

Installing EHR Modules More Efficiently

Teamwork, LEAN Approach Helps St. Mary's Medical Center Execute Successful Vendor Independent Application Implementation



St. Mary's Medical Center (SMMC) is a 363-bed hospital and teaching facility based in Huntington, WV. Employing more than 2600 professionals, SMMC has provided 90 years of quality healthcare delivery to twenty counties throughout the West Virginia, Ohio, and Kentucky tristate area. Tasked with implementing an important EHR module on a tight timeline, SMMC's Nick Chinn, Director of IT/Communications, pioneered a bold, innovative strategy to install modules independently of the source software vendor, accelerating the program timeline while also reducing cost.

Background

In November 2014, Cabell Huntington Hospital signed a definitive agreement with Pallottine Health Services, Inc., to acquire St. Mary's Medical Center. The acquisition process took nearly four years, during which time SMMC's legacy surgery software suite became further and further outdated. In 2018, the acquisition closed. With Cabell having signed a Cerner Millennium contract, it was anticipated that SMMC, a Soarian customer, would follow suit. As a step to this transition, SMMC began implementing Cerner Millennium applications, starting with Millennium Ambulatory ASP for physician practices, and then with SurgiNet, Cerner's Surgery & Anesthesia Information Solution module.

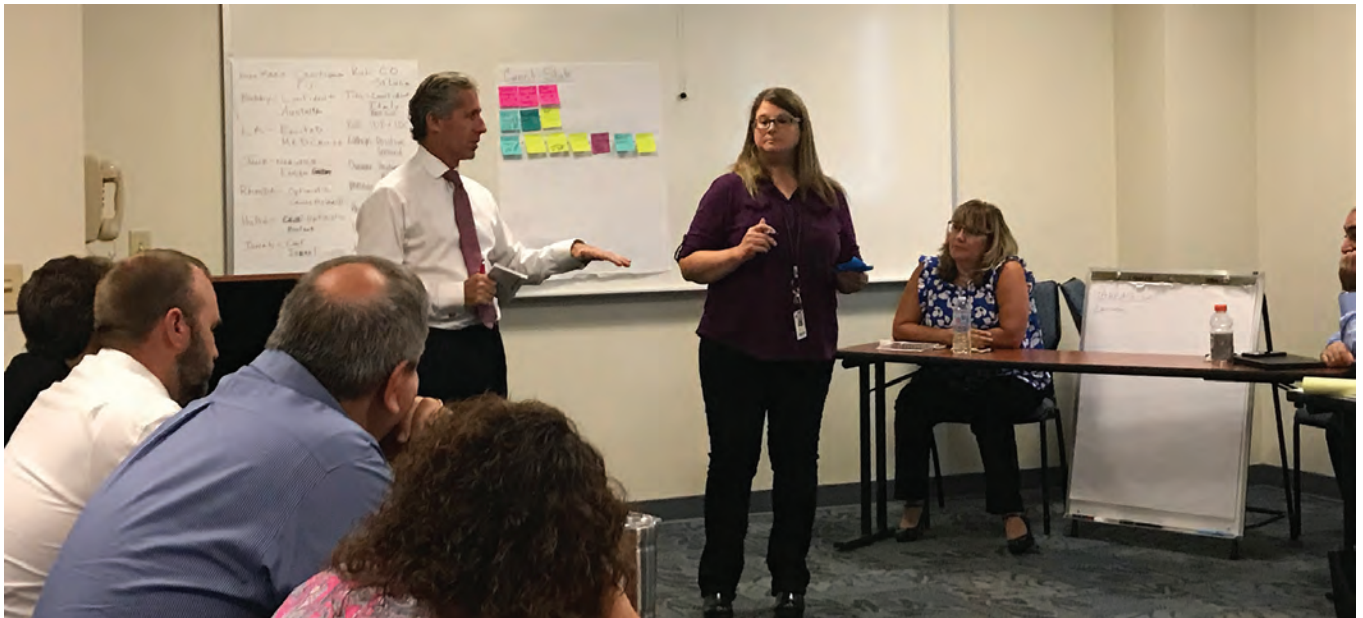
The Challenge

When adding multiple applications during a full implementation, healthcare organizations generally have the benefit of the tools, oversight and integration resources of the full vendor implementation team. However, during a single module installation, the deployment teams are generally more versed in the specific module being installed, versus having a bigger picture view of how the integration will affect other areas of the clinical and IT infrastructure, and how interoperability issues should be addressed. Utilizing vendor services to implement standalone modules represents a significant financial investment. Additionally, these high-turnover resources typically do not prioritize education and knowledge transfer, which is critical to support end users on client teams. These assumptions; combined with displeasure with the expertise and knowledge gaps of vendor resources from the Cabell implementation and SMMC Millennium Ambulatory ASP installation, led SMMC to explore alternative avenues for installing SurgiNet.

The Solution

SMMC selected e4health to assist with professional services and support of the SurgiNet implementation. e4health has been a trusted adviser and service provider to SMMC for the past 9 years, assisting with a variety of successful IT projects. To assist with all phases of this install, e4health assembled a tactical SurgiNet implementation team, and employed LEAN program visibility tools such as a detailed scope and resources roadmap...

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e4health facilitated a Rapid (<1 Day) a3 Process Improvement Work Session to review and align on current and future states.

(prior to contract signature), e4caster® for project transparency and visibility, a DCW Scorecard for design and work transparency, along with Workflow Scorecards and Testing Readiness tools – all of which combined to create total, real-time transparency and accountability throughout the project. The following four facets represent keys to the success of the project.

1. Planning and Establishing Groundwork with LEAN Governance Model

SMMC does not use a large oversight committee, and instead drives initiatives forward with a small steering group of executive decision makers. By utilizing this LEAN Governance model for the SurgiNet implementation, SMMC ensured that they always had the right people in the room, so that decisions moved very quickly. Additionally, e4health facilitated a Rapid (<1 Day) a3 Process Improvement Work Session to review and align on current and future states, which ensured complete readiness for a successful transition to the SurgiNet solution.

2. Utilizing a Strategic Partner for Install Support

Hitting the target live date was critical, and partnering with e4health gave SMMC full control over their program timeline. The e4health implementation team consisted of a Program Director, a SurgiNet Subject Matter Expert, a Charge Services Subject Matter Expert, and an Integration Architect. The e4health resources worked closely with the SMMC staff to form a unified implementation team.

3. Employing LEAN Tools

e4health provided proprietary tools to improve visibility and accelerate milestone achievement.

e4caster® – This proprietary program management and visibility software was used to track work and milestone achievement. Having access to all milestone statuses within e4caster® helped simplify and accelerate the process of providing updates during weekly program status meetings.

DCW Tracker – The e4health DCW Tracker is a tracking document that organizes the validation and completion of all project DCW's. This document is visualized in e4caster®, ensuring transparency and a complete understanding of...



e4caster® was used to track all program work and milestone achievement.



DCW Tracker enabled program leadership to track exactly where the project stood with DCW data collection, build and unit testing.

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where the team was with the work. With multiple steps and owners, this tool enabled program leadership to track exactly where the project stood with DCW data collection, build and unit testing.

Workflow Tracker – The e4health Workflow Tracker is a tracking document that manages all workflows from identification to approval. e4caster® provides easy identification of any problem areas, helping to streamline what can be a long and tedious process from start to finish.

Testing Readiness Tracker – The e4health Testing Readiness Tracker organizes and manages milestones as identified for testing readiness. This tool provides identification of areas that may not be ready for testing, by providing visibility of build completion, workflow completion and script readiness.

e4health also developed resource utilization and timeline artifacts that improved cost and resource visibility. “That level of detail was not typical... it was extraordinary, and so valuable to me to track and see how much work we were getting out of our consultants and what project timeline we were anticipating,” said Nick Chinn, SMMC Director of IT/Communications. “It helped me accurately project what invoices would be, and I used it for many things.”

4. Supporting Education and Knowledge Transfer

To become more proficient in the utilization of the modules, it is helpful to focus on areas such as troubleshooting strategies, general maintenance, and growth. During the SurgiNet implementation, the effort was made to provide education and knowledge transfer during the implementation, as opposed to at the end. While the expert resources brought a wealth of knowledge to the table, this area will be improved upon for future efforts, to make users more comfortable in the ongoing maintenance and management of the software.

The Results

The SurgiNet implementation was completed successfully, coming in under budget and on schedule. “I have to give credit to both teams for the work they did and the oversight on both sides,” said Chinn. “It was a very successful live event, and I couldn’t be happier with the project. And, it didn’t slow down patient care.”

Making this success even more special was the pioneering aspect of the project. “We heard that installing these modules independently of the vendor is not possible, and since we’d never done it before, we didn’t know if it could actually be done,” said Chinn. “Going down this road was risky, but the risk paid off in many ways, getting it done on budget, and getting it done on time.” An e4health/SMMC analysis exercise to scope out the project before contracting was key in allaying fear about completing the project successfully. Data on deliverables, resources, timeframes, dependencies, and necessary skill sets was laid out precisely before the final decision to proceed was made.

Workflow	CS Approved	FS Workflow	FS Approved	Test Script Created	Comments
Preoperative - Link App	N/A	N/A	N/A	N/A	May do not link app
Preoperative - IOP File and Scheduling	Yes	Yes	Yes	Yes	meeting 5/7
Preoperative - Verbal Surgery Request	Yes	Yes	Yes	Yes	
Patient Cancellations Day of Procedure Inpt	Yes	Yes	Yes	Yes	
Patient Cancellations Day of Procedure OP	Yes	Yes	Yes	Yes	
Patient Cancellations No Show Page 1	Yes	Yes	Yes	Yes	
Patient Cancellations Page 2	Yes	Yes	Yes	Yes	
Rapid Schedule for Trauma	Yes	Yes	Yes	Yes	
Change	Yes	Yes	Yes	N/A	
After Hours Emergency Trauma Current State	Yes	Yes	Yes	Yes	duplicate of trauma

Workflow Tracker managed all workflows from identification to approval.

DCW Tasks Total	DCW Tasks % Complete	Build Tasks Total	Build Tasks % Complete	Workflows Total	Workflows % Complete	Scripts Drafted	Script
Scheduling	1	1	0.75	0	0	0	1
Surgery/Prevention	2	1	0.75	0	0	1	1
Surgery/Chaos	3	1	0.33	3	50	N/A	3
Changes	3	0	0	2	0	0	0
Prep Cards	1	0.75	1	0	N/A	0	0
Core	5	3	0.6	N/A	N/A	0	0

Testing Readiness Tracker provided visibility into build completion, workflow completion and script readiness.



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