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When cameras are watching, more doctors wash up

By Genevra Pittman

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(Reuters Health) - A new study found that more doctors and nurses washed their hands when video cameras were installed in every room in their unit and the staff was continuously informed about rates of hand-washing compliance.

While the hand-washing turnaround was "pretty amazing," one of the study's authors said, it's unclear whether the measure helped achieve the ultimate goal -- preventing infection transmission in the hospital -- and whether it would be cost-effective in other settings.

"Hand washing is an integral part of infection control," said Dr. Bruce Farber, from North Shore University Hospital in Manhasset, New York. But, "rates of hand washing among health care workers are less than perfect."

Cameras and timely feedback seem to be a strategy that can address that, he told Reuters Health. "It's certainly one tool that can be used. I certainly don't think it's ever going to be used by everyone, everywhere."

Farber and his colleagues conducted the new study in their intensive care unit between 2008 and 2010. They installed \$50,000 worth of cameras in hallways and patient rooms -- pointing at every sink and hand sanitizer dispenser -- as well as motion sensors in all doorways.

Off-site reviewers monitored those videos and checked whether any doctor or nurse who came through a patient's door washed their hands within ten seconds, and if they did the same on the way out. Doing that earned workers a "pass," while waiting too long to wash up or not doing it at all counted as a "fail."

Then, the system sent compliance rates by room to electronic boards in the ward's hallways and to supervisors, so all staff could see how well they were doing as a unit.

Before health workers started getting that constant feedback, less than seven percent of them washed their hands immediately when entering or before leaving a patient's room, according to video records.

That shot up to 82 percent in the weeks after the hallway messages started, and reached an average high of 88 percent over the next year and half of monitoring.

The researchers acknowledged in their report published in *Clinical Infectious Diseases* that the monitoring didn't take into account the quality of hand washing, and Farber said the criteria for adequate hand hygiene were "very strict and very difficult to adhere to."

It's possible, the researchers added, that there are some cases when hand-washing isn't necessary, for example when a doctor is going into a patient's room but doesn't plan on touching the patient.

Or, if a patient is falling out of bed or needs immediate pain relief, heading to the sink first might not be the best choice, added Dinah Gould, who has studied hand-washing interventions as a researcher at City University in London, but wasn't involved in the new study.

Still, many studies have documented generally low rates of hand washing among health care workers.

"Logically, according to common sense hand hygiene is a good thing to do because if you do it properly it removes bacteria from the skin," Gould said. "Doctors and nurses should do it and patients in their care should expect it's going to be done."

Whether it definitely prevents infection, she said, hasn't been proven.

Farber said that he and his colleagues were starting to see a trend of fewer hospital-acquired infections, including those caused by drug-resistant bugs like methicillin-resistant *Staphylococcus aureus* (MRSA) and *Clostridium difficile*. But more time is needed to determine if that has anything to do with hand hygiene, he cautioned.

Gould said the study shows that the video-taping method for encouraging better hand hygiene is possible. But she questioned whether installing cameras and analyzing videos would be feasible on a day-to-day basis outside of research studies. "I think that the cost would probably preclude it," she told Reuters Health.

In addition to the up-front cost for installing the cameras, the CEO of the company that provided the feedback services, Arrowsight, Inc., said those services cost about \$3,000 per month for a single ICU. For the current study, monitoring and feedback were funded by the hospital, and the equipment was bought with a state grant.

SOURCE: bit.ly/tgeVQN *Clinical Infectious Diseases*, online November 21, 2011.