

New study finds MRSA on the rise in hospital outpatients

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The community-associated strain of the deadly superbug MRSA -- an infection-causing bacteria resistant to most common antibiotics -- poses a far greater health threat than previously known and is making its way into hospitals, according to a study in the December issue of *Emerging Infectious Diseases*.

The new threat is easily picked up in fitness centers, schools, and other public places and has increased the overall burden of MRSA within hospitals, the report found.

The study, which analyzed data from more than 300 microbiology labs serving hospitals all over the United States, found a seven-fold increase in the proportion of "community-associated" strains of methicillin-resistant *Staphylococcus aureus*, or MRSA, in outpatient hospital units between 1999 and 2006.

According to study authors, this increase threatens patient safety because doctors and patients often move back and forth between inpatient and outpatient units of a hospital.

"This emerging epidemic of community-associated MRSA strains appears to add to the already high MRSA burden in hospitals," said Ramanan Laxminarayan, Principal Investigator for Extending the Cure, a project that examines policy solutions to the growing problem of [antibiotic resistance](#) based at the Washington, D.C. think-tank, Resources for the Future. Extending the Cure is supported by the Robert

Wood Johnson Foundation's Pioneer Portfolio, which funds innovative ideas that may lead to breakthroughs in the future of health and health care.

Over the length of the study, researchers found that the proportion of MRSA increased more than 90 percent among outpatients with staph and now accounts for more than 50 percent of all *Staphylococcus aureus* infections. The findings suggest that this was due almost entirely to an increase in community-associated strains, which jumped from 3.6 percent of all MRSA infections to 28.2 percent—a seven-fold jump from 1999 to 2006. Similar increases in inpatients suggest that these strains are spreading rapidly into hospitals as well.

MRSA kills an estimated 20,000 people in the United States each year. The [superbug](#), which is resistant to most common antibiotics, can attack wounds and trigger potentially lethal blood stream infections. Community-associated strains, while generally less virulent and susceptible to more antibiotics, can still cause significant morbidity and mortality.

"MRSA has generally been a significant problem only in hospitals," said Eili Klein, the report's lead author and researcher at Resources for the Future. "But the findings from this study suggest that there is a significant reservoir in the community as well." This community reservoir leads to a dangerous spread of community-associated strains from outpatient units into hospitals, according to Klein.

To curtail this spread, hospitals will need to step up infection control procedures, including those practiced in outpatient units. This study and others suggest that the most effective way of containing MRSA and other superbugs is by employing surveillance and infection control on a regional basis.

"The movement of community-associated strains into the hospital also points to the urgent need for rapid tests that can identify the strain of MRSA," Klein said. Some MRSA strains, particularly those coming into the outpatient departments, are vulnerable to a wider range of cheap antibiotics. With a rapid test, a hospital doctor could prescribe a cheaper, but still effective drug to combat an infection—a strategy that might reduce health care costs and help preserve the nation's supply of antibiotics, according to authors.

Source: Burness Communications

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