



TRANSFORMING AND MODERNIZING DATA TO DELIVER LIFE-ALTERING HEALTH ALERTS

A new medical device company deploys an innovative portal to gain insights for doctors and patients

A medical, technology startup was looking for a way to give seizure patients peace of mind. By collecting and analyzing data coming from patients' electrical signals received from their brain, this company was making it easier for patients and medical teams to access, share, interpret and report data received from a wearable monitor. The company needed an efficient platform that would help maintain, analyze, and interpret massive amounts of data. With Catapult's help, they created a portal that offered a variety of capabilities including authentication of users, dashboarding for physicians and patients, analytics, compliance, and multi-language capabilities, among others.

THE CHALLENGE:

Prior to working with Catapult, the company gathered data coming from their Sensing Portable Sensing Analysis Characterization System (SPEAC) surface electromyography (sEMG) monitor. The wearable device takes 1,000 sEMG samples from the patient's body every second and algorithms analyze the samples in real time and looks for muscle activity that is indicative of a Generalized Tonic Clonic (GTC) seizure, also known as a grand mal seizure. It was difficult for the start-up to effectively maintain, manage, and interpret the patterns of data received from the patient's samples. They needed to find an effective solution that would gather, save, interpret and analyze

huge amounts of data, as well as find a way to share accurate findings with patients and doctors.

The company partnered with Catapult to improve the quality and user experience of the portal to continue to impact lives with their findings. As the two teams got further into the development of the portal, they found that to get the Food and Drug Administration's approval, they fundamentally had to change the business's operations, by creating new processes.

THE SOLUTION:

Catapult worked with the company to establish effective business processes as well as develop a portal that allowed seizure patients and physicians to track valuable data that can be used to prevent future seizures. Catapult helped the company determine, enhance and automate business processes through a variety of design workshops and development planning activities. Together, they resolved to create a portal that would offer a variety of capabilities including authentication of users, dashboarding for physicians and patients, analytics, compliance, and multi-language capabilities.

RESULTS:

Despite the constraints, Catapult delivered the company an efficient portal that met the FDA requirements and changed the lives of many who suffer from seizures. Doctors can now gather, analyze and interpret their patient's data in an easy-to-use portal that helps create an effective diagnosis. Patients can now be informed of their brain wave patterns allowing them to be proactive with their own health decisions.

After Catapult partnered with the company to create the portal with reporting capabilities, they received approval from the FDA and additional funding to continue with the development of the wearable monitor and transform the medical device industry.

TRANSFORMATIVE IMPACT:

The technical framework and business consulting Catapult provided not only positively impacted the company and helped them receive FDA approval, but the lives of many individuals that can now gather more information on their brain wave patterns when they are about to have a seizure.

CATAPULT'S IMPACT:

- Development of administration dashboards used to manage physicians, patients and devices
- Provided visibility into patient activity with data reporting capabilities
- Made insights easier to consume through dashboard data visualizations
- Improved the ability to manage reporting on patient data
- Provided quick and easy upload of patient event data