In our last blog post, (a peek at the future of healthcare) we considered the key drivers behind innovation in the health care industry. Telehealth has seen explosive market growth in recent years and shows no sign of slowing down. Despite its enormous potential for growth, the healthcare industry faces regulatory challenges that impede innovation.

Since the 1996 introduction of HIPAA, (Health Insurance Portability and Accountability Act), the healthcare industry has become highly regulated. The scope and complexity of healthcare regulation has made it incredibly difficult for organizations to adopt new technologies. Compared to other industries, they have been relatively slow to adopt technological innovations as a result. This trend has manifested itself in the adoption of the public cloud, BYOD (Bring Your Own Device), and even the storage of online health records. With this in mind, one can assume this trend will repeat itself when it comes to browser based real time communications powered by WebRTC.
When thinking about technology in the healthcare industry, and more specifically embedded communications, there are several crucial factors to consider.

Security

Security is a primary concern in healthcare applications since they often deal with confidential and sensitive patient health data. The healthcare industry has very stringent requirements around cryptographic security that dictates how and when the data needs to be encrypted, transmitted and decrypted.

To build a compliant telehealth application, specific encryption algorithms and data security standards need to be followed. Additionally, any underlying 3rd party platform used to help power a telehealth service needs to be completely secure with comprehensive data protection, access control, business continuity rules and procedures in place.

Data Privacy and Regulations

There are a number of privacy laws and regulations that surround patient document rights, in particular how providers share information. Inevitably, such regulatory measures put a burden on data fluidity and make it more difficult to adopt new technologies that involve data.

Understandably, HIPAA compliance is often raised as a key concern for any healthcare technology. For the communication of patient information through technologies like WebRTC, HIPAA requires that the communication channel be properly secured to protect patient confidentiality.

To add to the complexity, the regulations aren’t just one size fits all. Data protection and legislation differs greatly between countries. For example there are specific laws and directives in the European Union on cross border healthcare – the “safe harbor” framework has prescribed specific standards to ensure the safe passage of patient/private data between the US and EU.

Integration and cost effectiveness

As WebRTC is a browser-based technology, enterprise organizations with restricted environments looking to adopt it will inevitably encounter browser/plugin/network issues. In addition, the legacy devices and systems that have historically been used to store content (e.g. patient health records and images) aren’t compatible with new technologies such as WebRTC.

It’s not just legacy storage systems that impede adoption. To make WebRTC compatible with traditional video conferencing solutions you would need to use proprietary protocols, software and hardware, all of which increase the infrastructure costs tremendously. Furthermore, these legacy solutions require maintenance and costly upgrades, increasing the total cost of ownership.

Simple user experience

Undeniably, user experience is of utmost importance when organizations are considering changing or adding new technology or working methods. Survey results showed that that only 1 in 6 doctors use electronic health record systems regularly despite there being incentives and bonuses attached to its usage. This suggests that many healthcare professionals are reluctant to change their existing methods and systems that they’re accustomed to. The value of new technologies need to be quickly justified and proven to increase efficiency and customer satisfaction.

Much like clinicians, doctors and nurses, patients have tended to be slow adopters of new healthcare services as well. In order for the medical community and their patients to use it, the technology needs to be user friendly and fit seamlessly into familiar workflows.

High performing and high quality solutions
Application performance and quality of service are essential for launching real time communications solutions for the healthcare industry. For instance, let’s say you’ve created a virtual home care service for chronically ill patients who need 24/7 monitoring and immediate access to specialists. For that use case, the caregiver would undoubtedly need reliable, high quality video, audio, imagery, and patient monitoring data sourced from connected devices. That can’t be delivered by WebRTC off the shelf without significant investments.

More importantly, applications need to be available on the endpoints and devices that healthcare professionals and patients use on a regular basis. In an increasingly mobile-centric world, that means contending with issues related to wifi, 3G or 4G connections. Whether it’s connectivity failures or a low bandwidth device, the communication service needs to be optimized to work reliably across a wide range of network conditions and environments.

Even in the face of these barriers, WebRTC continues to disrupt the healthcare industry at an unbelievably fast pace. Third party services like the OpenTok platform are making that process even simpler by abstracting away the complexities of WebRTC, helping you deliver a highly reliable and secure telehealth application.

Stay tuned for our next healthcare blog to learn more.

Please fill out the form and we will be in touch with you shortly.

1.844.324.0340

First Name

Last Name

Email Address

Phone Number

Are you a Developer?

Company Name

Select Country

Product of Interest

Existing traffic to switch?

Traffic Volume Monthly (Optional)