

# RESISTANCE ANYWHERE IS RESISTANCE EVERYWHERE

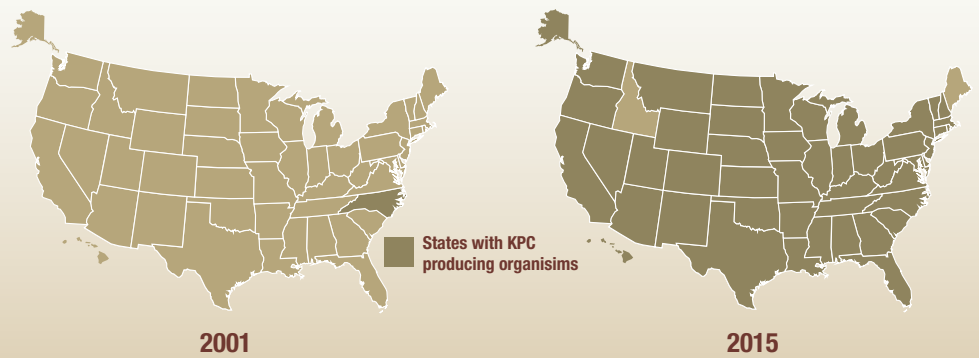


## Antibiotic Resistance Can Travel the Globe

- 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

For more information, please contact Centers for Disease Control and Prevention.  
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