

RESISTANCE ANYWHERE IS RESISTANCE EVERYWHERE

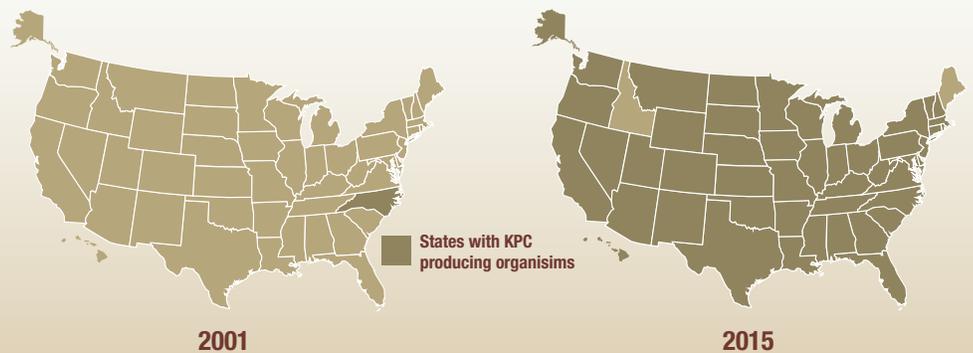
Antibiotic Resistance Can Travel the Globe

- Often called superbugs, some bacteria are already resistant to most or all known antibiotics. One example is CRE, a family of germs that is resistant to our most powerful drugs of last-resort.
- Sometimes called “nightmare bacteria” because they are so difficult to treat, CRE was originally found in only one U.S. state but has spread.
- *Klebsiella pneumoniae* carbapenemase (KPC) infections were once seen in limited locations in the U.S. but are now found throughout the country.
- Another type of CRE, caused by New Delhi metallo-beta-lactamase (NDM-1), was initially identified in India, but is now present in several other countries including the U.S., Canada, Netherlands, United Kingdom, Australia, and beyond.



Why We Must Act Now

Graphical Distribution of *Klebsiella pneumoniae* carbapenemase (KPC) Infection



Did You Know?

1. Antibiotic resistance is one of the world’s most pressing public health threats.
2. Antibiotics are the most important tool we have to combat life-threatening bacterial diseases, but using antibiotics can have side effects.
3. Antibiotic overuse increases the development of drug-resistant germs.
4. Patients, healthcare providers, hospital administrators, and policy makers must work together to use effective strategies for improving antibiotic use—ultimately improving medical care and saving lives.

- The way we use antibiotics today or in one patient directly impacts how effective they will be tomorrow or in another patient; they are a shared resource.
- Antibiotic resistance is not just a problem for the person with the infection. Some resistant bacteria have the potential to spread to others—promoting antibiotic-resistant infections.
- Since it will be many years before new antibiotics are available to treat some resistant infections, we need to improve the use of antibiotics that are currently available.

Outpatient antibiotic use: U.S. compared to Europe (2004)

Defined Daily Dose/1,000 inhabitants per day



Source: Goossens et al. CID 2007;44:1091-5; erratum CID 2007; 44:1259

Global Health Professionals Can:

- **Spread the message** that antibiotic resistance is a global problem.
- **Implement hospital infection-control measures** to reduce the spread of multidrug-resistant strains and reinforce national policies on prudent use of antibiotics, reducing the generation of antibiotic-resistant bacteria.
- **Adhere to World Health Organization's strong recommendations** that governments focus control and prevention efforts in four main areas:
 1. Surveillance for antimicrobial resistance;
 2. Rational antibiotic use, including education of healthcare workers and the public in the appropriate use of antibiotics;
 3. Introduction or enforcement of legislation related to stopping the sale of antibiotics without prescription; and
 4. Strict adherence to infection prevention and control measures, including safe handwashing measures, particularly in healthcare facilities.
- **Develop relevant policies** and **coordinate international efforts** with the support of WHO to combat antimicrobial resistance.

For more information, visit CDC's Get Smart Program Website

Get Smart About Antibiotics Week
<http://www.cdc.gov/getsmart/week/index.html>

Get Smart Resources for Policy Makers
<http://www.cdc.gov/getsmart/week/educational-resources/policy-makers.html>

Centers for Disease Control and Prevention

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