

CASE STUDY

Developing a Custom Telehealth Platform for a Nationwide Provider



Background

In the early months of the COVID-19 pandemic, one nationwide telehealth provider saw usage of their platform increase so dramatically that their third-party telehealth platform was unable to scale to support that usage. The telehealth provider sought help from Medical Web Experts to develop a custom, scalable solution.

Within six months, Medical Web Experts had developed and rolled out a new, cloud-based platform designed to offer rich functionality while also supporting unprecedented numbers of simultaneous users.

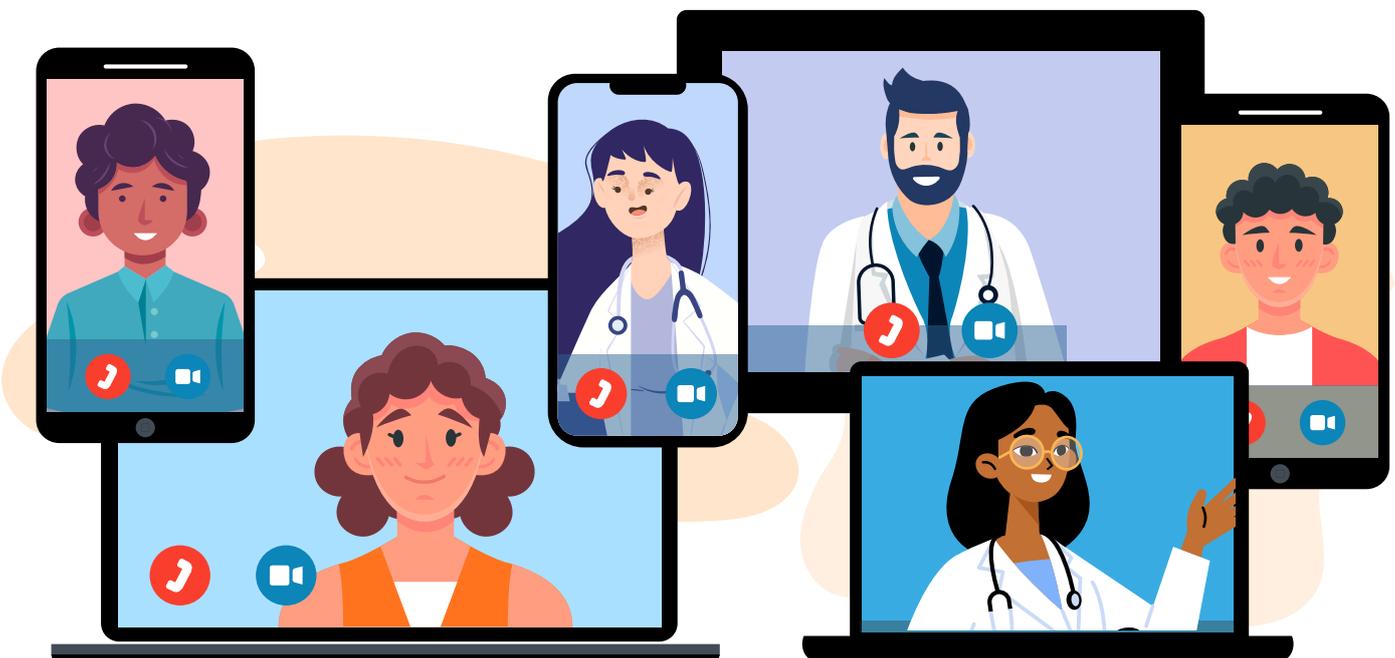
The new platform provides premium telehealth and videoconferencing software that can also be integrated with the client's flagship telemedicine kiosks and peripherals; modern communication features such as instant messaging and alerts; a HIPAA-compliant audit-log feature to track all activity on the platform; and appointment scheduling, bill pay, and administrative features. In addition, the platform is highly customizable and brandable, allowing the telehealth provider's clients to incorporate their own brand guidelines and logos.

Even while offering this level of functionality, the platform proved itself to be incredibly robust, coping with around 20,000 requests per minute during pen testing. Meanwhile, Medical Web Experts continues to support the client in ensuring that the platform can scale well beyond its expected usage.

Challenges

Scaling up for a surge in users

One of the key challenges of this project was ensuring that the client's platform would be capable of handling high demand. Catering to the post-pandemic world, the telehealth portal needed to be able to cope with enormous amounts of traffic with minimal downtime, while still offering a cutting-edge suite of features.



Supporting the provider's diverse clients

As the ghost developer for a B2B supplier, it was essential for MWE to understand the unique requirements of the telehealth provider's roster of clients, which included large hospitals and governmental organizations. With data security a crucial consideration in any healthcare platform, MWE needed to deliver a secure service to each of these clients, ensuring that each platform user could only see and manage the accounts of people within their organization.

Integrating the platform with hardware and software

MWE was asked to design a platform that could integrate one of the telehealth provider's main products: a telemedicine kiosk that enables doctors to treat patients remotely via video conferencing and integrated medical equipment. The portal needed to be able to run on these kiosks and process data from different types of medical equipment, such as blood-pressure monitors and stethoscopes.

In addition to hardware, the platform was also required to integrate with third-party solutions such as a payment gateway, e-signature platform, and scheduling system.



Approach

- MWE embarked on a close collaboration with the client – not just on the level of its software development team, but also on an executive level, with senior members of the team consulting on both strategy and development.
- For increased stability and scalability, the application runs on MWE Cloud, our AWS-based, HIPAA-compliant, highly monitored infrastructure.
- MWE carried out extensive testing to ensure that this version of the platform would be capable of handling high numbers of simultaneous users and requests.
- MWE incorporated and upgraded features offered by the previous platform – videoconferencing, appointment scheduling, messaging services, notifications, etc. – as well as a number of new ones requested by the client.
- The new features include an audit-log function (for full HIPAA compliance) and customizable branding for the telehealth provider’s clients.



Features of the platform

Telehealth with high-quality video conferencing

To enable secure remote consultations between patients and healthcare professionals, we integrated Zoom-based telehealth and video-conferencing options into the software.

Patient-provider communications

Catering to the demand for modern, consumer-centric digital services, the platform offers live chat, SMS and email notifications & reminders, and the ability for patients, providers, and admins to sign and exchange digital documents (such as intake forms).



Appointment management

The platform features calendar management services, allowing patients to book, reschedule and request appointments while giving practices the ability to send invitations to patients. Leveraging modern technology to automate a large part of the day-to-day admin helps providers streamline their workflows and enables patients to have more control over their care.

HIPAA-compliant audit log



To ensure full traceability in line with US healthcare regulations, the platform allows the telehealth provider's clients to track and record every action taken by both staff and patients on the platform. Clients' access was restricted to their own organization, making information shared on the platform more relevant and more secure.

Customizability & branding

Clients of the telehealth provider were able to adapt and customize the platform with the colors, fonts and logos of their organization, giving them a consistent brand identity and helping to build trust with patients.

Administrative support / client-facing backend

A number of client-facing features designed to support day-to-day processes of healthcare practices were also included in the portal, enabling clients of the telehealth provider to run their organizations more smoothly and efficiently.

Results



95%

of test results delivered within 24 hours



20,000

requests processed per minute

- The platform offers rich functionality, including high-quality teleconferencing software and telemedicine kiosk integration, a modern suite of chat and instant messaging services, administrative support, automated appointment scheduling and a number of features to ensure full HIPAA compliance.
- During pen testing, the cloud-based platform was able to handle at least 20,000 requests per minute and the team is confident it will continue to support the client's needs well beyond the predicted capacity.
- The portal is fully equipped to be used by large hospitals and governmental organizations due to its scalability, versatility and reliability.

- The project marks the start of a close long-term partnership and collaboration with the client. MWE continues to support the client with hosting, maintenance, and feature expansion, and will work to ensure that the platform can cope with exceptional levels of demand both now and in the future.



Ready to scale up your platform to meet future challenges?

If you're looking for a partner to design a robust and highly functional telehealth platform for your organization, get in touch with Medical Web Experts today.



Contact Us Online



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