

# Minimizing the Risk: Real-time Data Help Prevent Health Care-Associated Infections

BY KAREN BRANZ

**Each year, nearly one in 20 patients acquires a health care-associated infection, impacting 1.7 million lives and costing hospitals and patients more than \$35 billion. Finding a way to anticipate and prevent those infections is the focus of quality efforts all over the nation.**

At CHRISTUS St. Michael Health System in Texarkana, Regional Chief Medical Officer Mike Finley, M.D., is using CareFusion's MedMined™ services to help the system reduce infections.

CareFusion is endorsed by the Texas Hospital Association for its services that objectively monitor hospitals for emerging infection issues. MedMined services have earned peer-reviewed status from the Healthcare Financial Management Association and are ranked No. 1 in the infection prevention market by KLAS, a research firm specializing in monitoring and reporting the performance of health care vendors.

"CareFusion is a surveillance tool that helps us identify patients who might develop health care-associated infections," said Finley. "It uses existing data from our laboratory information system to search for markers that indicate infection risk."

The markers, including orders for cultures of blood, urine and other body substances, give Finley and his colleagues an indication of where infection risk is highest.

"If 2-3 percent of patients on a unit have risk markers one week, and the next week that number doubles, it tells you something is going on. It gives me a heads-up that I need to walk around and check to see if there are processes that aren't being followed well or new people who need additional training," Finley said.

"For our nursing staff, the markers help make our in-service training very targeted," he added. "The markers are very well thought-out. There aren't a lot of false positives. If the markers go up, infections follow."

According to David Sellers, CareFusion's vice president of clinical operations management, the system mines existing hospital laboratory, census and pharmacy data and uses complex computer algorithms to identify patterns that indicate increased infection risk.

"The system alerts the hospital staff when it sees unusual data, unusual organisms or anything that departs from what is normal for that organization," Sellers said. "The reports describe opportunities for improvement. In addition, the data mining surveillance system reports include best practice information based on current medical literature to recommend bedside actions for correction."

"Our interventions aren't breaking new ground," Finley said. "We're just using proven infection control methods and making

sure that we are doing them really well. For example, we know that good oral care is key to preventing ventilator-associated pneumonia, but it's a tedious, not-very-pleasant task that can be neglected when patients have other critical needs. By providing staff with daily feedback on infection risk, we can demonstrate to them that their efforts are paying off. That helps keep them motivated."

A key to CareFusion's success at CHRISTUS St. Michael has been the ease of use. "Because it uses existing data from our electronic systems, there is no additional data entry. Not only does that reduce the workload, but also it eliminates additional data entry errors," Finley said.

CareFusion also helped CHRISTUS St. Michael reduce one other type of infection.

"We noticed in the CareFusion data that there was an above-average number of home-acquired infections in patients going home with surgical and other wounds, so we put together an inexpensive discharge kit that included liquid soap and a sterile washcloth, along with wound care instructions," Finley said. "We hoped that the kit would keep people from going home and using that same bar of soap that they were using before they came to the hospital. The kit costs almost nothing, but using it has cut those infections in half. That's a great result for such a small investment."

Becky Johnson, infection control coordinator at Medical Center Health System in Odessa, also used the CareFusion data to identify a source of community-acquired infections.

"A CareFusion report helped us pinpoint the source of a large percentage of one type of antibiotic-resistant bacterial infections. The majority of these patients were coming from the same long-term care facility," Johnson said. Hospital staff worked with the nursing home to reduce the infection rate.

Within the hospital, CareFusion data showing Foley catheter use was associated with virtually all urinary tract infections in the hospital helped Johnson focus staff prevention efforts.

"CareFusion includes a customized list of common interventions for reducing UTIs, which we based our efforts on. Within 30 days, we were seeing half the number of UTIs we had seen the previous month," she said.

"CareFusion data is very reliable. It allows us to target our interventions to the areas where we can see the greatest return," Johnson added.

For more information about CareFusion, contact Daryl Lu at [daryl.lu@carefusion.com](mailto:daryl.lu@carefusion.com) or 619/972-8500 or visit [www.carefusion.com](http://www.carefusion.com). \*