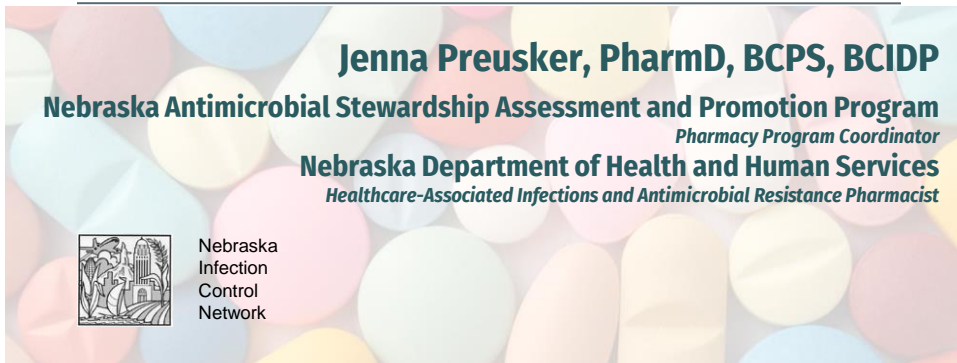# ANTIMICROBIAL STEWARDSHIP IN LONG-TERM CARE FACILITIES:
## Program Infrastructure and Interventions
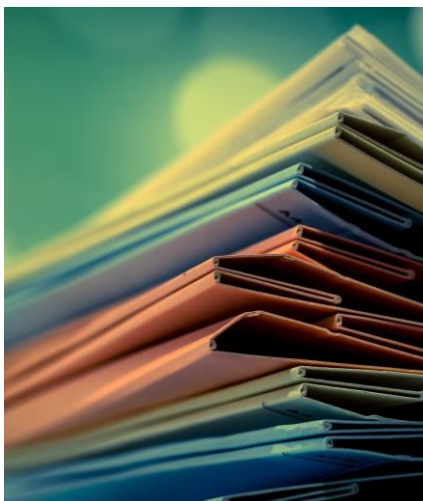
**Jenna Preusker, PharmD, BCPS, BCIDP**
**Nebraska Antimicrobial Stewardship Assessment and Promotion Program**
*Pharmacy Program Coordinator*
**Nebraska Department of Health and Human Services**
*Healthcare-Associated Infections and Antimicrobial Resistance Pharmacist*

Nebraska
Infection
Control
Network

1

# Objectives

1. Understand the importance of antimicrobial stewardship programs in long-term care facilities

2. Recognize the steps required for implementing antimicrobial stewardship program by reviewing the first 4 Core Elements of AS for nursing homes

3. Review the available resources that infection preventionists in long-term care facilities can use to develop an antimicrobial stewardship program

2

**Understand the importance of antimicrobial stewardship programs in long-term care facilities.**
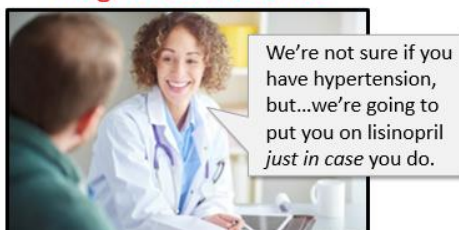
**Objective 1**

3

# Scope of Antibiotic Overuse

- 4.1 million Americans are admitted to nursing homes each year.

- 70% of nursing home residents will receive at least one course of antibiotics every year.

- Up to **75%** of these courses are inappropriate or unnecessary.



Imagine this scenario!

We're not sure if you have hypertension, but...we're going to put you on lisinopril *just in case* you do.
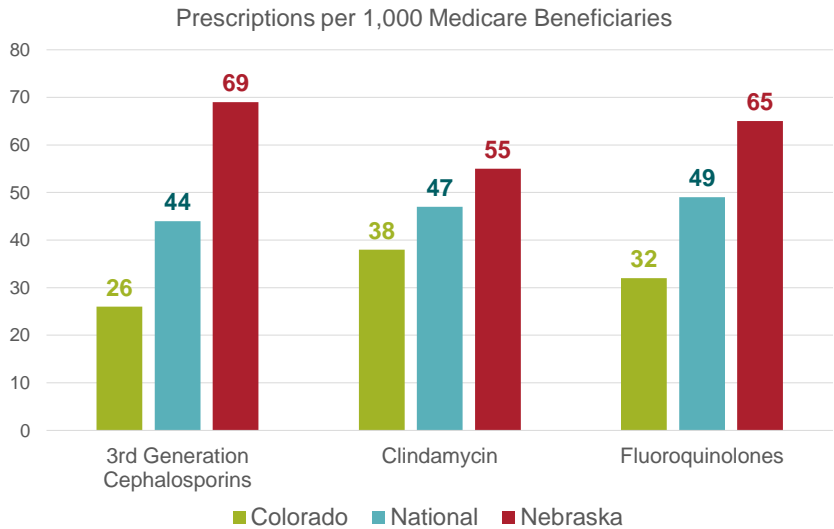
Antibiotic resistance threats in the US, 2013. www.cdc.gov/drugresistance/threat-report-2013/pdf/ar-threats-2013-508.pdf
Antibiotic Prescribing and Use in Hospitals and Long-Term Care. Apr 2017. www.cdc.gov/antibiotic-use/healthcare/
AHRQ Safety Program for Improving Antibiotic Use – Long-Term Care

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## Medicare Part D Antibiotic Prescribing, 2022

Prescriptions per 1,000 Medicare Beneficiaries

| | Colorado | National | Nebraska |
|---|---|---|---|
| 3rd Generation Cephalosporins | 26 | 44 | 69 |
| Clindamycin | 38 | 47 | 55 |
| Fluoroquinolones | 32 | 49 | 65 |

Data source: 2022 publicly available Medicare Part D prescription claims database

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# The 5 Ds of Antimicrobial Stewardship

| Diagnosis | Does the resident truly have an infection that requires antimicrobial therapy? |
|---|---|
| Drug | Is the most likely causative organism of this infection typically susceptible to this drug? |
| Dose | What is the recommended dose for this type of infection, and does it need to be adjusted for renal function? |
| Duration | What is the recommended duration of treatment? |
| De-escalation | Can a narrower antibiotic be used once culture results are available? |

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## How Antibiotic Resistance Happens

*Patients receive antibiotics*

*If antibiotics are continued...*

Infections start when **pathogenic** bacteria outcompete the normal flora, or **good** bacteria

- Both **pathogenic** and **good** bacteria decrease in numbers
- Symptoms resolve

- **Good** bacteria continue to decrease in numbers
- **Pathogenic** bacteria mutate and become **resistant** to survive

*As antibiotics continue even longer...*

*When antibiotic durations are prolonged...*

- **Good** bacteria are severely reduced
- **Resistant** bacteria continue to multiply and may spread to other people or cause recurrent infection

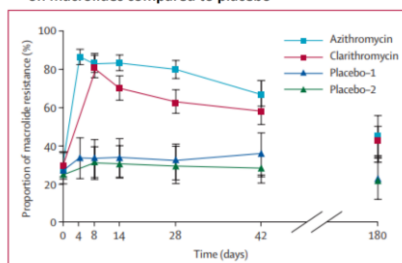**Resistant** bacteria begin to multiply and share mutations with other bacteria

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# Antimicrobial Resistance
### Just a few more days… what's the harm?

Changes in macrolide-resistant S. pneumoniae while on macrolides compared to placebo



Just **4 days** of antibiotic therapy was enough to drive a **3-fold** increase in macrolide resistant *Streptococcus pneumoniae* in throat swabs

In a study of >7,000 ICU patients, **each additional day** of an anti-pseudomonal beta-lactam antibiotic (cefepime, piperacillin/tazobactam, or meropenem) resulted in a **4% increased risk** of developing a new resistant organism.
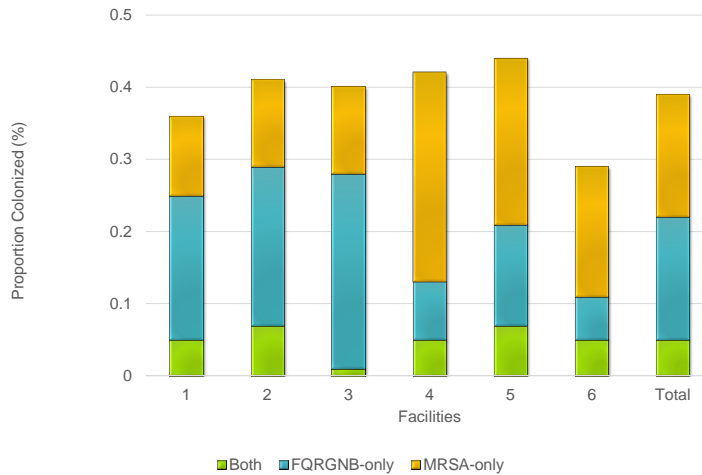
Teshome BF, Vouri SM, Hampton N, Kollef MH, Micek ST. Duration of Exposure to Antipseudomonal β-Lactam Antibiotics in the Critically Ill and Development of New Resistance. Pharmacotherapy. 2019 Mar;39(3):261-270.

Ventilator and Hospital-associated Pneumonia: antibiotics increased resistance **15%** (3 days) to **35%** (10+ days) with no difference in mortality or length of ICU stay

Short-course Empiric Antibiotic Therapy for Patients with Pulmonary Infiltrates in the Intensive Care Unit (atsjournals.org)

Effect of azithromycin and clarithromycin therapy on pharyngeal carriage of macrolide-resistant streptococci in healthy volunteers: a randomised, double-blind, placebo-controlled study - The Lancet

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## LTCFs as Reservoirs for MDROs



FQRGNB: Fluoroquinolone-resistant gram-negative bacteria

MRSA: Methicillin-resistant *Staphylococcus aureus*

Crnich et al. Infect Control Hospital Epidemiol 2012; 33(11):1172-4

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## Role in Regional Dissemination of Multi-Drug-Resistant Organisms

- Outbreak of KPC-producing Enterobacterales studied over a period of one year

- 42 cases were identified

- 24 cases were linked to 1 LTACH

- 75% of rest of the cases were linked to 3 NH

- Successful control requires extensive coordination between acute and long-term care facilities
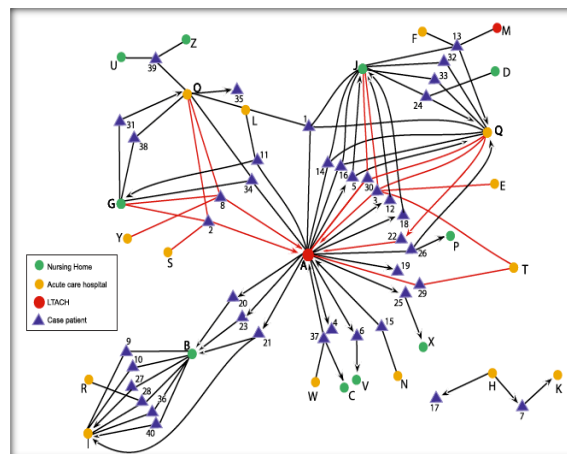


Won SY et al. Clin Infect Dis. 2011 Sep;53(6):532-40.

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# Why Does Antibiotic Resistance Matter?

### Limited Treatment Options

When bacteria are resistant to common antibiotics, we may need to use more expensive or less effective drugs that often have worse side effects.

### Longer Recovery Time

Infections that don't respond to antibiotics can lead to hospital admissions with longer hospital stays and more severe illness.

### Spread to Others

Resistant bacteria can spread to other people, creating even bigger problems in long-term care settings.

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# How common are antibiotic-related adverse events?

Antimicrobials are the 2nd most frequent cause of medication-related adverse drug events leading to emergency department visits

In hospitalized patients who receive ≥ 24 hours of antibiotics,

- 1 in 5 will experience an ADE
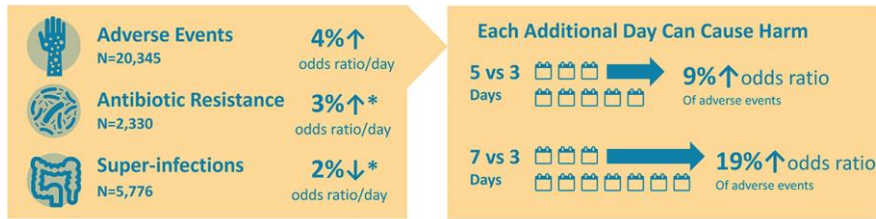- 1 in 3 occur after hospital discharge

Shehab N, Lovegrove MC, Geller AI, Rose KO, Weidle NJ, Budnitz DS. US Emergency Department Visits for Outpatient Adverse Drug Events, 2013-2014. JAMA. 2016 Nov 22;316(20):2115-2125.
Tamma PD, Avdic E, Li DX, Dzintars K, Cosgrove SE. Association of Adverse Events With Antibiotic Use in Hospitalized Patients. JAMA Intern Med. 2017 Sep 1;177(9):1308-1315

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## Estimating Daily Antibiotic Harms
### Umbrella Review and Meta-Analysis

Public Health Ontario | Santé publique Ontario

🔍 **35** Systematic Reviews      ⚖️ **71** Short vs. Long Antibiotic Duration Trials

**92%** studies evaluated respiratory tract and urinary tract infections

**23,174** patients evaluated

**Adverse Events** N=20,345 — **4%↑** odds ratio/day

**Antibiotic Resistance** N=2,330 — **3%↑ \*** odds ratio/day

**Super-infections** N=5,776 — **2%↓ \*** odds ratio/day

**Each Additional Day Can Cause Harm**

**5 vs 3 Days** → **9%↑** odds ratio Of adverse events

**7 vs 3 Days** → **19%↑** odds ratio Of adverse events

\* Non-statistically significant difference

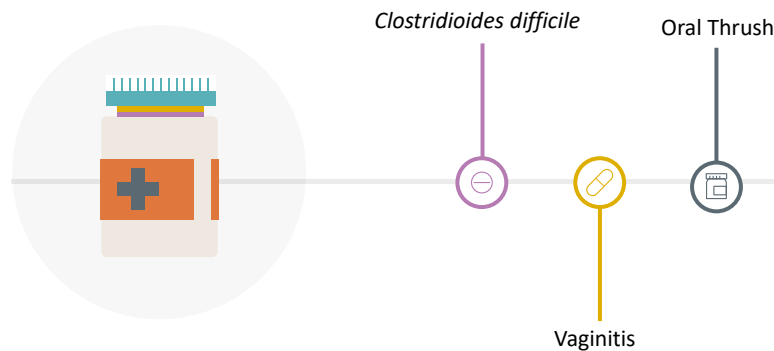Source: Curran J et al. Estimating daily antibiotic harms: An Umbrella Review with Individual Study Meta-analysis Clin Micro Infect. 2021

Public Health Ontario

Curran J. *Clin Microbiol Infect.* 2022;28(4)

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# Secondary Infections

*Clostridioides difficile*     Oral Thrush

Vaginitis

**Antimicrobials are non-selective and kill good bacteria that are protective, potentially resulting in secondary infections.**

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## ASCP/AMDA Top 10 Particularly Dangerous Drug Interactions in LTC

**1** Warfarin
Fluoroquinolones

**2** Warfarin
SMZ/TMP

**3** Warfarin
Macrolides

**4** Theophylline
Fluoroquinolones

- Clinical significance and potential to cause harm
- Frequency with which the interaction occurs
- Frequency of prescribing in nursing homes

Top 10 Particularly Dangerous Drug Interactions in PALTC | AMDA | The Society for Post-Acute and Long-Term Care Medicine

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## Social Factors Influence Antibiotic Prescribing

Fears, risks, fatigue

Other prescribers outside of long-term care facilities

Communication among staff

Resident and family pressure

Create a Culture of Safety Around Antibiotic Prescribing | Agency for Healthcare Research and Quality (ahrq.gov)

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## Long Duration of Treatment Influenced by PROVIDER PREFERENCE > Patient Characteristics
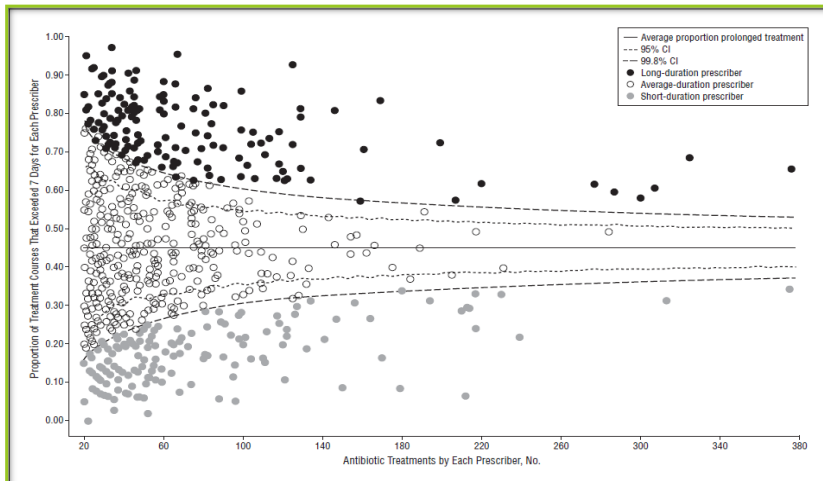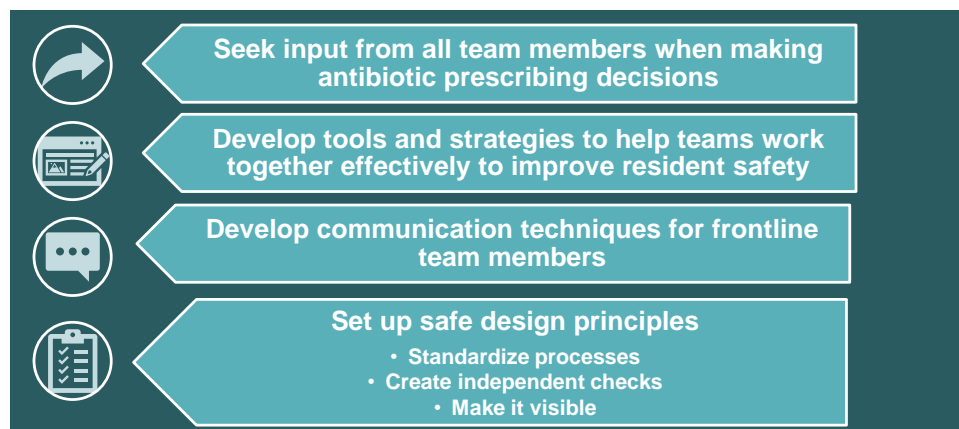


**Figure 2.** Funnel plot to determine whether variability in average treatment durations by individual prescribers is greater than can be expected by random chance. The CIs for the funnel plot are generated using exact binomial CIs for the expected proportion of treatments exceeding 7 days (standardized to the population average). Each dot indicates 1 of the 699 prescribers responsible for more than 20 individual antibiotic treatments. There were more long-duration outlier prescribers above 3-SD CIs (black dots) and short-duration outlier prescribers below 3-SD CIs (gray dots) than expected by random chance.

Daneman N et al. JAMA Intern Med. 2013 Apr 22;173(8):673-82

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# Creating a Culture of Safety Around Antibiotic Prescribing

**Seek input from all team members when making antibiotic prescribing decisions**

**Develop tools and strategies to help teams work together effectively to improve resident safety**

**Develop communication techniques for frontline team members**

**Set up safe design principles**
- Standardize processes
- Create independent checks
- Make it visible

Create a Culture of Safety Around Antibiotic Prescribing | Agency for Healthcare Research and Quality (ahrq.gov)

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## CMS Regulations for Antibiotic Stewardship Programs

§483.80(a)(3) As part of their IPCP program, the facility must establish an antibiotic stewardship program that includes antibiotic use protocols and a system to monitor antibiotic use.

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**Centers for Medicare & Medicaid Services**

**42 CFR Parts 405, 431, 447, 482, 483, 485, 488, and 489**

**[CMS–3260–F]**

**RIN 0938–AR61**

**Medicare and Medicaid Programs; Reform of Requirements for Long-Term Care Facilities**

**AGENCY:** Centers for Medicare & Medicaid Services (CMS), HHS.
**ACTION:** Final rule.

https://www.federalregister.gov/documents/2016/10/04/2016-23503/medicare-and-medicaid-programs-reform-of-requirements-for-long-term-care-facilities

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## Antibiotic Stewardship is a team effort!

ASP development should include leadership support and accountability via the participation of the medical director, consulting pharmacist, nursing and administrative leadership and therefore, the IP should utilize and work collaboratively with these team members to also implement the ASP. While an ASP is a team effort, the IP is responsible for ensuring the program meets the requirements for ASPs (at §483.80(a)(3), F881).

https://www.federalregister.gov/documents/2016/10/04/2016-23503/medicare-and-medicaid-programs-reform-of-requirements-for-long-term-care-facilities

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## IP Participation on Quality Assessment and Assurance (QAA) Committee

- The IP must be a participant on the facility's QAA committee and report on the IPCP and on incidents (e.g., healthcare-associated infections (HAIs)) identified under the program on a regular basis.
- Reporting should include
  - Facility process and outcome surveillance
  - Outbreaks (ongoing and any since the last meeting) and control measures
  - Occupational health communicable disease illnesses (e.g., TB, influenza)
  - **Antibiotic Stewardship Program (ASP)** related to antibiotic use and resistance data.

https://www.federalregister.gov/documents/2016/10/04/2016-23503/medicare-and-medicaid-programs-reform-of-requirements-for-long-term-care-facilities

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**Recognize the steps required for implementing antimicrobial stewardship program by reviewing the first 4 Core Elements of AS for nursing homes**

**Objective 2**

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## CDC Core Elements of Antibiotic Stewardship in LTC

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## Core Element #1
## Leadership Commitment

| | |
|---|---|
| 🗒 | Written statement of support for an antimicrobial stewardship program |
| 👥 | Outline duties of the ASP team members |
| 💬 | Communicate expectations with the nursing staff and prescribing providers |
| 📱 | Create culture that promote appropriate antibiotic use |

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## Slide 25

[Facility Logo]

**FROM:** [Executive Director, Medical Director, Director of Nursing, etc.]

**DATE:** [Date]

**RE:** Antimicrobial Stewardship Program

Antibiotics are among the most commonly prescribed medications within long-term care facilities. However, misuse of antibiotics can lead to undesirable outcomes including emergence of multidrug resistant pathogens, development of *Clostridium difficile* infections, adverse drug reactions, increased mortality, and higher costs.

As part of the continuing commitment to provide high quality care to all our residents, the leadership team of [facility name] has created an Antibiotic Stewardship Program (ASP). This program will promote appropriate use of antibiotics in our facility. The overall goal of ASP is to prevent undesirable outcomes related to antibiotic misuse by optimizing the selection of drug, dose, route, and duration of therapy. Antibiotic use protocols and systems to monitor antibiotic use will be implemented to achieve ASP goals.

The ASP will be a part of the facility's Infection Prevention and Control Program. Infection preventionist will play a central role and the key leaders accountable for the program include [Medical Director, Director of Nursing, Consultant Pharmacist, etc.]. This multidisciplinary team will regularly review appropriateness of antibiotic courses and make recommendations for adjustment in practice where necessary, establish new or revise existing protocols relevant to appropriate antibiotic prescribing, monitor and report patterns of antibiotic use and resistance; and provide education on responsible use of antibiotics.

The success of this initiative requires the full participation and support of those who prescribe, prepare, administer, and receive antimicrobial therapy. The facility will provide adequate staffing and resources to support the functions and goals of the ASP. ASP team will engage prescribing providers, staff, residents, and residents' families to ensure that antibiotic use protocols can be implemented smoothly. Facility leadership is confident that with the help of frontline staff, support of prescribing providers, understanding of resident and families, and guidance of ASP team, we will improve quality of care and minimize untoward consequences of antibiotic therapy.

NEBRASKA ANTIMICROBIAL STEWARDSHIP ASSESSMENT AND PROMOTION PROGRAM  **ASAP**

# Sample Leadership Support Statement

Tools and Templates for Long Term Care - ASAP (nebraskamed.com)

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## Slide 26

# Leadership Commitment

- Leadership support is the most reported barrier to patient safety improvement projects

- A senior executive has the ability:
  - To impact structure of an antimicrobial stewardship program
  - To push consistency across the system
  - To provide material resources and finances
  - Create culture that promotes appropriate antibiotic use messaging, education, celebration of improvement

https://www.cdc.gov/antibiotic-use/core-elements/nursing-homes.html
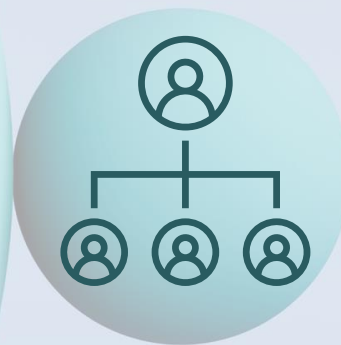
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# Engaging Your Leadership

- Make sure you clarify requests
  - What exactly is your team asking for?
- Be specific
- Be prepared
- Have evidence to support your requests
  - What is the magnitude of the problem?
- Anticipate obstacles and solutions
  - Time
- Give a reasonable time frame to address your concerns



Microsoft stock image

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# Core Element #2
# Accountability

| | |
|---|---|
|  | Empower leaders of the program<br>Medical Director, Director of Nursing, Consultant Pharmacist, IP |
|  | Provide dedicated time for ASP activities |
|  | Make the team accountable |
|  | Develop partnerships with consultant laboratory, local and state health departments, and Nebraska ASAP |

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## Antibiotic Stewardship Committee/Team

- Required Committee Membership
  - Infection Preventionist
  - Medical Director or a designated lead physician
  - Director of Nursing or Assistant Director of Nursing
  - Consultant Pharmacist

- Optional Committee Membership
  - Administrator
  - Prescribing Provider (Attending Physician, Nurse Practitioner or Physician Assistant)
  - Nurse representative
  - Nurse Aid representative
  - Allied Health Professional
  - Representative from the Resident and Family Council

> Committee should meet **at least quarterly**, and review policy/program annually and as needed
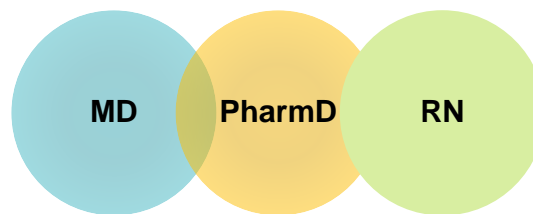
29

## Forming a Team

- **Desired Qualities:**
  - **Basic knowledge of antibiotics**
  - **Interest in a leadership role**
  - **Respect of their peers**
  - **Receptive of feedback**
  - **Ability to work in teams to solve problems (quality improvement)**
  - **Interest in and devotion to improving antibiotic use**

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## Delineating Roles

- Medical director sets **standards for antibiotic prescribing**
- Consulting pharmacist can help **provide oversite** through QI activities, reviewing medications, monitoring for adverse events, reporting use data
- Infection preventionist has **knowledge and expertise** to obtain outcomes and perform QI projects

MD  PharmD  RN

https://www.cdc.gov/antibiotic-use/core-elements/nursing-homes.html

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[Facility Logo]

| SUBJECT: | Antimicrobial Stewardship Program |
| POLICY NO.: | [Policy number] |
| EFFECTIVE DATE: | [Policy effective date] |
| LAST REVISION DATE: | [Date of last policy revision] |
| RELEVANT REGULATION: | CFR § 483.80(a)(1)-(4) |
| APPROVED BY: | [Approving individual or committee] |

**Institutional Policy for LTCF ASP**

b. Monitor facility antimicrobial use, antimicrobial resistance patterns, and compliance to ASP-related processes
c. Report outcomes of ASP activities to QAPI Committee and healthcare workers
d. Identify opportunities for improvement in facility antibiotic prescribing practices along with developing and implementing action plans to make these improvements
e. Provide education to healthcare workers, residents and families on appropriate use of antimicrobial agents

**Policy Statement:**
The goal of the Antimicrobial Stewardship Program (ASP) is to promote the appropriate use of antimicrobials in order to maximize treatment outcome and minimize unintended consequences of antimicrobial therapy. The ASP aims to improve antibiotic prescribing practices through the development and implementation of antibiotic use protocols and a system to monitor antibiotic use.

**Structure:**
The Antimicrobial Stewardship Committee has been established to provide support and oversee activities of the ASP. This committee and the ASP will be part of the Infection Prevention and Control Program (IPCP). The IPCP will directly report all ASP-related activities and outcomes to the Quality Assurance and Performance Improvement (QAPI) Committee. QAPI Committee will in turn report all ASP activities and outcomes to nursing staff, prescribing clinicians, and other relevant staff.

**Procedure:**
1. Membership of the Antimicrobial Stewardship Committee
   a. Medical Director (required)
   b. Director of Nursing (required)
   c. Infection Preventionist (required)
   d. Consultant Pharmacist (required)
   e. Additional member as deemed appropriate by the Antimicrobial Stewardship Committee which may include Nurse representative, Nursing Aide representative, QAPI Director, Administrator or other healthcare workers

2. Meetings
Antimicrobial Stewardship Committee will meet at least quarterly to review ASP-related activities and outcomes. The committee will also report its activities along with antibiotic use and resistance data to QAPI Committee at least on an annual basis.

3. Responsibilities
   a. Ensure appropriate use of antimicrobials through development and implementation of institutional policies, procedures, treatment algorithms, or other relevant initiatives

NEBRASKA ANTIMICROBIAL STEWARDSHIP ASSESSMENT AND PROMOTION PROGRAM  ASAP

## Develop an Antibiotic Stewardship Policy

https://asap.nebraskamed.com/long-term-care/tools-templates-long-term-care/

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## Core Element #3
## Drug Expertise

Establish access to individuals with antibiotic expertise to implement antibiotic stewardship activities

**Consultant pharmacist who has received specialized infectious diseases or antibiotic stewardship training**

Antibiotic stewardship program leads at the hospitals within your referral network

Develop relationships with infectious disease consultants in your community

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# Consultant Pharmacist

**The Antibiotic Stewardship Program in Relation to Pharmacy Services**
The assessment, monitoring, and communication of antibiotic use shall occur by a licensed pharmacist in accordance with §483.45(c), F756, Drug Regimen Review. A pharmacist must perform a medication regimen review (MRR) at least monthly, including review of the medical record and identify any irregularities, including unnecessary drugs.

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## 5 Ways Consultant Pharmacists can Contribute to Antibiotic Stewardship

**1. Ensure documentation of the indication for every antibiotic order**

- Antibiotic selection/appropriate duration during the antibiotic review process
- Alert the provider if the indication for an antibiotic order is not documented

**2. Use the shortest effective antibiotic duration**

- Guidelines are available for common infectious diseases
- Contact the provider if the length of therapy exceeds the recommended duration

**3. Improve fluoroquinolone prescribing practices**

- Due to the risk of serious adverse events, fluoroquinolones should be used only when other treatment options are unavailable
- When possible, discuss alternatives to fluoroquinolones with providers

**4. Avoid treatment of asymptomatic bacteriuria**

- In most cases, bacteria in the urine with no symptoms should not be treated
- Advocate for the use of protocols to properly evaluate signs and symptoms before testing for UTI and starting antibiotics

**5. Limit the use of prolonged antibiotic prophylaxis for UTI**

- There is no clear evidence supporting prolonged antibiotic use for prevention of recurrent UTI in nursing home residents with asymptomatic bacteriuria. Antibiotic use can cause adverse drug events and contribute to antibiotic resistance
- Identify residents on prolonged antibiotic therapy for prevention of UTI and discuss with providers to ensure that the benefits outweigh the risks of adverse drug events

5 Ways Consultant Pharmacists Can Be Antibiotics Aware (cdc.gov)

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## Core Element #4
## Action

| | |
|---|---|
| 📄 | Policies that support optimal antibiotic use |
| 👥 | Broad interventions - Infection evaluation and communication |
| 💬 | Infection and syndrome specific interventions |
| 💊 | Pharmacy interventions |

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## Choosing Interventions

- Facilities differ greatly in:
  - Types of prescribers
  - Culture
  - Patient populations
  - Resistance patterns
  - Resources

- Keep initial ASP initiatives simple!
  - Small projects focused on obvious problems that are likely to lead to early and measurable successes
  - These initiatives should be designed to improve patient care and to promote positive relationships
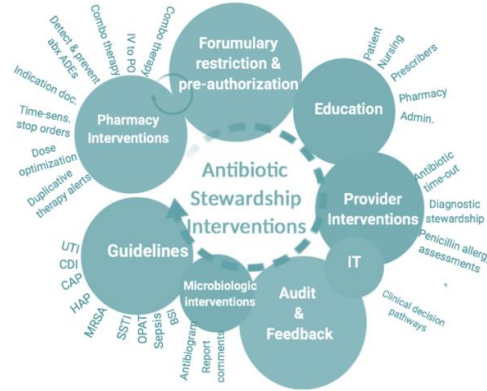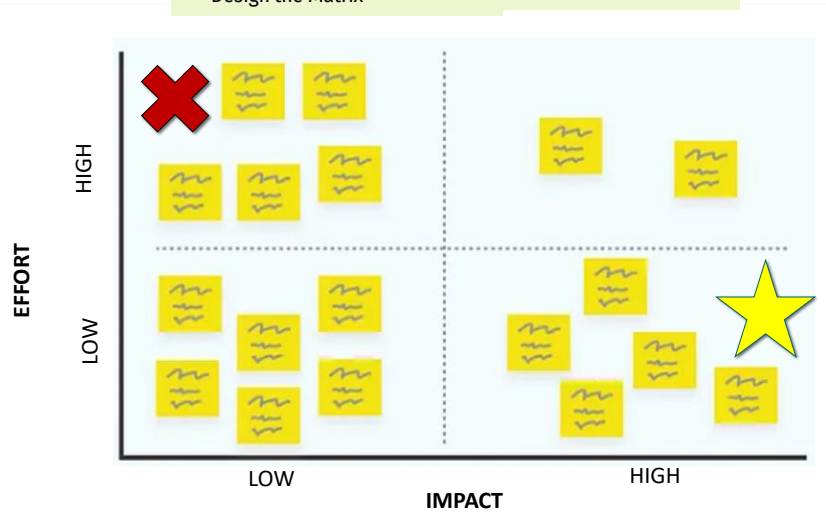


https://www.cdc.gov/antibiotic-use/core-elements/hospital.html#_ENREF_30
Image from: http://www.kdheks.gov/epi/download/KS_ABX_Stewardship_CAHs_Toolkit.pdf

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# Impact vs. Effort (Prioritization) Matrix

- ✓ Get everyone together
- ✓ Identify goals and objectives
- ✓ Design the Matrix
- ✓ Share your ideas
- ✓ Designate the tasks
- ✓ Create an Action Plan



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## Choosing the Right Intervention

| Target for Intervention | Intervention |
|---|---|
| Antibiotics being prescribed even when clinical criteria for infection are not met | • SBAR tool implementation |
| Diagnostic tests being sent unnecessarily | • SBAR tool implementation<br>• Use of decision-making algorithm |
| Broad spectrum agent being used unnecessarily | • Develop facility-specific guidance<br>• Implement antibiotic time-out |
| Bug-drug mismatches | • Antibiogram use for empiric treatment |
| Continuation of empiric antibiotics even after infection ruled out | • Implement antibiotic time-out |
| Inappropriate length of therapy | • Develop facility-specific guidance<br>• Implement antibiotic time-out |
| Unnecessary antibiotics being started by outside providers | • Implement mandatory review of necessity by medical directors for all outside antibiotic orders<br>• Implement antibiotic time-out |
| Unnecessary antibiotics being started by specific providers | • Consider providing specific feedback to the providers |

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## 12 Common Situations in Which Systemic Antibiotics are Generally Not Indicated

- Positive urine culture in an asymptomatic resident

- Urine culture ordered solely because of change in urine appearance

- Nonspecific symptoms or signs not referable to the urinary tract, such as falls or mental status change (with or without a positive urine culture)

- Upper respiratory tract infection (common cold)

- Bronchitis or asthma in a resident who does not have COPD

- "Infiltrate" on chest x-ray in the absence of clinically significant symptoms

- Suspected or proven influenza in the absence of secondary infection (but DO treat influenza with antivirals)

- Respiratory symptoms in a resident with advanced dementia, on palliative care, or at the end of life

- Skin wound without cellulitis, sepsis, or osteomyelitis (regardless of culture result)

- Small (<5cm) localized abscess without significant surrounding cellulitis (use drainage only)

- Decubitus ulcer in a resident at end of life

- Acute vomiting and/or diarrhea in the absence of a positive culture for shigella or salmonella or a positive toxin assay for *Clostridioides difficile*

www.ahrq.gov

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## Tool: Implementation Planning

| Agenda Topic | Amount of Time | Action Items | Person Responsible |
|---|---|---|---|
| 1. Overview of purpose of an Antimicrobial Stewardship Program | 5 minutes | | |
| 2. Overview of toolkit/tools to be implemented | 10 minutes | | |
| 3. Discussion of changes to workflow<br>(a) Step-by-step discussion of what toolkit use would look like in nursing home (e.g., where blank forms are kept, how they will be handled in the workflow, where will completed forms be kept, etc.)<br>(b) Determine individuals responsible for specific processes and steps<br>(c) Identify potential barriers and how to address them | 20 minutes | | |
| 4. Start-up activities: Identify activities to be carried out to use the tools (e.g., creation of new forms, data collection, meetings or letters for communication, trainings, etc.) | 10 minutes | | |
| 5. What is a realistic timeline for starting the program? This estimate should consider time for training, developing policies, and informing others (such as the prescribing clinicians and labs). | 5 minutes | | |
| 6. Schedule monthly team meeting to review progress and address questions/problems | 5 minutes | | |
| 7. Identify the next steps and agenda for next meeting | 5 minutes | | |

https://www.ahrq.gov/sites/default/files/wysiwyg/nhguide/3_TK1_T4-Implementation_Planning_Sample_Agenda_final.pdf

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**Review the available resources that infection preventionists in long-term care facilities can use to develop an antimicrobial stewardship program**

**Objective 3**

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# CDC Core Elements of Antibiotic Stewardship for Nursing Homes

**Leadership commitment**
Demonstrate support and commitment to safe and appropriate antibiotic use in your facility

**Accountability**
Identify physician, nursing and pharmacy leads responsible for promoting and overseeing antibiotic stewardship activities in your facility

**Drug expertise**
Establish access to consultant pharmacists or other individuals with experience or training in antibiotic stewardship for your facility

**Action**
Implement **at least one** policy or practice to improve antibiotic use

**Tracking**
Monitor **at least one process** measure of antibiotic use and **at least one outcome** from antibiotic use in your facility

**Reporting**
Provide regular feedback on antibiotic use and resistance to prescribing clinicians, nursing staff and other relevant staff

**Education**
Provide resources to clinicians, nursing staff, residents and families about antibiotic resistance and opportunities for improving antibiotic use

Core Elements of Antibiotic Stewardship for Nursing Homes | CDC

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# Program Toolkits
# AHRQ – Agency for Healthcare Research & Quality

**AHRQ** Agency for Healthcare Research and Quality

Topics ˅    Programs ˅    Research ˅    Data ˅    Tools ˅

Home > Antibiotic Stewardship Toolkits > Long-Term Care Toolkit

Create a culture of safety around antibiotic prescribing

Develop and improve your stewardship program

Apply the Four Moments framework for all patients receiving antibiotics

Learn best practices for common infectious syndromes

**Improve antibiotic prescribing**
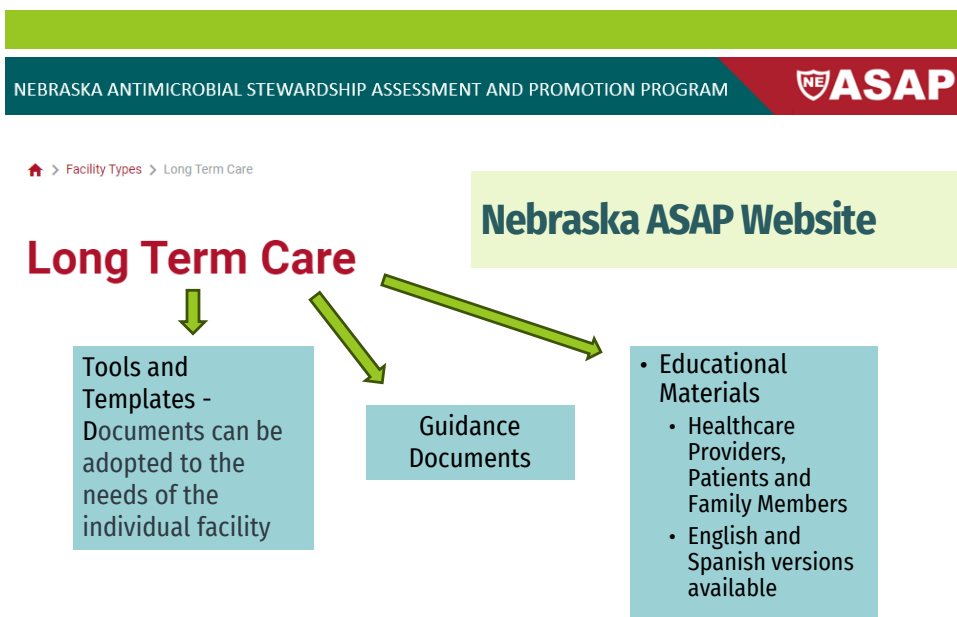
Toolkit To Improve Antibiotic Use in Long-Term Care | Agency for Healthcare Research and Quality (ahrq.gov)

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[For Nursing Homes | Rochester Patient Safety Collaborative](#)

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NEBRASKA ANTIMICROBIAL STEWARDSHIP ASSESSMENT AND PROMOTION PROGRAM  ▦ASAP

🏠 > Facility Types > Long Term Care

## Long Term Care

**Nebraska ASAP Website**

Tools and Templates – Documents can be adopted to the needs of the individual facility

Guidance Documents

- Educational Materials
  - Healthcare Providers, Patients and Family Members
  - English and Spanish versions available

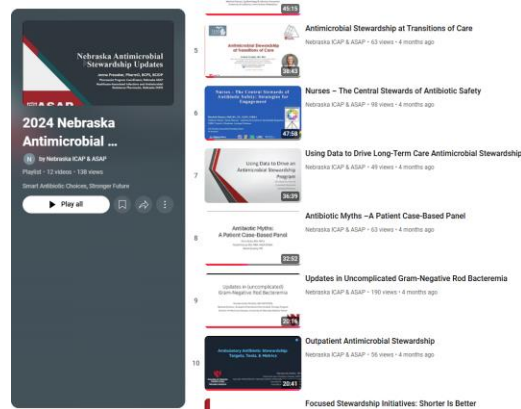[https://asap.nebraskamed.com/facilities/long-term-care/](https://asap.nebraskamed.com/facilities/long-term-care/)

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- Nebraska Antimicrobial Stewardship Summit session recordings available on the Nebraska ASAP YouTube channel
- 2024 Nebraska Antimicrobial Stewardship Summit - YouTube



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## Summary

- Implementing Antimicrobial Stewardship in long-term care facilities is a team effort. Infection Preventionists have a central role in establishing and promoting these programs in the nursing homes.

- CDC Core Elements for ASP in Nursing Homes provide the framework for establishing a successful program.

- There are numerous different ASP interventions, and facilities should tailor interventions to their specific needs.

- Free resources and tools are available to help facilities implement various components of core elements.

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# THANK YOU!
## QUESTIONS/COMMENTS?

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