



# Pittsburgh Regional Healthcare Initiative

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## Heinz Long-Term Care Facility

## VA long-term care facility addresses MRSA

Heidi Walker, RN, unloads 33 pounds of macaroni—about 103,000 pieces—as she prepares to talk to staff members about MRSA. The audience comprises RNs, LPNs, nursing assistants, housekeepers, escorts and others at the H. John Heinz III Progressive Care Center, the long-term care facility affiliated with the VA Pittsburgh Healthcare System (VAPHS).

Walker's topic is MRSA, an antibiotic-resistant microorganism to which nursing home residents are particularly vulnerable.

What's the point of the macaroni? Each year in the United States, approximately 2 million people contract a hospital-acquired infection in the United States each year, and 103,000 die. About half of them are attributable to MRSA.<sup>1</sup>

"When I tell co-workers that each little piece of macaroni represents a human being, a fellow American who died last year due to hospital-acquired infection, it really gets their attention," says Walker, the MRSA Prevention Coordinator at Heinz.

### Long-term care and MRSA

In the United States, more patients are in long-term than in acute-care facilities.<sup>2</sup> But long-term care facilities differ from hospitals in one significant way: most patients reside there. When those residents need episodic treatment at acute-care hospitals, they usually return to their long-term care domicile once the crisis has passed.

This back-and-forth movement of patients between and among facilities is thought to increase both their exposure to infection and their chances of spreading it to others. For this reason, tracking down and eradicating MRSA in long-term care facilities is especially hard work.

Patients who are *infected* or *colonized* with MRSA carry the organism on or in their bodies and can potentially spread it to others. And while colonized people may have no symptoms, about a quarter of them will ultimately acquire a full-blown MRSA infection.

Healthcare workers can become colonized, too. In fact, MRSA is spread most commonly through the hands of healthcare workers. Although colonization among healthy workers is often transient, it raises the unsettling possibility of spreading MRSA beyond the hospital walls, to friends and family. The issue of MRSA represents the confluence of patient safety and worker safety.

### VAPHS targets MRSA

The VA's University Drive acute-care hospital garnered national attention for all but eliminating MRSA infections on the post-surgical unit, 4 West. The work on 4 West began as a joint venture in 2002 between the VA, PRHI, and the Centers for Disease Control and Prevention.

Beginning in 2002, 4 West Team Leader, Ellesha McCray, RN, and PRHI Coach, Peter Perreiah, began improving access to equipment and materials staff need for MRSA patients. Using the Toyota-based

Perfecting Patient Care™ model, the improvement team helped to create a reliable supply of gowns, gloves and hand hygiene supplies, and made dozens of other improvements that freed up time for staff to devote to infection control.

The work spread through the acute-care hospital, and also to Heinz. These early measures also paved the way for what came next: the capacity to test every patient for the presence of MRSA.



**Macaroni & MRSA?** Heidi Walker, RN, uses macaroni to show how many Americans die each year from MRSA infections.

### Screening every patient

Now, the entire VA University Drive hospital and the Heinz long-term care facility, has begun screening every patient for MRSA on admission; isolating patients who harbor the organism; and raising the expectation among staff of 100% adherence to infection control protocols. The hospital also tests all patients on discharge to learn whether they became colonized or infected during their stay.

Over five days in June, all 250 patients at Heinz received an initial screening for MRSA. The screening yielded a surprise: 39 patients, about 16%, unexpectedly turned out to be colonized. Had these asymptomatic patients been mixed in with the general population, they could have spread the microorganism to others. But the screening allowed those patients to be placed in a room requiring contact precautions (hand hygiene, gloves and gowns) and other measures in their treatment. When a patient is under contact precautions, equipment like stethoscopes and blood pressure monitors stay in the room and are not shared. Patients are assigned their own wheelchairs and other equipment.



**Supply line.** Beginning at the VA's acute-care hospital in 2002, the Toyota-based Perfecting Patient Care System™ helped create a reliable supply of hand hygiene products. These system improvements paved the way for further advances against MRSA at the main hospital—and also at the Heinz long-term care facility.

However, ALWAYS screening new patients and ALWAYS screening on discharge is itself a tall order. How can workers make sure that these tests don't fall through the cracks in a complex organization?

In July at Heinz, automated templates



**Dedicated equipment.** Equipment in the rooms of MRSA patients is never shared. The stethoscopes' bright pink color provides a vivid reminder that it belongs in a MRSA room.

were introduced into the computer system, a timely "pop-up" prompting personnel to order the appropriate screening. The VA's electronic medical record also makes it possible to record which patients test positive for MRSA colonization or infection,

so that upon subsequent hospitalizations at any VA hospital, contact precautions can be taken by those caring for that person.

**Discussion groups**

As the full-time MRSA Prevention Coordinator at Heinz, Walker is responsible for educating staff about MRSA. And staff members are eager to learn.

"We held discussion groups on four nights and asked for voluntary attendance. By the end of the fourth night, 100% of nurses had attended," said Walker. "They understood that we were interested in learning what they actually do, what the current condition of their work is, how it really is for

them. We talked about the variation in the way they currently do things like hand hygiene. And we let them know we are here to help them make their work easier and help them do the right things for their patients. They really responded."

Walker has created posters on correct procedure for obtaining the screening swab. These now join the other visual cues inviting correct hand hygiene, and build on the MRSA work already begun. Workers also have at their disposal surveys and links to information on preventing MRSA.<sup>3</sup>

Now a cross-disciplinary core group of staff members has volunteered to research more about the ideas, obstacles and solutions workers face. The group intends to build on what they learned implementing the Toyota-based model to create a VA-specific healthcare improvement method.

"We'll see what we can do right away. And we'll share what we learn at a community MRSA meeting," says Walker.

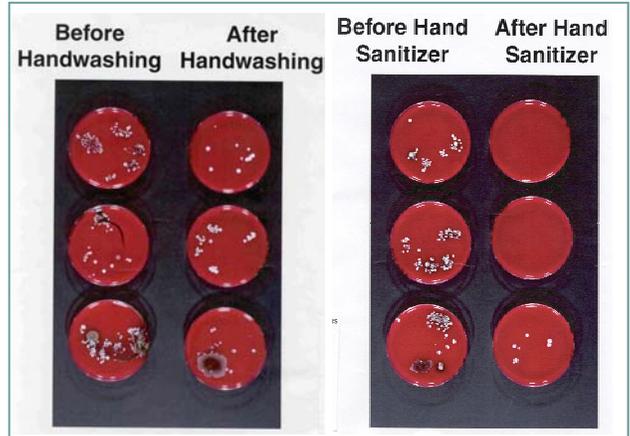
The largest concern at Heinz, as at any long-term care facility, is patient mobility.

Because social interaction is a major part of rehabilitation, patients with MRSA are free to move about. The group at Heinz will begin identifying and developing applicable precautions for this unique population.

"That will be our greatest challenge," says Walker. "We can isolate the patient in their room, but if they're mobile, they're free to travel the hospital. We have to develop appropriate protective measures while addressing their need for socialization."

**MRSA prevention: a healthy contagion**

The MRSA program that began at the VA has been taken up by the entire community. Currently, target units at 23 area facilities—



**Visual cues:** posters are installed in staff areas show petri dishes created on-site from clinicians' hands. The poster demonstrates the superiority of alcohol hand rub over hand washing alone. This information is reinforced through staff meetings at Heinz.

as well as the entire VA acute- and long-term care hospitals—have begun screening 100% of their patients on admission and discharge to determine who needs to be isolated and who may have become colonized.

Hospitals and long-term care facilities share patients. Up until now, they have also shared infections. The VA and community efforts represent a way to share information about MRSA prevention and process improvements that will make patients and workers safer.

