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ID CONSULT

# MRSA Panic Unwarranted

Methicillin-resistant *Staphylococcus aureus* has become the new disease of the moment, with alarming headlines almost daily this autumn about the "killer" bacterium. While of course MRSA is a real concern, we physicians can help by reassuring people that we have tools to deal with this problem.

The media frenzy began early in October 2007, with reports of MRSA-related deaths of high school athletes in at least three states, and numerous other cases of MRSA infection in schools around the country.

Then on Oct. 17, the Centers for Disease Control and Prevention (CDC) reported on the 8,987 cases of invasive MRSA from July 2004 to December 2005 in nine sentinel sites associated with the Active Bacterial Core Surveillance system (JAMA 2007;298:1763-1804).

With headlines like CNN's "Experts: Drug-Resistant Staph Deaths May Surpass AIDS Toll," it's not surprising that our phone lines became overheated. We received four times the usual number of calls after that item appeared, from both patients and physicians worried about MRSA.

One physician wanted to know how to advise a local high school about the industrial-strength fumigation performed by a hazmat-like team that had been shown on TV. One school proposed bleaching its football field because that's where players' injuries occurred. I suggested that neither procedure was warranted.

The fact is that humans have coexisted with *S. aureus* for a long time. More persistent MRSA strains appeared about 10 years ago. But both MRSA and methicillin-sensitive *S. aureus* (MSSA) are capable of causing serious invasive disease. In fact, I recently treated an adolescent with disseminated MSSA disease that included septic thrombophlebitis; abscesses in his lung, spleen and liver; septic arthritis; and sepsis.

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On the flip side, the majority of MRSA cases still present as common skin and soft-tissue infections that do not progress to life-threatening illness.

We have long known that *S. aureus* causes more disease in the warmer months, that it seems to have a male predominance, and that it takes advantage of open wounds, whether surgical or traumatic.

What's new in the last 5-10 years is that more strains are resistant to traditional antistaphylococcal antibiotics, and some (both MRSA and MSSA) have virulence genes that make invasive infections more likely, often in otherwise healthy adolescents.

In our community, about 60% of local disease—furuncles, pyoderma, impetigo—are due to MRSA.

I follow an algorithm that involves incision and drainage as the first step, while obtaining a specimen for culture and stratifying the severity of systemic illness and vulnerability of the infected site(s) (AAP News 2004;25:105).

Antibiotics may not always be necessary with single site infection in a child who is afebrile and previously healthy, while those who are febrile should receive empiric clindamycin or trimethoprim/sulfamethoxazole in mild to moderate disease, or even vancomycin for severe life-threatening disease.

Usually we use clindamycin, which still covers 90% of MRSA strains in Kansas City.

However, if the child is critically ill, we start with vancomycin because we don't want to risk that 10%.

The data reported by the CDC tell us that the majority of cases continue to be health care associated, and the vast majority of cases occur in adults.

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Among 5,287 cases from six of the sentinel sites, just 134 were aged 17 and younger.

That small a number makes it difficult to extrapolate meaningfully from the overall epidemiologic data.

An elderly person with underlying chronic illness who dies of MRSA bacteremia is not as striking a story on the evening news as a sudden death in a previously healthy 16-year-old athlete. Death in a healthy child is unexpected these days and raises concern because parents can feel that they have no control, leading to a sense of panic.

And the media don't help matters by using words like "Superbug."

This term has been used at other recent times to refer to *Clostridium difficile*, *Streptococcus pneumoniae*, and a variety of other organisms that are either difficult to treat or that are associated with bad outcome. Will the real "Superbug" please stand up? On second thought, let's just stop using the word altogether.

Another overused phrase is "flesh-eating bacteria." In fact, most *S. aureus* can "eat flesh," using coagulase and other enzymes. That's what helps form boils or carbuncles in pockets within the subcutaneous tissues. Alarming "flesh-eating" strains which can be lethal in a day or 2 have been around for decades, although they are more frequent these days; they can be either MRSA or MSSA.

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But in fact, Group A streptococcus was the original bug to be labeled "flesh eating bacteria"—another case of bacterial identity theft.

We physicians can be the voices of reason. We can reassure our patients about MRSA while giving them practical advice on how to avoid it and the danger signs if they do become infected. This includes such common-sense measures as frequent hand washing, which of course helps prevent influenza and other infectious diseases that kill far more people than MRSA does.

Physicians who work with athletes or athletic teams can help by offering players practical advice that includes wiping the last person's sweat off equipment with antiseptic solutions such as diluted Clorox before using it themselves, not sharing towels, giving prompt attention to skin wounds, and practicing general good hygiene. The CDC has an excellent MRSA site that you can recommend to patients: www.cdc.gov/features/mrsainschools.

The newly reported CDC data provide us with important benchmark information about the prevalence of MRSA invasive disease in the United States, so that public health professionals can begin making recommendations about how best to minimize recurrent or serious disease using logical and practical tools.

Recognition of the early signs of systemic infection and prompt intervention are the keys.

We have multiple antibiotics that still effectively treat even the scariest strains.

Other simple strategies of infection control and hygiene can reduce risks, too. Rarely if ever will these strategies include fumigating or shutting down schools.

And let's keep in mind: Panic is not a practical tool. ■

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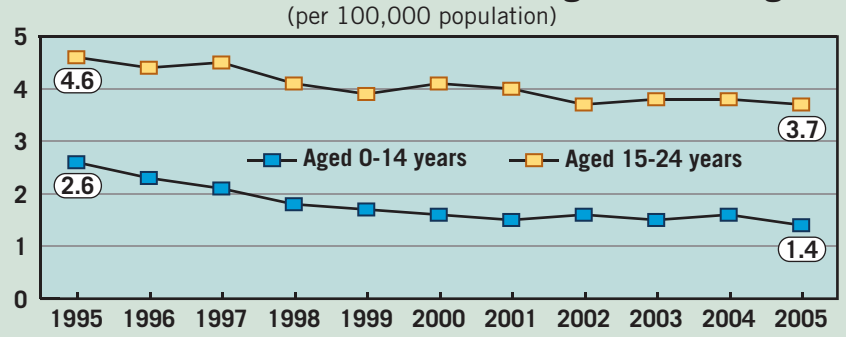
**DATA WATCH**

**U.S. Tuberculosis Rates Declining in the Young**

(per 100,000 population)




Source: Centers for Disease Control and Prevention

Elsevier Global Medical News