



# Active Bacterial Core Surveillance (ABCs) Report

## Emerging Infections Program Network

### Methicillin-Resistant *Staphylococcus aureus*, 2005



#### ABCs Areas

California (3 county San Francisco Bay area); Colorado (5 Denver area county); Connecticut; Georgia (8 county Atlanta area); Maryland (Metro Baltimore area); Minnesota (1 metro Twin Cities county); New York (1 Rochester county); Oregon (3 county Portland area); Tennessee (1 Nashville county).

#### ABCs Population

The surveillance areas represent 16,489,254 persons.  
Source: National Center for Health Statistics bridged-race vintage 2005 postcensal file.

#### ABCs Case Definition

Invasive methicillin-resistant *Staphylococcus aureus* (MRSA) disease: isolation of MRSA from a normally sterile site in a resident of the surveillance area in 2005. Cases of disease are classified into one of three epidemiologic classifications. A case is classified as hospital-onset (HO) if the MRSA infection was identified more than 48 hours after hospital admission; as healthcare-associated community-onset (HACO) if the MRSA infection was identified less than 48 hours after admission and had one of more of the following: 1) previous positive MRSA culture, 2) a history of hospitalization, surgery, dialysis or residence in a long term care facility in the previous year, or 3) the presence of an indwelling catheter or current percutaneous medical device. If none of the previously mentioned criteria are met, a case is classified as community-associated (CA).

#### ABCs Methodology

ABCs personnel routinely contacted all microbiology laboratories serving acute care hospitals in their area to identify cases. Standardized case report forms that include information on demographic characteristics, clinical syndrome, and outcome of illness were completed for each identified case. Selected isolates were collected and sent to CDC for routine testing including; antimicrobial susceptibility testing, pulsed field gel electrophoresis (PFGE), toxin testing and *SCCmec* typing. Regular laboratory audits assessed completeness of active surveillance and detected additional cases.

Rates of invasive MRSA disease were calculated using population estimates for 2005. For national estimates of cases, race- and age-specific rates of disease were applied from the aggregate surveillance area to the age and racial distribution of the 2005 U.S. population. Cases with unknown race were distributed by site based on reported race distribution for known cases.

For more information, visit our web site:

<http://www.cdc.gov/abcs>

#### Reported ABCs Profiles

Race	No. (Rate*)
White	3572 (29.8)
Black	2375 (78.7)
Other	193 (13.0)

Unknown race (n=692) distributed amongst known

\*Cases per 100,000 population for ABCs areas

MRSA Class	No. (Rate*) Cases^	No. (Rate*) Deaths~	PFGE Type (N,%)	
			USA100	USA300
HO	1616 (9.8)	421 (2.6)	267 (75.2)	48 (13.5)
HACO	3601 (21.8)	573 (3.5)	495 (63.8)	175 (22.6)
CA	820 (5.0)	88 (0.5)	45 (23.3)	129 (66.8)

\*Cases per 100,000 population for ABCs areas

^n=106, ~n=15: could not be classified after chart review

PFGE Type (%)	%PVL Pos.	Clinda-R^	T/S-R~	Levo-R*
USA100 (61)	0.6	94.9	1.8	99.5
USA300 (26.6)	94.4	10.2	1.8	52
USA500 (4.8)	1.4	48.6	91.7	98.6
USA800 (1.7)	0	8	0	48
IBERIAN (1.7)	4.0	28	60	88
OTHER (4.3)	13.1	56.5	1.5	50.8

n=1512

^% Clindamycin resistant; ~% Trimethoprim-sulfamethoxazole resistant; \* % Levofloxacin resistant

Syndrome	CA (n=820)	HACO (n=3601)	HO (n=1616)
Bloodstream Infection			
with other syndrome	538	2764	1237
with no other syndrome	160	1334	785
Pneumonia	115	426	266
Osteomyelitis	65	285	90
Endocarditis	106	224	40
Cellulitis	189	316	84
Skin abscess*	55	81	26

Note: Some cases had more than one syndrome.

\*Category includes skin abscess, necrotizing fasciitis, gangrene, wounds

#### National Estimates of Invasive Disease

Cases: 108,281\* (36.53/100,000)

Deaths: 20,601(6.95/100,000)

\* Estimate includes cases with >1 infection in 2005, unlike previously published estimate which included only first ever invasive MRSA infection (JAMA, 2007 Oct 17; 298 (15):1765-71)

#### Citation

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Available via the Internet:

<http://www.cdc.gov/ncidod/dbmd/abcs/survreports/mrsa05.pdf>