

Council of State and Territorial Epidemiologists Position Statement

03-ID-07

Committee: Infectious Disease

Title: Surveillance for methicillin-resistant *Staphylococcus aureus*

Statement of the Problem:

Methicillin-resistant *Staphylococcus aureus* (MRSA) infections are increasingly becoming a more common cause of illness in persons both inside and outside of hospitals and healthcare facilities. MRSA disease in the community has been associated with recent antibiotic use, sharing contaminated items, having active skin diseases, and living in crowded settings. Clusters of skin infections caused by MRSA have recently been described among incarcerated persons, players of close-contact sports, men who have sex with men, school children, and other populations. Community-associated MRSA disease with onset in the community are typically skin infections, but can also cause severe illness and death, as reported among some children. MRSA infections are not routinely reported to public health authorities, so an accurate estimate of incidence is unknown. Surveillance in select states will help characterize the scope and risk factors for MRSA in communities, guide appropriate development of prevention programs, and permit development of recommendations for national surveillance, if warranted.

Statement of the desired action(s) to be taken:

1) CDC to support development of systematic surveillance for invasive and community-acquired methicillin-resistant *Staphylococcus aureus* in select states, such as those with Emerging Infections Program grants (EIPs). A methicillin resistant *Staphylococcus aureus* (MRSA) Case Report Form was created by the CDC and has been used by some of the Emerging Infections Program sites and for the ABCs Surveillance System. This form could be evaluated and modified for use to identify both invasive and community-associated MRSA.

Goals of Surveillance:

- 1) Monitor and describe the incidence, prevalence, distribution, and etiology of reportable methicillin-resistant *Staphylococcus aureus* in select states or communities.
- 2) Rapidly recognize and characterize the emergence of new patterns of disease and populations affected.
- 3) Guide prevention programs to control and prevent the further spread and deleterious public health consequences of methicillin-resistant *Staphylococcus aureus*.
- 4) Develop recommendations for national surveillance and consideration of MRSA for inclusion on the national notifiable diseases list.

Methods of Surveillance:

Physician, health care provider, and laboratory reporting. Data elements collected by state health departments could be reported to the Centers of Disease Control and Prevention through the National Electronic Disease Surveillance System (NEDSS).

Period of Surveillance:

Two years, with review of reported surveillance data in order to make recommendations for consideration of MRSA as mandatorily reportable condition.

Background and Justification:

Methicillin-resistant *Staphylococcus aureus* (MRSA) was first recognized in the 1960s and became endemic in many hospitals during the 1990s. MRSA isolates are often resistant to multiple commonly used antimicrobial agents, including erythromycin, clindamycin, and tetracycline. MRSA can cause different kinds of illness, including skin infections, bone infections, pneumonia, severe life-threatening bloodstream infections, and others. MRSA infection most commonly develops in hospitalized patients

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who are elderly or very sick or who have an open wound or invasive device. According to some estimates, as many as 100,000 persons are hospitalized each year with MRSA infections, and a growing proportion of these persons have disease onset occurring in the community. MRSA can be found on the skin and in the nose of some people without causing illness. The number of people who are colonized with MRSA at any one time is unknown, but likely low (1%). Infection occurs when the colonized MRSA bacteria cause disease in the person. MRSA can spread among people having close contact with infected people. MRSA is almost always spread by direct physical contact. Spread of MRSA may also occur through indirect contact by touching objects (i.e. towels, sheets, wound dressings, clothes, workout areas, sports equipment) contaminated by the infected skin of another person.

The development of ongoing surveillance for MRSA in select states is an effective way to monitor the disease burden in the community setting, and to identify specific risk factors that place individuals at higher risk for community-associated MRSA and for serious outcomes from MRSA infection. Some states have already added MRSA disease, invasive and community acquired, to their notifiable disease list. This surveillance has helped to characterize MRSA infection and to define specific intervention programs to decrease the spread of MRSA in the communities.

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