Meaningful Use Stage 2 Certification

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"The Client was looking to get its EHR product certified for Meaningful Use within tight timeframes to get a distinct market advantage."

The Client

The Client is a vendor of an Electronic Healthcare Records (EHR) management product whose cloud based dental specific EHR system facilitates and integrates the commercial and clinical areas of practice management. These areas include administrative tasks such as scheduling, eligibility checks, documentation, claim submission, payment posting and custom reporting as well as patient related functions such as tracking medical history, diagnosis recording, and charting and procedure completion. The Client acquired an existing EHR software product with the strategy of developing a dental practicespecific EHR product from it. The Client's key driver for this project was the unavailability of cloud based dental EHR systems, which met the ONC-ACB certification for Meaningful Use (MU).

The Business Challenge

The Client was keen to get its EHR product certified for Meaningful Use Stage 2 requirements so they could aggressively go to market as one of the first MU Stage 2 certified dental EHR products in the market. As the product was previously certified for MU Stage 1 by the Drummond Group the Client decided to use the Drummond group for MU Stage 2 certification as well.

The EHR product was still in active development by Telliant team, with several new features were being added, the requirements for MU readiness had accomplished in parallel with other development. In addition the Client wanted to accomplish the MU certification within a 3-month period.

The Client chose Telliant as its MU Stage 2 development partner for the following reasons:

> Ability to translate complex requirements into design quickly
> Staff the team quickly with a mix of skills including developers, business analysts & QA
> Experience with working EHR products and implementing regulatory requirements
> Capacity to carry out multiple development tasks concurrently without affecting quality

The Engagement

The Scope of Work provided by Telliant included:

> Gather the ONC-ACB requirements from various sources including Drummond Group proctor test sheets
> Assemble an agile team consisting of Project Manager, software engineers, QA engineers and business analysts
> Understand the process of testing followed by the Test Proctor
> Create a work breakdown structure and a project plan for achieving all MU Stage 2 Requirements
> Create a detailed project plan for development
> Conduct internal mock-tests to validate functionality
> Work with 3rd party providers for components and interfaces
> Demonstrate the functionality to the Drummond Test Proctor and field follow-up questions

" The MU Stage 2 certification was achieved with Telliant playing a variety of roles including product management. "

" Telliant assembled a team consisting of Business Analysts, Software Engineers, QA Engineers and a Project Manager that worked with consultants & 3rd party partners to achieve the objective optimally. "

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TECHNOLOGY ENVIRONMENT

The Major Technology Components:

> MVC Architecture
> Microsoft ASP.NET and C#
> Microsoft SQL Server 2008 R2
> .Net 4.0 and Nhibernate ORM framework
> JavaScript and jQuery
> IIS 7.0

Solution Highlights

The solution consisted of understanding the MU Stage 2 requirements and to map the requirements into product features, create a project plan for design and development of the functionality. Telliant also worked with Meaningful Use consultants to understand the most optimal way to implement the various requirements based on the current functionality and the expectations of the test proctor.

The following are some of the major functional areas of the EHR that Telliant implemented:

Drug-Allergy Interaction: The Client uses DoseSpot as the ePrescribe provider. Changes were made to the interface to show the drug-drug and drug-allergy interactions as required for certification. Drug formulary checks.

Patient Demographics & Vitals: The EHR was modified as required to support recording of all patient languages per the ISO 639-2 constrained by ISO 639-1 vocabulary standard. In addition, race and ethnicity categories were modified to include the minimum categories as specified in the OMB Registry. The ability to record vitals including height, weight and blood pressure readings were required.

Clinical Decision Support: As required for the measure, the EHR was enhanced to activate CDS alerts based on data in problem list, medication list, medication allergy list, demographics, laboratory test data and vital signs. Configure, view and assign CDSS rules were based on configurable user rights. The alerts show diagnostic and therapeutic references while incorporating lab results and importing CCDA files.

CCDA & Data Portability: The CCDA document requirements for MU2 certification is substantially different than the older CCD format. The CCDA included sections for problems, encounter diagnosis and medication administered. Lab test unit and range were added along with immunizations, care plan & instructions, functional/cognitive status and multiple care team members functionality. Telliant created a reusable component for creating the continuity of care documents for single, multiple and global patient sets. Telliant also created a seamless component for receiving and importing the CCDA document needed for multiple MU2 measure certification.

CQM's: The EHR was enhanced to create QRDA3 and QRDA1 files and verified through the Cypress Testing tool prior to testing with the proctor for selected patient data.

Secure Messaging: Interfaced with 3rd party tools (EMR Direct) to securely exchange Continuity Of Care Document and interfaced with Microsoft HealthVault to provide the patients, capability to view, transmit & download CCDA documents.

Automated Measure Calculation: Developed all the functionality to calculate the numerator and denominator for all the MU measures. The ability to display the provider reports for selected reporting periods along with the ability to adjust the reporting periods as needed.

Auditing and Tamper Resistance: The software was enhanced to meet requirements for event tracking such as changes to social history display the audit report sort and filter based on various ranges. The capability to prevent tampering from external sources was added using hash algorithms to the database records.

Results Achieved

The Client achieved the following major benefits from the partnership with Telliant:

> The Meaningful Use certification was completed per the client's schedule, allowing an on-time roll-out into the market.
> The development of MU required features were done in parallel with other functional enhancements to the product.
> Leveraged 3rd party solutions to accelerate the MU readiness without compromising the core value of the product.
> Managed the large scale development project consisting of a distributed team located in several time zones under very tight deadlines.

To learn more about how we can help achieve your goals in the ever-evolving world of IT and innovation, please visit www.telliant.com

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