RCCH HealthCare Partners Uses MEDITECH Toolkit and Surveillance Solution to Combat CAUTI

Introduction

Leadership at RCCH HealthCare Partners (Brentwood, TN) identified inconsistencies in the organization's approach to preventing catheter-associated urinary tract infections, or CAUTI. They decided to make it an organization-wide priority to reduce instances of CAUTI and implement standardized best practices for indwelling catheters across the five hospitals on MEDITECH's most recent release. To do so, they needed an EHR solution that better analyzed data, so they could monitor and manage patients at risk of contracting CAUTI.

SNAPSHOT

Opportunity

Reduce instances of CAUTI and implement standardized best practices for indwelling catheters across five hospitals.

Solution

MEDITECH's Surveillance and CAUTI Prevention Toolkit

Benefits

- 45% decrease in CAUTI from Q4 2017 to Q1 2018
- 35% reduction in indwelling catheter days
- Fewer costs attributed to hospital-acquired conditions
- Clinician time savings and reduced need for paper reports

Profile

RCCH HealthCare Partners comprises 18 regional health systems spanning 12 states, with a headquarters in Brentwood, Tennessee. The health system has over 14,000 employees, including 2,500 physicians. 13 of RCCH's hospitals use MEDITECH's EHR.

Why CAUTI?

CAUTI is the most commonly reported hospital-acquired infection in the United States. Each year, more than 560,000 patients are affected, and a staggering 13,000 CAUTI-related deaths occur. CAUTI can lead to prolonged hospital stays, increased costs, morbidity, and mortality, and is one of the most common types of infection that can lead to sepsis.

Having witnessed the devastating effects of CAUTI, leadership at RCCH HealthCare Partners used the rollout of MEDITECH's CAUTI Prevention Toolkit as a springboard to focus on combating the infection. Using MEDITECH's surveillance capabilities, primarily rules and workflows embedded in the toolkit, they aimed to eliminate the human factors that enable CAUTI to develop.

Rolling out New Solutions

RCCH implemented two new solutions that paved the way for the initiative's success:

MEDITECH's Surveillance	Allowed RCCH to better analyze the key clinical and demographic data needed to monitor and manage patients at risk of CAUTI and other potential HACs, and to perform clinical quality measures. Surveillance alerts clinicians and guides care teams to the next appropriate actions.
MEDITECH's CAUTI Prevention Toolkit	Ensured that RCCH followed best practices for placing indwelling catheters. All CAUTI-related initiatives implemented by RCCH leadership were done in compliance with the toolkit.

To achieve widespread adoption at the clinical level, RCCH leadership knew that these two solutions needed to be convenient, easy to use, and able to address the high-cost, high-risk problem of CAUTI. They tailored their project plan accordingly, focusing on educating end users on how the solutions checked all of these boxes. Using MEDITECH's online guides and training resources, RCCH formulated a detailed project plan for CAUTI surveillance and prevention, placing IT in the leadership role.

From the beginning, RCCH's chief quality officer recognized the benefits of a robust surveillance solution, and helped obtain the executive-level support needed to initiate the project. The solution's initial rollout targeted the nursing and ancillary clinician practice. IT formed a workgroup that consisted mainly of nurses and clinical analysts and tested potential watchlists in front of the group. IT solicited their feedback on areas for improvement before moving these watchlists LIVE.

Using Surveillance to Prevent and React to CAUTI

MEDITECH's Surveillance solution helps care teams to prevent CAUTI events by minimizing the amount of time patients remain on catheters unnecessarily. Floor nurses and charge nurses are alerted to patients who have qualified for at-risk CAUTI profiles via indicators on their patient Status Board or Surveillance Desktop. By selecting the indicator, the nurse is brought to the role-based Take Action feature, where they can review the patient's qualifying criteria. The nurse can then respond to the alert (e.g., initiate nurse-driven removal protocol by launching directly into Manage Urinary Catheter assessment and removing the indwelling catheter).

Providers place indwelling catheter orders based on CDC guidelines in accordance with MEDITECH's toolkit, and can document indwelling catheter-related information directly from their progress notes.

Should CAUTI symptoms arise, infection control nurses are alerted via the Indwelling Catheter Monitoring Status Board, which collects the clinical and demographic data they need to monitor at-risk patients and identify reportable CAUTI events in one central location. The Catheter indicator also appears on the Physician Status Board and populates to the appropriate profile. Physicians are also alerted when a patient meets the at-risk CAUTI profiles via an indicator on their Physician Status Boards. From these boards, they can quickly respond to alerts via the role-based Take Action feature, initiating protocol orders, documenting, and messaging appropriate care teams as soon as a patient shows symptoms of CAUTI.

Resource Commitments:
Implementation timeline: 3 months
FTE requirement: 0.6 hours
RCCH personnel: 3 analysts at an average of 0.2 hours per week

RCCH has extended their Surveillance solution well beyond CAUTI.
In fact, demand for new Surveillance Profiles has been high as staff realize the benefits Surveillance offers.

In addition to CAUTI, RCCH produced the following Surveillance Profiles:

Condition	Infection Prevention	Quality	Throughput
COPD	Central Line	Fall Risk	Daily Weight
CHF	Flu	Restraint	Dialysis
Tobacco User	Isolation	Skin Integrity	EKG
NAS	Sepsis	Stroke	Glucose
	Ventilator	VTE	POC
			Physical Therapy
			Ocupational Therapy
			Speech Therapy
			Respiratory Therapy
			Registered Dietitian
			Wound Care
			Psychiatric Evaluation

CAUTI Prevention Toolkit

RCCH clinicians used the toolkit to access evidence-based standard content embedded within MEDITECH's EHR, along with optimal workflows and system guidance to support them in the prevention and early detection of CAUTI. Perhaps most importantly, the toolkit requires clinicians (via embedded rules) to place indwelling catheters only when specified by CDC guidelines.

The toolkit also promotes the timely removal of all indwelling catheters by triggering a nurse-driven catheter removal protocol. This protocol authorizes nurses to evaluate catheters at the beginning of each shift to determine if patients still meet the CDC criteria for catheter placement. If the patient no longer meets this criteria, the system alerts the nurse to remove the catheter and to document the date and time of removal.

Implementing the CAUTI toolkit fostered proactive patient-catheter care awareness through real-time surveillance, with embedded CAUTI profiles that monitor patient activity and alert care team members to at-risk patients. As an added benefit, the toolkit assists in National Health Safety Network (NHSN) reporting by helping RCCH to collect the relevant data for each quarterly report.

Overcoming Challenges

Many of RCCH's challenges lay in helping end users to adapt to the new functionality of the CAUTI Prevention Toolkit and Surveillance solution. As RCCH is a larger organization, it was difficult to spread the necessary education and ensure that protocols stayed uniform across the five MEDITECH organizations. To achieve widespread adoption, IT hosted virtual meetings with clinical leadership and facility IT staff, using the MEDITECH EHR to demonstrate how this functionality could inform their practice. They made it a point to showcase how this toolkit was to be embedded in their workflow supporting them, and not the other way around.

Following implementation, clinical analysts performed periodic chart audits as a method of identifying end user workarounds and any barriers to end user adoption.

> "We have a continuous focus on patient safety and preventing harm. I am very pleased with the attention toward appropriate use of urinary catheters and the diligence to prevent hospital-acquired infections, such as catheter-associated urinary tract infections (CAUTI). The MEDITECH Surveillance functionality enables nurses to leverage technology in patient safety efforts.."
>
> **Dana Obos, Chief Quality Officer, VP Clinical Operations at RCCH HealthCare Partners**

Surveillance Efforts Beyond CAUTI

When presented with requested changes to the system, the workflow is as follows:

- Facility CNO/CQO → Reviews proposed or requested build
- Corp Governance Team → Reviews CNO/CQO accepted build
- Clinical Applications Team → Builds and validates content, educates facility analysts

As RCCH explored how Surveillance could be used for non-CAUTI initiatives, the magnitude of Surveillance Watchlist requests that IT received presented challenges: Once end users saw the functionality of these watchlists, there was a flood of requests for additional lists. These lists also needed to be optimized once LIVE, increasing IT workload and requiring them to spend time vetting potential Surveillance Watchlists.

To request and prioritize new profiles, RCCH uses a central repository of profile criteria from which clinicians complete Surveillance request forms indicating their desired information. These requests are then reviewed by IT and turned into LIVE Watchlists. The flexible Watchlists can be designed to either remove patients manually from the list, or have the patient drop off automatically after meeting certain criteria (for example, if the patient is extubated).

To prevent overflow within the system, RCCH routinely evaluates the efficacy of each Watchlist and retires those that aren't being used. The organization's clinical applications team also actively monitors adoption and unintended workflow barriers, holding monthly workgroup sessions to inform best practices and identify ways to improve upon published guides and end-user workflow.

Results and Lessons Learned

45% decrease in CAUTI from Q4 2017 to Q1 2018.

35% reduction in indwelling catheter days.

Momentum from the CAUTI surveillance initiative has led to the adoption of **over 30 Watchlists**, and a greater adoption of Surveillance across RCCH.

Using the MEDITECH Surveillance solution and CAUTI Prevention Toolkit, physicians gained enhanced clinical insights without having their documentation times impacted. Surveillance also mitigated paper reporting at RCCH, eliminating the need for clinicians and infection control staff to print manual reports and mine through data manually. Generally, the solution was warmly received by clinicians, as it saved them time by granting the ability to launch into reports directly from the Surveillance Desktop.

Out of the IT team's various educational efforts, a five-minute video for end users proved to be the most successful. Distributing this video made it easy for IT to spread consistent messaging across each of the five facilities. RCCH leadership also concluded that this project would not have been successful had it not been led by IT.

Looking Ahead

RCCH formulated a CAUTI approach that harnesses a real-time monitoring system to analyze patient data and automatically identify at-risk patients, prompting clinicians to take timely care actions. It was only by using the Surveillance solution and CAUTI Prevention Toolkit synchronistically that RCCH was able to harness the full power of the MEDITECH system. RCCH will be using this approach to develop Surveillance Profiles for joint replacement, chart compliance, and diabetes in the near future.

Given the success of the CAUTI Prevention Toolkit, RCCH will be implementing additional EHR toolkits designed by MEDITECH, including the Sepsis Management Toolkit, which will be used to measure excess days, and will allow RCCH leadership to explore cost savings related to identifying sepsis sooner and intervening faster.

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