



Case Study:

## Saint Francis Medical Center

Midwestern Hospital Transforms Infusion Pump Management, Drives Higher Quality, Efficiency and Performance

### Overview

#### The Need

In examining asset management, Saint Francis Medical Center recognized a need to address two key objectives. The first: to improve infusion device management and efficiency to enable better availability. The second: to improve performance, longevity and inventory management of infusion devices.

#### The Solution

Leaders at Saint Francis saw the value in using a comprehensive real-time location system (RTLS). With BD™ Alaris Asset Management interface of the BD Alaris™ System with STANLEY Healthcare RTLS MobileView®, the hospital now has real-time visibility to the location of every BD Alaris System infusion device. In addition, the platform integration makes it possible to know the infusion device status: *ON/OFF, Available, In-Use*.

#### The Results\*

Since deploying the integration, Saint Francis has improved workflow, device utilization and staff efficiency—all while reducing equipment and maintenance costs:

- Biomedical engineers no longer spend as much as an hour and a half each day hunting for pumps, translating into a **cost avoidance of \$21,000 per year**.
- Saint Francis has achieved **100% preventive maintenance performance** on 800+ devices with only two full-time biomed engineers covering a 1.1M-square-foot facility.
- To date, the hospital has prevented equipment losses representing at least **\$60,000 in cost savings**.

\* Customer reported feedback, Saint Francis Medical Center



*Medicine to the Highest Power*

#### About Saint Francis Medical Center

Saint Francis Medical Center is a 308-bed facility serving more than 713,000 people throughout Missouri, Illinois, Kentucky, Tennessee and Arkansas. Guided by its mission to provide a ministry of healing and wellness inspired by its Catholic philosophy and values, it has become a progressive, innovative regional tertiary care referral center.

The hospital has been named one of the top 100 “Best Places to Work in Healthcare” by *Modern Healthcare* magazine for six consecutive years—an honor no other employer in Missouri has achieved. The prestigious program is open to companies across the healthcare industry—hospitals, service companies, suppliers, payers and others—with at least 25 employees.

#### Integrated Solution

- AeroScout® Asset Management
- BD Alaris Asset Management

## Challenges Faced

Saint Francis Medical Center made a system-wide decision to adopt a new infusion device technology. The new technology would address some challenges, but others related to asset management were likely to persist. Chief among them:

- **Time spent searching for devices.** Whether retrieving devices for cleaning, repair or preventive maintenance, Biomedical Engineering personnel were spending as much as 90 minutes per day hunting for infusion pumps.
- **Risks related to preventive maintenance.** Without full visibility to the fleet of infusion devices, it was time consuming to ensure 100% compliance with preventive maintenance requirements.
- **Drug library updates.** With the legacy devices and lack of device visibility, it took Saint Francis a full year to complete drug library updates across its entire fleet of infusion devices.
- **Shrinkage.** Infusion pumps are among the most critical—and costly—devices for any hospital. Saint Francis sought a solution to help prevent accidental loss and theft, while protecting their BD Alaris System investment.

## Solution Benefits

As part of their strategic decision to adopt the BD Alaris System across the health system, Saint Francis' leaders determined they could alleviate some infusion device management challenges by implementing a comprehensive, integrated RTLS solution.

BD Alaris Asset Management, the interfacing of the BD Alaris System and STANLEY Healthcare RTLS MobileView® platform, provides real-time visibility to the location and status—*ON/OFF, Available, In-Use*—of infusion devices hospital-wide. Combining status and location information enables the hospital to use data-driven insights to improve workflow, device utilization and staff efficiency—all while reducing equipment and maintenance costs.

From kickoff to go-live, the implementation of the project took less than one month to set-up and deploy. Since then, the results have been compelling:

- **Time savings.** Now with the comprehensive RTLS solution providing infusion pump status, Biomedical Engineering staff can easily find devices even when they are hidden in utilities closets. It also makes it possible to avoid wasting time looking for devices when they are in use with patients. The time saved for Biomed labor alone amounts to cost savings of about \$21,000 a year. In addition, nursing personnel now spends less time searching for infusion devices. They can easily locate the closest available pump in the MobileView dashboard for greater efficiency.

\* Subject to internet connection, devices' variability and selected settings.



**100%**  
PREVENTIVE MAINTENANCE  
on 800+ devices by 2 FTEs



**\$60,000**  
OF EQUIPMENT SAVED  
FROM LOSS



**3 WEEKS**  
INSTEAD OF 1 FULL YEAR  
to update drug libraries across  
all infusion pumps



**\$21,000**  
IN LABOR COST  
AVOIDANCE PER YEAR  
by eliminating manual searches



- Better performance with more efficient preventive maintenance.** Understanding the significant investment in infusion devices, Saint Francis realized BD Alaris Asset Management would be a particularly useful tool to help protect their investment. With the implementation of the RTLS solution, Saint Francis has achieved a yearly 100% preventive maintenance performance on over 800 devices with only two FTE biomedical engineers across a 1.1M-square-foot facility.
  - Achieve 100% device remediation.** Saint Francis has embraced their integrated RTLS solution to minimize disruption for staff and patients when device remediation is required. Knowing the device location and status has had a tremendous impact on the speed and efficiency of device collection. During these efforts, the technicians were able to find and remediate 100% of the affected infusion devices within the five-day contract period—which had never happened before. Prior to the integrated solution, techs took a top-down manual approach, searching floor by floor and in every room, including occupied patient rooms. An incomplete remediation of the devices often left the staff at Saint Francis responsible for sending the remaining devices back to the manufacturer—a time consuming and inconvenient process. Using data collected by MobileView, techs can strategically plan device pickup by only focusing on infusion devices with the status of *Not-In-Use* or *OFF* and skipping *In-Use* pumps to avoid disrupting patient care, while ensuring 100% remediation completion.
  - Faster drug library updates.** The new fleet and integrated solution have fueled cross-functional collaboration across the hospital. That, in turn, has empowered Saint Francis to transform the way it updates the drug library data set on the infusion devices. Prior to the new solution, the hospital would spend up to a full year completing drug library updates to all infusion devices. With visibility to device location and infusion status, Saint Francis can now accomplish 100% of the drug library updates in as little as three weeks.
  - Loss prevention.** Saint Francis has been able to prevent losses before they occur on some of their most critical devices. The hospital uses STANLEY Healthcare's RTLS inventory shrinkage control application to monitor device location and automatically alert staff if equipment enters strategic egress locations—namely, hospital exits and trash chutes. Saint Francis staff has retrieved devices from the trash and ambulatory units, resulting in cost savings of at least \$60,000. In addition, Saint Francis' infusion device management enables the hospital to monitor device location and utilization so it does not overspend on rental equipment.
- In short, Saint Francis is a pioneer for its infusion device management with BD Alaris Asset Management with STANLEY Healthcare—transforming rich information into meaningful change across the organization.



## Lessons Learned

- Devote the right resources.** Once Saint Francis chose to pursue a comprehensive RTLS solution, the team aligned internally to understand the dedicated resources required for solution planning, implementation and education. Biomedical Engineering led the project with two full-time resources dedicated to project organization and implementation. Biomed also served as the internal champions to ensure adoption and value realization in other departments.
- Think before you tag.** Initially, Saint Francis mounted RTLS tags the same way on every infusion device—an approach that led to adhesion failures on the BD Alaris Pump module. They quickly discovered that the location of the tag on those devices made it easy for hospital staff to knock them off. Through investigation and testing, the Biomedical Engineering personnel identified a solution: rotating the tag 90 degrees to mount against the top groove of the BD Alaris Pump module. From there, they implemented the change during preventive maintenance checks of the devices. Using the new tag mounting technique, Saint Francis has experienced zero tag failure.
- Spread the word, compound the results.** The team at Saint Francis realized their investment in a comprehensive RTLS solution would be worthwhile to share with various stakeholders within the hospital. Biomedical Engineering educated other departments, including Pharmacy, Nursing and Environmental Services, on the solution's functionality to help improve outcomes beyond Biomed. These departments are now even more collaborative on their infusion device management—from efficient drug library updates to consistent PAR level management of devices in the emergency department.


*Thanks to the integration of the BD Alaris System with STANLEY Healthcare RTLS MobileView, we now have real-time visibility to the location of every Alaris device. The beauty of the joint solution is the ability to see infusion device status: In-Use, Not-In-Use, OFF.*

*- Drew Johnston  
Biomedical Engineer  
Saint Francis Medical Center*

## About STANLEY Healthcare

STANLEY Healthcare provides over 14,000 hospitals and senior living organizations with enterprise solutions that create a safe, secure and efficient healthcare experience across life's stages. The STANLEY Healthcare solution set enables customers to achieve organizational excellence and superior care in critical areas: Patient/Resident Safety, Security & Protection, Environmental Monitoring, Clinical Operations & Workflow and Supply Chain & Asset Management. These solutions are complemented by STANLEY Healthcare's By Your Side™ Lifetime Customer Care commitment to ensure that every customer achieves success and realizes the full value of their investment, through consulting, training, implementation and integration services. STANLEY Healthcare is proud to be part of Stanley Black & Decker, Inc. For more information, visit [www.stanleyhealthcare.com](http://www.stanleyhealthcare.com). Follow STANLEY Healthcare on [Facebook](#), [Twitter](#), [LinkedIn](#) and [YouTube](#).

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