INTRODUCTION

In 22 countries, healthcare organizations of all types and sizes are doing amazing things with our software — from urban IDNs that serve populations in the millions, to critical access hospitals and specialty care settings. *The Innovators: MEDITECH Customers In Action* introduces several of these organizations, so you’ll get a glimpse of how they’re using our EHR to improve processes, quality, and most importantly, patient outcomes.

No matter what challenges your organization is facing, you’ll find stories you can relate to, and learn from, in the pages ahead. We hope these summaries inspire you to download and read the full case studies; just look for the link at the end of each synopsis.
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Union Hospital’s Journey To Stage 7

About
- Union Hospital of Cecil County is a full-service community hospital in Elkton, MD.
- The 83-bed, not-for-profit organization has been nationally recognized for clinical excellence in the treatment and prevention of disease.

Challenge
Going completely digital and achieving HIMSS Stage 7 had been long-time goals for Union Hospital. After the hospital migrated to MEDITECH’s latest release in 2014, Union’s executive team decided paperless care, and achieving HIMSS Stage 7, were within reach. HIMSS Analytics tasked Union with presenting a minimum of three case studies that display how they harness analytics to drive change and improve practices.

Execution
Union assembled a core team to review HIMSS Stage 7 requirements and verify these had been met. They also collaborated with MEDITECH through our HIMSS Stage 7 Program to ensure they were prepared for the survey visit. The Union team’s 304-slide presentation, covering 12 case studies, wowed the surveyors and led to HIMSS Stage 7 designation.

Initiatives highlighted in this case study include:
- Working with multiple health information exchanges (HIEs)
- Oncology Nurse Navigator Program
- CAUTI reduction
- Lethality Assessment Program
- Implementing scanning to become 100% paperless.

Union encourages HIMSS Stage 6 hospitals to pursue Stage 7, noting that for them, it was a natural progression. The surveyors were particularly impressed with how “data rich” the hospital is; with the new designation, Union is confident they now have the leverage to continue harnessing technology to optimize patient care and incorporate best practices.

Achieving HIMSS Stage 7 sparked other process improvements, including:
- Connecting with two HIEs, saving their physicians an hour of paperwork per day
- Eliminating oncology care delays through improved navigator documentation
- Reducing cases of UTIs as well as their device utilization ratio (DUR) in each department
- Improving the monitoring of patients seeking help for domestic violence
- Going 100% paperless with Scanning and Archiving to eliminate searching through paper charts
- Improving teamwork and collaboration among departments.

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Hilo Medical Center Improves SEP-1 Compliance by 34 Percentage Points Using MEDITECH’s Expanse EHR

About

- Hilo Medical Center (Hilo, HI) is the largest employer in the Big Island of Hawaii.
- Located in a medically underserved area, where physician shortages hover around 35 percent, HMC’s surrounding community also exhibits some of the highest rates of chronic disease in Hawaii.

Challenge

HMC has been evolving its approach to sepsis over the years. In determining areas for quality improvement, the hospital found that 85 percent of sepsis cases were present on arrival at the emergency department. While MEDITECH’s ED Tracker provided clinical information from the patient’s EHR, staff needed a way to more quickly identify and treat septic patients.

Execution

Recognizing the need to better assess patients, hospital leaders looked to MEDITECH’s Sepsis Management Toolkit and Quality and Surveillance solution. Using the toolkit’s evidence-based and outcomes-focused implementation guide, staff aligned best practice workflows within the EHR. By refining such interventions, HMC continued to adapt its clinician workflow in the ED, making significant strides in quality improvement.

Within months of implementing MEDITECH’s Quality and Surveillance solution and guidance from MEDTECH’s Sepsis Management Toolkit, HMC surpassed Hawaii’s 68 percent core measure compliance by reaching 76 percent compliance for coded data.

- Significantly improved SEP-1 compliance from 42 percent to 76 percent (coded data)
- Automated processes for earlier detection of potential sepsis
- Coordinated sepsis response among physicians and nurses.

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“Sepsis has been a difficult core measure for us. Truthfully, it was driving us crazy to try to meet the ‘all or nothing’ requirements without excessive personnel cost or over-treating patients. But MEDITECH’s surveillance is a game changer. We now have action items built into our EHR, so we can alert physicians quickly when patients meet sepsis criteria and prompt the appropriate orders and documentation.”

Jon Martell, MD, CMIO, Hilo Medical Center
Deborah Heart and Lung Optimizes Patient Throughput with MEDITECH Business and Clinical Analytics

About

- As the Delaware Valley Region’s only specialty hospital dedicated to treating cardiovascular and lung disease, Deborah Heart and Lung Center (Browns Mills, NJ) treats some of the highest acuity patients in the area.
- Given the severity of the average patient admitted to Deborah, optimizing patient throughput is vital to the hospital’s success.

Challenge

Deborah was searching for a way to provide executives with timely access to current analytics, in order to support their performance improvement efforts. Although they had used Microsoft® Excel to track metrics in the past, this process was time-consuming, and the results were not always easy to interpret.

Execution

Deborah leadership implemented MEDITECH’s Business and Clinical Analytics solution to monitor the success of various initiatives and process improvement projects. The rollout of their first two personalized dashboards, the Surgical Intubation Times Dashboard and the 10 a.m. Discharge Dashboard, gave staff access to the data they needed to make these processes more patient-centric, and to decrease instances of patients waiting unnecessarily.

Using personalized dashboards created through MEDITECH’s BCA solution, Deborah achieved the following results:

- Increased discharges before 10 a.m. sixfold
- Identified and addressed root causes for disparities in timeliness between physicians
- Backed suggestions for new projects and results of performance improvement projects with solid evidence
- Eliminated the risk of human error associated with downloading reports from other sources and manually compiling data.

“...the right data, to the right person, at the right place, at the right time, and in the right format’ can be transformational. That’s what MEDITECH’s Business and Clinical Analytics solution does for us.”

Rich Temple, Vice President/ CIO
Deborah Heart and Lung Center

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Alder Hey Children’s NHS Foundation Trust (Liverpool, England) is one of Europe’s largest children's hospitals, with over 275,000 patients and families visiting the Trust each year.

In addition to the hospital’s main site, Alder Hey offers pediatric services at a number of community sites across Merseyside, Cumbria, Shropshire, Wales, and the Isle of Man.

The NHS in the northwest counties of Cheshire and Merseyside (C&M), which includes Alder Hey, is working to connect healthcare and social services organizations through interoperability initiatives. As a main provider of pediatric care, Alder Hey works with children who transition to various outpatient settings; thus, they aspired to develop a method for sharing patient records across the region.

The NHS designates the creation of sustainability and transformation partnerships (STPs) — also referred to as health information exchanges (HIEs) — to promote more coordinated, cost-effective care. Many different vendors feed the C&M STP. To help develop the pathway for sharing patient information, Alder Hey elected to use the continuity of care document (CCD) available through MEDITECH, as MEDITECH is the only vendor using formatted data and global standards for cross-enterprise document sharing.

Within six weeks, Alder Hey and MEDITECH developed a CDA feed into the shared record, allowing clinicians to see a list of documents in the patient record including discharge summaries, radiology reports, pathology results, and standard demographics. Other benefits include:

- An improved user experience, as clinicians access information from other Trusts and GPs as part of their workflow
- The availability of necessary clinical information, to prevent duplicate investigations
- A reduction in time spent collating and summarizing clinical information from other Trusts and GPs
- Improved clinical decision-making due to the availability of relevant information during the clinical encounter.

“We wanted to do something based on IHE standards and didn’t want to rely on complex integration. We quickly selected MEDITECH for their use of formatted data using XDS standards, and within only six weeks we had developed a CDA feed into the shared record. It was really easy to achieve and we now have a rich set of information.”

David Reilly, Head of Interoperability at Alder Hey
RCCH Healthcare Partners Uses MEDITECH Toolkit and Surveillance Solution to Combat CAUTI

About

• RCCH Healthcare Partners spans 12 states, with its headquarters located in Brentwood, Tennessee.
• The organization comprises 18 regional health systems, and over 14,000 employees. Thirteen of RCCH’s hospitals use MEDITECH’s EHR.

Challenge

RCCH sought to eliminate inconsistencies in their approach to preventing catheter-associated urinary tract infections (CAUTI), and to implement uniform best practices for indwelling catheters across the five hospitals on MEDITECH’s most recent release. To do so, they needed an EHR solution that enabled clinicians to more effectively analyze the data they needed to monitor and manage patients who were at a higher risk of CAUTI.

Execution

RCCH turned to MEDITECH’s Quality and Surveillance solution and CAUTI Prevention Toolkit to support them in the early detection and prevention of CAUTI. Quality and Surveillance alerted clinicians and care teams to their next appropriate actions, and helped ensure that all indwelling catheters were placed in compliance with CDC best practices embedded within the Toolkit.

Results

After implementing MEDITECH’s Quality and Surveillance solution and CAUTI Prevention Toolkit, momentum from the CAUTI surveillance initiative led to the following improvements at RCCH:

• 45% decrease in CAUTI from Q4 2017 to Q1 2018
• 35% reduction in indwelling catheter days.

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“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
Patient Registries Help **Kalispell Regional**
Advance Diabetes Management, Increase Cancer Screenings by 22 Percent

**About**

- Located in northwestern Montana, Kalispell Regional Medical Center is a 288-bed, acute care hospital that provides a wide variety of healthcare services to the residents of Flathead Valley.

**Challenge**

As Kalispell transitioned to an alternative payment model, they needed to broaden their focus from the patients they saw regularly to the patients they saw sporadically. To identify these unengaged patients, they needed a convenient means to determine everyone for whom they’re responsible. Kalispell discovered they were relying solely on physician visits to meet all the care needs of their patients and turned to MEDITECH’s Patient Registries — a comprehensive population health tool — to help them identify, stratify, and engage their patient communities.

**Execution**

As Kalispell moved to the CPC+ reimbursement model, they determined that Patient Registries could support their shift from fee for service to value-based care. They designed their registry workflows so that all meaningful, documented patient data would flow directly to registries so that clinicians could verify whether they were meeting care protocols, helping them to be more proactive in fixing poor compliance rates.

Once the patient registries were established, they empowered Kalispell’s clinicians to examine entire groups of patients, determine who they’re responsible for, and decide on the appropriate interventions. Using registries enabled Kalispell to:

- **Increase colonoscopies by 22%**
- **Improve compliance rates for diabetic eye exams and wellness visits**
- **Have fewer patients leaving the ED without receiving timely follow-up from their PCP’s office.**

Thanks to their success with the Wellness and Diabetes Registries, Kalispell is exploring a wide range of registry options to help manage organization-wide performance improvement efforts.

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“**MEDITECH’s Patient Registries are a powerful tool for you to find out what’s broken in your institution. Rather than spending months tracking down information in reports, the registries help uncover what’s not easy to find.**”

John Tollerson, DO, Family Practice, Kalispell Regional Medical Center
Waypoint Centre for Mental Health Care Improves Transitions with SBAR Tool

About

- Waypoint Centre For Mental Health Care is a comprehensive tertiary mental health care research and academic hospital that provides mental health services for adults and provincial high security forensic mental health services.
- Located in Penetanguishene, Ontario, the organization has 1,200 employees, 301 beds, and about 27,000 outpatients.

Challenge

In previous years, the Waypoint Centre for Mental Health Care struggled with care transitions. They relied on paper Kardex at shift changes — a slow process that could take up to 40+ minutes for each hand-off. This was extremely frustrating for staff and patients alike. Waypoint also experienced several incidents indicating a need for a more efficient transfer of care process and better staff education on risk factors.

Execution

Waypoint determined that an SBAR format would be the most effective workflow for overcoming their care transition challenges. Waypoint combined the ITCT (Information Transfer at Care Transitions), the Kardex, and chit sheet into an electronic SBAR intervention. By collaborating with partners that had already experienced success with MEDITECH — they could close gaps related to patient transitions.

Waypoint went LIVE with MEDITECH and SBAR using no paper during shift changes across 14 inpatient units, from day one. Staff was initially concerned about how long it would take to document online, but soon found the new electronic process took between 10-15 minutes, compared to the 40+ minutes for paper documentation. Other positive results from Waypoint’s successful implementation include:

- Significant reduction in the length of shift reports
- Improved patient satisfaction, since patients no longer have to wait for reports to be completed
- Improved clinician satisfaction.

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“Clinicians, clinical information and IT managers, and other staff agreed MEDITECH had the mental health functional tools, support, and experience required to meet our unique needs. The ability to integrate and support various ministry and healthcare reporting requirements were also factors in the final decision.”

Lorraine Smith, Vice President of Corporate Services, Waypoint Centre for Mental Health
Frederick Memorial Hospital Reduces Sepsis Mortality Rate by 65 Percent with MEDITECH

About

- Frederick Memorial Hospital (Frederick, MD) is the hub of Frederick Regional Health System and the only acute care hospital in the county.
- Located 50 miles from Baltimore, this nonprofit, 233-bed facility and its outpatient services account for 285,000 visits every year. FMH has been validated as a HIMSS EMRAM Stage 7 provider.

Challenge

Frederick Memorial Hospital’s leading cause of death was sepsis, with mortality rates as high as 16 percent. An analysis determined that 97 percent of sepsis patients arrived at FMH via the hospital’s emergency department. The hospital did not have bundles or protocols in place, nor did they have a system to recognize borderline sepsis patients.

Execution

Recognizing the need for a comprehensive approach to sepsis care, FMH leadership designed a three-pronged strategy that consisted of:

1. Forming a multidisciplinary committee to establish best practices for sepsis screening, order set bundles, documentation, and chart review
2. Improving sepsis awareness by changing the organizational culture at a multidisciplinary level
3. Instituting a corporate goal of reducing sepsis mortality and surpassing the core measure at a minimum of 80 percent.

A strong, collaborative, and multidisciplinary approach enabled FMH to decrease sepsis rates and improve core measure compliance, while changing the organization’s culture.

- SEP-1 core measure compliance rates rose from 32 percent to 80 percent, but have reached as high as 91 percent. (The national average is 51 percent.)
- The sepsis mortality rate decreased 65 percent from almost 16 percent down to 4.76 percent.

FMH has transformed itself from a below-average performer to a recognized leader in the fight against sepsis.

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Results
About

• Located in northwestern England, The Clatterbridge Cancer Centre (CCC) is one of the leading cancer centers in the UK and has transformed cancer care delivery in the region
• CCC provides nonsurgical oncology services, including pioneering chemotherapy, radiotherapy, and proton beam treatments, to approximately 27,000 patients per year
• CCC transitioned from paper-based medical records and limited e-Prescribing capabilities to MEDITECH’s 6.0 solution — a fully integrated electronic system.

Challenge

The facility previously used a hybrid system of paper medical records and limited electronic capabilities for notes and prescribing. Staff faced six main issues related to the hybrid approach, including cumbersome e-Prescribing, lack of clinical decision support, limited access to patient information, inconsistent documentation, prescription authorization delays, and regulatory compliance issues.

Execution

Leadership realized that CCC required a digital infrastructure and clinical decision support to meet the demands of delivering complex anti-cancer treatments. Once LIVE on a fully electronic system, oncology staff across 11 sites could access clinical information, place orders, and administer treatments more effectively. CCC followed MEDITECH’s implementation guidelines by creating a comprehensive program of staff engagement, education, and training, outlined in prototyped clinical stages — each of which required clinical sign-off. By enabling the medical staff to experience the LIVE system in advance, outside of the pressure of their busy clinics, CCC migrated from its legacy systems to MEDITECH’s EPR over a single weekend.

Results

CCC oncologists are now experiencing a more efficient process for managing patient records, placing orders, and documenting care, resulting in the following benefits:

• Immediate access to patients’ medical records & stronger clinical decision support for cancer therapies
• System response time issues have been eliminated
• 20% higher influx of immunotherapy volume accommodated without additional staff
• Reduced ordering process for those chemotherapy orders requiring multiple cycles from between 15 to 90 steps, down to just 8.

Clatterbridge’s experience demonstrates that integrating Oncology care into your EPR improves care team collaboration, leading to more efficient cancer care delivery. CCC continues to extract MEDITECH’s rich functionality to help clinicians make better and more timely decisions. Ongoing technology projects will further streamline workflows and reduce clinical administrative time.

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"Prescribing is much quicker, having access to one source for information is good, and being able to see nursing documentation is a positive. Also, we appreciate that referral documents are scanned in quite quickly now. We have confirmation of diagnosis before the letters are typed for a high proportion of patients, which, given the complexity of inclusion criteria for meds, helps us to ensure we’re complying."

Helen Flint, Senior Pharmacist, Clatterbridge Cancer Centre
Ontario Shores Advances
Patient Engagement with MEDITECH

About
- Ontario Shores Centre for Mental Health Sciences is a 346-bed public teaching hospital in Whitby, Ontario, that provides a wide range of assessment and treatment services to those living with complex and serious mental illness
- As the first HIMSS Davies Enterprise Award and HIMSS EMRAM Stage 7 recipient in Canada, Ontario Shores is recognized as one of the world’s leading advocates for the “recovery model” of mental health care, which is focused on restoring fuller function and quality of life to patients.

Challenge
Prior to their EHR implementation, Ontario Shores patients had limited access to their own care data. Their health information requests were processed manually by the organization’s health information management (HIM) department, which could take weeks. Communication with caregivers between appointments was limited, and medical record information was not easily shareable with providers outside of Ontario Shores’ network. Executives at Ontario Shores identified an opportunity to extend medical information access to patients, in support of maintaining care continuity and strengthening patient engagement.

Execution
During the implementation of MEDITECH’s patient portal, Ontario Shores focused on four primary patient engagement goals:
- Enhancing patient access to their care providers and their own care data
- Supporting the paradigm shift toward service-user-driven care
- Eliminating gaps in patient engagement and partnership between patients, families, and healthcare providers
- Evolving existing practices and culture from a provider-centric model to a patient-provider partnership.

Clinicians, patients, and other healthcare professionals at Ontario Shores were involved with the design, planning, and implementation of the portal from the start.

Results
After implementing the portal, Ontario Shores observed significant, measurable benefits for both patients and healthcare organizations, including:
- Improvement in 7 out of 8 patient mental health recovery domains, including self-empowerment, basic functioning, and overall well-being
- 67% greater likelihood that portal users attend appointments
- 30% lower likelihood that portal users request information
- 16% improvement in patient self-assessment scores.

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"The patient portal is a valuable tool that empowers patients to be active participants in their own care. Clinicians are able to partner with patients to further support their recovery goals and stay connected to their progress."

Sanaz Riahi, Senior Director, Professional Practice and Clinical Information at Ontario Shores Centre for Mental Health Sciences
Anderson Regional Health System is the most comprehensive health system in the East Mississippi/West Alabama area. The health system is ranked in the top 2% in the nation for patient safety and experience by Healthgrades, a leading independent healthcare ratings organization.

Challenge
During a transition in leadership, Anderson Regional analyzed their revenue cycle processes and identified areas for improvement. Key financial metrics showed that calculated A/R days were in excess of 95 days while there was also $7 million in credit balances across more than 7,000 patient accounts.

The hospital recognized that a lack of standard workflow processes was leading to inefficiencies in the revenue cycle department. Issues such as manual communication methods and over-reliance on paper needed to be corrected in order to revamp Anderson’s revenue cycle efforts.

Execution
An important component of Anderson’s success was their migration from MEDITECH’s MAGIC platform to Expanse. They were determined to maximize their use of all the tools their Revenue Cycle solution had to offer and ensure staff was adept at navigating the system.

Using the power of the Financial Status Desktop allowed the revenue cycle team to continuously monitor the organization’s financial health and make more informed decisions relative to overall performance. By using real-time financial data to actively monitor key performance indicators, Anderson quickly identified negative trends and became proactive in reversing them.

“Having the right tools, for the right people at the right time means we can clearly set our performance standards for each team. MEDITECH’s Revenue Cycle solution has made a huge difference for us in that regard.”

Kevin Adams, CRCR, CMRP, Revenue Cycle Director at Anderson Regional in Meridian, MS

Anderson Regional Cut AR Days by 50 Percent Using MEDITECH’s Revenue Cycle Solution

Results
Anderson Regional Health System is reaping the benefits of improved revenue processes, including better revenue and cash flow, process efficiencies, and increased productivity. Highlights include:

- Cut A/R days by 50%
- Reduced lost revenue by 90%
- Improved revenue by $14 million in one fiscal year
- Achieved these outcomes while in the midst of mandatory 18% support and 15% clinical staffing cuts.

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**About**

- Avera Health, based in Sioux Falls, SD, is one of the largest health systems in the Midwest with more than 300 care locations in five states, including a state-of-the-art human molecular genetics laboratory, the Avera Institute for Human Genetics (AIHG)
- AIHG uses pharmacogenomics to analyze how the genetic makeup of an individual affects his/her response to drugs, helping clinicians efficiently identify the safest, most effective drugs for them.

**Challenge**

Medical staff across Avera’s hundreds of hospitals and clinics shared MEDITECH’s integrated EHR, but because AIHG’s processes were not automated, clinicians had to revert to paper orders for pharmacogenomic testing, which disrupted workflow.

Avera’s IT committee realized they needed to design the future-state workflow to leverage their EHR. The improved workflow would use discrete pharmacogenomics data to drive clinical decision support and guide clinicians to the most appropriate drug options for the patient.

**Execution**

The improvement project, which took place at Avera McKennan, was broken down into three phases: documentation, ordering, and alerting:

- **Documentation**: For patients who require comprehensive pain management, the AIHG pharmacists document their interpretation of the patient’s genetic profile and drug recommendations in a standardized note template.
- **Ordering**: Providers order pain genotyping tests using MEDITECH’s CPOE solution. Because pharmacogenomic results are now formatted as structured data, genetic lab results flow to the ordering providers’ desktops.
- **Alerting**: Clinical decision support rules created in MEDITECH’s CPOE solution flag clinicians based on the results of the patient’s pain genotyping panel. These alerts guide more appropriate medication prescribing.

By incorporating pharmacogenomics into clinical workflows for safer, more efficient pain control at Avera McKennan, Avera Health has realized numerous benefits to patients, clinicians, and the health system. Here are a few benefits they’ve experienced by improving their clinical processes:

- **Patients**: Minimized medication trial-and-error, with patients experiencing improved pain management as they transition to recovery.
- **Clinicians**: Increased physician satisfaction and productivity due to easier ordering of tests, efficient locating of results, and active clinical support that guides better decision making. A comprehensive “picture” of the patient is accessible system-wide in the EHR.
- **Health system**: New processes ensure optimal pain management and alleviate safety concerns related to ADEs.

As Avera Health implements MEDITECH’s Expanse EHR, they continue to build on their success with actionable pharmacogenomic data and clinical decision support, which are crucial to improving quality of care.

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Detecting the Undetected:
MEDITECH’s Surveillance Identifies and Prevents Infections at Valley

About
- The Valley Hospital is a fully accredited, acute care, not-for-profit hospital in Ridgewood, New Jersey
- Valley has earned 13 Disease-Specific Certifications (also known as Gold Seals of Approval®) from The Joint Commission.

Challenge
Like most healthcare organizations, The Valley Hospital had always struggled with early identification of sepsis, both in the ED and on inpatient floors. Motivated by the Institute for Healthcare Improvement’s 100,000 Lives Campaign, Valley’s leadership assigned advanced practice nurses (APNs) and quality assessment staff to track specific conditions and evaluate patients.

When Valley moved forward with MEDITECH’s EHR, the hospital’s leadership team recognized the potential for a new electronic surveillance tool in helping clinicians with the early detection of sepsis and accepted the opportunity to be an early adopter.

Execution
Participating in agile development and proper implementation processes enabled Valley to collaborate with MEDITECH on a real-time monitoring system, which simultaneously analyzes clinical and demographic data from throughout the EHR. Using rule logic grounded in evidence-based medicine, the surveillance system detects subtle changes in a patient’s condition that care teams may miss, alerting clinicians and providing guidance for the timely initiation of sepsis care.

MEDITECH’s Surveillance solution quickly earned the organization’s confidence for its power and versatility, and the hospital sees no limit in its potential. With 23 surveillance boards in use, Valley is yielding impressive results:
- 100% of HIM-coded septic patients were found by electronic surveillance in March 2016
- 93% of patients who qualified for sepsis surveillance board were coded with sepsis diagnosis by HIM
- 78% to 98% increased compliance in flu vaccine administration rates
- 30 minutes in estimated nursing time saved by eliminating manual counts of urinary catheters and central lines for CAUTI and CLABSI rates
- 93% VTE prophylaxis compliance rate, a dramatic improvement from the low ’70s.

Surveillance has emerged as the Valley IT department’s first choice for hospital-wide problem solving. Clinicians are confident that the solution is identifying conditions, providing relevant data, and expediting ordering to initiate treatment sooner.

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“Why wouldn’t you want to free staff from performing repetitive tasks or surveilling patient information when the EHR can accomplish those same functions faster and more easily?”

Chris Neumann, Project Specialist at Valley Health System
Avera McKennan’s Nurse Navigator Program Uses MEDITECH’s EHR to Steer ED to $475,000 Annual Cost Savings

About

- Avera McKennan Hospital & University Health Center, a HIMSS Analytics Stage 7 hospital and four-time designated Magnet facility, is a 545-bed tertiary hospital located in Sioux Falls, SD.
- The hospital is the flagship of Avera Health, a 33-hospital system spanning five states, including South Dakota, North Dakota, Iowa, Minnesota, and Nebraska.

Challenge

Nurses in Avera McKennan’s Emergency Department identified a segment of their patient population frequently using the ED for non-emergent situations. This is a problem faced by EDs across the United States, with potentially avoidable visits estimated to be over 50% or about 67 million visits. Avera nurses took this challenge head on by implementing a nurse-driven care manager program.

Execution

The ED nurse navigator program focuses on patients considered “super utilizers” by providing personalized care management extending beyond the ED. After working through the process on paper, they enlisted Avera’s IT team to automate the documentation in MEDITECH.

IT maximized MEDITECH’s integration, documentation, and clinical decision support tools to capture all the data electronically, and embed alerts within the registration and documentation processes to improve communication and continuity of care within the ED.

Results of Avera’s ED nurse navigator include:

- 78% decline in ED visits by program participants
- $475,000 reduction in cost of care for program participants
- 13.7% decrease in overall non-emergent ED visits
- 68% patient follow-up compliance, which is well above the Magnet hospital compliance average of 25%-40%.

With the success of Avera McKennan’s ED nurse navigator program, Avera Health has begun implementing the program across their entire network. The initiative is easily replicated using tools already available within MEDITECH to automate a standardized nurse navigator toolkit. As the program expands, Avera will continue to use the data to further refine the program.

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Avera Health Achieves 45 Percent Mortality Rate Reduction With Sepsis Screening

About

- Avera Health is an integrated health system comprised of 33 hospitals with more than 330 locations throughout South Dakota and four surrounding states
- The organization manages approximately 2.4 million visits per year.

Execution

To promote effective standards, Avera embedded the following elements into the nursing and physician workflow:

- Nurse-driven screening protocol to identify sepsis patients early
- Evidence-based physician order sets to provide immediate treatment
- A centralized EHR Sepsis panel, displaying sepsis-related data in flowsheet format
- Tools to monitor compliance and effectiveness.

By implementing these processes and raising sepsis awareness through their ‘Seeing Sepsis’ campaign, Avera Health improved their recognition and response time to sepsis cases, enabling immediate treatment and desirable outcomes.

Challenge

Supported by business and clinical intelligence data, Avera Health identified sepsis as the number one opportunity for care improvement and cost reduction across their system. Soon after, the organization defined a system-wide goal to reduce sepsis mortality by collaborating with multiple disciplines, providers, and facilities throughout the Avera system to implement a standardized sepsis toolkit in MEDITECH.

A key focus of the project was ensuring that the screening and treatment protocol could be used universally across the system, ensuring the Avera brand promise of providing consistent standardized care at all Avera hospitals.

With its nurse-driven sepsis screening assessments and physician order set bundles, Avera Health is using MEDITECH’s integrated Expanse EHR to save lives by quickly identifying patients at risk for sepsis and initiating immediate, evidence-based diagnostics and treatments. As a result, the organization has managed to significantly streamline workflows, reduce costs, and improve patient outcomes.

Avera’s new sepsis detection protocols have resulted in:

- 45% reduction in mortality rate due to sepsis screening
- $10 million cost savings based on a $5,080 decrease in cost per case
- Readmission rate reduction from 12.9% to 10.3% for sepsis patients and observed-to-expected (O/E) ratio reduction from .70 to just above .60 — exceeding top performers in the nation.

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“Rarely does a clinical tool touch every patient, but 100% of our patients are now screened for sepsis. We’ve seen a dramatic improvement in both mortality and morbidity related to sepsis care.”

Dr. Jennifer McKay, MD, MIO, Avera Health
Stamford Hospital’s CAUTI Initiative Leading to 70 Percent Reduction in UTIs

About

- Stamford Hospital is a 305-bed community teaching hospital, an affiliate of the New York-Presbyterian Healthcare System, and a major teaching affiliate of the Columbia University College of Physicians & Surgeons.

Challenge

According to the CDC, hospital-acquired CAUTI increases length of stay, mortality, and hospitalization costs, with the average per patient direct costs and attributable mortality at $750 per episode. Despite broad-based education, hand-hygiene efforts, and environmental cleaning initiatives, Stamford Hospital’s urinary catheter utilization rates and CAUTI had not fallen over a five-year period.

Execution

Leveraging the MEDITECH EHR’s documentation, CPOE, clinical decision support, and reporting tools, Stamford enhanced communication between nurses and physicians on the need for catheters and made it easier for their clinicians to follow best practices. The organization developed a set of interventions to minimize the risk of catheter-associated urinary tract infections, including the following steps initiated in the EHR:

- The Infection Prevention team developed guidelines for physicians to document catheter insertion criteria when ordering catheters. They also developed electronic order sets with Foley time limits
- They linked the order for “Foley Maintenance Protocol”, which includes the nursing checklist for catheter removal to the physician’s catheter insertion order
- Nurses regularly review the reason for a catheter and are required on every shift to document the patient’s voiding method. A nurse-driven protocol allows nurses to remove the catheter when no longer needed.

Results

The results of Stamford Hospital’s CAUTI Reduction Program have been impressive. They successfully sustained reductions in hospital-wide catheter-associated urinary tract infections and Foley catheter use, as demonstrated by the data below:

- Reduced hospital-wide urinary catheter use by 50% and urinary tract infections by over 70%
- Saved an estimated $100,000 and six patient lives over a three-year period
- Lowered the incidence of hospital-wide CAUTI numbers from 14 per quarter to 2 per quarter and hospital-wide CAUTI rates have trended down from 4.3 infections per 1,000 catheter-days to 1.4 infections per 1,000 catheter-days.

An important aspect of any quality initiative is sustainability and Stamford’s results over several years demonstrate the effectiveness of the CAUTI program.

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