Targeting High-cost Antibiotics to Decrease Pharmacy Spend and Improve Overall Patient Care

The Sentri7® Difference

The following case study is a Sentri7 Health System customer who has asked not to disclose their System name.

CHALLENGE

Looking across a large health system enterprise, a system director of pharmacy saw an opportunity to educate prescribers about a high-cost antibiotic to improve appropriate prescribing in accordance to the system's AMS program. The antibiotic, ertapenem (INVANZ), has been considered a niche carbapenem due to its lack of antipseudomonal activity. While its once daily dosing is beneficial in outpatient or home infusion settings, it was identified as a target for an inpatient drug initiative in five key hospitals.

SOLUTION

Using Sentri7 clinical surveillance, the Director tracked daily prescribing over the course of a year in the inpatient setting with the goal of substituting meropenem when a carbapenem is appropriate, or a narrower spectrum antibiotic such as ceftriaxone when *Pseudomonas* coverage is not desired. Substituting meropenem as the inpatient drug of choice was due to lower cost and better overall spectrum of activity in cases where empiric use of carbapenem is required. The Director set up an ertapenem rule in Sentri7 so he was alerted in real-time whenever the drug was prescribed by a clinician.

> Sentri7's ability to alert me real-time gave me the opportunity to conduct prospective audit and provide feedback to hospital clinical pharmacy staff at the point where we could make the biggest impact on patient care."
>
> **System Director of Pharmacy**

THE RESULT

As a result, the Director was able to decrease overall volume of ertapenem vials used nearly 81% over 20 months between 2018 and 2019. Thereby reducing the overall spend on this higher cost antibiotic while upholding each hospital's commitment to high-quality patient care.

To ensure effective change management in prescribing practices, the Director would contact each clinician, discuss the patient case and educate them on the evidence behind using an alternative antibiotic in the inpatient setting. "Sentri7's ability to alert me real-time gave me the opportunity to conduct prospective audit and provide feedback to hospital clinical pharmacy staff at the point where we could make the biggest impact on patient care," said the Director. "This solution also helped me quickly identify patients not on the right antibiotics or opportunities to de-escalate broad spectrum agents to ones more aligned with culture results, which is key for reducing spend on high-cost drugs, improving patient care and reducing antimicrobial resistance."

81%↓
DECREASE OF ERTAPENEM VIALS
REDUCING OVERALL SPEND

4930

919

ERTAPENEM QUANTITY
2018 VS **2019**

2018   2019