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## The Mount Sinai Medical Center New York, NY



# An Ounce of Prevention

Hospital-acquired infections (HAIs) attack the most vulnerable patients. Annually, HAIs affect almost 2 million patients, costing over \$2 billion in additional treatment—and taking 90,000 lives, according to the Centers for Disease Control.

As one of the largest hospitals and best teaching institutions in the world, The Mount Sinai Medical Center is not just satisfied with *controlling* infections, they are dedicated to *preventing* them, and the Environmental Services (EVS) department is the first line of defense.

### COMPATIBILITY, RESPONSIVENESS, RESOURCES

Mount Sinai's 1,171-bed facility has a huge EVS department, with more than 650 full- and part-time employees in EVS and Patient Transportation (PT), and with an additional 44 Crothall Healthcare managers.

For years, Mount Sinai had been using another national services company for EVS and PT, but by 2008, Mount Sinai's leadership decided they needed to make a change.

In the eyes of Mount Sinai Vice President of Support Services Daryl Wilkerson: "We were looking for quality, more services, more empathy for our employees, and more of a team approach. Crothall told us what they would accomplish. The expectations were put out there in front of everyone."

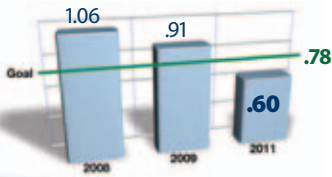
### STARTS WITH TRAINING, ENDS WITH TECHNOLOGY

The Mount Sinai story is more than a simple EVS transition story. In 2008, Mount Sinai had 1.06 C. diff infections per 1,000 patients—and a hospital goal of dropping that rate to 0.78.

The first strategy, according to Crothall Regional Manager Paul Killion, was simply to strengthen the EVS department, with a special emphasis on retraining. "We had to do major retraining when we began the contract," Killion recalled. "Employees were mixing their own chemicals; sometimes, they weren't even using the right chemicals."



57% reduction in C. diff infection rates, from 1.06 in 2008 to 0.60 in February 2011



Crothall went beyond simply updating department processes. They overhauled everything from technology to attitude:

- Hospitality training
- New, state-of-the-art equipment
- Environmentally friendly products

HAI rates began dropping. *Significantly.* In the first year, the C. diff rate dropped to 0.91.

Then in 2010, Crothall began piloting a new cleaning program specifically geared toward infection prevention. Two new technologies—3M Clean-Trace and Tru-D (UV irradiation device)—were introduced to Mount Sinai.

Clean-Trace detects ATP, a protein present in all living organisms. The test is a simple swab that gives results in 30 seconds. This was a huge step over previous measures used at Mount Sinai. "There was no technology, they just used their vision and a form," explained Wilkerson. "Clean-Trace gives measurable, empirical data. You either disinfected the surface or you didn't," said Killion.

Crothall's program focuses on high-touch surfaces known to spread infection, such as toilet flushers, doorknobs, and bed rails. Clean-Trace allows for directed coaching of staff to actually show them what they missed and help them improve. In the first six months of the program, the EVS staff did surprisingly well—84% compliance in patient rooms and 78% in OR suites. In the subsequent six months, compliance jumped to 86% and 81%, respectively.

The next step was Tru-D, a device that uses highly concentrated doses of UV energy to sterilize not only all room surfaces, but also the air itself, destroying all living organisms, including MRSA, influenza, and even C. diff spores. A recent study showed that patients are 40% more likely to develop an HAI if the room's previous occupant was infected.

Tru-D is used by Mount Sinai in patient rooms with confirmed infections, as well as high-risk areas like OR suites and L&D rooms.

"At the end of the day, it's all about patient care," Wilkerson said. "You've got to change your approach. You have to be forward thinking or you'll lose the game. Crothall has a lot more resources, and they know the trends. That's why we rely on Crothall to bring those things to our attention."

## **RUNNING DOWN THE NUMBERS**

After a full year with new infection prevention goals and two years operating with Crothall's management focus, the results at Mount Sinai are conclusive:

- 57% reduction in C. diff infection rates, from 1.06 in 2008 to 0.60 in February 2011
- Increase from 60% in 2008 to 67% so far in 2011 for HCAHPS cleaning scores
- 50% reduction in OSHA incidents, from 49 to 25
- 48% reduction in lost work days, from 1004 to 527, saving at least \$441,000 a year

"I attribute the first-year improvements in both safety and effectiveness to proper use of chemicals and training of our staff. Our continued progress is thanks to the amazing tools we have introduced, like Clean-Trace and Tru-D," Killion said. "It wasn't just the technology. It was about modifying our behavior. It was making sure that we were cleaning and disinfecting effectively."

For Wilkerson, this level of leadership and performance is even more than he expected. "A lot of it is the management on the ground," he explained. "Our Crothall managers truly drive the program."