

'Relentless Effort' Needed to Stop Nosocomial Infections: CDC

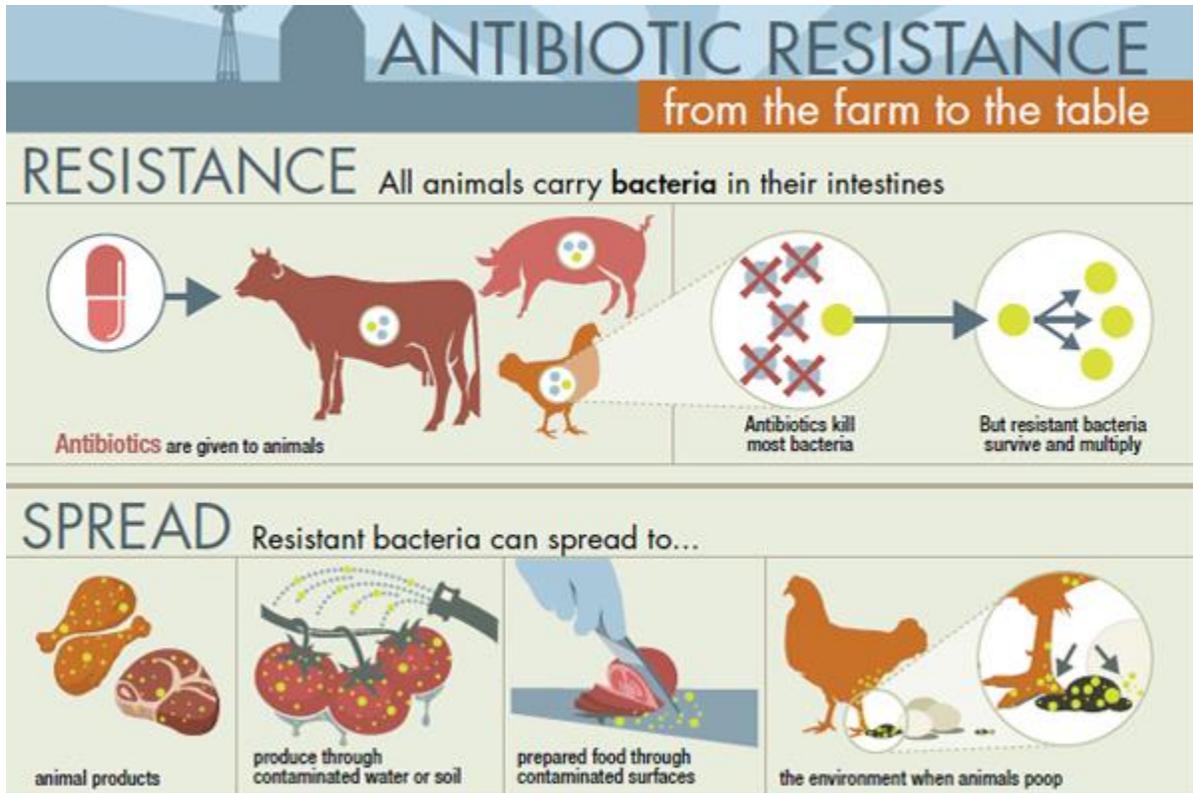
Antibiotic resistant organisms remain a challenge



by [Michael Smith](#)
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The CDC is urging "relentless effort" to prevent healthcare associated infections (HAI) and especially those caused by antibiotic-resistant organisms, according to the agency's director, [Tom Frieden, MD](#).

"Doctors, nurses, and other healthcare professionals have the power to change the direction of antibiotic resistance nationally," Frieden told reporters in a telephone media briefing to discuss a [Vitals Signs report on healthcare-associated infections](#). Over use of Antibiotics puts us at risk.

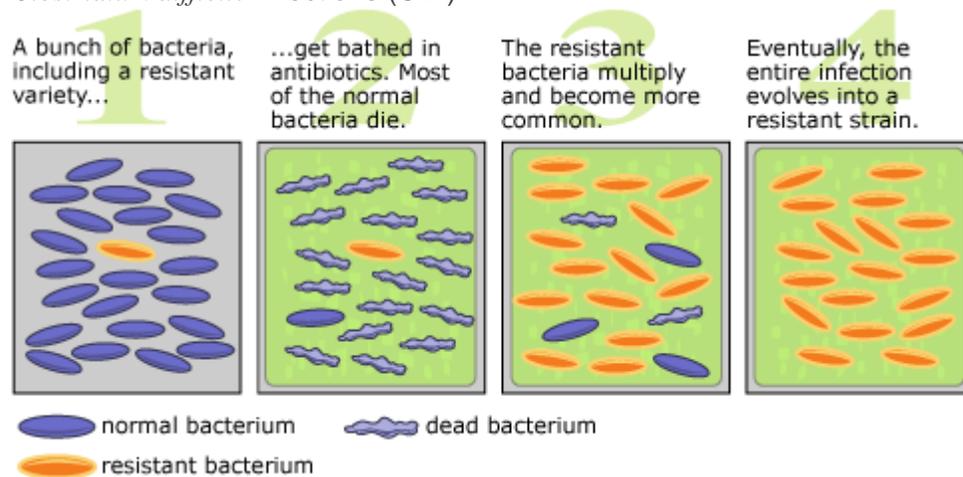


But to do so, they have to pay attention to preventing infections "every time they care for a patient," he said.

The Vital Signs report, based on data from more than 5,600 healthcare facilities, found signs of long-term progress in combating some healthcare-associated infections, Frieden said, but also worrying signs that resistant organisms are a common cause.

"On any given day," Frieden said, "one in 25 patients has at least one healthcare associated infection" and antibiotic resistant organisms cause an important proportion of those. "No one should get sick when they are trying to get well," he added.

The Vital Signs report looked at four main types of infection: central line-associated bloodstream infections (CLABSI), catheter-associated urinary tract infections (CAUTI), surgical site infections (SSI), and *Clostridium difficile* infections (CDI).



The authors used data reported for 2014 to the CDC's [National Healthcare Safety Network](#) by 4,000 short-term acute care hospitals, 501 long-term acute care hospitals, and 1,135 inpatient rehabilitation facilities in all 50 states.

In addition to *C. difficile*, they focused on six other drug-resistant organism types -- carbapenem-resistant *Enterobacteriaceae* (CRE), methicillin-resistant *Staphylococcus aureus*(MRSA), ESBL-producing *Enterobacteriaceae* (extended-spectrum β -lactamases), vancomycin-resistant *Enterococcus* (VRE), multidrug-resistant *Pseudomonas aeruginosa*, and multidrug-resistant *Acinetobacter*.

The bottom line:

- Since 2008, the incidence of CLABSI has fallen 50% in short-term acute care hospitals and 9% in long-term acute care hospitals. But 17% (one in six) of the remaining CLABSI are caused by antibiotic-resistant bacteria.
- Since 2008, SSI related to 10 procedures tracked in previous reports have fallen 17%. But 14% (one in seven) of the remaining infections are caused by antibiotic-resistant bacteria.
- There has been no change in the overall incidence of CAUTI since 2009 and 10% are caused by antibiotic-resistant bacteria.
- The incidence of CDI was down 8% since 2011.

The incidence of CLABSI has fallen every year since 2008, but the other types of infection have been more variable. For instance, while there is no overall change in CAUTI since 2009, the rate was down 5% in 2014 from the previous year.

In acute care hospitals, the report says, about 15% of the catheter- and surgery-related infections were caused by one of the six antibiotic-resistant bacteria. The rate increased to a "chilling" one in four in long-term acute care hospitals, Frieden said, because they treat patients who are generally very sick and have an average stay of more than 25 days.

Across all types of healthcare facilities, 47.9% of *S. aureus* infections were resistant to methicillin, 29.5% of *enterococci* were resistant to vancomycin, 17.8% of *Enterobacteriaceae* had the extended-spectrum beta-lactamase phenotype and 3.6% were carbapenem-resistant, while 15.9% of *P aeruginosa* and 52.6% of *Acinetobacter* species were multidrug-resistant.

The rates varied by facility type, the investigators found, but were consistently higher in long-term acute care hospitals.

The drop in CLABSI represents a "huge success" for healthcare, commented [Peter Pronovost, MD](#), of Johns Hopkins University, an [expert on patient safety](#) who was also on the media call.

The improvement was "only made possible by the collaborative effort of everyone," he said.

The current issue is reducing rates of antibiotic resistance, he said, and "that same collaborative and committed effort ... can help us address antimicrobial resistance."

The key steps, he said, are:

- Preventing the spread of infection among patients by employing such things as good hygiene and sterile gowns and gloves.
- Preventing infection in the first place by taking care to keep catheters sterile, using them only as long as they are needed, and perhaps even questioning whether a catheter should be used in the first place.
- Using the right antibiotic and only as long as it's needed.

The Vital Signs report notes that *C. difficile* remains an important problem in U.S. hospitals, with some 453,000 infections and 29,000 deaths within 30 days of diagnosis in 2011. The incidence of CDI in acute care hospitals has fallen 8% since 2011 but increased 4% from 2013 to 2014.

The CDC data comes at the same time as [Consumer Reports](#) released [updated hospital ratings](#) showing that many large teaching hospitals have poor CDI rates.

The ratings cover more than 3,200 hospitals across the country, the nonprofit organization said, and about a third have *C. difficile* infection rates that are worse than the national average.

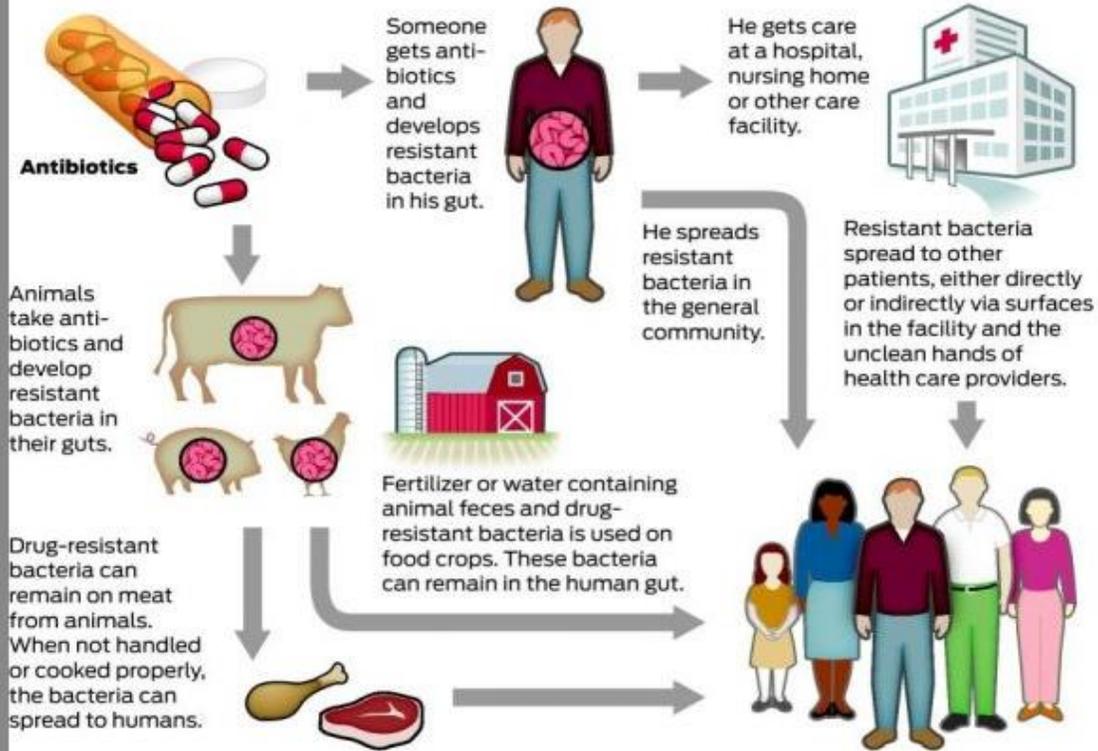
That includes 24 of the nation's largest teaching hospitals, the organization said.



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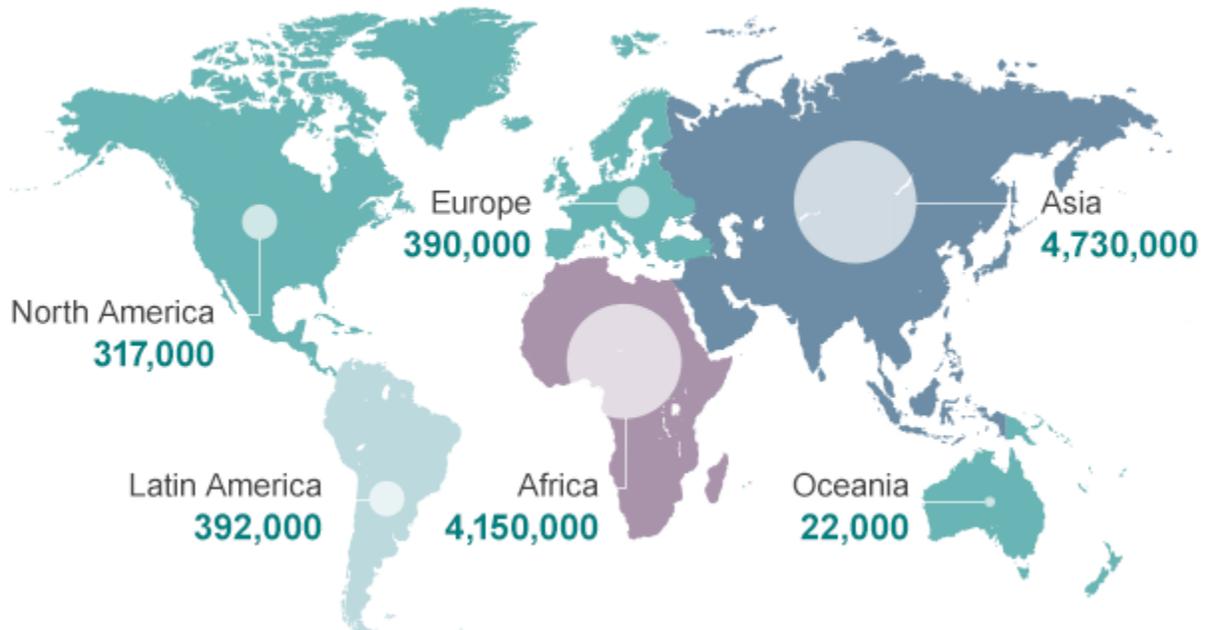
How antibiotic resistance spreads



Source: Centers for Disease Control and Prevention

Todd Trumbull / The Chronicle

Deaths attributable to antimicrobial resistance every year by 2050



Source: Review on Antimicrobial Resistance 2014