# National Health IT Week: How Tech Has Helped Two Hospitals with Patient Care and Quality Measures

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**Penn Highlands Elk and Saratoga Hospital implemented technology tools to streamline workflow and improve the quality of care.**

As healthcare transitions from fee-for-service to value-based care, hospitals and health systems are increasingly using health information technology (HIT) to address the challenges of improving patient care and complying with quality measures.

These topics were address during a webinar this week on how to achieve better patient care and outcomes through value-based care in conjunction with National Health IT week, which runs this week. Now in its 10th year, National Health IT Week is a forum showcasing the pivotal role of health IT in improving the quality of healthcare and includes a number of in-person and digital events throughout the week.

During a webinar panel discussion on "Improving Patient Care and Quality Measures," two hospitals shared how they have used technology tools to deliver to up-to-date information to clinicians, which enables patients to be managed in real-time, and ultimately has helped hospital staff streamline their workflows and improve the quality of care.

Derrick Goode, who works in clinical informatics at Penn Highlands Elk, a St. Mary's, Pa.-based hospital in the Penn Highlands Healthcare system, outlined how the hospital has implemented 700 Visual SmartBoards from Iatric Systems to streamline workflows in most hospital departments, which has helped improve patient care, patient safety, staff efficiency and quality measures. Visual SmartBoard is a data visualization and interactive workflow management tool that pulls information from clinical and administrative systems and builds customized dashboards to present real-time views of data and critical patient information.

In particular, Goode said SmartBoards used for detecting early signs of sepsis and readmission risks have helped to improve patient outcomes at Penn Highlands Elk.

Sepsis and readmission risks are two quality measures that most hospitals have to report. There are new federal reporting requirements for sepsis patients under the Centers for Medicare & Medicaid (CMS) inpatient quality reporting program, noted Kay Jackson, education and advisory manager at Iatric Systems during the panel discussion.

A rise in sepsis cases also costs Medicare billions each year. Medicare paid hospitals $7.2 billion to treat sepsis in 2013, Jackson said, and severe sepsis with a major complication was the second most frequently billed diagnosis in 2013.

With a goal of creating better early detection of sepsis in hospital patients, Goode says he began working with Iatric Systems last fall to customize a Visual SmartBoard for sepsis monitoring at Penn Highlands Elk. As identifying sepsis often requires examining multiple clinical measures, having real-time data can be key in identifying the early signs of sepsis.

According to Goode, the hospital identified six core values, such as pulse, blood pressure, body temperature, respirations and glucose levels in non-diabetic patients, and customized a SmartBoard to monitor for these different criteria. Using these criteria, patients are given a sepsis score and when a sepsis score reaches a threshold, an automatic alert is sent out to the nurse monitoring the patient, who

can notify a physician. The early detection has led to interventions, such as starting patients on a different course of antibiotics or ordering different lab work.

"We went live with the board in January, and it has altered the course of some patients," Goode said, "Doctors have said the board has helped and it's great tool for us."

Reducing 30-day hospital admissions also is a high priority for many hospitals and health systems. According to Jackson, in 2013, nearly 18 percent of Medicare patients who had been hospitalized were readmitted within a month.

At Saratoga Hospital in Saratoga Springs, NY, hospital leadership proactively sought out ways to reduce its 30-day hospital readmissions in order to improve the quality of patient care while also complying with the Readmissions Reduction initiative established by CMS, which aims to reduce the number of patients who return to a hospital within 30 days of discharge.

The hospital recognized the need to move beyond static reports for managing patient care to a real-time approach so that high-risk patients could be identified upon entry into the hospital, according to Nan Till, senior systems analyst, information systems at Saratoga Hospital.

The hospital has deployed SmartBoards throughout the hospital to early identify and meet the needs of high-risk patients in the emergency department (ED) and inpatient units. The hospital was able to customize the ED high-risk SmartBoard to identify patients discharged within 30 days along with other criteria such as age, symptoms and medical history. If a patient is admitted, that patient's information flows to the inpatient high-risk SmartBoard so the patient can be further monitored.

Since implementing SmartBoards along with best practices and customized action plans in the emergency department and inpatients unit, the 30-day readmissions rate at Saratoga Hospital has decreased by 40 percent.

"Visual SmartBoard has dramatically changed the workflow in our entire hospital," Till said, as caregivers now have a real-time view of critical information at a glance.