

Sentri7® Pharmacy Elevates Hendrick Health System's Antimicrobial Stewardship, CDC Core Elements Alignment



Client Profile

Hendrick Health System is an award-winning healthcare organization serving a 19 county region in Midwest Texas. Located in Abilene, the organization operates a 522 bed medical center, a women's center, a rehabilitation hospital, a cancer center, a hospice center, and other ancillary offerings.

Hendrick has been honored with the Gallup Great Workplace Award for 11 consecutive years, and Becker's Hospital Review named Hendrick in its 2017 list of 150 Top Places to Work in Healthcare. Hendrick Health System is regularly recognized by leading national organizations such as the American Diabetes Association, American Association for Respiratory Care, American Stroke Association, and American Association of Cardiovascular and Pulmonary Rehabilitation.

Consistently an early adopter of industry best practices, Hendrick has engaged in antimicrobial stewardship for several decades. In response to a recent US imperative for formalized antimicrobial stewardship programs (ASPs), the organization is using Sentri7® Pharmacy to streamline and operationalize antimicrobial stewardship strategies. Hendrick uses Sentri7 to equip frontline clinical staff with the real-time data they

need for making proactive, informed decisions and for undertaking design and performance improvement initiatives.

Antimicrobial Stewardship: *The Challenge*

Hospitals and healthcare systems must prioritize antimicrobial stewardship amid alarming national and global statistics related to the growth of antibiotic-resistant strains of microorganisms. Mounting regulatory pressure underscores the importance of implementing the Centers for Disease Control and Prevention's (CDC's) Core Elements of Hospital Antibiotic Stewardship Programs as the minimum standard.

In 2017, the Joint Commission introduced new standards that mirror the CDC's core elements based on the expected adoption of related conditions of participation by the Centers for Medicare & Medicaid Services (CMS). In addition, current industry movements point to upcoming requirements for antimicrobial use reporting to the National Healthcare Safety Network (NHSN). "Our ability to demonstrate ongoing process and performance improvement within an ASP is important going forward," said Pharmacy Clinical Manager Greg Perry. "That's what the CDC and CMS will eventually be looking for under pay for performance."

Like many large healthcare organizations, Hendrick faced resource challenges as it set out to operationalize a high-performing ASP that aligned with CDC core elements. But



Sentri7® helps support Hendrick pharmacy staff across a range of AMS activities; for example, Sentri7:

- Provides real-time alerting of opportunities to adjust and/or optimize antimicrobial dosing.
- Helps capture interventions.
- Tracks drug utilization, days of therapy, and other crucial data points that get submitted to the NHSN and the CDC.
- Tracks intravenous (IV) to oral (PO) antibiotic conversion.
- Enforces hospital policies and procedures—for example, discontinuation of the use of drugs proven to have safety issues.
- Manages drug-bug mismatches.

manual processes were hindering the health system's ability to address antimicrobial stewardship in a proactive way, and the team estimated it would take several additional staff to fulfill the core element requirements involving implementation of ASP recommendations, tracking of performance, and reporting. "Having timely access to the right data is critical to maturing ASP efforts," Perry said. "The hard part is pulling all the data and making sure it's accurate. Without a clinical surveillance infrastructure, staff would have to comb through hundreds of patient charts on a daily basis."

Sentri7 Supports High-Level ASP Initiatives

Hendrick pharmacy operations are designed to reflect a philosophy of maximizing outcomes while minimizing resources. Sentri7 was a natural choice to support the implementation of a formal ASP in 2016—especially because the organization had used the solution since 2007 to elevate pharmacy medication management and comply with The Joint Commission National Patient Safety Goals.

Today, the comprehensive antimicrobial stewardship functionality within Sentri7 provides the critical IT support needed to operationalize CDC core elements. Real-time aggregation of patient data and automated tracking, identification, and reporting of potential antimicrobial issues equip Perry and his team with the data needed to elevate clinical response. And intelligently filtered information built on customized rules provides real-time notification of orders for restricted antimicrobials, drug-bug mismatch, and comparisons of antimicrobial regimens, renal function surveillance, possible hospital-

acquired infections, and other areas the ASP identifies. "The solution brings patients to us instead of staff's having to dig through charts," Perry said. The solution also supports one-click reporting to the NHSN and the CDC, thereby further streamlining work flows that support a high-level look at how the organization measures up against its peers. That capability, Perry said, will be even more important in the future, once CDC mandates the reporting.

"Our C-suite focuses on utilization—especially from a CDC perspective," Perry said. "That compares us with the rest of the world. Just like Medicare's Hospital Compare data, antimicrobial use data is going to become available to the public at some point." The antibiogram provided through Sentri7 clinical surveillance further enhances Hendrick's ASP efforts by eliminating the need for staff to manually validate information from large data feeds. "Now, it's very simple, and the data is always available in real time," Perry said. "It lets me see trends in the data, which is very useful."

Better Data for Better Outcomes

Sentri7 enables Hendrick to implement high-level initiatives that are affecting patient care positively and reducing costs significantly. Specifically, Hendrick uses the Sentri7 antibiogram to educate physicians and change prescribing behaviors. For instance, the Sentri7 antibiogram was the basis for reducing the empiric use of oral quinolones for urinary tract infections.

Reporting functionality helps create a culture of accountability and supports ongoing process improvement. Hendrick can align rules with national goals and objectives and then track performance. The resulting

information then gets shared at regular ASP committee meetings and benchmarked against a goal of 80% compliance-with-rules review. “The rules we can write in Senti7 enable me to align front-end pharmacy with ASP team goals and the potential outcomes we want,” Perry said.

Senti7: Empowering ASPs for Better Care

High-performing ASPs have proved that they deliver notable return on investment, but Perry emphasizes that cost savings are secondary to Hendrick Health System’s mission. “At the very start of this, I said, ‘We are not doing this to save money,’” he said.

“That’s not why you do stewardship. You do it because you want the right drug, the right dose, and the right length of therapy.” Perry added.



In the first quarter of 2018, Senti7 helped Hendrick achieve more than \$100,000 in cost savings through interventions and medication management activities. Those cost savings came from clinical interventions such as:

- Intravenous to oral conversion
- Enforcement of policies and procedures for the treatment of MRSA
- Renal dose adjustments according to policies and procedures



Bench to Bedside

Senti7 has also been useful in helping the pharmacy team change prescribing behavior. For example, if the team detects that a physician is prescribing four times as much of a certain drug as the rest of the medical staff, the Senti7 surveillance platform facilitates intervention and proactive recommendation of a viable substitute—educating the physician along the way.

Taking those efforts one step further, Hendrick applies Senti7 in support of changes required to roll out new clinical programs. As a recent example, the pharmacy staff received new national guidelines for the treatment of *C. difficile*. As part of the guidelines, physicians were asked to discontinue use of a particular drug in favor of a different one that had proved more effective. Once the training was complete, the pharmacy team was able to track drug utilization through Senti7, which revealed that the medical staff was complying with the new guidelines. For those physicians who were still prescribing the discontinued drug, the pharmacy team actively intervened, using the opportunity to not only change the drug but to also educate the prescribers on the new guidelines.

For more information please call 800.654.8395 or visit www.wolterskluwer.com/en/solutions/senti7-clinical-surveillance/medication-management/antimicrobial-stewardship