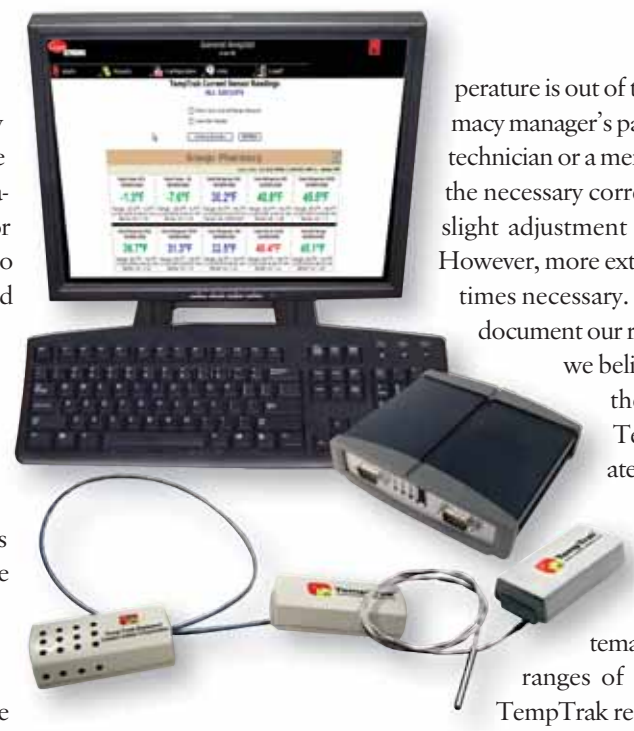
By John Lepto, RPh

TempTrak from Cooper-Atkins



LICENSED FOR 253 BEDS, AKRON CHILDREN'S HOSPITAL offers a wide range of services with practitioners in a variety of pediatric specialties. Our pharmacy department is responsible for monitoring the temperature of 59 medication storage locations, most of which are refrigerators. However, we also monitor the temperature and humidity of several non-refrigerated areas to ensure medications are stored in compliance with JCAHO and USP standards in those locations as well. To aid in our temperature and humidity monitoring efforts, we implemented the TempTrak wireless monitoring system from Cooper-Atkins, rolling the product out from late 2006 to early 2007.

The Challenges of a Manual System

Prior to implementing TempTrak, our pharmacy technicians were charged with manually monitoring and documenting the temperature and humidity conditions in our medication storage areas using a paper log. With this process, we experienced difficulty in maintaining complete temperature logs, as well as medication losses due to refrigerator malfunctions to which we were not immediately alerted. Annually, as an institution, we were spending an estimated 4,000 man-hours monitoring the temperature and humidity of our medication storage areas. Using TempTrak, we knew we could:

- ensure our medications are stored at the correct temperatures
- more accurately monitor the temperature of our refrigerated medications
- improve the workflow efficiency surrounding temperature documentation
- improve our response time when a temperature falls outside of the acceptable ranges defined by USP

In addition, we felt TempTrak would assist us in ensuring the medications in our main pharmacy are stored at controlled room temperature per Joint Commission requirements.

System Implementation

At the outset of our implementation process, we developed a team approach, involving the information services department, as well as representatives from nursing and engineering. In addition, our implementation team included the nutrition department, the lab, and our primary care pediatric offices, who plan to use TempTrak to monitor an additional 200 medication storage devices under their purview. Working with Cooper-Atkins, our information services department determined its needs for the TempTrak's server and made an appropriate purchase. Before go-live, a Cooper-Atkins representative conducted an on-site, four-hour training session to familiarize our staff with TempTrak's software component, and a Cooper-Atkins representative installed the system's probes throughout the main hospital.

How It Works

Using temperature probes, the TempTrak system monitors the temperatures of our medication storage areas, and then wirelessly sends the collected data via a transmitter and receiver to the dedicated TempTrak server. For each device being monitored, TempTrak records temperature and humidity data every five minutes. If a temperature is out of the specified range, an alert is sent to a pharmacy manager's pager. The manager then ensures a pharmacy technician or a member of our maintenance department takes the necessary corrective action. The most common "fix" is a slight adjustment of the refrigerator's temperature gauge. However, more extensive repairs to the refrigerators are sometimes necessary. The TempTrak software requires that we document our responses to out-of-range temperatures, and we believe JCAHO surveyors will be impressed by the thoroughness of the documentation. TempTrak's software also allows us to generate reports that can reveal longer-term temperature trends or patterns.

In order to decrease the number of alerts we receive and better control our medication storage temperatures, we systematically fine-tuned the operating temperature ranges of our refrigerators. For instance, because TempTrak recognizes 36° to 46°F as an acceptable temperature range, it is necessary to carefully calibrate the refrigerators so that the temperatures within them will not dip – even to 35.5°F.

Going forward, we plan to program the system to send "pop-up window" alerts to pharmacy PCs. Alerts will be sent to the pharmacy manager's pager if the alert is not dealt with in a timely manner.

System Benefits

We have not had a JCAHO review since installing TempTrak, but we are confident the system and its documentation capabilities will satisfy surveyors. Even without conducting a formal ROI analysis, the benefits of implementing an electronic device for monitoring medication storage area temperatures are clear. There is no question that the system has made the process of temperature monitoring more effective and more efficient for our staff, as evidenced by the elimination of almost 4,000 man-hours of manual temperature recording on an annual basis. Furthermore, we have more complete and more accurate temperature data and better control over our medication storage conditions than we did with a manual method.

To ensure a successful implementation at your facility, involve all departments that may benefit from the system at the start, including administration, nursing, nutrition, information services, the lab, and engineering. Each department will develop its own implementation objectives and understand its role in the overall process, resulting in a smooth transition to the new system. ■

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WHERE TO FIND IT:

Cooper-Atkins Corporation .....**Circle reader service number 31**
or visit www.cooper-atkins.com