Each review includes a profile picture (a letter in a circle), the reviewer's name, the number of reviews, a star rating, the time since the review, and a 'NEW' badge. The review text is followed by thumbs-up and share icons.

- elon john** (1 review): 5 stars, a week ago. Review: "Very professional, thorough, kind, received results quickly. Due to this service we were able to avoid hospitalization. There was also a follow up visit and consult with a doctor. I would highly recommend this service."
- Sage** (1 review): 5 stars, 3 weeks ago. Review: "Great service! Very caring and professional! They are very knowledgeable and communicate with doctors on the phone while caring for your loved one at home. If I could give them a higher rating, I would. Joe (Paramedic) who treated my mother a few times now, he is outstanding! I couldn't be more impressed with the standard of care."
- Bailey** (3 reviews): 5 stars, 4 months ago. Review: "My paramedic arrived within 40 minutes of my initial call. He was wonderful! Very professional, kind compassionate and empathetic to my complaints and concerns. He administered Tori doll via IM. It was truly a wonderful experience and I would recommend it to anyone I cared about. I feel so fortunate to have this service available to me. Thank you!!"

Healthcare Solutions

<https://www.techlogix.com/healthcare>

Techlogix helps its clients develop solutions that optimize healthcare IT investments for better business and care outcomes and by developing new platforms for supporting innovative care delivery models.

We bring our deep domain experience in healthcare and expertise in healthcare technology to each engagement. Our consultants analyze your problems, recommend a solution, and then develop and implement it.

Supported by our technology practice areas (Innovation & Product Engineering, API & Integration Services, Cloud Transformation, Data Analytics & AI, Business Process Management, and Enterprise Mobility) and leveraging a library of our pre-built modules, we implement solutions in an extremely cost effective and efficient manner.

Contact

For more information, contact info@techlogix.com



About Techlogix

Techlogix is an IT services, consulting, and business solutions company that helps its clients use innovation and emerging information technologies to digitally transform their business. Our globally distributed development teams build high performance solutions leveraging our practice-specific delivery methodologies. Our people combine the spirit of engineering excellence with a strong commitment to deliver a delightful end-to-end customer experience. Techlogix employs approximately 600 people in 6 delivery centers worldwide.

Visit us online at www.techlogix.com