



North Oaks Health System Leverages Advanced Surveillance Technology to take Infection Prevention, Medication Management and Quality Initiatives to the Next Level

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*Pam Vaccaro, RN, CIC
Director of Infection Prevention
and Environmental Services
North Oaks Health System*

CUSTOMER PROFILE

Located between Baton Rouge and New Orleans, Louisiana-based North Oaks Health System (North Oaks) is a progressive community hospital system committed to optimizing the healthcare experience through compassion and innovation. The organization operates the 237-bed North Oaks Medical Center, the North Oaks Rehabilitation Hospital, multiple outpatient treatment centers, a hospice agency and a growing physician group for primary and specialty care. Recognized regionally and nationally, the organization recently received the 2013 Press Ganey Guardian of Excellence Award for ranking in the 95th percentile for patient satisfaction.

Implementation Objectives

As part of its greater strategy to align with the healthcare industry’s performance-based accountable care movement, North Oaks deployed Senti7® to improve its infection prevention processes and pharmacy workflows, laying a foundation to support optimal outcomes on both the patient safety and cost fronts.

“Without the support of an integrated, rules-based database like Senti7, healthcare organizations only have the resources and time to reach the low-hanging fruit in terms of quality initiatives,” said Pam Vaccaro, RN, CIC, director of infection prevention and environmental services with North Oaks. “It’s all about efficiency; being able to complete your work and still be out on the floor—proactively addressing what might otherwise be missed.”

Since deploying the solution in 2009 North Oaks has streamlined infection prevention workflows to ensure more rapid identification of at-risk patients

CASE STUDY

NORTH OAKS HEALTH SYSTEM

and accurate reporting through the Centers for Disease Control and Prevention's (CDC) National Healthcare Safety Network (NHSN). Efficiencies created within clinical pharmacy workflows have led to an increase in care activities, producing significant gains in patient safety, outcomes and cost efficiencies.

The Challenge: Moving From Reactive to Proactive

The movement toward greater transparency of data associated with healthcare associated infections (HAIs) through mandated public reporting and accountability for HAI reduction has notable economic and reputational implications for healthcare organizations. Like many community-based healthcare organizations, North Oaks faces an uphill battle allocating its limited number of staff resources to ramp up quality initiatives and stay one step ahead of regulatory performance challenges.

At North Oaks, Vaccaro is responsible for overseeing infection prevention efforts and environmental services for two facilities and more than 20 clinics. Manual methods of surveillance to identify patients at risk for infection have hindered North Oaks—and the industry as a whole—in effectively addressing the HAI challenge.

A typical day for Vaccaro could begin with a review of paper reports for as many as 150 patients, requiring hours of time to identify indicators and intervention opportunities. Often, data was outdated as soon as a plan of action could be put into place due to rapid changes in patient information or status or situation(s)

"The key to effective infection prevention strategies is early identification, early isolation and early intervention," Vaccaro emphasized.

Without tools to aggregate disparate patient data into a real-time picture of a patient's condition, the effectiveness of infection prevention efforts to proactively address HAIs is minimized. All too often, the response becomes reactive rather than proactive.

Recent changes to NHSN definitions of HAIs and increasing public reporting requirements add additional compliance burdens to daily processes for infection prevention personnel. Under manual processes, reporting consists of labor-intensive review of computerized microbiology reports and often requires data aggregation from numerous databases.

"The government doesn't play around when it comes to inaccurate reporting. The information has to be accurate," Vaccaro said. "Pulling the correct information could take hours and would require at least half of an FTE whose time could otherwise be spend in critical infection prevention activity."

The Challenge: Supporting Top-of-license Clinical Work

Through more streamlined clinical pharmacy workflows, North Oaks determined that pharmacy expertise could be leveraged on a higher level, aligning with and further advancing the organization's quality initiatives. As the performance-based regulatory landscape moves health systems into a risk-bearing reimbursement model, the need for more high-profile clinical pharmacy activity has become a critical component for improving patient safety and reducing potential for adverse medication events.

The pharmacy department at North Oaks previously tracked clinical status of patients manually, printing individual patient reports and reviewing for such areas as intravenous to oral therapy conversion (IV/PO) and renal dosing. According to Jamie Covington, PharmD, clinical pharmacy manager at North Oaks, the cumbersome process required hours to complete each day, minimizing the effectiveness of interventions.

"By the time we would get to a patient, the data was often outdated," she explained. "We needed a method for pulling data to present a better picture of what was actually happening with a patient in real-time in order to positively impact the quality curve."



Covington recalled that demonstrating the value of pharmacy interventions was also difficult as tracking was done with limited information on Excel spreadsheets. North Oaks needed a solution to move clinical pharmacy efforts to the next level—one that would support more efficient identification of patients as well as accurately track and report the outcomes of interventions.

SOLUTION: SENTRI7 TO SUPPORT HIGHER-LEVEL INFECTION PREVENTION AND CLINICAL PHARMACY EFFORTS

Vaccaro and Covington identified the need for an electronic surveillance solution to provide real-time data aggregation and efficient collection of accurate patient data. The decision was made to deploy Senti7[®] based on its advanced rules-based platform provided through a convenient web portal. The provision of a dynamic dashboard in the solution enables a convenient, quick view of patients based on customized rules, helping North Oaks rapidly identify risks and gaps in care.

Vaccaro noted that the specificity of the rules has been a major benefit from an infection prevention perspective. Rules have been built to cover all HAIs, promoting quick identification of at-risk patients and more rapid response through quick review of final positive culture/assay results, radiology reports, surgical post-op notes, significant chemistry, hematology and immunology results.

“Results up in real-time on the dashboard,” Vaccaro noted. “We can now assess risk for conditions such as MRSA at the push of a button.”

Instead of clicking through numerous pages within the organization’s EHR, Vaccaro is able to more effectively manage isolation patients as Senti7 targets clinical scenarios and specific organisms of interest in real-time as well as assists with tracking of historical locations of patients throughout a hospital stay to evaluate incurred risks.

“We have had many stories of successful prevention efforts since deploying Senti7,” Vaccaro said. “We have been able to increase our isolation management compliance from 46% to roughly 90%.”

Meeting regulatory requirements has also become easier as Senti7 simplifies the process for mandatory reporting to NHSN by staying current with definitions that boost compliance and streamlining workflows through automated reporting to the CDC and Centers for Medicare and Medicaid Services. Manual processes for reporting that previously took hours can now be completed in about 20 minutes, Vaccaro said. The robust reporting capabilities also provide assistance with data capture for state reportable conditions and enable easy creation of historical reports.

“Sentri7 is very user-friendly for all experience levels,” Vaccaro emphasized. “We looked at a lot of options, and Sentri7 was by far the easiest to learn. The usability of the solution helped speed adoption rates and uptake of the solution”

Pharmacy staff is leveraging the power of the rules-based infrastructure to create greater efficiencies in such areas as IV/PO conversions, renal dose adjustments, anticoagulant monitoring and antimicrobial stewardship efforts. Covington noted that pharmacy has recently started tracking and monitoring utilization of new therapies added to formularies as well as high-cost antibiotic use and increased duration of treatment greater than five days.

“We’ve definitely seen an increase in the number and types of interventions as clinical pharmacy staff are able to see more patients in shorter periods of time,” Covington said. “With the reporting features in Sentri7, we’ve been able to track cost savings better, and I can now relate the cost savings to the intervention type.”

North Oaks has also seen improvement in core measures performance with Sentri7 part of its greater strategy. Through custom-built rules, pharmacy is able to act as a “second catch” safety mechanism to nursing by tracking conditions such as heart failure and making sure patients have been ordered the right medications at discharge.

Covington also pointed out that data collected within Sentri7 helped justify the need for a second infectious disease pharmacist. “With one, we were reaching about 30% of all patients on antibiotics, and now we are seeing about 70%,” she noted.

FORWARD LOOKING

Vaccaro and Covington both believe there is still great potential to leverage the surveillance capabilities of Sentri7 and are working collaboratively to identify opportunities across the organization to heighten response and improve care delivery.

To learn how Sentri7 can help you improve clinical outcomes, visit www.sentri7.com or call 800.654.8395.

