

EMBARGOED until MONDAY, SEPTEMBER 16th at 1pm ET

Antibiotic Resistance Threats in the United States, 2013

Key Points for Partners

Background: This landmark report presents a first-ever snapshot of the burden and threats posed by the antibiotic-resistant germs having the most impact on human health. These threats are ranked in categories of urgent, serious, and concerning. Threats were assessed according to seven factors associated with resistant infections: health impact, economic impact, how common the infection is, a 10-year projection of how common it could become, how easily it spreads, availability of effective antibiotics, and barriers to prevention. Infections classified as urgent threats include carbapenem-resistant Enterobacteriaceae (CRE), drug-resistant gonorrhea, and *Clostridium difficile*. CDC created this report to communicate directly to the public in plain language the big picture of drug resistance and the complexity of the problem.

Key Points:

- Every year, more than two million people in the United States get infections that are resistant to antibiotics and at least 23,000 people die as a result, according to a new report issued by the Centers for Disease Control and Prevention (CDC).
 - In addition *C. difficile*, a serious diarrheal infection usually associated with antibiotic use causes nearly 250,000 hospitalizations and at least 14,000 deaths every year in the United States.
- Patients with resistant infections are at higher risk of disability and death compared with infections that are easily treatable with antibiotics.
- Some studies have estimated the total economic cost of antibiotic resistance to the U.S. economy to be as high as \$20 billion in excess direct healthcare costs, with additional costs to society for lost productivity as high as \$35 billion a year.
- Antibiotics are among the most commonly prescribed drugs used in human medicine. However, up to 50 percent of all the antibiotics prescribed for people are not needed or are not prescribed appropriately.

Main Message:

- **Drug resistant infections are a threat to human health and economic health.**
 - In addition to the toll on human life, antibiotic-resistant infections add considerable and avoidable costs to the already overburdened U.S. healthcare system.
 - In most cases, antibiotic-resistant infections require prolonged and costlier treatments, extend hospital stays, and require additional doctor visits and healthcare use.
- **The use of antibiotics is the single most important factor leading to antibiotic resistance around the world.**

- **Antibiotics are a precious, limited resource—the more we use antibiotics today, the less likely we are to have effective antibiotics tomorrow.**
 - The loss of effective antibiotic treatments will not only cripple the ability to fight routine infectious diseases but will also undermine treatment of infectious complications in patients with other diseases.
 - Many of the advances in medical treatment—joint replacements, organ transplants, cancer therapy, and improvements in the treatment of chronic diseases such as diabetes, asthma, rheumatoid arthritis and other immunological disorders, and many others—are dependent on the ability to fight infections with antibiotics.
 - If the ability to effectively treat those infections is lost, the ability to safely offer people many of the life-saving and life-improving modern medical advances will be lost with it.
- **As in humans, it is important to use antibiotics in animals only when necessary to manage infections.**
 - The use of medically important antibiotics for promoting growth is not necessary and recent proposed guidance from the U.S. Food and Drug Administration (FDA) describes a pathway toward phasing out this practice.
- **Urgent action is needed NOW by EVERYONE who uses antibiotics**
 - Drug development for new antibiotics and new antifungals is necessary but not sufficient to deal with our AR threats.
 - Surveillance, prevention and stewardship are at least as important as drug development.

To combat this serious health threat, CDC has identified four core actions that must be taken:

1. **Preventing Infections, Preventing the Spread of Resistance:** Avoiding infections reduces the amount of antibiotics that have to be used and reduces the likelihood that resistance will develop. Drug-resistant infections can be prevented by immunization, infection prevention actions in healthcare setting, safe food preparation and handling, and general handwashing.
2. **Tracking:** CDC gathers data on antibiotic-resistant infections, causes of infections, and whether there are particular reasons (risk factors) that caused some people to get a resistant infection. With that information, experts can develop strategies to prevent those infections and prevent the resistant bacteria from spreading.
3. **Improving Antibiotic Use/Stewardship:** Perhaps the most important action needed to greatly slow the development and spread of antibiotic-resistant infections is to change the way antibiotics are used. Up to half of antibiotic use in humans and much of antibiotic use in animals is unnecessary. The commitment to always use antibiotics appropriately and safely —only when they are needed to treat disease, and to choose the right antibiotics and to administer them in the right way in every case—is known as antibiotic stewardship.
4. **Development of Drugs and Diagnostic Tests:** Because antibiotic resistance occurs as part of a natural process in which bacteria evolve, it can be slowed but not completely stopped. Therefore, new antibiotics always will be needed to keep up with resistant bacteria, as will new tests to track the development of resistance.