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Hand Washing, a Key Anti-Flu Strategy, Often Neglected by Health Care Workers

Mike Mitka

AS THE 2009 INFLUENZA A(H1N1) virus expands its reach, health officials continue to stress the importance of hand washing as the first line of defense in prevention. Particularly in health care settings, hand antisepsis has long been recognized as a key factor in minimizing the spread of pathogenic microorganisms and limiting health care–associated infections. Yet getting health care workers, including physicians and nurses, to wash their hands remains a problem. In response, new patient safety programs from the Joint Commission and the World Health Organization (WHO) are placing their initial focus on improving compliance with hand hygiene standards.

On September 10, the Joint Commission launched its Center for Transforming Healthcare, which seeks to identify effective quality and safety practices that can be implemented at a broad range of institutions, said Mark R. Chassin, MD, MPH, Joint Commission president. Its first target: hand cleanliness. “We conducted a little poll giving institutions about 35 of the nastiest quality problems they now face and asked them to identify for themselves what their top problems were,” Chassin said. “The problem receiving the most votes was hand hygiene.”

The Joint Commission’s program comes a few months after the May 5 launch by the WHO of the First Global Patient Safety Challenge, which is intended to spur worldwide commitment by policy makers, health care workers, and patients to make cleanliness in the health care setting a top priority. Its first charge is to achieve consensus on the most effective strategies for improving hand hygiene in health care. The WHO has also published a guide to implementing

its health hygiene strategies (http://whqlibdoc.who.int/publications/2009/9789241597906_eng.pdf). To date, 5752 hospitals in 122 countries have signed on to the challenge.

The evidence for hand hygiene is compelling. According to the Joint Commission, an estimated 1 in 136 patients in the United States (2 million cases annually) become seriously ill from hospital-acquired infections, resulting in annual direct medical costs of up to \$45 billion; prevention programs could cut those costs by up to \$31.5 billion. And while the evidence is limited, studies suggest a higher burden of health care–associated infections in developing countries, with the WHO citing 1-day prevalence surveys of single hospitals in Albania, Morocco, and Tunisia that found such infections in almost 1 in 5 patients.

While it seems obvious that health care workers should be practicing optimal hand hygiene, a variety of factors work against this, said Kathy B. Kirkland, MD, an associate professor of medicine, infectious disease, and international health at Dartmouth Medical School in Lebanon, NH. “One problem is that failure to clean hands is not proximally related enough to the infection acquired by a patient to create its own feedback loop—so there is a dis-

connect,” Kirkland said. “No one knows whose hand hygiene event failure is associated with a specific patient infection, so it is difficult to make that accountability link as easily as if you touched patients and they broke out with boils.”

Beyond the disconnect, there are other obstacles faced by health care workers in their efforts to achieve optimal hand hygiene. The Joint Commission listed such barriers as ineffective placement of dispensers or sinks, insufficient or nonexistent education and just-in-time coaching, a safety culture that fails to stress hand hygiene at all levels, the awkwardness of cleaning hands when carrying items, the interference of gloves with the process of cleaning, a misperception that wearing gloves eliminates the need for hand hygiene, forgetfulness, and distractions. Further, compliance data are often not collected or reported accurately or frequently.

But health care workers should know they are susceptible to carrying around infectious organisms, and that cleaning hands is effective in minimizing the risk of infecting others. Studies have shown that 80% of hospital staff who dressed wounds infected with methicillin-resistant *Staphylococcus aureus* (MRSA) carried the organism on their



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The Joint Commission and the World Health Organization are promoting hand hygiene, which minimizes the spread of microorganisms and limits health-care related infections.



hands for up to 3 hours, while 60% of health care workers, within half an hour of contact with patients with *Clostridium difficile* infection, were contaminated even without touching the patients, from merely returning drug charts to the ends of beds. Meanwhile, washing with soap and water virtually eradicated these organisms (Stone SP. *J R Soc Med.* 2001;94[6]:278-281).

A JOINT INITIATIVE

The Joint Commission's Center for Transforming Healthcare establishes pilot study programs involving small numbers of hospitals or health care systems with established quality and safety improvement tools in place. It seeks to identify and measure poor quality and unsafe health care practices and then to test targeted, long-lasting interventions that, if successful, can be replicated at other institutions, said Chassin. "The center is specifically directed to the task of moving health care organizations that are doing well to becoming outstanding, and accreditation never seemed to me to be a tool suited to do that," Chassin said. "The challenge of health care is to transform itself to become a high-reliability industry that deals with hazards just as successfully as industries like nuclear power or airline travel."

The hand hygiene project involves 8 hospitals or health care systems that are conducting individual pilot studies in medical or surgical environments or intensive care units. The participants are Cedars-Sinai Health System, Los Angeles; Exempla Lutheran Medical Center, Wheat Ridge, Col; Froedtert Hospital, Milwaukee; the Johns Hopkins Hospital and Health System, Baltimore; Memorial Hermann Health Care System, Houston; Trinity Health, Novi, Mich; Virtua, Marlton, NJ; and Wake Forest University Baptist Medical Center, Winston-Salem, NC.

Anne Marie Benedicto, MPH, executive vice president and chief of staff at the Joint Commission, said the organizations participating in the pilot program have already begun their studies and hope to have initial results available in January. "They have looked at the root causes of hand hygiene failure,

Hand Hygiene Help

Hospitals and health care workers looking to improve their hand hygiene compliance can turn to information provided by the US Centers for Disease Control and Prevention (CDC).

The CDC offers a Web site, <http://www.cdc.gov/Handhygiene>, which features its *Guideline for Hand Hygiene in Healthcare Settings—2002* (<http://www.cdc.gov/mmwr/PDF/rr/rr5116.pdf>).

The Web site also provides an interactive hand hygiene training course for health care workers (<http://www.cdc.gov/handhygiene/training/interactiveEducation/>) and a patient admission video designed to teach the importance of hand hygiene to those being admitted to a hospital (http://www.cdc.gov/Handhygiene/Patient_Admission_Video.html).

implemented interventions, and now are testing how effective they are," Benedicto said. She added that 6- and 12-month follow-up results will also be disseminated.

The pilot study at Trinity Health is being conducted at its St Joseph Mercy Hospital in Ann Arbor, Mich. Since June, some regular staff members on every unit have been designated quality coaches; their role is to observe whether their colleagues are complying with the facility's hand hygiene standards. "This is not a punitive position, but the person is making observations and reporting the numbers," said Paul F. Conlon, PharmD, JD, senior vice president for clinical quality and patient safety with Trinity Health. "If you do not measure it, you cannot improve it, and you need unbiased numbers."

By January, the Joint Commission hopes to make available to all the hospitals it accredits data on interventions that allow for a 90% compliance rate regarding hand hygiene. Hospitals will then be able to identify the problems they face regarding hand hygiene, match them against pilot institutions that had similar issues, and adopt the solutions that were found to be successful. Chassin added that such solutions, and the tools used to achieve them, should continue to keep compliance rates at high levels. "The application [of these tools], when used well, allows you to come out at the other end with a control plan that includes very specific sets of processes to monitor ongoing improvements," Chassin said.

DO IT YOURSELF

Kirkland said hospitals and health care workers do not have to wait for the results from the Joint Commission to improve their own hand hygiene compliance rates. It is one step, she said, to raise awareness by using UV light and fluorescent powder to demonstrate how organisms can travel or placing one's hand in Petri dish agar to grow bacteria. But the real key is creating habitual processes—that is, "building hand hygiene into one's routine," Kirkland said. "When you get into a car today, you automatically put your seatbelt on; you do not consider what type of road or traffic you may encounter before determining whether or not to buckle up."

Kirkland is also a firm believer in having alcohol-based hand-sanitizing dispensers throughout a hospital or office setting to take away the excuse used by some that they do not have time to spend thoroughly washing their hands before encountering every patient. "You can use alcohol-based hand sanitizers on the move or when talking to someone," Kirkland said. "In the real world, in almost all cases, the hand sanitizer is adequate to interrupt transmission of infectious agents."

A by-product of this focused intent on improving patient safety is that it also protects health care workers, especially in light of emerging infectious diseases such as 2009 influenza A(H1N1), said Conlon. "As the flu season gets under way, staff are worried about their own well-being," Conlon said. "I think people want to do the right thing and make everything as safe as they can." □