

WASHINGTON STATE DEPARTMENT OF HEALTH

Nursing Home Antimicrobial Stewardship Toolkit



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This document is intended to provide guidance, but not to replace clinical judgement. Facilities are responsible for knowing the latest regulatory and clinical guidance.

Introduction



The purpose of this guide is to help nursing homes starting or advancing their antimicrobial stewardship program and is part of a larger [Nursing Home Antimicrobial Stewardship Toolkit](#).

The intended audience for this document is nursing home leadership and staff involved in antimicrobial stewardship. The Washington State Department of Health Antimicrobial Stewardship team welcomes feedback on how to make this document better. Please write to AMS@doh.wa.gov with suggestions.

A note to readers on the use of the terms *antibiotic* and *antimicrobial*:

- We have used the term *antimicrobial* throughout this document, which refers to all anti-infectives including antibiotics, antivirals, antifungals and antiparasitics.
- We use the term *antibiotic* when referring only to antibiotics, medications to treat bacterial infections. Most antimicrobial stewardship programs focus initially on antibiotic use but should broaden their scope to promote safe and optimal use of other anti-infectives as their programs advance.

SECTION 1

Information Technology (IT) Resources





Making the Most of your Information Technology (IT) Resources

There are many benefits to using IT to support an antimicrobial stewardship (AS) program:

- a. Automated AS interventions can reduce manual processes and free up staff for other tasks
- b. Centralized distribution of resources such as AS education
- c. Order sets can ensure that orders are correct and contain all necessary elements
- d. Ability to generate automated reports

Get to know the facility's main IT resources

- a. IT help desk
- b. Electronic health record (EHR) help desk
- c. Company Intranet page
- d. Processes for requesting changes to your EHR
- e. Learning management system (LMS)
- f. Consultant pharmacist

SECTION 1: INFORMATION TECHNOLOGY RESOURCES

Ask your IT resource these questions when you launch an AS initiative:

- a. How can my EHR help me accomplish my AS goals?
- b. Do reports already exist in my EHR that can help me to track antibiotic use measures for my AS program? If not, can we modify reports currently available in the EHR to track the needed measure?
 - See [The Core Elements of Antibiotic Stewardship for Nursing Homes – Appendix C: Data Sources, Elements, and Measures for Tracking Antibiotic Use in Nursing Homes](#)
- c. Can my pharmacy generate antibiotic prescribing reports?
- d. Can I build or modify order sets in my EHR, and what is the process?
- e. Does an order set already exist that can help clinicians and nurses place antibiotic orders correctly?
- f. Can my reports run automatically on specific days/times?
- g. Can I distribute resources to clinical staff via my company's Intranet?
- h. Can we build notification pop-ups into certain orders to remind physicians of AS goals?
- i. Can my learning management system (LMS) help me educate clinical staff on our new AS initiative?
- j. Can I create my own training modules to upload to our LMS?
- k. Can my EHR require documentation of antimicrobial indication?

NOTE: *There may sometimes be additional costs from your EHR vendor for certain interventions. Please work with your leadership to determine if an intervention is right for your facility.*

SECTION 2

Leadership Commitment and Accountability



Tips for Obtaining Leadership Commitment and Accountability

Per the CMS State Operations Manual:

“[The antibiotic stewardship program development] should include leadership support and accountability via the participation of the medical director, consulting pharmacist, nursing and administrative leadership, and individual with designated responsibility for the infection control program if different.”

Examples of how leaders can support the antimicrobial stewardship (AMS) program:

Put stewardship duties in job descriptions and annual performance reviews

We strongly encourage prioritizing this intervention.

Include dedicated time specifically for stewardship duties in each job description.

See the section titled “How to Put Stewardship in a Job Description” [on page 13](#) for suggested wording and processes.

Write statements communicating expectations for AMS

This toolkit contains [a letter to providers](#) that can be signed by the medical director and/or administrator.

The letter can be disseminated in a hard-copy format or via email.

Appoint an AMS Champion¹

Consider appointing a senior executive leader to serve as a point of contact or “champion”¹ for the stewardship program to help ensure that the program has resources and support to accomplish its mission.

See the section titled “Putting Stewardship in a Job Description” for suggested wording.

Provide resources¹ (staffing, IT)

IT solutions can streamline workflows and reduce staff workload, freeing them up to do more critical tasks.

SECTION 2: LEADERSHIP, COMMITMENT, AND ACCOUNTABILITY

Reference:

1. CDC. Core Elements of Hospital Antibiotic Stewardship Programs [Internet]. Centers for Disease Control and Prevention. Atlanta, GA: US Department of Health and Human Services; 2019 [cited 2022 Nov 3]. Available from: <https://www.cdc.gov/antibiotic-use/core-elements/hospital.html>

Obtaining Buy-in from Stakeholders: the “Why” Behind the “What”

- a. Share the “Antibiotic Stewardship is a Regulatory Requirement” and “Antimicrobial Stewardship is a Quality Improvement Initiative” portions of this document with your leadership and clinical staff.
 - Note: While this document frequently uses the term “antimicrobial stewardship,” it is important to note that only antibiotic stewardship is required by Centers for Medicare and Medicaid Services (CMS). See the introduction for more information.
- b. Share the “Antimicrobial Stewardship is a Medication Safety Initiative” and “Antimicrobial Stewardship is a Public Health Initiative” portions of this document with your clinical staff and providers.

Antibiotic Stewardship is a Regulatory Requirement

CMS Section §483.80(a)(3)

- a. **“Infection prevention and control program.** The facility must establish an infection prevention and control program (IPCP) that must include, at a minimum, the following elements:”
 - i. “An antibiotic stewardship program that includes antibiotic use protocols and a system to monitor antibiotic use.”



CMS State Operations Manual:

- a. The intent of this regulation is to ensure that the facility:
 - i. Develops and implements protocols to optimize the treatment of infections by ensuring that residents who require an antibiotic are prescribed the appropriate antibiotic;
 - ii. Reduces the risk of adverse events, including the development of antibiotic-resistant organisms, from unnecessary or inappropriate antibiotic use; and
 - iii. Develops, promotes, and implements a facility-wide system to monitor the use of antibiotics.

Joint Commission Standard MM.09.01.01:

- a. Requires that the facility has a program which is compliant with the CDC’s *Core Elements of Antibiotic Stewardship for Nursing Homes*



Antimicrobial Stewardship is a Medication Safety Initiative

- 20% of patients prescribed an antibiotic will suffer from a side effect.¹
- Some of these side effects can be severe. Examples:
 - a. Amoxicillin/clavulanate is the most frequent cause of idiosyncratic drug-induced liver injury in the US Drug-Induced Liver Injury (DILIN) registry.²
 - b. Fluoroquinolones can cause altered mental status in the elderly and have been associated with psychosis, hallucinations, convulsions, hypoglycemia, and hyperglycemia.³
 - c. Beta-lactam use may be linked to kidney stone development.⁴
 - d. Sulfamethoxazole-trimethoprim can interact with blood thinners. It may also interact with certain blood pressure medications to lead to high potassium levels that can cause irregular heart rhythms and potentially death.⁵
 - e. Doxycycline can cause phototoxic skin reactions.⁶
 - f. Azithromycin can lead to irregular heart rhythms that may increase the risk of cardiovascular death.⁷
- Antibiotics are responsible for almost 1 in 5 emergency department visits for adverse drug reactions.⁸
- Side effects from antibiotics can confound a physician's diagnosis, which may lead to unnecessary testing and increased lengths of stay.
- Side effects may be prevented or mitigated when AS principles are used.

Antimicrobial Stewardship is a Public Health Initiative

- We are entering an age when some bacterial infections have no effective treatments. Antimicrobial resistance is already here.
 - a. In the US, more than 2.8 million antimicrobial-resistant infections occur each year.¹⁰
 - b. Of those cases, 35,000 die¹⁰
 - c. These numbers are predicted to increase.¹⁰
- Resistant bacteria may mean that certain patient populations will be left very vulnerable to significant health risks from routine procedures.¹⁰
 - a. 1.2 million women had a cesarean section in 2017 – a procedure for which prophylactic antibiotics are recommended.¹⁰
 - b. Over 33,000 organ transplants were performed in 2016.¹⁰
 - i. Transplant medicine relies heavily on prophylactic antibiotics due to the high use of immunosuppressant therapies.¹⁰
 - c. About 650,000 people receive outpatient chemotherapy every year.
 - i. Antibiotics are necessary to protect these patients from serious infections such as febrile neutropenia.¹⁰
- 40% - 75% of antibiotics prescribed in long term care settings are considered unnecessary or inappropriate.¹¹
- Overuse of antibiotics during the COVID-19 pandemic caused the US to lose progress in the fight against antimicrobial resistance.
 - a. Resistant hospital-onset infections and deaths both increased at least 15% during the first year of the COVID-19 pandemic.¹²
- New antibiotic development is not keeping pace with the rapid increase in antibiotic resistance.



Antimicrobial Stewardship Can Reduce Staff Workload

- Many urinalyses performed in long term care facilities are unnecessary, leading to waste and increased supply costs for a facility.
- Reducing unneeded urinalyses in your facility can reduce workload on both laboratories and the nursing staff who are required to collect them, freeing them up to do more critical tasks.
- Administering fewer IV antibiotics may decrease costs and free up nursing time for other tasks.
- Supporting your facility's AS program may lead to fewer multi-drug resistant organisms, which in turn means less need for enhanced barrier precautions. This can translate into less work for nursing staff and lower supply costs to the facility.



SECTION 2: LEADERSHIP, COMMITMENT, AND ACCOUNTABILITY

References:

1. Curran J, Lo J, Leung V, et al. Estimating daily antibiotic harms: an umbrella review with individual study meta-analysis. *Clinical Microbiology and Infection: The Official Publication of the European Society of Clinical Microbiology and Infectious Diseases*. 2022;28(4):479-490. doi:10.1016/j.cmi.2021.10.022
2. deLemos AS, Ghabril M, Rockey DC, et al. Amoxicillin–Clavulanate-Induced Liver Injury. *Digestive Diseases and Sciences*. 2016;61(8):2406-2416. doi:10.1007/s10620-016-4121-6
3. Baggio D, Ananda-Rajah M. Fluoroquinolone antibiotics and adverse events. *Australian Prescriber*. 2021;44(5):161-164. doi:10.18773/austprescr.2021.035
4. Joshi S, Goldfarb DS. The use of antibiotics and risk of kidney stones. *Current Opinion in Nephrology and Hypertension*. 2019;28(4):311-315. doi:10.1097/mnh.0000000000000510
5. Antoniou T, Gomes T, Juurlink D, Loutfy M, Glazier R, Mamdani M. Trimethoprim-Sulfamethoxazole–Induced Hyperkalemia in Patients Receiving Inhibitors of the Renin-Angiotensin System. *Archives of Internal Medicine*. 2010;170(12):1045-1049. doi:10.1001/archinternmed.2010.142
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9. Centers for Disease Control and Prevention. About Antimicrobial Resistance. Antimicrobial Resistance. Published December 13, 2021. Accessed September 23, 2022. <https://www.cdc.gov/drugresistance/about.html>
10. Centers for Disease Control and Prevention. Antibiotic Resistance Threats in the United States. US Department of Health and Human Resources; 2019:11-12. Accessed September 23, 2022. <https://www.cdc.gov/drugresistance/pdf/threats-report/2019-ar-threats-report-508.pdf>
11. Centers for Disease Control and Prevention. The Core Elements of Antibiotic Stewardship for Nursing Homes. US Department of Health and Human Services; 2015:4. Accessed September 23, 2022. <https://www.cdc.gov/antibiotic-use/core-elements/pdfs/core-elements-antibiotic-stewardship-H.pdf>
12. Centers for Disease Control and Prevention. COVID-19: U.S. Impact on Antimicrobial Resistance, Special Report 2022. US Department of Health and Human Resources; 2022:6. Accessed September 23, 2022. <https://www.cdc.gov/drugresistance/pdf/covid19-impact-report-508.pdf>

Putting Stewardship in a Job Description

- Advantages of having antimicrobial stewardship (AS) duties in job descriptions:
 - Ensures that personnel are aware of their role in the program and are evaluated on performance of those tasks.
 - Provides continuity in the event of staff turnover, as new staff will be aware of their role in your facility's AS program from their very first day.
- **We strongly recommend implementing this action in your facility.**
- Consider dedicating time in each full-time equivalent (FTE) specifically to stewardship duties.
- Work with your HR department to integrate stewardship into job descriptions and annual performance reviews.
- For consultants, if possible, negotiate contracts to include stewardship responsibilities.
- See sample language for job descriptions or contracts in the tables below. Modify the language for your facility's specific needs.

Facility Staff Positions Sample Language

Director of Nursing¹	<p>Establish standards for nursing staff to assess, monitor, and communicate changes in a resident's condition that could impact the need for antimicrobials.</p> <p>Use their influence as nurse leaders to help ensure antimicrobials are prescribed only when appropriate.</p> <p>Educate front line nursing staff about the importance of antimicrobial stewardship and explain policies in place to improve antimicrobial use.</p>
C-Suite Executive	Supports the facility's antimicrobial stewardship program

SECTION 2: LEADERSHIP, COMMITMENT, AND ACCOUNTABILITY

Medical Director¹

Works with the facility's consultant pharmacist to establish goals for the antimicrobial stewardship program.

Reviews antibiotic use data and ensure best practices (e.g., the right drug at the right dose for the right amount of time) are followed.

Sets standards for antimicrobial prescribing practices for all healthcare providers prescribing antimicrobials, in partnership with the consultant pharmacist.

Gives prospective audit and feedback to prescribing clinicians as per program policy.

Prescribing Providers (PAs, MDs, DOs, ARNPs)

Actively participates in the facility's antimicrobial stewardship program.

Works with the antimicrobial stewardship program leads as needed to accomplish program goals.

Infection Prevention

Collaborates with the facility's medical director, director of nursing, and consultant pharmacist to address antimicrobial stewardship concerns such as rate of *C. difficile*.

Collaborates with consultant pharmacist to provide clinical staff, resident, and family education related to antimicrobial stewardship.

Tracks facility-specified metrics for the antimicrobial stewardship program.

Monitors adherence to prescribing standards in facility's antimicrobial stewardship program.

Creates monthly reports for the antimicrobial stewardship program.

Presents antimicrobial stewardship data at QAPI meetings.

SECTION 2: LEADERSHIP, COMMITMENT, AND ACCOUNTABILITY

CNAs	Actively participates in facility's antimicrobial stewardship program. Identifies deviation from stewardship policies and processes specified by the facility's antimicrobial stewardship program and reports these to the supervising nurse.
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RNs	Actively participates in facility's antimicrobial stewardship program. Educates residents and their families as needed about antimicrobial stewardship program objectives.
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Consultant Positions Sample Language

Laboratory	Produces a facility specific Clinical Laboratory Standards Institute (CLSI)-compliant antibiogram on an annual basis.
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Consultant Pharmacist	Works with the facility's medical director to establish goals for the antimicrobial stewardship program. Works with the facility's medical director and/or Director of Nursing to create antimicrobial stewardship education for residents and clinical staff. Guides development of clinical practice guidelines in participation with medical director, director of nursing, and clinical staff. Reports antimicrobial use data to stewardship leaders.
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Sample Antimicrobial Stewardship Program Meeting Agenda

Suggested Required Attendees:

Medical Director, Director of Nursing, Consultant Pharmacist, Infection Prevention, C-Suite Champion, IT Representative (if available)

Suggested Optional Attendees:

Bedside caregivers, prescribers

Kudos

- Who helped you with stewardship this past month?
- What wins can we celebrate as a team?

Old Business:

- Review any action items from prior month

Stewardship Updates

- Regulatory
- News & announcements
 - Local health jurisdiction
 - State public health
 - Federal
 - Facility
 - Outcomes or meeting minutes from meetings with providers, bedside staff last month

Monthly Stewardship Reports

- Review progress on facility goals
- Chart review results or findings
- Process and outcome measures report
 - What is going well
 - Barriers to success
 - Plan for addressing barriers
 - Next steps

Resources

- What is needed to achieve goals
- To whom should request be made
- Status of any previous requests

Action Items

- Items to be completed this next month and by whom

SECTION 3

Drug Expertise





Tips for Providing Drug Expertise

Per CMS State Operations Manual:¹

- Please note that 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.
- Potential tags for additional investigation may include:
 - F756: for concerns related to the failure of the pharmacist to review and report any unnecessary antibiotic irregularity;
 - F757: for concerns related to unnecessary antibiotic use

Tips for Making Recommendations

- If giving daily recommendations or making recommendations in real-time, consider contacting the prescribing clinician or office directly to make the recommendation.
 - Consider tracking recommendation acceptance rates and sharing results with the medical director monthly.

SECTION 3: DRUG EXPERTISE

- Consider sharing monthly antimicrobial use feedback verbally and in writing with the director of nursing and medical director to improve uptake of recommendations.
 - A 2022 study performed in a teaching hospital reviewed the factors favoring acceptance for approximately 3,000 pharmacist interventions. They noted that recommendations given verbally versus electronically was associated with an approximately 30% higher acceptance rate.²
- Consider negotiating language into contracts to ensure the pharmacist and medical director have dedicated time to discuss recommendations made as the result of monthly medication reviews.

Tips for Education

- Partner with the infection preventionist, medical director, and director of nursing to create education modules for physicians and nursing staff quarterly and as needed throughout the year.

Tips for Action^{1,3}

See [checklists included in this toolkit](#) for suggested order of implementing stewardship actions.

- Ensure documentation of dose, duration, and indication on every antimicrobial order.
- Partner with the infection preventionist, medical director, and director of nursing to create facility-specific guidelines for antimicrobial prescribing based upon the facility's antibiogram.
- Educate providers on appropriate and inappropriate uses of fluoroquinolones.
 - See "[Appropriate Use Criteria for Clindamycin and Fluroquinolones.](#)"
- Educate providers to avoid treatment of asymptomatic bacteriuria.
- Review appropriateness of antibiotic prophylaxis for UTI.

Tips for Tracking and Reporting

See checklists included in this toolkit for suggested order of implementing tracking and reporting.

- Partner with your infection preventionist to create reports for facility-specific antimicrobial stewardship (AS) metrics.
- Attend QAPI meetings to support the infection preventionist in sharing antimicrobial use data.
- Consider meeting regularly 1-on-1 with the infection preventionist to discuss progress on AS and to review surveillance of multi-drug resistant organisms and *C. difficile*.

SECTION 3: DRUG EXPERTISE

References:

1. CMS. State Operations Manual Appendix PP -Guidance to Surveyors for Long Term Care Facilities Transmittals for Appendix PP [Internet]. Nursing Homes. CMS; 2022 Oct [cited 2022 Nov 7] p. 788–94. <https://www.cms.gov/medicare/provider-enrollment-and-certification/guidanceforlawsandregulations/downloads/appendix-pp-state-operations-manual.pdf>
2. Durand A, Gillibert A, Membre S, Mondet L, Lenglet A, Mary A. Acceptance Factors for In-Hospital Pharmacist Interventions in Daily Practice: A Retrospective Study. *Frontiers in Pharmacology* [Internet]. 2022 Mar 23 [cited 2022 Nov 7];13. Available from: <https://www.frontiersin.org/articles/10.3389/fphar.2022.811289/full>
3. CDC. 5 Ways Consultant Pharmacists Can Be Antibiotics Aware [Internet]. Antibiotic Prescribing and Use. CDC; 2022 [cited 2022 Nov 7]. Available from: <https://www.cdc.gov/antibiotic-use/pdfs/Consult-pharm-11x17poster-MAIN-P.pdf>

SECTION 4

Tracking and Reporting



Tips for Tracking & Reporting

Q: Which metrics should I use for my stewardship intervention?

A: Most metrics utilized by antimicrobial stewardship programs are categorized as either “process measures” or “outcome measures.”

Process measures are metrics that track adherence to a defined process¹. For example:

- Adherence to a facility-specific treatment guideline for urinary tract infections²
- Tracking types and acceptance of recommendations from prospective audit and feedback²
- Number or rate of UTI Situation-Background-Assessment-Recommendation forms (SBARs) completed by nursing staff in the prior month

Outcome measures demonstrate the impact of the health care service or intervention on the health status of patients¹. For example:

- Rate of *C. difficile* infections in a long-term care facility²
- Number or rate of adverse drug reactions that occurred after implementing a new facility-specific guideline for cellulitis²
- Rate of multidrug resistant organisms or *C. difficile* infections

The CDC’s Core Elements for Antibiotic Stewardship in Nursing Homes recommends monitoring at least one process measure and at least one outcome measure related to antibiotic use in your facility³.

The table below provides examples of process and outcome measures for consideration.³ Select the measures that are most relevant to the facility’s goals.

PROCESS MEASURE ^{3,4}	OUTCOME MEASURE ^{3,4}
<ul style="list-style-type: none"> • Nursing home-initiated new starts antibiotic starts per 1,000 resident-days • Days of antibiotic treatment per 1,000 resident-days • Antibiotic starts by provider per number of residents under care • Antibiotic time-outs completed in the past month (as a % of eligible cases) • SBARs completed in the past month (as a % of eligible cases) • Duration of antibiotic courses • Adherence to a facility-specific guideline (such as Loeb or antibiotic treatment guideline based on antibiogram) 	<ul style="list-style-type: none"> • <i>C. difficile</i> infection rates • Adverse drug events rates • Antibiotic-resistant organism rates • Costs related to antibiotic use

SECTION 4: TRACKING AND REPORTING

This toolkit utilizes the [Minnesota Department of Health’s Excel Tracking Tool](#), which offers many options and flexibility to help facilities meet their infection prevention and antibiotic stewardship goals.

- **Please review the WebEx recording titled [“Infection and Antibiotic Use Tracking in Long-Term Care”](#) that describes how to utilize this tool.**

Consider also the following suggestions as you get started using this tracking tool for AS:

- Tracking *C. difficile* infection rates
 - This is found in the tracking tool under the “Summary” tab and in column S of the worksheet
- Tracking Days of Therapy per 1,000 Resident-Days
 - Fill out the “Total Days of Therapy per Month” column found in Column B of the “Summary” worksheet
 - You can obtain this value by adding up all of the values found in Column AF in each month’s worksheet
 - This will populate the “Days of Therapy (DOT) Rate per 1,000 Resident Days” graph on the “Summary” worksheet
- Tracking Antimicrobial Starts using the separate section of each month’s worksheet (see image below)
 - These correspond to Columns W – Z and Columns AA – AJ
 - This will populate the “Rx Origin,” “% Meeting Criteria,” and “Antimicrobial Class Utilization” graphs on the “Summary” worksheet

W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
Antimicrobial Starts													
Antibiotic Name	Class	Dose	Route	Frequency	Provider	Antimicrobial RX Origin	Antibiotic Start Date	Antibiotic End Date	Total Days of Therapy	Meets Criteria?	Antibiotic Reassessment (Antibiotic “Time outs”) Performed?	Other Antimicrobials Prescribed Name	Other Antimicrobials Prescribed Class

Utilization” graphs on the “Summary” worksheet

SECTION 4: TRACKING AND REPORTING

Q: Where can I get report data?⁶

A: See these suggestions for sources of data for specific reports of antibiotic use:

EHR Systems

Antibiotic use reports can be generated by the facility if local IT expertise exists or by working with the EHR vendor.

Uptake of EHR use in nursing homes and the interface and capabilities of different EHRs may vary by nursing home.

LTC Pharmacies

LTC pharmacies can generate reports of the number of days of antibiotics dispensed.

Due to multiple pharmacy transactions for the same antibiotic course, identifying an accurate antibiotic start date may not always be possible. Additionally, the indication for treatment may not be available.

Manual Chart Review

Nursing homes can prepare antibiotic use reports based on manual chart reviews.

This method is time-consuming and may be difficult to sustain, but may be the only available data source in some nursing homes.

For additional information on data sources that your IT resource can utilize, refer to the CDC document below and share it with your IT resource:

[**The Core Elements of Antibiotic Stewardship for Nursing Homes: Appendix C: Data Sources, Elements, and Measures for Tracking Antibiotic Use in Nursing Homes**](#)

SECTION 4: TRACKING AND REPORTING

References:

1. AHRQ. Types of Health Care Quality Measures | Agency for Healthcare Research & Quality [Internet]. AHRQ. 2015 [cited 2022 Nov 7]. Available from: <https://www.ahrq.gov/talkingquality/measures/types.html>
2. Robinson J. Antimicrobial Stewardship. In: 2022 Infectious Diseases Pharmacy Preparatory Review and Recertification Course. ACCP and ASHP; 2022. p. 18–20.
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SECTION 5

Education





Tips for Providing Education

Refer to [checklists](#) for suggestions on the order of implementation.

Educating Staff Members

Staff Orientation Packet

We strongly encourage prioritizing implementation of this intervention.

The orientation packet on [the toolkit website](#) contains educational modules that can be uploaded to your learning management system (LMS). Once uploaded, these modules can automatically be assigned to all new employees and be reassigned on an annual basis as a refresher. Consider customizing these educational modules with your facility's policies, procedures, or documentation forms.¹

Requiring this orientation for all new staff ensures that as staff turnover, institutional knowledge is maintained.

- **Please note that these capabilities may vary depending upon your LMS. Contact your LMS vendor or local IT resource for more information.**

If LMS is not available, consider creating special orientation binders that contain these educational modules.¹

SECTION 5: EDUCATION

Pocket Cards Create pocket cards with the Loeb criteria that are included in the template policy in this toolkit. Give these cards to each new hire.

Posters Hang copies of SBAR or the Loeb criteria in areas frequented by clinical staff (e.g., next to phones, near computer stations). There are also posters available on [CDC's Implementation Resources for Nursing Homes webpage](#)

In-Services Consider engaging staff by having them teach their peers on a monthly basis.¹

Educating Residents and Families

Welcome Packets Include patient educations ([English](#) and/or [Spanish](#)) in all resident welcome packets.

Posters Hang copies of the [Provider Commitment to Stewardship posters](#) in multiple common areas of the facility (e.g., dining areas, reception areas, mail room, hallways, etc.).²

Pamphlets Provide a copy of the UTI patient education pamphlets linked above to residents or their families each time the resident or family member requests an antibiotic for UTI.

Keep copies of these pamphlets readily accessible to staff.

Use [the communication skills education](#) listed in the orientation packet to teach staff how to discuss a plan of care with residents or family members when antibiotics are not indicated.

Family and Resident Councils Consider making antibiotic stewardship an agenda item in these meetings. Share patient education pamphlets above with residents and families and discuss any concerns.

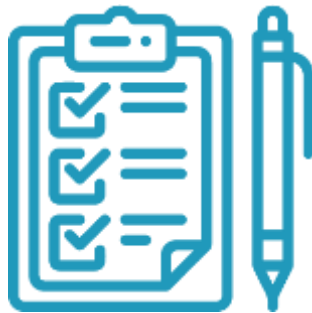
SECTION 5: EDUCATION

References:

1. AHRQ. Guide to Implementing a Program To Reduce Catheter-Associated Urinary Tract Infections in Long-Term Care [Internet]. AHRQ Safety Program for Long-Term Care: HAIs/CAUTI. AHRQ; 2017 Mar [cited 2022 Nov 7] p. 19. Available from: <https://www.ahrq.gov/hai/quality/tools/cauti-ltc/modules/implementation/guide.html>
2. Centers for Disease Control and Prevention. The Core Elements of Antibiotic Stewardship for Nursing Homes. US Department of Health and Human Services; 2015:4. Accessed September 23, 2022. <https://www.cdc.gov/antibiotic-use/core-elements/pdfs/core-elements-antibiotic-stewardship-H.pdf>

SECTION 6

Action



Tips for Taking Action

Refer to checklists for suggested order that these actions should be implemented.*

Prioritize interventions based on the needs of the facility and share outcomes from successful interventions with nursing staff and clinical providers. Work with your consultant pharmacist, director of nursing, and medical director to determine how best to implement these actions in your facility. Review the [CMS State Operations Manual](#) for more details on requirements for your stewardship program.

- Please note that the assessment, monitoring, and communication of antibiotic use shall occur by a licensed pharmacist in accordance with §483.45(c), F756, Drug Regimen Review.

The table below provides examples of “Actions,” as per the CDC’s Core Elements of Antibiotic Stewardship for Nursing Homes and CMS’s State Operations Manual.

Documentation of Dose, Duration, and Indication^{1,2}

Work with your consultant pharmacist to determine the best way to implement this practice.

Check with your EHR or IT resource to determine if this documentation can be required by your EHR during order entry.

Otherwise, work with your consultant pharmacist to utilize a database software to manually create a template for the purposes of tracking if this is completed. This toolkit contains [a tracking tool created by the Minnesota Department of Health](#) that can be utilized by your facility. Refer to the instructions [located here](#) for more information.

SECTION 6: ACTION

Assessing Residents Using Standardized Tools and Criteria^{1,2}

[A urinary tract infection-specific \(UTI\) SBAR](#) (“Situation-Background-Assessment-Recommendation”) is included in this toolkit. This tool is based upon the Loeb minimum criteria for initiation of antibiotics.

Instruct bedside staff to use the SBAR when communicating with offsite clinicians when a UTI is suspected.

Encourage prescribers to ask about the SBAR each time a nurse calls regarding a suspected UTI.

Check with your EHR or IT resource to determine if the SBAR or a reminder to use the SBAR can be integrated into your order entry processes. If not, ensure that a supply of paper SBAR forms is readily accessible near telephones as a reminder to staff.

Consider posting a copy of the SBAR in front of each phone regularly used by clinical staff. Make the SBAR process a permanent agenda item for discussion in staff huddles.

Consider tracking compliance with the UTI SBAR process and create a report each month.

“Time-Outs”^{1,2}

[A checklist for antibiotic time-outs is linked in this toolkit.](#)

Instruct bedside staff to use the checklist for communicating with the prescribing clinician 2-3 days after initiation of antibiotics.

Encourage prescribers to ask about the checklist each time a nurse calls about a resident’s antibiotics.

Check with your EHR or IT resource to determine if there is an antibiotic “time-out” census that can be automatically printed out daily to assist with this task.

Ensure that a supply of SBARs is readily accessible near telephones as a reminder to staff.

Consider posting a copy of the checklist in front of each phone regularly used by clinical staff. Make the checklist and time-outs a permanent agenda item for discussion in staff huddles as a reminder.

Consider tracking compliance with the antibiotic time-out process and create a report each month.

SECTION 6: ACTION

Prospective Audit and Feedback

Work with your consultant pharmacist and medical director to determine how to implement this action.

Strategies that have been used successfully in hospital settings include tracking antibiotic prescribing by provider and comparing them to their peers.

Antibiograms¹

Antibiograms are tables developed by the microbiology laboratory showing the percent susceptibility of common bacteria tested against a panel of common antibiotics. Antibiograms can be used to guide empiric therapy decision-making and for tracking overall resistance in the facility over time.

Consider negotiating with your contracted laboratory to create an annual facility specific Clinical Laboratory Standards Institute (CLSI)-compliant antibiogram.

Antibiograms can be disseminated many different ways, including via email, hard copy, during orientation, and on a dedicated area of your facility's Intranet,

References:

1. Centers for Disease Control and Prevention. The Core Elements of Antibiotic Stewardship for Nursing Homes. US Department of Health and Human Services; 2015:4. Accessed September 23, 2022. <https://www.cdc.gov/antibiotic-use/core-elements/pdfs/core-elements-antibiotic-stewardship-H.pdf>
2. CMS. State Operations Manual Appendix PP -Guidance to Surveyors for Long Term Care Facilities Transmittals for Appendix PP [Internet]. Nursing Homes. CMS; 2022 Oct [cited 2022 Nov 7] p. 788–94. Available from: <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/GuidanceforLawsAndRegulations/Downloads/Appendix-PP-State-Operations-Manual.pdf>

SECTION 7

Resources



More Resources for Long-Term Care Facilities

Local Health Jurisdiction

[Washington State Local Health Jurisdictions](#)
(Select the county in which your facility resides)

Washington State Department of Health

[Washington State Department of Health Subscriptions](#)

- Follow the prompts to create a login
- Suggested subscriptions (listed under the “Disease Control and Health Statistics” heading):
 - Healthcare-Associated Infections and Antibiotic Resistance Updates
 - epiTRENDS
 - Project Firstline

CMS

Scroll down to the bottom of the [CMS.gov](#) page to locate the prompt below:

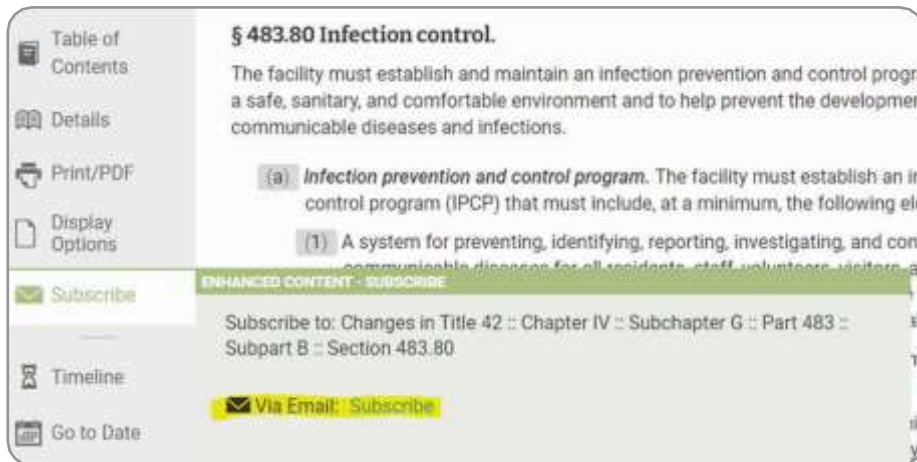


- Follow the prompts to create a CMS login
 - Suggested subscriptions:
 - CMS Skilled Nursing Facilities/Long-Term Care Open Door Forum (listed under the “Open Door Forums” heading)
-

Regulation Updates

To receive updates each time that the CMS Conditions of Participation for Infection Control are updated:

1. Click on this link: [eCFR :: 42 CFR 483.80 – Infection control](#).
2. On the left-hand side of the page, there will be a button that says “Subscribe.” Click this button, and then click on the next “Subscribe” button that appears in the popup that appears:



4. If you do not have an account: Enter your email and password into the login box that appears on the next screen and click “Sign Up.” Otherwise, enter your information and click “Sign In.”
5. If you had to create an account: click again on the link in Step 1 and follow the instructions in Step 2 to subscribe.