



Flight of the Superbug

VA hospitals set the standard in targeting MRSA.

BY STEPHENIE OVERMAN

VA hospitals have had more than their share of frightening headlines this year – possible HIV and hepatitis exposure due to improperly cleaned equipment, and incorrect radiation doses administered for prostate-cancer treatment. But in the area of battling a dangerous superbug – a type of bacteria that has become resistant to many antibiotics – VA is getting rave reviews. As the *Las Vegas Sun* declared, “VA System Stanching MRSA.”

MRSA is methicillin-resistant *Staphylococcus aureus*, a potentially deadly type of staph infection found in hospitals. According to the Centers for Disease Control and Prevention (CDC), the superbug is one of the most rapidly growing infections associated with health-care facilities, with nearly 100,000 people a year developing serious cases. In 2005, approximately 18,650 Americans died during hospital stays related to MRSA infections.

But the rate at which patients contract the germ is declining, dropping 28 percent between 2005 and 2008, the *Journal of the American Medical Association* reported in its Aug. 11 issue.

VA's Pittsburgh Healthcare System went on the defensive against MRSA in 2002, focusing on basic hygiene. Its pilot program reduced infections by 50 percent, as hospital personnel monitored all incoming patients in key units with nasal swabs and cultures for the superbug. They treated patients with MRSA by taking special precautions.

The key was cultural transformation, says Dr. Rajiv Jain, program director for “Zeroing in on MRSA,” VA's prevention initiative. “We engaged employees,” he says. “We listened to their ideas and their concerns. We removed barriers to making their work as successful as possible.”

Key staff members from 17 VA hospitals went to Pittsburgh for training, where they were given flexibility in designing their own MRSA prevention programs. “We told them what needed to get done, but how it got done was left to them,” because the culture in every hospital is different, Jain says.

VA used the same approach when rolling out the MRSA initiative in its 150 hospitals nationwide.

“It would be too presumptuous to take much credit” for the recent decline in “invasive” MRSA infections born in health-care facilities, Jain says, but he believes VA's efforts have drawn needed attention to the problem.

VA's prevention program is viewed by many consumer advocates as the “gold standard” in MRSA, says Dr. Kevin Kavanagh, who heads the patient-advocacy organization Health Watch USA. “The Pittsburgh VA hospital had very good results at a time when other institutions were having an increase (in MRSA) ... We're starting to see a drop. A lot has to do with attention drawn to the problem, along with groundwork done at VA facilities.”


More hospitals are using a search-and-contain approach, says Dr. Stephen Streed, system director of epidemiology/infection prevention at Lee Memorial Health System in Fort Myers, Fla., and board member of the Association for Professionals in Infection Control and Epidemiology.

He agrees that VA is the tip of the spear in the fight against MRSA. In fact, when Streed's hospital tried to order screening tests for the superbug, “we had to wait because VA had ordered so many.”

Other Superbugs. MRSA is just one of a number of superbugs threatening people's health. *Clostridium difficile*, known as C. diff, causes 500,000 infections each year, resulting in nearly 30,000 deaths, says Dr. L. Clifford McDonald of the CDC.

C. diff, which causes diarrhea and more serious intestinal conditions such as colitis, is difficult to kill. Alcohol-based hand sanitizers don't do the job. Hands need to be washed with soap and water, and hospital patients with C. diff may need to be isolated from other patients, Jain says.

Working with the CDC, VA is in the final stages of putting together a plan to fight C. diff that is similar to its MRSA program, he adds.



While *C. diff* is the current problem bug, others are on the horizon. One, known as NDM-1, has been found in patients in South Asia and Britain. Also worrisome are what are called ESBL-producing organisms, which are generally resistant to many classes of antibiotics.

Deadly organisms evolve faster than pharmaceutical companies can develop expensive new drugs to fight them, Streed says. “There’s always a lag time between when an organism develops and the next generation of antibiotics. When (organisms) reach critical mass in a given area, it takes no time for them to travel.”

Antibiotic Stewardship. The growing resistance to antibiotics is one of the greatest threats to public health worldwide, according to ReAct – Action on Antibiotic Resistance, an international organization working to increase awareness of the threat and promote research innovations. Researchers, politicians and representatives from public-health organizations and the pharmaceutical industry met in Uppsala, Sweden, in September to discuss global strategies for reducing unnecessary antibiotic use and developing new medicines.

In the meantime, individuals and health-care providers should take steps to practice what Streed calls “antibiotic stewardship.”

For individuals, this means understanding that antibiotics are not a cure-all for illnesses. Types of bacteria become resistant to treatment because of overuse of antibiotics in an attempt to treat common colds, sore throats and the flu. Such viral infections are not cured by antibiotics.

For health-care providers, this means carefully controlling use of the drugs. “If you do that, you can follow and control the development of resistant organisms,” Streed says. “VA hospitals have been doing it for a long time.”

Besides using antibiotics wisely, there are other steps people can take to protect themselves and others from superbugs. First, speak up. At VA hospitals, “we have brought it into our culture so that it will not be offensive to ask people if they have washed their hands,” Jains says.

And don’t expect doctors and nurses to do all the hand-washing. “You can do hand hygiene,” Jains says. “Remember the rules we learned when we were kids. Wash your hands.”

Also, “patients need to move from being passive to being more of a partner” with health-care providers, Kavanagh says. For example, if a person will be undergoing surgery, he can lower his risk of infection by washing with antibacterial soap before he enters the hospital.

Finally, when going into a hospital or health-care facility, he adds, consider asking someone to be a health-care advocate, perhaps a family member, “to make sure you are clean and kept clean.”

Stephenie Overman is the author of “Next-Generation Wellness at Work” (Praeger, 2009).

HOW TO PREVENT CA-MRSA

CA-MRSA, or community-associated MRSA, is a MRSA infection in a healthy person who has not been hospitalized or had a medical procedure in the past year. According to the New York Department of Health, outbreaks have occurred among athletes, military recruits, day care attendees, injection-drug users and others who live in crowded settings and/or routinely share contaminated items.

The Mayo Clinic offers these prevention tips:

Wash your hands. Scrub hands briskly for at least 15 seconds, then dry them with a disposable towel, and use another towel to turn off the faucet. Carry a small bottle of hand sanitizer containing at least 60 percent alcohol, for times when you don’t have access to soap and water.

Keep wounds covered. Keep cuts and abrasions clean and covered with sterile, dry bandages until they heal. The pus from infected sores may contain MRSA, and keeping wounds covered will help keep the bacteria from spreading.

Keep personal items personal. Avoid sharing items such as towels, sheets, razors, clothing and athletic equipment. MRSA spreads by contaminated objects as well as by direct contact.

Shower after athletic games or practices. Shower immediately after each game or practice. Use soap and water.

Sanitize linens. If you have a cut or sore, wash towels and bed linens in a washing machine set to the hottest water setting (with added bleach, if possible) and dry them in a hot dryer.

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