

## Stewardship Actions

# High-Risk Medications Worksheet: Antibiotics

According to the Centers for Disease Control and Prevention (CDC), “[antibiotic stewardship](#) is the effort to measure antibiotic prescribing; to improve antibiotic prescribing by clinicians and use by patients so that antibiotics are only prescribed and used when needed; to minimize misdiagnoses or delayed diagnoses leading to underuse of antibiotics; and to ensure that the right drug, dose and duration are selected when an antibiotic is needed.” Antibiotic stewardship refers to a set of commitments and actions designed to “optimize the treatment of infections while reducing the adverse events associated with antibiotic use.”

This worksheet expands on the CDC’s [Core Elements of Antibiotic Stewardship](#) checklist to promote improvement opportunities for your team. Use this document to discuss your current antibiotic stewardship program, identify elements you already have in place and determine those you still need to build upon. Work in a methodical fashion, implementing one or two activities to start and gradually adding new strategies from each element over time. Additional questions toward the document’s end allow further discussion of strategies that can strengthen your program. Review your antibiotic stewardship program annually at a minimum.

Antibiotics			
Leadership	Standards/Practices	Further Actions to be Taken	
<p><b>Element:</b> Demonstrate support and commitment to safe and appropriate antibiotic use in your facility</p> <p><a href="#">The Core Elements of Antibiotic Stewardship for Nursing Homes: Checklist (cdc.gov)</a></p>	<p><b>Action:</b> Our organization’s leadership demonstrates commitment to supporting antibiotic stewardship efforts.</p> <p>Demonstrated by:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Written statements in support of improving antibiotic use shared with staff, residents and families (e.g., display commitment poster)</li> <li><input type="checkbox"/> Stewardship-related duties included in position descriptions and job evaluations</li> <li><input type="checkbox"/> Communicating expectations about the use and monitoring of antibiotics and the enforcement of stewardship policies</li> <li><input type="checkbox"/> Reviewing antibiotic use and resistance data and supporting interventions to address anomalies</li> <li><input type="checkbox"/> Creating a culture that promotes antibiotic stewardship through messaging, education and celebrating improvement</li> </ul>	<p><b>What:</b></p>	<p><b>By Whom:</b></p>

Accountability	Standards/Practices	Further Actions to be Taken	
<p><b>Element:</b> Identify physician, nursing and pharmacy leads responsible for promoting and overseeing antibiotic stewardship activities in your facility</p> <p><a href="#">The Core Elements of Antibiotic Stewardship for Nursing Homes: Checklist (cdc.gov)</a></p>	<p><b>Action:</b> Our organization has identified individuals responsible for activities to optimize the use of antibiotics.</p> <p>Demonstrated by:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Individuals identified who are accountable for the antibiotic stewardship activities (ABS champion) and have support of the organization’s leadership</li> <li><input type="checkbox"/> Medical director empowered to set standards for prescribing practices</li> <li><input type="checkbox"/> Director of nursing empowered to set standards for assessing, monitoring and communicating changes in a resident's condition</li> <li><input type="checkbox"/> Consultant pharmacist engaged in supporting antibiotic stewardship oversight through medication regimen review and reporting of antibiotic use data</li> <li><input type="checkbox"/> Regular opportunities exist to discuss ABS and infection prevention practices in the center. There is coordination between ABS champion/IP staff and internal/external partners.</li> </ul>	<p><b>What:</b></p>	<p><b>By Whom:</b></p>
Drug Expertise	Standards/Practices	Further Actions to be Taken	
<p><b>Element:</b> Establish access to consultant pharmacists or other individuals with experience or training in antibiotic stewardship for your facility</p> <p><a href="#">The Core Elements of Antibiotic Stewardship for Nursing Homes: Checklist (cdc.gov)</a></p>	<p><b>Action:</b> Our organization has individuals on staff with antibiotic expertise or we can access external partners with antibiotic expertise.</p> <p>Demonstrated by:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Identifying individuals at the organization with expertise; OR working with a consultant pharmacist with specialized infectious disease or antibiotic stewardship training</li> <li><input type="checkbox"/> Identifying partners outside facility, such as consultant laboratory, state and local health departments</li> <li><input type="checkbox"/> Partnering with the stewardship program leads at hospitals in your referral network</li> <li><input type="checkbox"/> Developing relationships with infectious disease consultants</li> </ul>	<p><b>What:</b></p>	<p><b>By Whom:</b></p>

Actions to Improve Use	Standards/Practices	Further Actions to be Taken	
<p><b>Element:</b> Implement at least one policy or practice to improve antibiotic use</p> <p><a href="#">The Core Elements of Antibiotic Stewardship for Nursing Homes: Checklist (cdc.gov)</a></p>	<p><b>Action:</b> Our organization has policies and procedures that address antibiotic prescribing and use.</p> <p>Demonstrated by:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Our organization has policies in place addressing antibiotic prescribing and use <ul style="list-style-type: none"> <li><input type="checkbox"/> Policy requires prescribers to document dose, duration and indication, including rationale and treatment site for every course of antibiotics</li> </ul> </li> <li><input type="checkbox"/> Antibiotic agents available in the organization are reviewed periodically to ensure availability is not a barrier to use of preferred agents</li> <li><input type="checkbox"/> Algorithms are developed and implemented for the assessment of residents suspected of having an infection using evidence-based guidance</li> <li><input type="checkbox"/> Organization-specific treatment recommendations are developed based on national guidelines and local susceptibilities</li> <li><input type="checkbox"/> Communication tool for residents suspected of having an infection is developed/utilized</li> <li><input type="checkbox"/> Organization-specific report of antibiotic susceptibility is developed and disseminated to clinical providers</li> <li><input type="checkbox"/> Process is in place for review of antibiotics by the clinical team two to three days after antibiotics are initiated (antibiotic time outs)</li> <li><input type="checkbox"/> Dispensing and consultant pharmacists are integrated into the clinical care team to support antibiotic stewardship efforts (review of prescriptions, review of microbiology culture results)</li> <li><input type="checkbox"/> Antimicrobial formulary reviewed annually and changed based on antibiogram</li> </ul>	<p><b>What:</b></p>	<p><b>By Whom:</b></p>

Tracking	Standards/Practices	Further Actions to be Taken	
<p><b>Element:</b> Monitor at least one process measure of antibiotic use and at least one outcome from antibiotic use in your facility</p> <p><a href="#">The Core Elements of Antibiotic Stewardship for Nursing Homes: Checklist (cdc.gov)</a></p>	<p><b>Action:</b> Our organization uses data to track usage, monitor antibiotic resistance and ensure adherence to facility-specific treatment recommendations, and our tracking includes process and outcome measures.</p> <p>Demonstrated by:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Process in place to receive monthly reports from the pharmacy and/or laboratory</li> <li><input type="checkbox"/> Reviews are performed on resident medical records to determine whether the clinical assessment, prescription documentation and antibiotic selection were in accordance with facility antibiotic use policies</li> <li><input type="checkbox"/> The amount of antibiotic use in the facility is tracked (e.g., point prevalence survey, NHSN reporting, start/stop dates, etc.)</li> <li><input type="checkbox"/> Clinical outcomes of antibiotic use are monitored (e.g., C. diff infections, antibiotic-resistant organisms, adverse drug events)</li> <li><input type="checkbox"/> Clinician response to antibiotic use feedback is monitored</li> </ul>	<p><b>What:</b></p>	<p><b>By Whom:</b></p>
Reporting	Standards/Practices	Further Actions to be Taken	
<p><b>Element:</b> Provide regular feedback on antibiotic use and resistance to prescribing clinicians, nursing staff and other relevant staff</p> <p><a href="#">The Core Elements of Antibiotic Stewardship for Nursing Homes: Checklist (cdc.gov)</a></p>	<p><b>Action:</b> Our organization has a process for reviewing prescribed antibiotic agents and provides regular feedback on results to providers.</p> <p>Demonstrated by:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Process is in place to communicate tracking results on reviews for specific antibiotic agents to the prescribers and other clinical staff</li> <li><input type="checkbox"/> Reviews are performed for specific antibiotic agents as outlined in the process</li> <li><input type="checkbox"/> Data on adherence to antibiotic prescribing policies and antibiotic use is shared with clinicians and nurses</li> <li><input type="checkbox"/> Data on adherence to antibiotic prescribing policies and antibiotic use is shared with leadership</li> </ul>	<p><b>What:</b></p>	<p><b>By Whom:</b></p>

Education	Standards/Practices	Further Actions to be Taken	
<p><b>Element:</b> Provide resources to clinicians, nursing staff, residents and families about antibiotic resistance and opportunities for improving antibiotic use</p> <p><a href="#">The Core Elements of Antibiotic Stewardship for Nursing Homes: Checklist (cdc.gov)</a></p>	<p><b>Action:</b> Our organization routinely educates clinicians, staff, residents and families about appropriate use of antibiotics and the organization’s commitment to responsible prescribing.</p> <p>Demonstrated by:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Education is provided to clinicians and staff via flyers, pocket guides, newsletters or electronic communications</li> <li><input type="checkbox"/> Information is posted in an area where residents gather about their role in antibiotic stewardship</li> <li><input type="checkbox"/> Education is provided to clinicians and staff via webinars or didactic face-to-face workshops</li> <li><input type="checkbox"/> Information is shared with each resident about appropriate use of antibiotics</li> <li><input type="checkbox"/> Education is provided to clinicians and staff via face-to face or virtual interactive workshops such as the <a href="#">QIN-QIO Nursing Home Training Sessions Introduction</a>.</li> <li><input type="checkbox"/> Education to prescribers is linked to feedback reports on prescribing practices and adherence to guidelines</li> <li><input type="checkbox"/> Education is provided to residents and family members</li> </ul>	<b>What:</b>	<b>By Whom:</b>
<b>Additional Opportunities to Improve Antibiotic Stewardship Program</b>			
<p>One tip for running an effective antibiotic stewardship committee is to have clearly established meeting time, designated roles and documented activities.</p> <p>Below are some suggestions for implementation:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> A separate infection control/antibiotic stewardship committee is established (or dedicated time to discuss antibiotic stewardship exists in QAPI or other infection control meeting)</li> <li><input type="checkbox"/> Members of committee are identified; roles of committee members are designated</li> <li><input type="checkbox"/> AHRQ sample agenda available <a href="#">here</a></li> <li><input type="checkbox"/> Committee reviews aggregated data at each committee meeting</li> <li><input type="checkbox"/> Action plans are developed based on data review and documented in the meeting minutes</li> <li><input type="checkbox"/> Report of committee activities is prepared annually</li> </ul>		<p><i>What actions steps might our organization take in the next three months?</i></p>	

<p>Another action to take is to identify problem antimicrobials and challenges with prescribing patterns.</p> <p><b>Questions to Discuss:</b></p> <ol style="list-style-type: none"> <li>1. Has our team identified specific antimicrobials that are problematic for our organization in our antimicrobial stewardship efforts?</li> <li>2. What have we done to address the problematic antimicrobials?</li> <li>3. Can we identify challenges with any prescribers while implementing stewardship activities?</li> <li>4. What have we done to overcome these challenges? Have we involved our medical director in these discussions?</li> </ol>	<p><i>What action steps might our organization take in the next three months?</i></p>
<p><b>Evaluate your communication across the health care team</b>      On a scale of 1 (low) to 5 (high), please rate</p> <ol style="list-style-type: none"> <li>1. Communication between staff and prescribers      <input type="checkbox"/> 1      <input type="checkbox"/> 2      <input type="checkbox"/> 3      <input type="checkbox"/> 4      <input type="checkbox"/> 5</li> <li>2. Communication between staff and other facilities (e.g., referring hospitals)      <input type="checkbox"/> 1      <input type="checkbox"/> 2      <input type="checkbox"/> 3      <input type="checkbox"/> 4      <input type="checkbox"/> 5</li> </ol>	<p><i>What action steps might improve self-rating?</i></p>
<p><b>Facility Surveys; Highlighting Antibiotic Stewardship Efforts</b></p>	<p><b>Further Actions to be Taken</b></p>
<p>Evaluate the following:      On a scale of 1 (low) to 5 (high), please rate:</p> <ol style="list-style-type: none"> <li>1. Confidence that organization would pass the antibiotic stewardship portion of a survey      <input type="checkbox"/> 1      <input type="checkbox"/> 2      <input type="checkbox"/> 3      <input type="checkbox"/> 4      <input type="checkbox"/> 5</li> <li>2. How well organization has highlighted stewardship efforts <ul style="list-style-type: none"> <li><i>Internally</i>      <input type="checkbox"/> 1      <input type="checkbox"/> 2      <input type="checkbox"/> 3      <input type="checkbox"/> 4      <input type="checkbox"/> 5</li> <li><i>Externally</i>      <input type="checkbox"/> 1      <input type="checkbox"/> 2      <input type="checkbox"/> 3      <input type="checkbox"/> 4      <input type="checkbox"/> 5</li> </ul> </li> </ol>	<p><i>What action steps might improve self-rating?</i></p>

<b>Quality Improvement Questions to Consider</b>	
<b>Leadership</b>	<ul style="list-style-type: none"> <li>• How does the organization communicate expectations around antibiotic stewardship?</li> <li>• Who are the leaders responsible for setting the tone for antibiotic stewardship within the organization's culture?</li> </ul>
<b>Accountability</b>	<ul style="list-style-type: none"> <li>• Share some examples of how antibiotic stewardship leads in your organization work with infection prevention program coordinators, consultant laboratories and state and local health departments.</li> </ul>
<b>Actions to Improve Use</b>	<ul style="list-style-type: none"> <li>• Do you have organization-specific treatment recommendations to assist with antibiotic decision-making for common clinical conditions? Examples? How are these shared with staff and prescribers?</li> <li>• Do you have a formal procedure for antibiotic timeouts? Please describe.</li> </ul>
<b>Tracking</b>	<ul style="list-style-type: none"> <li>• Do you receive a monthly report from the pharmacy tracking antibiotic use (e.g., new orders, number of days of antibiotic treatment) for your facility/organization?</li> <li>• Do you receive a monthly report from the laboratory summarizing antibiotic resistance in cultures sent from your facility/organization (e.g., antibiogram)?</li> <li>• How is adherence to the policy to document an indication for antibiotics being monitored?</li> <li>• How is adherence to facility/organization-specific treatment recommendations monitored?</li> </ul>
<b>Reporting</b>	<ul style="list-style-type: none"> <li>• Do you have a process for reviewing specific antibiotic agents and communicating the results with prescribers?</li> <li>• Who is responsible for conducting the reviews? Who is responsible for communicating with the prescribers?</li> </ul>
<b>Education</b>	<ul style="list-style-type: none"> <li>• Does your organization provide education to clinicians on improving antibiotic use? How is education provided (flyers, staff meetings, off-site meetings, online education)? How often?</li> <li>• Does your organization provide education to staff on improving antibiotic use? How is education provided (flyers, staff meetings, off-site meetings, online education)? How often?</li> <li>• Does your organization provide education to residents and family members on appropriate antibiotic use? How is this done?</li> </ul>

*This material was prepared by Comagine Health, a Medicare Quality Innovation Network-Quality Improvement Organization under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. Views expressed in this material do not necessarily reflect the official views or policy of CMS or HHS, and any reference to a specific product or entity herein does not constitute endorsement of that product or entity by CMS or HHS. 12SOW-T1-22-QIN-158*