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Healthcare Case Study

HL7 standards-based platform for
simplified pre-operative care and
better surgery outcomes

*Modern and feature-rich software suites for
anesthesiologists and surgeons*



PROJECT BACKGROUND

A team of independent board-certified physicians wants to simplify preoperative screening without adversely affecting the quality and adherence to healthcare standards. As part of this work, the team wants to build a platform that will significantly improve surgical experience—from patient intake to readmission prevention and everything in between. They want to integrate this platform with EHRs, community health records, and clinical laboratories. Also, they want to build a recommendation engine which will analyze the patient's information and offer suggestions to be followed before the surgery. The group also wants to make sure they are adhering to the compliances such as HIPAA, QCDR, QR and ensure data security and secure care delivery of the highest standards from Centers for Medicare & Medicaid Services (CMS).

THE VATSA SOLUTION

Modern and feature-rich software suites for anesthesiologists and surgeons

Vatsa worked as a product development partner with the company to build their cutting-edge platform. Vatsa practiced agile methodology with biweekly sprint and helped releasing new features to the platform at fast pace.

These software suites integrate with all the leading EHRs (electronic health records) vendors, including Allscripts, Cerner, McKESSON, GE Healthcare, Meditech, Amkai solutions and more. Vatsa used Mirth Connect as a cross-platform HL7 interface engine to enable bi-directional exchange of HL7 messages between the supported EHRs and their software suite. Vatsa pre-integrated analytics engine powered by Power BI to deliver evidence-based preoperative recommendations. Multiple different parties, including hospitals, insurers and physicians could be given secure and role-based authorized access to use patient's data to avoid repetitive interviews. Importantly, the system improved the time-to-treatment and time-to-recovery due to better dissemination of information between all qualified stakeholders.

Vatsa also developed mobile applications for Android and iOS for patients to access and fill in their data quickly and comfortably. The applications also include biometric and OCR security to avoid misuse of data. Using their mobile application, patients can also share reports with their respective physicians for faster review, consultation and better post-op care.

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RESULTS

The company brought its healthcare expertise while Vatsa providing end-to-end product development, maintenance and support. Vatsa's high commitment and investment with bringing the right technology expertise has resulted in a 9-year-long strong relationship between the two companies. The technology partnership with Vatsa has brought a lot of benefits to the company and its customers such as:

- Gaining a first mover advantage in the market and filling a critical gap due to faster time-to-market
- Easy adoption and use of the platform at hospitals and care centers due to seamless integration with existing EHR and EMR solutions
- A platform that achieves all compliances right from the day of first launch, which leads the company to keep focus on patients and their care instead of policies and compliances
- Standards-based, seamless and secure messaging between systems with HL7 compliance resulting in quick and widespread adoption
- Helping the company's founders and leadership team to focus on their healthcare domain expertise to improve product usability with continuous feedback while Vatsa took care of the feasibility analysis and implementation
- Improved staff efficiency and quality of care and reducing post-operative complications like heart attack and infections by using a strong recommendation engine
- Improved collaboration between various members in the care-giving staff that led to improved time-to-treatment, better outcomes and reduced re-admissions

TECHNOLOGY AND TOOLS:

.Net , C#, SQL 2016, SSRS, Mirth Connect, HL7 Standards, Entity F/W, Subsonic, Teleric Controls, MVC, Power BI



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VATSA has grown from being a software service provider company to a complete solution provider for variety of business needs of its customers. At VATSA, we not only help our customers in problem identification and resolution but also provide a unique touch of trust by owning their business situation while we help them overcome it.

We do this through our talented pool of people, impeccable services and innovative solutions. Our commitment to quality and excellence is evident in every assignment we deliver. With our agile work culture and professional ethics, we have built high level of trust in our customers, which has resulted into repeat business.



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