

The Dos and Don'ts of Antibiotics

As more bacteria display resistance to common antibiotics and there is less research and development of new antibiotics, we are faced with the dilemma of not having sufficient antibiotics to treat infections effectively – and those that can tend to be expensive and often need to be administered intravenously.

What is Antibiotic Resistance – and Why it Matters

Antibiotic resistance occurs when antibiotics are given when they are not needed, such as for asymptomatic bacteriuria, or an antibiotic is used that the bacteria is not sensitive to, or an antibiotic is administered in the wrong dose or duration.

In addition to antibiotic resistance, use of antibiotics increases the resident's potential for three different adverse effects: physiological reactions such as rash, nausea, and renal toxicity; other infections such as C Diff or fungal infections; and potential drug-drug interactions if they are receiving multiple medications.

The answer to the challenges is to implement an Antibiotic Stewardship program. There are three opportunities to effect change through the Antibiotic Stewardship program:

1. Infections: Infection prevention and control measures can decrease Baseline Infection Rates.
2. Antibiotic Use: Prescribing protocols can be used to inform antibiotic use decision making for optimized and targeted treatment and to decrease antibiotic exposure.
3. Antibiotic Resistance: This can be accomplished through tracking and monitoring.

Although hospitals had a choice early on to establish an Antibiotic Stewardship program, long-term care facilities were mandated to establish one in the final rule issued in 2016 by CMS.

Core Elements of Antibiotic Stewardship

CMS has provided us with the Core Elements of an Antibiotic Stewardship program. They include:

- Leadership Commitment
- Accountability
- Drug Expertise
- Action
- Tracking
- Reporting
- Education

Each element has components that need to be addressed by the facility. The most significant one is leadership. Without leadership support, it will be hard to sustain the program.

The Dos and Don'ts of Antibiotics (Cont.)

Elements	Components
Leadership Commitment Nursing home leaders commit to improving antibiotic use. Facility leadership, both owners and administrators as well as regional and national leaders if the facility is part of a larger corporation, can demonstrate their support in the following ways:	<ul style="list-style-type: none"> Write statements in support of improving antibiotic use to be shared with staff, residents, and families. <ul style="list-style-type: none"> Include stewardship-related duties in position descriptions for the medical director, clinical nurse leads, and consultant pharmacists in the facility. Communicate with nursing staff and prescribing clinicians the facility's expectations about use of antibiotics and the monitoring and enforcement of stewardship policies. Create a culture, through messaging, education, and celebrating improvement, which promotes antibiotic stewardship.
Accountability Nursing homes identify individuals accountable for the antibiotic stewardship activities who have the support of facility leadership:	<ul style="list-style-type: none"> Empower the medical director. Set standards for antibiotic prescribing practices for all clinical providers. Be accountable for overseeing adherence – Empower the director of nursing. Set practice standards for assessing, monitoring, and communicating changes in a resident's condition by nursing staff. Nurses and nurse aides play a key role in the decision-making process for starting an antibiotic. Engage the consultant pharmacist. Support antibiotic stewardship oversight through quality assurance activities such as medication review and reporting of antibiotic use data.
Drug Expertise Nursing home antibiotic stewardship leaders establish access to individuals with antibiotic expertise and utilize existing resources to support and implement antibiotic stewardship activities.	<p>Infection prevention program coordinator:</p> <ul style="list-style-type: none"> Infection prevention coordinators have key expertise and data to inform strategies to improve antibiotic use. Consultant laboratory Nursing homes contracting laboratory services can request reports and services to support antibiotic stewardship activities. Antibiogram <p>Work with a consultant pharmacist:</p> <ul style="list-style-type: none"> One who has received specialized infectious diseases or antibiotic stewardship training. Partner with antibiotic stewardship program leads. These may be located at hospitals within your referral network. Develop relationships. It is important to develop relationships with infectious disease consultants in your community as well as local and state Health Departments.
Actions Nursing homes implement prescribing policies and change practices to improve antibiotic use.	<ul style="list-style-type: none"> Policies that support optimal antibiotic use. Ensure that current medication safety policies, including medication regimen review, are applied to antibiotic prescribing and use. Broad interventions to improve antibiotic use. Standardize the practices to implement during the care of any resident suspected of an infection or started on an antibiotic. Improve evaluation and communication of clinical signs and symptoms. Optimize use of diagnostic testing. Implement an antibiotic review process for all antibiotics in your facility. "Antibiotic Time-Out." <p>Pharmacy interventions to improve antibiotic use:</p> <ul style="list-style-type: none"> Integrate dispensing and consultant pharmacists into the clinical care team. Key partners in supporting antibiotic stewardship. Provide assistance in ensuring antibiotics are ordered appropriately –Elements of a complete order. Infection and syndrome specific interventions to improve antibiotic use – Identify clinical situations which may be driving inappropriate courses of antibiotics, such as: <ul style="list-style-type: none"> Asymptomatic bacteriuria Urinary tract infection prophylaxis Implement specific interventions to improve use



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Elements	Components
Tracking & Reporting Nursing homes monitor both antibiotic use practices and outcomes related to antibiotics to guide practice changes and track the impact of new interventions.	<ul style="list-style-type: none">• Process measures.• Tracking how and why antibiotics are prescribed.• Antibiotic Use Measures – Tracking how often and how many antibiotics are prescribed.• Antibiotic Outcome Measures – Tracking the adverse outcomes and costs from antibiotics.
Education Nursing homes provide antibiotic stewardship education to clinicians, staff, and residents & families.	<ul style="list-style-type: none">• Effective educational programs address both nursing staff and clinical providers on the goal of an antibiotic stewardship intervention, and the responsibility of each group for ensuring its implementation.• Examples are:<ul style="list-style-type: none">○ Flyers○ Electronic Communication○ Interactive academic detailing○ Pocket guides○ Newsletters

8 Steps to a Successful Program

Starting or revising an Antibiotic Stewardship program takes time, planning, and thought. It is done in methodical steps:

1. Select a committee.
2. Identify what your facility needs are by assessing where you are in delivering antibiotics.
3. Once you have your needs identified, prioritize them.
4. Begin with one issue and one action.
5. Write your policy and procedure.
6. Develop any forms you will need to institute the action as well as track it.
7. Determine what and when you will report the findings.
8. Educate all involved.

Continue to implement actions in this manner until you feel confident that you are managing your program and getting effective results.

PharMerica is partnering with leading organizations to support DONs and other nurse leaders in long-term and post-acute care with needed resources and education. Access more at PharMerica.com/who-we-are/nurse-advancement.