

June 26, 2007

CONTACT: Jonathan Osmundsen
Work 202-261-2869; cell 512-751-5309
Email: jonathan.osmundsen@mslpr.com



National Prevalence Study of Methicillin-Resistant *Staphylococcus aureus* (MRSA) in U.S. Healthcare Facilities

OVERVIEW AND KEY FINDINGS

A BRIEF HISTORY OF MRSA

The antibiotic methicillin was introduced in 1959; two years later the first documented cases of MRSA appeared. MRSA emerged as a pathogen causing HAIs in U.S. hospitals in the late 1970s. At the time, MRSA represented 2% of all *S. aureus* HAIs. Today, MRSA accounts for >60% of *S. aureus* HAIs. As CDC has documented, the upward trend continues.

MRSA has increasingly spread beyond healthcare facilities and recently has emerged as a community pathogen. Community acquired MRSA (CA-MRSA) usually causes skin and soft tissue infections, while healthcare-associated MRSA or HA-MRSA causes bloodstream, surgical site, pneumonia or urinary tract infections.

THE SURVEY

APIC's National MRSA Prevalence Study is the largest, most comprehensive of its kind and provides valuable new information about MRSA in U.S. healthcare facilities. The survey asked infection control professionals (primarily APIC's 10,000+ members in the U.S.) to collect data about all patients in their facilities who were identified with MRSA infection or colonization on one day during October or November of 2006. So in a sense, this survey is a "snapshot" of MRSA prevalence in the U.S. MRSA patients were identified using microbiological, medical, infection control and other types of records.

Scope

- ❖ Survey results include responses from 21 percent of all acute care hospitals in the U.S. as well as over 100 long term care and rehabilitation facilities. (1,237 facilities responded in total)
- ❖ Responses were received from facilities in all 50 states
- ❖ Responses were received from facilities caring for virtually every type of patient: acute care, cancer, cardiac, children's, long term care, rehabilitation facilities. In addition, they included county, private, and public facilities.
- ❖ Responses were received from all sizes of facilities/hospitals: <100, 100-300, and >300-bed facilities
- ❖ Survey includes data on both MRSA infections and colonizations

TOP SURVEY RESULTS

1. Data shows that 46 out of every 1,000 patients in the survey were either infected or colonized with MRSA (34=infected, 12=colonized). This rate is between 8-11 times greater than previous MRSA estimates (which were more limited in scope and used different methodologies.)

The total number of patients identified with MRSA colonization/infection was 8,654. Of those 8,654, the following detailed data was provided for 7,944 patients:

- 54% were male, 46 % were female
- 67% were on the medical service
- 81% of patients were detected by clinical cultures
- 19% were detected by active surveillance cultures.
- 77% were detected <48 hours of admission
- 23% were detected >48 hours of admission*
- 37% had skin and soft tissue infections only (most commonly seen with CA-MRSA)
- 63% had infections at sites other than skin or soft tissue (e.g., blood, pneumonia, urinary tract)
- <30% of isolates susceptible to clindamycin and <20% susceptible to levofloxacin

(*many papers in the literature divide HA-MRSA from CA-MRSA using this artificial cut-off of hours after admission, ignoring the fact that many patients are repeatedly admitted and thus become colonized with MRSA at one admission and then are detected with infection at a subsequent admission. Our data (see above) on site of infection and antimicrobial susceptibility results suggest that the majority of MRSA isolates reported were from HA-MRSA rather than CA-MRSA).

2. 77% of those with MRSA in the survey were identified within 48 hours of hospital admission, which means 35 out of every 46 MRSA patients are being admitted to the hospital/healthcare facility already infected or colonized with the bug, having acquired it either in a previous healthcare facility stay or in the community at large.
3. 81% of all MRSA cases in the survey were identified by clinical cultures meaning that most of the patients with MRSA had exhibited signs and symptoms of the infection which then prompted their physicians to order laboratory cultures to confirm diagnoses.
4. 67% of all MRSA patients were on the medical services, meaning they were being treated for general medical conditions like diabetes and pulmonary and cardiac problems.
5. 28% of facilities in the survey were doing active surveillance, which is the only way that MRSA colonization (vs. infection) is identified.
6. Detailed data on the facilities that participated in the survey include:
 - There was an average 1.6 infection control professionals (ICP) at participating facilities
 - Of participating healthcare facilities, 64% were urban and 36% rural
 - Facilities averaged 256 licensed beds and ranged in size from 8-1,668 licensed beds
 - Facilities had a total of 187,058 inpatients during survey period, averaging 169.