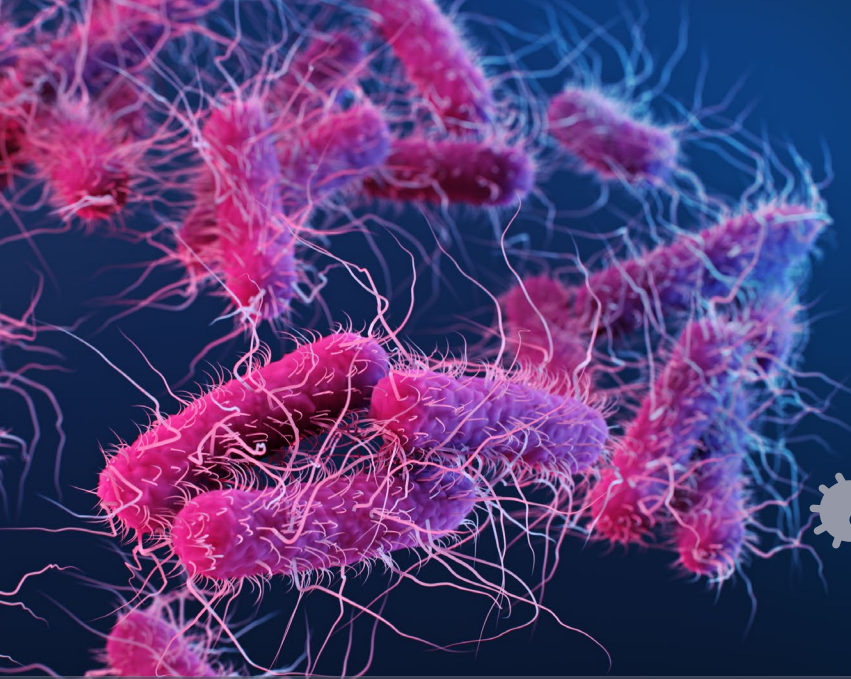


EXTENDED-SPECTRUM BETA-LACTAMASE (ESBL) PRODUCING ENTEROBACTERIACEAE

THREAT LEVEL **SERIOUS**

197,400
Estimated cases in hospitalized patients in 2017

9,100
Estimated deaths in 2017

$1.2B
Estimated attributable healthcare costs in 2017

ESBL-producing Enterobacteriaceae (a family of different types of bacteria) are a concern in healthcare settings and the community. They can spread rapidly and cause or complicate infections in healthy people.

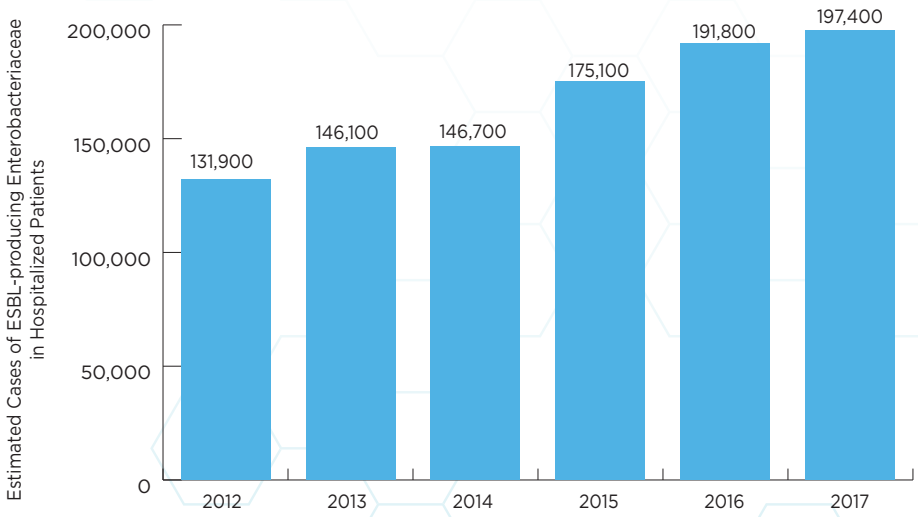
WHAT YOU NEED TO KNOW

- ESBLs are enzymes that break down commonly used antibiotics, such as penicillins and cephalosporins, making them ineffective.
- ESBL-producing Enterobacteriaceae often cause infections in otherwise healthy people. About one-quarter of patients with these infections had no known underlying health conditions.
- Antibiotic options to treat ESBL-producing Enterobacteriaceae infections are limited. Healthcare providers often have to use intravenous (IV) carbapenem antibiotics to treat infections that used to be treated with oral antibiotics.

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

CASES OVER TIME

CDC and partners are working to assess and address why cases of ESBL-producing Enterobacteriaceae have increased since 2012.



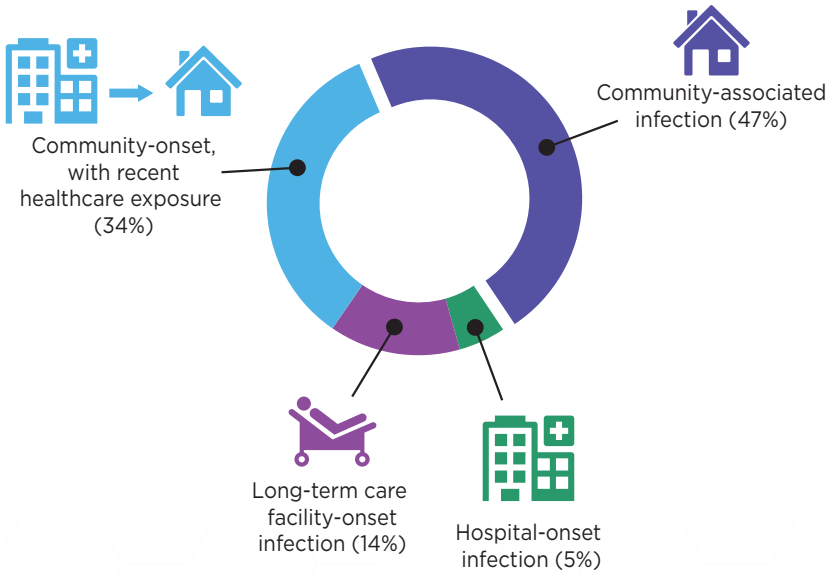
RESISTANCE SPREADS QUICKLY

The Enterobacteriaceae family includes *Escherichia coli (E. coli).* Certain strains (types) of *E. coli,* such as ST131, have quickly spread in the community and among healthcare settings. These strains often cause more severe infections and spread more easily. Additionally, a particular ESBL enzyme, called CTX-M, appears to be spreading in the United States and around the world. The CTX-M enzyme can be shared through DNA (genes) between different Enterobacteriaceae species. When CTX-M and ST131 combine, they are a dangerous combination that can rapidly spread resistance.

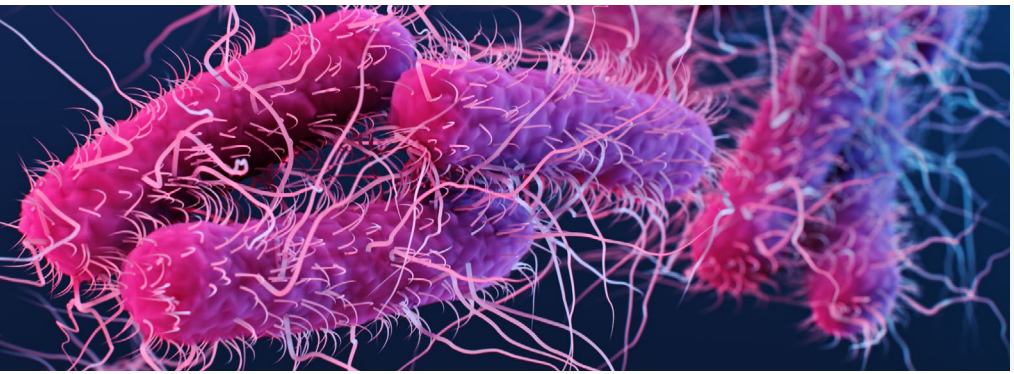
In many cases, even common infections caused by ESBL-producing germs require more complex treatments. Instead of taking oral antibiotics at home, patients with these infections might require hospitalization and IV carbapenem antibiotics. The more we rely on carbapenem antibiotics, the greater the possibility of resistance developing to this important class of antibiotics.

WHERE INFECTIONS CAN HAPPEN

Almost half of ESBL-producing Enterobacteriaceae infections occur in people who have not had recent inpatient healthcare exposure or an invasive medical procedure. These infections are called community-associated infections.



Data shows infections by epidemiological classification (the setting where patients most likely got the infection based on clinical information).



ONLINE RESOURCES

About Healthcare-associated Infections
www.cdc.gov/hai

CDC Healthcare-associated Infections Guidelines and Recommendations
www.cdc.gov/infectioncontrol/guidelines/index.html