



Cost-estimates of antibiotics in nursing homes range from

**\$38 million** to  
**\$137 million**  
per year.<sup>1</sup>



Residents in nursing homes with higher antibiotic use have a

**24%**  
**increased risk**  
of antibiotic-related harm.<sup>2</sup>



In nursing homes with higher antibiotic use,  
**even residents who do not receive antibiotics are at increased risk**

of indirect antibiotic-related harms due to the spread of resistant bacteria or *C. difficile* germs from other patients.<sup>2</sup>



Core Elements for Antibiotic Stewardship in Nursing Homes

## Creating a Culture to Improve Antibiotic Use in Nursing Homes

### Why is Antibiotic Stewardship Important for Nursing Homes?

- ▶ Antibiotics are some of the most commonly prescribed medications in nursing homes.
  - Over the course of a year, up to 70% of nursing home residents get an antibiotic.
- ▶ Roughly 40% to 75% of antibiotics are prescribed incorrectly.
  - In nursing homes, high rates of antibiotics are prescribed to prevent urinary tract infection (UTI) and respiratory tract infection (RTI). Prescribing antibiotics before there is an infection often contributes to misuse.
  - Often residents are given antibiotics just because they are colonized with (carrying) bacteria that are not making the person sick. Prescribing antibiotics for colonization contributes to antibiotic overuse.
- ▶ When patients are transferred between facilities, for example from a nursing home to a hospital, poor communication between facilities about prescribed antibiotics (e.g., rationale, number of days) plus insufficient infection control practices can result in antibiotic misuse and the spread of antibiotic resistance.
- ▶ Antibiotic-related harms, such as diarrhea from *C. difficile*, can be severe, difficult to treat, and lead to hospitalizations and deaths, especially among people over age 65.
- ▶ Current nursing home regulations (e.g., F-tag 441, F-tag 329, F-tag 428) already include a requirement to review and monitor antibiotic use.

### What Can I Do as a Leader to Improve Antibiotic Use?

- ▶ Share formal statements in support of improving antibiotic use with staff, residents and families.
- ▶ Commit resources for monitoring antibiotic use and providing feedback to staff.
- ▶ Identify and empower the medical director, director of nursing, and/or consultant pharmacist to lead stewardship activities.
- ▶ Have clear policies to improve prescribing practices for staff to ensure patients are not started on antibiotics unless needed.
  - Establish minimum criteria for prescribing antibiotics,
  - Develop facility-specific standards for empiric antibiotic use, based on data from the facility; and
  - Review antibiotic appropriateness and resistance patterns on a regular basis.
- ▶ Print and distribute materials to educate staff, residents and families.
- ▶ Provide access to individuals with antibiotic expertise for support staff accountable for implementing antibiotic stewardship activities.
- ▶ Partner with antibiotic stewardship program leaders at hospitals and infectious diseases consultants in the community.

<sup>1</sup> Strausbaugh LJ, Joseph CL. Burden of Infections in Long-Term Care. *Infect Control Hosp Epidemiol* 2000;21:674-679.

<sup>2</sup> Daneman, N et al. Variability in Antibiotic Use Across Nursing Homes and the Risk of Antibiotic-Related Adverse Outcomes for Individual Residents. *JAMA Intern Med.* 2015; E1-E9.