

# Preserving antibiotics for the future

**Get Smart  
About Antibiotics Week**  
November 12-18, 2012

## 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 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 employ effective strategies for improving antibiotic use – ultimately improving medical care and saving lives.

## Looking ahead at the problem

- No single strategy can solve the issue of antibiotic resistance; a multi-pronged approach is required.  
We must educate everyone about the growing threat of antibiotic resistance and the appropriate use of antibiotics.
- We must eliminate all inappropriate use of antibiotics – in human medicine, animal medicine, and agriculture.
- We must prevent the emergence and transmission of resistant infections through research into new vaccines and diagnostics and by implementing other effective infection prevention and control initiatives.
- Improving antibiotic use takes time and resources, but is well worth the investment.

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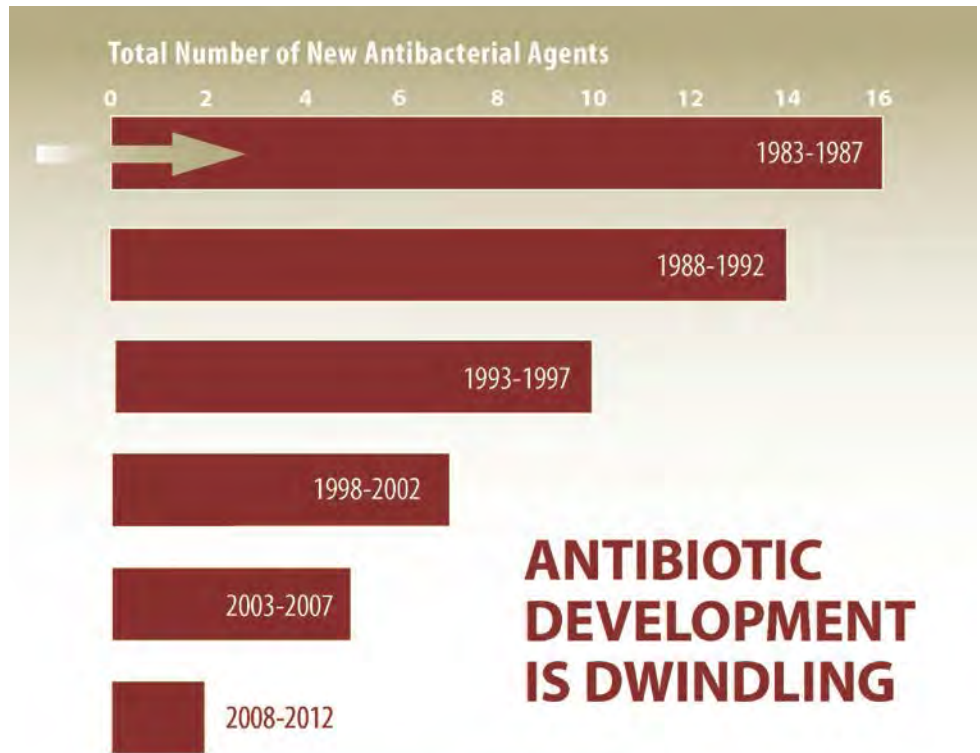


## Why we must act now

- 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.

## Changing the way we think about antibiotics for the future

- Antibiotic use is a healthcare-quality issue that impacts patient safety.
- Investments in appropriate antibiotic use will pay off, saving lives and money.
- Healthcare facilities must have support for antibiotic stewardship interventions and programs in order to manage antibiotic use.
- Ensuring the success of antibiotic stewardship programs is a collective effort.
- Resistant organisms will continue to develop, so it is important that we continue to pursue the development of new antibiotics while preserving the ones we have today.



**ANTIBIOTIC DEVELOPMENT IS DWINDLING**

Source: *The Epidemic of Antibiotic-Resistant Infections*, CID 2008;46 (15 January) Clin Infect Dis. (2011) May 52 (suppl 5):S397-S428. doi: 10.1093/cid/cir153

## Vaccines as a tool for addressing antibiotic resistance

- Developing new vaccines can decrease rates of antibiotic-resistant infections. The first pneumococcal conjugate vaccine (PCV7) was licensed in the U.S. for use in infants and children in 2000.
- By 2010, cases of resistant pneumococcal disease decreased by 66% in children younger than 5 years of age.
- PCV13, licensed in 2010, provides an opportunity to prevent even more antibiotic-resistant infections of pneumococcal disease.



### Centers for Disease Control and Prevention

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