Antibiotic-resistant bacteria cause more than 2 million illnesses and at least 23,000 deaths each year in the United States. Antibiotic resistance occurs when germs no longer respond to the drugs designed to kill them. Inappropriate prescribing of antibiotics contributes to antibiotic resistance and is a threat to patient safety.

Healthcare Providers Can:

- **Prescribe correctly**
  - Avoid treating viral syndromes with antibiotics, even when patients ask for them.
  - **Pay attention to dose and duration:** The right antibiotic needs to be prescribed at the right dose for the right duration.
  - Be aware of antibiotic-resistance patterns in your area so that you can always choose the right antibiotic.
  - Hospital and nursing home providers should reassess within 48 hours of starting the antibiotic, when the patient’s culture results come back. Adjust the prescription, if necessary. Stop the prescription, if indicated.

- **Collaborate with each other and with patients**
  - Talk to your patients about appropriate use of antibiotics.
  - Include microbiology cultures, when possible, when ordering antibiotics.
  - Work with pharmacists to ensure appropriate antibiotic use and prevent resistance and adverse events.
  - Use patient and provider resources offered by the Centers for Disease Control and Prevention (CDC) and professional organizations such as Society for Healthcare Epidemiology.
    - Provider Resources: http://www.cdc.gov/getsmart/
    - Patient Resources: http://www.cdc.gov/getsmart/community/for-patients/index.html
    - General Information: http://www.cdc.gov/drugresistance/protecting_yourself_family.html

- **Stop the spread**
  - Follow hand hygiene and other infection control measures with every patient.

- **Embrace antibiotic stewardship**
  - Improve antibiotic use in all facilities—regardless of size—through stewardship interventions and programs, which will improve individual patient outcomes, reduce the overall burden of antibiotic resistance, and save healthcare dollars.
  - Recognize and participate in CDC’s Get Smart About Antibiotics Week initiatives.
Inpatient Settings

- Overuse of antibiotics creates an unnecessary risk for adverse drug events, such as *Clostridium difficile* infection, a sometimes deadly diarrhea.
- Antibiotic resistance adversely impacts the health of millions of hospitalized patients every year.
- Some infections in hospitals are now resistant to all available antibiotics.
- About **40% of the patients receiving antibiotics** receive unnecessary or inappropriate therapy.

Outpatient Settings

- Each year, millions of antibiotics are prescribed unnecessarily for viral infections.
- Antibiotics can cause adverse drug events and promote antibiotic resistance.
  - There are more *Clostridium difficile* infections in places with more antibiotic use.
  - Antibiotic use in primary care is associated with antibiotic resistance at the individual patient level.
- Antibiotics cause **1 in 5 emergency department visits** for adverse drug events and are the most common cause of emergency department visits for adverse drug events in children.

For more information, visit CDC’s Get Smart program website:
Get Smart Resources for Healthcare Providers  
[http://www.cdc.gov/getsmart/week/educational-resources/hcp.html](http://www.cdc.gov/getsmart/week/educational-resources/hcp.html)

Centers for Disease Control and Prevention

For more information, please contact Centers for Disease Control and Prevention.  
1600 Clifton Road N.E., Atlanta, GA 30333  
Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-63548  
Email: getsmart@cdc.gov Web: [www.cdc.gov/getsmart](http://www.cdc.gov/getsmart)