

CASE STUDY

Mercy Health System Janesville, WI

Wi-Fi-based automated Temperature Monitoring using the Primex Wireless Synchronous Network System (SNS) has been implemented in hospitals and clinics throughout Mercy Health System to track drug refrigerator temperatures and maximize the safety of stored medication and patient nutrition products.

“The depth and breadth of the Primex Wireless functionality was precisely what we were looking for. Our goal is to deploy the SNS technology solutions in all our medication and patient nutrition storage areas across the Mercy enterprise.”

- Don Janczak MS, PharmD., BCPS, CPHQ,
Director of Pharmacy



The Problem:

At Mercy Health System (MHS), monitoring the temperature of medication storage refrigerators has always been one of pharmacy's core responsibilities to ensure patient safety and drug integrity, as well as to comply with regulatory requirements. After costly incidents of significant losses, MHS was feeling the pain of its manual temperature monitoring system. Maintaining manual storage temperature logs was time-consuming and tedious to manage, yet absolutely necessary to comply with applicable Joint Commission, health department and other regulatory agency standards.

According to MHS Director of Pharmacy, Don Janczak, MS, PharmD., BCPS, CPHQ, Mercy's primary challenge with manual temperature logs was the inability to identify whether temperatures had deviated outside acceptable ranges when clinics were closed, such as at night or on weekends. An additional challenge was ensuring staff was in position to react to an alert of failing equipment quickly enough to save the vaccines and other products. Even during a pilot test of an audible alarm system, incidents of significant, costly drug losses occurred when temperatures deviated during off hours. Mercy's search for a reliable, cost-effective, technology-based solution resulted in the implementation of Primex Wireless SNS Temperature Monitoring throughout the MHS pharmacy facilities.

Mercy Health System
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Mercy Health System is an integrated healthcare system providing comprehensive services to residents in southern Wisconsin and northern Illinois.

Hospitals: 3
Clinical Sites: 68
Beds: 323
Staff: 4,000

The Solution:

The Primex Wireless SNS Temperature Monitoring system now automatically captures, logs and documents data from sensors readings in each medication and patient nutrition storage refrigerator or freezer. Temperature sensor data is transmitted over the secure 802.11 wireless network that was already in place at Mercy, and automatically captured on a central server. Lost or incomplete documentation is no longer a problem, and comprehensive, accurate reports are easily accessed to demonstrate compliance to applicable regulatory standards. Best of all, facility and department managers and select staff can now access the system from any computer with access to the MHS IT network to monitor how consistently equipment is operating within the predetermined temperature range.

Should an out-of-range reading occur, an email alert is instantly sent to the representative manning the 24-hour Nurse Hotline call center, who then follows a standard protocol for contacting the staff member responsible for the failing refrigeration unit at that time of day or night. The prompt alerts allow staff to make repairs or move vaccines, medicines and nutrition products before equipment fails, greatly reducing costly losses.

All in all, advanced sensor technology has proven to be an exceptional tool for achieving Mercy's goal of streamlining the processes surrounding proper and regulatory compliant storage of pharmaceuticals and nutritional products. Mercy's technology investment is expected to be quickly recouped by eliminating, or at least minimizing, incidences of waste caused by refrigeration errors and out-of-range temperatures.

Results:

- Ensures drug and patient nutrition storage temperatures are continually monitored.
- Notifies appropriate facility staff when temperatures deviate from optimal ranges
- Allows staff to take timely, appropriate actions to minimize losses.
- Automatically captures and logs accurate, comprehensive documentation of temperatures in all essential storage areas to comply with applicable standards.
- Frees up Mercy clinicians, nurses, pharmacists and pharmacy staff to perform more high-value work — ensuring quality patient care and safety.



To Learn More:

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