

# On the Line

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## METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA): A GROWING PROBLEM FOR CORRECTIONS

By Elizabeth Gondles and Michael Kelly

New strains of bacteria are constantly developing, presenting an endless stream of challenges for the medical community. Particularly troublesome is the fact that many of these new bacteria are resistant to antibiotics. At ACA's Winter Conference workshop "The Containment and Treatment of Methicillin-resistant Staphylococcus Aureus (MRSA) Infections within the Correctional Setting," a panel of speakers addressed the prevention, management and containment of one such bacteria and the growing public health concern it has caused.

On hand to offer their expertise were panel members Capt. Newton E. Kendig II, M.D., medical director of health services for the Federal Bureau of Prisons; Lannette Linthicum, M.D., director of health services for the Texas Department of Criminal Justice (TDCJ); Col. Rick Frey, director of the Department of Detention for the Broward County (Fla.) Sheriff's Office; and John P. May, M.D., corporate medical director of Armor Correctional Health Services Inc. Each provided his or her unique perspective of the issue and offered insight on how the problem can be contained.

### CAUSES OF MRSA

"Staphylococcus, (otherwise known as staph), is common bacteria that is found just about everywhere, and it's been around forever," explained Kendig. The bacteria typically causes minor skin infections such as folliculitis and impetigo, but it sometimes causes more serious infections, as well. "Staph was a plague on medical care in the pre-antibiotic era and it wasn't until penicillin came around that we were really able to treat these infections," said Kendig. Within a year of the

discovery of penicillin, however, scientists identified some strains of staph that appeared to be resistant to the drug, and ever since that time, they have had to develop other drugs to treat the infection.

One such drug, called methicillin, had been very effective for treating most staph infections for years. It was not until recently that strains of staph developed that have shown a resistance to the drug and related antibiotics. These types of staff, referred to as methicillin-resistant staphylococcus aureus or MRSA, primarily cause skin infections, which can develop into open wounds. In addition, MRSA can cause urinary tract infections, sinusitis, blood poisoning and pneumonia. While most MRSA cases can be easily treated, some patients have had life-threatening infections.

When the MRSA infection first began presenting, it was almost always limited to individuals who had been in a hospital or nursing home or had come into contact with someone in either setting. However, over the last six years, individuals who had no contact with a hospital or nursing home began developing skin infection with MRSA. For instance, medical providers in a prison in Galveston, Texas, began reporting an increased number of MRSA infections in 1995, and based on their knowledge of the infection at the time, they blamed the hospital. "Of course our prison hospital in Galveston disputed that, and correctly as it turned out," said Linthicum, as evidence of community-acquired infection began to turn up.

Kendig said this is significant not only because it means that cases of MRSA infection are being acquired in the community, but there do not appear to be any traditional risk factors. In other words,

perfectly healthy people can acquire the infection. While there is more prevalence among African-Americans and among children, and the infection tends to be more prominent in southern institutions, Kendig warned that "every race, every ethnicity is susceptible." The problem is particularly tricky for correctional administrators and health care providers because if any staff members develop MRSA, there is no true way to determine whether they acquired it from the institution or in their community, since both are very similar strains.

Ironically, the heavy use of antibiotics has been associated with the rise in MRSA cases. "It's not the sole cause," Kendig said, "but more and more inappropriate use of antibiotics leads to resistance, and that's why we have a national crisis right now with resistant bacteria." That said, Linthicum explained that while antibiotics are available to prisoners who have resistant staph infection, they are limited. She said TDCJ provides a complex regimen of antibiotic treatment for MRSA patients, but they must be very careful "because of the risk for developing resistance if the drugs are not taken appropriately."

Additionally, congregate, crowded settings, such as boot camps and football locker rooms, tend to host MRSA outbreaks. The reason for this is because infection can occur more easily when the bacteria come in contact with skin that has been compromised by turf burns or minor scrapes. According to Kendig, MRSA is usually spread from person to person by direct contact, but it may also be spread through contact with contaminated surfaces or objects, even by sharing towels, which makes locker rooms a particularly possible setting.

## **CONTROLLING MRSA**

While MRSA can be easily transmittable, it can be just as easily curtailed in many cases. For instance, Kendig identified dirty hands as the “number one factor” in spreading MRSA and emphasized the importance of good hygiene in preventing transmission. He outlined several steps inmates can take to protect against infection and to stop the spread of MRSA:

- Wash hands thoroughly with soap and water throughout the day;
- Never touch another person’s wounds, infected skin or dirty bandages;
- Do not scratch skin rashes;
- Maintain excellent personal hygiene through regular showers, keeping a clean living space and regularly laundering bed linens;
- Do not share personal hygiene items with others such as toiletries and towels;
- Clean off any surfaces shared with others such as weight benches;
- Use a towel or shirt as a barrier between your bare skin and exercise equipment;
- Shower after participating in close-contact recreational activities whenever possible;
- Do not get a tattoo in prison;
- Do not use injection drugs; and
- Do not have sexual contact with other inmates.

Similarly, Linthicum discussed measures taken by the TDCJ to prevent the spread of MRSA. By the end of 1995, TDCJ had developed a program of case findings and infection control methods for MRSA. By policy, all drained skin lesions were to be cultured, and MRSA cases were to be reported to TDCJ’s Office of Preventive Medicine. In addition to evaluating their own surveillance data, TDCJ also looked at information obtained following several previous MRSA outbreaks from correctional facilities and communities around the country.

This information provided further guidance to TDCJ in developing a strategy to fight MRSA. It instituted certain procedures including treating skin rashes promptly and aggressively, stressing good hygiene to staff and offenders and covering any large or draining skin lesions.

TDCJ currently provides a “Patient Education Fact Sheet” and information about MRSA, emphasizing the importance of not scratching skin lesions and seeking medical attention as soon as any abscesses or boils are detected.

The goals of TDCJ’s policy when dealing with MRSA, Linthicum said, are to “properly treat infected patients, prevent the emergence of drug-resistant staph and prevent the spread of staph.”

Much the same, the Broward County (Fla.) Sheriff’s Office is doing its part to contain the spread of MRSA in the county’s five jail complexes. Frey pointed out that the sheriff’s office books about 77,000 people each year. “That’s important,” he said, “because that means we have 77,000 people coming in the door, and 77,000 people going out the door every year.” With that kind of turnover, Frey said, MRSA in a jail setting can have a broad impact on the public health. Frey explained that addressing MRSA in jails puts them in an advantageous position to help with prison settings, as well. “Nobody gets to prison without going to jail first,” he said, “so if we deal with this in jail first, it can benefit prison populations and hundreds of thousands of people in the general community.”

According to Frey, Broward County starts with “a strong educational effort” to inform inmates and staff about the basics of MRSA and other communicable diseases. This includes brochures, videos and DVDs. Frey said it is a good idea to have a health educator on staff to provide up-to-date information for everyone in the facility. Broward County takes an aggressive approach to identifying inmates with any communicable diseases.

Frey described steps that he said every jail administrator should take to help control MRSA infections and prevent an outbreak. Staff should be reminded of the importance of sanitation in general and hand washing in particular. Frey said supplies of liquid hand sanitizer should be stockpiled, and gloves should be available where they might be needed. A tracking system should also be developed to identify where cases are occurring and to determine if they could spread throughout the facility. Also, administrators should ensure that medical providers have a system in place for identifying and treating MRSA cases. The system should address decontamination protocols for staff, and an isolation area for patients should be identified, if needed.

In addition, Frey said, laundry practices should be assessed. The water temperature should be monitored to ensure that it is hot enough to kill bacteria, and disinfectants should be used where they are needed. Also, an open line of communication should be established with the health department so the facility can make use of their resources and abilities in case of a MRSA outbreak. He also emphasized that when infected inmates are released, a protocol should be established that addresses the medical needs of those individuals. “Hook them up with the health department, give them some medicine, don’t just send them out with nothing,” he said.

Frey also suggested that when an outbreak of MRSA is suspected or confirmed in a facility, the administrator should immediately contact the health department and notify the public information office. Not only should the housing staff be examined for any sign of MRSA infection, but the infected inmate should be removed from the housing unit and isolated. Then, said Frey, staff should determine where the infected inmate has been within the facility, and all those areas should be decontaminated. “This includes temporary housing cells, housing units, showers, bunks, laundry, transport vehicles and gym equipment,” he said. Also, medical providers should visually examine all inmates housed within the same area as the infected inmate.

In addition, Frey recommended that administrators post notices and information in public visitation areas to make sure that inmates and visitors are made aware of the potential outbreak, and dispel rumors by providing staff with information during roll call and in training bulletins.

Frey also suggested that the arresting agency be notified if the infected inmate was recently arrested. “In a lot of cases, you’re not going to be able to find out who the arresting officer was,” Frey explained, “but you can let the agency know that there was potential exposure to MRSA on a given date, and their human resources can handle it from there.” The same goes for any judicial personnel who came in contact with the infected inmate. “Judges, attorneys, and public defenders should all know that they may have been exposed,” he said. In addition, by checking visitor logs, it can be determined if the infected inmate had any visitors such as clergy, attorneys or family members, who

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## A Growing Problem for Corrections

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should also be promptly notified that they may have been exposed.

Finally, Frey said that command staff should walk through the units of infected inmates to demonstrate confidence to the staff. "It shows them that you know, and it lets them know that this stuff is not going to kill you."

Each panelist made it clear that MRSA is an increasing health care problem with implications for jail and prison settings as

well as the general community. While they each had a different perspective on MRSA based on their individual experiences, the three were in consensus on three main points: Although more prevalent in certain groups and areas, every person is susceptible to MRSA. While it is rarely fatal, infection can cause serious illness. And, although MRSA can be treated with specific antibiotics, it is more easily prevented than cured, and the simplest and most effective form of prevention is good hygiene. The bottom line, says

Kendig, "No matter where you are in the country, MRSA is affecting your community to some degree."

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