Preventing Health Care–Associated Infections: Empowering Patients and Engaging Staff

By LaToya Miller, MPH, MRSA program manager, VA Pittsburgh Healthcare System

VHA has launched a nationwide prevention initiative aimed at eliminating MRSA (Methicillin-resistant Staphylococcus aureus) infections.

“The ‘ZEROing in on MRSA Initiative’ is a major paradigm shift in health care for the U.S.,” said Project Director Rajiv Jain, MD, FACP. “Until a few years ago, few hospitals in the United States screened patients to identify those who silently carry MRSA, a germ that has learned to resist commonly-used antibiotics and can inhabit the skin and mucous membranes of people who have no symptoms.”

MRSA can spread to other patients via hospital equipment, like wheelchairs and bed rails. But the biggest culprit is unsuspecting health care workers whose hands have casually touched a patient or equipment.

Although implementation of MRSA-control programs over the last 25 years has proven successful in Europe, conventional wisdom in the United States regarded MRSA as uncontrollable: too many people had it and nothing could be done to contain it. Based upon preliminary data from pilot facilities that began implementing the “ZEROing in on MRSA Initiative” in August 2006, there is a growing feeling that something can be done.

In January 2007, VHA Directive 2007-002 was signed, mandating that all VA medical facilities begin the “ZEROing in on MRSA Initiative” in at least one acute care unit. Implementation throughout acute care was completed by September 30 of this year. To view the directive, click on: www1.va.gov/vhapublications/ ViewPublication.asp?pub_ID=1525.

The initiative was developed to reduce hospital-acquired infections through a multi-pronged approach to the problem. We hope it will also serve as a model for other hospitals that want to take a proactive approach. The initiative is focused on four essential components that have been collectively coined the “VHA MRSA Bundle.” They are:

- Active Surveillance
- Aggressive Hand Hygiene
- Contact Precautions
- Cultural Transformation

Active Surveillance allows for the identification of MRSA carriers through a simple swab of the nose. Every veteran who is admitted, discharged, or even transferred between units has a swab test performed. Active Surveillance is important because it can identify a previously unrecognized reservoir of asymptomatic carriers of MRSA. It also allows health care workers to take appropriate actions to prevent transmission.

“Assuring that health care workers appreciate the danger that the ‘silent carriers’ present to the safety of other patients is crucial to a successful MRSA prevention program,” said Kathleen Risa, MSN, CIC, education coordinator for the MRSA Program Office.

While VA hospitals have hand hygiene programs, the initiative’s Aggressive Hand Hygiene element calls for a revitalization of those programs with innovative approaches to monitor staff compliance – and incorporate patients and visitors.

At several VA medical centers, patients now actively participate, reminding providers to
“Ask Me If I’ve Washed My Hands”  
By Lori Hagen, chief of quality management, James H. Quillen VA Medical Center

The Joint Commission surveyors can observe staff to see if they perform proper hand hygiene. If three incidents of non-compliance are observed, a medical center will receive a “Recommendation for Improvement,” which requires an immediate action plan and monitoring. (Please note that this method for dealing with noncompliance is being reviewed by the Joint Commission.)

We want to provide safe and quality patient care to our veterans, so our staff are continuously reminded to follow proper hand hygiene. When patient tracers are being performed, staff are observed to see if they are properly completing hand hygiene. To recognize compliance to hand hygiene, staff are given a button to wear that reads: Ask Me If I’ve Washed My Hands.

When You Need to Take Action

When hands are visibly dirty (soiled) or contaminated with proteinaceous material, wash them with antimicrobial soap and water for 15 seconds. Otherwise, use an alcohol-based hand rub for decontaminating hands.

Remember, staff must also wash their hands with soap and water before eating, after using the toilet, or after working with a patient infected with a spore-forming microorganism, such as Clostridium difficile, or a patient with a norovirus intestinal infection.

Hand Hygiene Techniques

- When decontaminating hands with an alcohol-based hand rub, apply the product to the palm of one hand then rub hands together. Cover all surfaces of the hands and fingers, until dry. A ping-pong ball size of alcohol-based foam is recommended.
- When washing hands with soap and water, first wet hands with water and then apply the soap. Rub hands together vigorously for at least 15 seconds, covering all surfaces of the hands and fingers. Rinse hands with water and dry thoroughly with a disposable towel, using a towel to turn off the faucet. Avoid using hot water since repeated exposure to hot water may increase the risk of dermatitis.

Be a model for correct hand hygiene: One person can make a difference! Hats off to those of our staff who were observed properly performing hand hygiene and are wearing their button – Ask Me If I’ve Washed My Hands – to promote awareness.

How Long Do You Wash Your Hands?

By Carol Walden, R.N., James H. Quillen VA Medical Center; photos by Scott Reynolds, the facility’s infection control technologist

These hands were coated with “Glo-Germ,” a tool for teaching hand washing with soap and water. When photographed under a black light, the Glo-Germ shows as blue. After five seconds of washing with soap and water, the hands actually appear to be more contaminated. After 10 seconds, considerable contamination remains under the nails and cuticles, but after 15 seconds, the hands are substantially cleaner.

Lesson: When using soap and water for hand hygiene, the hands must be washed for a minimum of 15 seconds.
Where Can You Find More Information On Hand Hygiene?
The NCPS Web Site, Of Course!

By Deborah Royal, NCPS visual information specialist

Visit www.va.gov/ncps/SafetyTopics/HandHygiene/index.html for a wealth of hand hygiene information and tools collected and/or developed by NCPS. Here are some of the topics:

Reference Documents
- One page summary of all CDC Hand Hygiene Guideline recommendations required by the VHA Directive and the Joint Commission. http://www.va.gov/ncps/SafetyTopics/HandHygiene/1PageSummaryHandHygieneCDC.doc
- Published article on the joint project between VA and the 3M Company using the Six Sigma process to implement the CDC Hand Hygiene Guideline. http://www.blackwell-synergy.com/doi/pdf/10.1111/j.1525-1497.2006.00361.x

An Important Question
One frequent and important question asked is this: What data can be acquired, studied, and returned to providers and other health care workers to better understand hand hygiene practices? The answer is simple: Three different types.
1. Observed overall performance on hand hygiene practices.
2. Quantity (mass in grams) of alcohol based hand rub used per 100 or 1,000 patient days.
3. Responses to questionnaires regarding attitudes and perceptions about hand hygiene practices.

Hand Hygiene Tools
- Excel spreadsheet for computing grams of alcohol product used per 100 patient days. http://www.va.gov/ncps/SafetyTopics/HandHygiene/HHTool_GramsPer100PtDays.xls
- Excel spreadsheet for computing grams of alcohol product used per 1,000 patient days. http://www.va.gov/ncps/SafetyTopics/HandHygiene/HHTool_GramsPer1000PtDays.xls
- Download the It’s OK to Ask button format. http://www.va.gov/ncps/SafetyTopics/HandHygiene/ItsOKtoAskButtons.doc
- Sample data from four VA medical center intensive care units. http://www.va.gov/ncps/SafetyTopics/HandHygiene/HHSampleData.doc
- CDC educational materials to promote facility hand hygiene. http://www.cdc.gov/handhygiene/materials.htm

Web Links
- Hand Hygiene Resource Center (organized by Dr. John Boyce, chair of the CDC committee that developed the guideline). http://www.handhygiene.org/
- University of Geneva Hospitals Hand Hygiene (led by Professor Didier Pittet, MD, MS). http://www.hopisaffe.ch/
- Safe Care Campaign. (An excellent resource for patients and families interested in preventing health care-acquired infections.) http://www.safecarecampaign.org/

More
Additional information is available for VA employees on the NCPS Intranet site: www.ncps.med.va.gov
wash their hands. At one medical center, a veteran is given a red and green card upon admission. The veteran flashes the green card to indicate that the provider has been observed washing his or her hands. A red card means “please stop and wash your hands.”

Not only is this an additional measure of assurance for hand hygiene, but it also empowers veterans to be active participants in their care. It can be hard for patients – especially older patients – to speak up; this gives them an easy and polite way to do so.

At many medical centers, volunteers are educating family members, caregivers, and visitors on the importance of hand hygiene.

Hand sanitizers and foam dispensers have been placed strategically throughout the hospitals. No longer are they isolated in patient care areas. They can now be seen in the cafeteria and reception areas, along with signage encouraging staff, patients, and visitors alike to use them.

The third bundle element, Contact Precautions, requires staff to gown and glove when providing care that necessitates direct contact with an MRSA colonized or infected patient. Nurses and laboratory staff collaborate to ensure that there is a systematic and efficient process in place to identify patients that require contact precautions.

As a reminder to staff and visitors, contact precaution signs are often placed on the outer door of a patient’s room. Door or wall-mounted containers store gowns, gloves, and hand wipes for easy access, and also serve as visual cues that precautions must be taken. Disposable or dedicated patient equipment is also commonplace and helps reduce the risk of transmission.

Some facilities have even designated a “safe zone” within each patient’s room, identified by colored tape or tile, where gowning and gloving are not necessary. Beyond the safe zone are items to which the patient has access and are therefore likely to be contaminated.

Cultural Transformation is the final element, and is arguably the driving force in sustaining the program as a whole. Through Cultural Transformation, staff are encouraged to propose new ideas and practices in their own unique culture and environment. In this way, the program is inherently culturally appropriate and staff-owned. This shift also emphasizes the collective efforts of all staff in infection control.

No longer is prevention compartmentalized solely to the infection control department. Each staff person – from director, to dietician, to housekeeper – has an important role in preventing the transmission of MRSA. “It is a significant change in the way we’ve operated in the past,” noted Dr. Jain. “The more people we involve, the better our result—success comes more quickly.”

Cultural Transformation also focuses on moving beyond the traditional, top-down leadership approach to doing business. Instead, leadership supports staff ideas and solutions, while working to remove barriers to implementation.

“Tapping the powerful enthusiasm and resources of all employees makes the program sustainable,” said Ms. Risa. “Staff own the program and are invested in the success of the program. It’s time to think outside the box and our staff are up to the task.”

VHA provided financial support for the initiative through the approval of a $30 million budget in April, including funds to support laboratory equipment, general supplies, and additional staff positions.

One such position is the newly created role of MRSA Prevention Coordinator (MPC), developed to manage the program on a day-to-day basis.

“We have found in our pilot sites, that a dedicated position is integral to the success of the program. There are simply far too many aspects to coordinate when you consider this program will ultimately cover all of acute care, long-term care, and behavioral health. I did not want to see this program forced upon our already overburdened infection control personnel,” said Dr. Jain.

Each facility has hired or is recruiting for an MPC, whose duties include coordinating with infection control to track and report MRSA rates, and to ensure that patients and staff receive appropriate educational material. To help focus their efforts, many MPCs attended a two-day MRSA Prevention Coordinator Training this past September, offered by the MRSA Program Office.

In early November, a National MRSA Prevention Forum is scheduled to be held in Orlando, Fla. It will bring together both administrative and clinical representation from each VA facility to share best practices and accomplishments of the program thus far.

During the conference, the next phase of implementation will be unveiled, which includes expansion into long-term care and behavioral health, slated to begin in early fiscal year 2008. Other highlights include a poster session, vendor fair, and keynote speakers from the Centers for Disease Control and Prevention, as well as an expert from the Netherlands.

As the largest integrated health care system in the country, VHA has truly taken the lead in the war against MRSA through the establishment of this nationwide prevention strategy. VHA will continue to take bold steps toward eliminating MRSA and other hospital-acquired infections. Prevention of MRSA is only possible when prevention becomes everyone’s responsibility!

For more information on the VHA MRSA Initiative, contact the program office at 412-688-6231. VA employees can also visit our web site: www.va.gov/pittsburgh/mrsa/mrsa_home.htm