

U.S. deaths from staph 'superbug' may surpass AIDS deaths

04:28 PM CDT on Wednesday, October 17, 2007

From Wire Reports

WASHINGTON – A dangerous germ that has been spreading around the country causes more life-threatening infections than public health authorities had thought and is killing more people in the U.S. each year than the AIDS virus, federal health officials reported Tuesday.

The microbe, a strain of a once innocuous staph bacterium that has become invulnerable to first-line antibiotics, is responsible for more than 94,000 serious infections and nearly 19,000 deaths each year, the Centers for Disease Control and Prevention calculated.

Although evidence has been mounting that the infection is becoming more common, the estimate published today in the *Journal of the American Medical Association* marks the first national assessment of the toll, officials said.

"This is the first study that's been able to capture the data in a comprehensive fashion," said Dr. Scott Fridkin, a medical epidemiologist at the CDC. "This is a significant public health problem. We should be very worried."

Other researchers noted that the estimate includes only the most serious infections caused by the bug, known as methicillin-resistant staphylococcus aureus, or MRSA.

"It's really just the tip of the iceberg," said Dr. Elizabeth Bancroft, a medical epidemiologist at the Los Angeles Department of Public Health who wrote an editorial accompanying the new research. "It is astounding."

On Monday, Ashton Bonds, 17, a student at Staunton River High School in Bedford County, Va., died of MRSA.

Fellow students organized a protest overnight Monday using text messages and social networking sites. They took Bedford County School Superintendent James Blevins on a tour of the school Tuesday to show him how unclean it is, particularly in the locker rooms.

Mr. Blevins said at a news conference Tuesday that the schools will be closed for cleaning today. Staunton River will be cleaned by a commercial cleaning company, and the county's other schools will be cleaned by janitorial staff.

The MRSA estimate is being published with a report that a strain of another bacterium, which causes ear infections in children, has become impervious to every approved antibiotic for youngsters.

"Taken together, what these two papers show is that we're increasingly facing antibiotic-resistant forms of these very common organisms," Dr. Bancroft said.

The reports underscore the need to develop new antibiotics and curb the unnecessary use of those already available, experts said. They should also alert doctors to be on the lookout for antibiotic-resistant infections so patients can be treated with the few remaining effective drugs before they develop serious complications, experts said.

MRSA is a strain of the ubiquitous bacterium that usually causes "staph" infections that are easily treated with common antibiotics in the penicillin family, such as methicillin and amoxicillin. Resistant strains of the organism, however, have been increasingly turning up in hospitals and in small outbreaks outside of health-care settings, such as among athletes, prison inmates and children.

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The germ, which is spread by casual contact, rapidly turns minor abscesses and other skin infections into serious health problems, including painful, disfiguring "necrotizing" abscesses that eat away tissue. The infections can often still be treated by lancing and draining sores and quickly administering other antibiotics, such as bactrim. But in some cases the microbe gets into the lungs, causing unusually serious pneumonia, or spreads into bone, vital organs, and the bloodstream, triggering life-threatening complications. Those patients must be hospitalized and given intensive care, including intravenous antibiotics such as vancomycin.

In the new study, Dr. Fridkin and his colleagues analyzed data collected in Connecticut, Georgia, California, Colorado, Oregon, New York, Tennessee, Minnesota and Maryland, identifying 5,287 cases of invasive MRSA infection and 988 deaths in 2005. Based on the findings, the researchers calculated that MRSA was striking 31 out of every 100,000 Americans, which translates into 94,360 cases and 18,650 deaths nationwide. In comparison, the AIDS virus killed about 12,500 Americans in 2005.

"This indicates these life-threatening MRSA infections are much more common than we had thought," Dr. Fridkin said.

In fact, the estimates make MRSA much more common than flesh-eating strep infections, bacterial pneumonia and meningitis combined, Dr. Bancroft noted.

"These are some of the most dreaded invasive bacterial diseases out there," Dr. Bancroft said. "This is clearly a very big deal."

The infection is most common among blacks and the elderly, but also commonly strikes very young children.

"We see these cases all the time," said Dr. Robert Daum of the University of Chicago. "In the last five weeks, I've taken care of five children who were sick enough to be hospitalized and require intensive care."

Studies have shown that hospitals could do more to reduce the spread of the infection through standard hygiene measures. Individuals can reduce their risk through common-sense measures, such as frequent hand washing.

In the second paper, Dr. Michael Pichichero and Dr. Janet Casey of the University of Rochester documented the emergence of an antibiotic-resistant strain of another bacterium known as *Streptococcus pneumoniae*, which causes common ear infections. Although all 11 children identified in the Rochester area with the microbe so far were eventually successfully treated, five required an antibiotic approved only for adults and one child was left with permanent hearing loss.

The researchers attributed the emergence of the strain to a combination of the overuse of antibiotics and the introduction of a vaccine that protects against the infection.

"The use of the vaccine created an ecological vacuum, and that combined with excessive use of antibiotics to create this new superbug," Dr. Pichichero said.

The Washington Post and The Associated Press contributed to this report.

How staph infections spread

Staph infections are found in crowded places, such as schools, jails and gyms. Staph can rub off the skin of an infected person and onto the skin of another. It can also be transmitted on a shared object or surface, such as towels, bar soap, hot tub benches and athletics equipment.

PRECAUTIONS

- Encourage frequent hand washing with liquid soap and warm water.

- Encourage students to keep their fingernails clean and clipped short.
- Avoid contact with other people's wounds or anything contaminated by a wound.
- Avoid sharing personal items – such as razors, towels, deodorant or soap – that directly touch the body.
- Clean and disinfect objects (such as gym and sports equipment) before use.
- Wash dirty clothes, linens and towels with hot water and laundry detergent. Using a hot dryer, rather than air drying, also helps kill bacteria.
- Encourage students who participate in contact sports to shower immediately after each practice, game or match.
- Keep open or draining sores and lesions clean and covered. Anyone assisting with wound care should wear gloves and wash hands with soap and water after dressing changes.