



Case Study:  
**WESTERN MARYLAND PHARMACY**

**Improving Clinical Outcomes**  
and Decreasing Acetaminophen Costs  
by 78% with Diver Platform

### Quick Facts:

**Organization:** Western Maryland Health System

**Industry:** Healthcare

**Location:** Cumberland, MD

**Customer since:** 2012

**Number of beds:** 205

**EHR:** MEDITECH

**Employees:** 2,300

**Solution:** Diver Platform

**Website:** [www.wmhs.com](http://www.wmhs.com)

### KEY TAKEAWAYS

- ❑ *Western Maryland Health System was trying to figure out how to manage rising drug costs. For example, the price of IV acetaminophen rose about 250% to \$35 per vial.*
- ❑ *With insights from Diver Platform, the hospital reduced its spending on acetaminophen 78% over two years, from nearly \$250,000 in FY15 to just over \$55,000 in FY17.*
- ❑ *The organization also used Diver to test Entereg and found patients on the drug had shorter lengths of stay and less readmission than other patients, resulting in a cost savings of \$112,000 over 6 months.*

### BACKGROUND

Western Maryland Health System, a rural hospital that serves patients in Maryland, Pennsylvania, and West Virginia, implemented Dimensional Insight's Diver Platform in 2012 to help better navigate the state of Maryland's new value-based reimbursement model. With Diver's help, Western Maryland greatly enhanced its position on key quality

indicators in just two years, peaking at 1st in the state after starting out as 46th out of 46 hospitals. Western Maryland has made great improvements across the hospital by focusing on the Triple Aim:

- ❑ Population health
- ❑ Experience of care
- ❑ Per capita cost

### THE CHALLENGE

Rising prescription drug costs are creating a huge burden on hospitals in the U.S. In fact, a study commissioned by the American Hospital Association indicated that inpatient drug costs increased 23.4% annually between 2013 and 2015, and 90% of surveyed hospitals indicated that rising drug prices had a moderate or severe impact on their ability to contain costs.

Western Maryland had been using an IV form of acetaminophen (Ofirmev).

When the drug first came on the market it was reasonably priced; however, the company that produced it was bought out and the new drug producer raised the price by about 250% to \$35 per vial. That meant Western Maryland was paying nearly \$250,000 per year for IV acetaminophen alone.

Here's where Diver came in.

### THE GOAL

*Western Maryland Health System wanted to use Diver to help it determine:*

- Did IV acetaminophen actually produce better outcomes than the oral version of the drug did?*
- What is the efficacy of other drugs and could the organization use those results to both improve outcomes and reduce costs?*

### THE RESULTS

With the help of business intelligence analyst Colby Lutz, Western Maryland's director of pharmacy services Surender Kanaparathi examined results from the hospital's patient population to see if IV acetaminophen produced better outcomes. Lutz and Kanaparathi examined various surgical procedures, patient lengths of stay, and number of opiates given. They found no significant difference in patient outcomes with IV acetaminophen.

Kanaparathi shared the results with the department of surgery and senior leadership. "It was an easy sell for us because when you deal on the theory that your oral medication works as well as your IV, you don't need to spend \$35 per dose when you can get it for pennies."

As a result of this analysis, Western Maryland sharply decreased the amount of IV acetaminophen it purchased. The hospital reduced its spending on the drug 78% over two years, from nearly \$250,000 in FY15 to just over \$55,000 in FY17.

Following the success of this project, Kanaparathi and Lutz decided to examine the efficacy of other drugs. Kanaparathi says, "The potential for me is endless with this, because with our EHR system, it's very cumbersome to extract simple data. It saves a lot of time for me to get all the data from Diver."

Following a discussion at the Triple Aim committee with Western Maryland's senior leadership, the hospital identified a population of patients who had longer than expected hospital. Kanaparathi suggested that a non-formulary drug Entereg might increase the pharmacy budget but decrease overall cost of care for patients with major intestinal surgeries.

The hospital tested Entereg for about six months on 30 patients, while keeping all other variables the same. Kanaparathi and Lutz analyzed the results in Diver and they found that the patients on Entereg had shorter lengths of stay and less readmission than other patients. That resulted in a cost savings of \$112,000 over 6 months.

### WHAT'S NEXT

Moving forward, Western Maryland is trying to identify disease states that have higher than expected lengths of stay, which are areas where improvements can make a big difference in clinical outcomes and/or spending. With Diver, the hospital can analyze how it is managing these patients and modify protocols and order sets according to what's working or not working.

"Our senior leadership is very supportive in expanding use of Diver to all other departments because they see the value that it brings throughout the organization," says Lutz. "Our hospital is committed to improving quality for patients while decreasing the cost of care, and Diver helps us do that."



## About Dimensional Insight

Dimensional Insight is the leading provider of integrated business intelligence and performance management solutions. Our mission is to make organizational data accessible and usable so everyone from analysts to line of business users can get the information they need to make an informed, data-driven decision.



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