Antibiotic Stewardship: The Facility Role and Implementation

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Phase II CMS Regulatory Changes

- Current information available includes: New Survey Process Slide Deck, Updated State Operations Manual (With renumbering, interpretive guidance, and F-tag crosswalk)

All of the following information has been obtained from the CMS State Operations Manual that will be effective November 28th, 2017 and The CDC’s “Core Elements of Antibiotic Stewardship for Nursing Homes”
• §483.80(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:

• §483.80(a)(3) An antibiotic stewardship program that includes antibiotic use protocols and a system to monitor antibiotic use.
The intent of this regulation is to ensure that the facility:

- Develops and implements protocols to optimize the treatment of infections by ensuring that residents who require an antibiotic, are prescribed the appropriate antibiotic;
- Reduces the risk of adverse events, including the development of antibiotic-resistant organisms, from unnecessary or inappropriate antibiotic use; and
- Develops, promotes, and implements a facility-wide system to monitor the use of antibiotics.
Antibiotic Stewardship

- As part of their IPCP programs, facilities must develop an antibiotic stewardship program that promotes the appropriate use of antibiotics and includes a system of monitoring to improve resident outcomes and reduce antibiotic resistance. This means that the antibiotic is prescribed for the correct indication, dose, and duration to appropriately treat the resident while also attempting to reduce the development of antibiotic-resistant organisms.
Nursing home residents are at risk for adverse outcomes associated with the inappropriate use of antibiotics that may include but are not limited to the following:

- Increased adverse drug events and drug interactions (e.g., allergic rash, anaphylaxis or death);
- Serious diarrheal infections from C. difficile;
- Disruption of normal flora (e.g., this can result in overgrowth of Candida such as oral thrush); and/or
- Colonization and/or infection with antibiotic-resistant organisms such as MRSA, VRE, and multidrug-resistant GNB.
Antibiotic Stewardship implementation

- The Centers for Disease Control and Prevention (CDC) has identified core actions to prevent antibiotic resistance within the control of the nursing home.

As summarized by the CDC, the core elements for antibiotic stewardship in nursing homes include:

- Facility leadership commitment to safe and appropriate antibiotic use;
- Appropriate facility staff accountable for promoting and overseeing antibiotic stewardship;
- Accessing pharmacists and others with experience or training in antibiotic stewardship;
- Implement policy(ies) or practice to improve antibiotic use;
- Track measures of antibiotic use in the facility (i.e., one process and one outcome measure);
- Regular reporting on antibiotic use and resistance to relevant staff such as prescribing clinicians and nursing staff; and
- Educate staff and residents about antibiotic stewardship.
The facility must develop an antibiotic stewardship program which includes the development of protocols and a system to monitor antibiotic use. This 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.
The antibiotic stewardship program protocols shall describe how the program will be implemented and antibiotic use will be monitored, consequently protocols must:

- Be incorporated in the overall infection prevention and control program;
- Be reviewed on an annual basis and as needed;
- Contain a system of reports related to monitoring antibiotic usage and resistance data. Examples may include the following:

  ✓ Summarizing antibiotic use from pharmacy data, such as the rate of new starts, types of antibiotics prescribed, or days of antibiotic treatment per 1,000 resident days;

  ✓ Summarizing antibiotic resistance (e.g., antibiogram) based on laboratory data from, for example, the last 18 months; and/or

  ✓ Tracking measures of outcome surveillance related to antibiotic use (e.g., C. difficile, MRSA, and/or CRE).
Incorporate monitoring of antibiotic use, including the frequency of monitoring/review. Monitor/review when the resident is new to the facility; when a prior resident returns or is transferred from a hospital or other facility; during each monthly medication regimen review when the resident has been prescribed or is taking an antibiotic, or any antibiotic regimen review as requested by the QAA committee. In addition, establish the frequency and mode or mechanism of feedback (e.g., verbal, written note in record) to prescribing practitioners regarding antibiotic resistance data, their antibiotic use and their compliance with facility antibiotic use protocols. 63 Feedback on prescribing practices and compliance with facility antibiotic use protocols may include information from medical record reviews for new antibiotic starts to determine whether the resident had signs or symptoms of an infection; laboratory tests ordered and the results; prescription documentation including the indication for use (i.e., whether or not an infection or communicable disease has been documented), dosage and duration; and clinical justification for the use of an antibiotic beyond the initial duration ordered such as a review of laboratory reports/cultures in order to determine if the antibiotic remains indicated or if adjustments to therapy should be made (e.g., more narrow spectrum antibiotic);
• Assess residents for any infection using standardized tools and criteria (e.g., SBAR tool for urinary tract infection (UTI) assessment, Loeb minimum criteria for initiation of antibiotics); and
• Include the mode (e.g., verbal, written, online) and frequency (as determined by the facility) of education for prescribing practitioners and nursing staff on antibiotic use (stewardship) and the facility’s antibiotic use protocols.
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.
• **LEADERSHIP SUPPORT ESTABLISHED AT FACILITY**

Can your facility demonstrate leadership support for antibiotic stewardship through one or more of the following actions?  
☐ Yes  ☐ No

If yes, indicate which of the following are in place (select all that apply)
- Written statement of leadership support to improve antibiotic use
- Antibiotic stewardship duties included in medical director position description
- Antibiotic stewardship duties included in director of nursing position description
- Leadership monitors whether antibiotic stewardship policies are followed
- Antibiotic use and resistance data is reviewed in quality assurance meetings

• **ACCOUNTABILITY**

Has your facility identified a lead(s) for antibiotic stewardship activities?  
☐ Yes  ☐ No

If yes, indicate who is accountable for stewardship activities (select all that apply)
- Medical director
- Director or assistant director of nursing services
- Consultant pharmacist
- Other: ________________________________
CDC Core Elements Checklist

• **DRUG EXPERTISE**
  
  Does your facility have access to individual(s) with antibiotic stewardship expertise?  
  
  - Yes  
  - No

  If yes, indicate who is accountable for stewardship activities (select all that apply)
  
  Consultant pharmacy has staff trained/is experienced in antibiotic stewardship
  
  Partnering with stewardship team at referral hospital
  
  External infectious disease/stewardship consultant

  Other:_________________________________

• **ACTIONS TO IMPROVE USE**
  
  Does your facility have policies to improve antibiotic prescribing/use?  
  
  - Yes  
  - No

  If yes, indicate which policies are in place (select all that apply)
  
  Requires prescribers to document a dose, duration, and indication for all antibiotic prescriptions
  
  Developed facility-specific algorithm for assessing residents
  
  Developed facility-specific algorithms for appropriate diagnostic testing (e.g., obtaining cultures) for specific infections
  
  Developed facility-specific treatment recommendations for infections
  
  Reviews antibiotic agents listed on the medication formulary

  Other:_________________________________
CDC Core Elements Checklist

ACTIONS TO IMPROVE USE

Has your facility implemented practices to improve antibiotic use? ☐ Yes ☐ No
If yes, indicate which practices are in place (select all that apply)
Utilizes a standard assessment and communication tool for residents suspected of having an infection
Implemented process for communicating or receiving antibiotic use information when residents are transferred to/from other healthcare facilities
Developed reports summarizing the antibiotic susceptibility patterns (e.g., facility antibiogram)
Implemented an antibiotic review process/“antibiotic time out”
Implemented an infection specific intervention to improve antibiotic use Indicate for which condition(s):_____________________________________

Does your consultant pharmacist support antibiotic stewardship activities? ☐ Yes ☐ No
If yes, indicate activities performed by the consultant pharmacist (select all that apply)
Reviews antibiotic courses for appropriateness of administration and/or indication
Establishes standards for clinical/laboratory monitoring for adverse drug events from antibiotic use
Reviews microbiology culture data to assess and guide antibiotic selection
CDC Core Elements Checklist

**TRACKING: MONITORING ANTIBIOTIC PRESCRIBING, USE, AND RESISTANCE**

Does your facility monitor one or more measures of antibiotic use?  
☐ Yes  ☐ No

If yes, indicate which of the following are being tracked (select all that apply)

- Adherence to clinical assessment documentation (signs/symptoms, vital signs, physical exam findings)
- Adherence to prescribing documentation (dose, duration, indication)
- Adherence to facility-specific treatment recommendations
- Performs point prevalence surveys of antibiotic use
- Monitors rates of new antibiotic starts/1,000 resident-days
- Monitors antibiotic days of therapy/1,000 resident-days
- Monitors rates of C. difficile infection
- Monitors rates of antibiotic-resistant organisms
- Monitors rates of adverse drug events due to antibiotics
- Other: __________________________________________________________

Does your facility monitor one or more outcomes of antibiotic use?  
☐ Yes  ☐ No

If yes, indicate which of the following are being tracked (select all that apply)

- Monitors rates of C. difficile infection
- Monitors rates of antibiotic-resistant organisms
- Monitors rates of adverse drug events due to antibiotics
- Other: __________________________________________________________
CDC Core Elements Checklist

• REPORTING INFORMATION TO STAFF ON IMPROVING ANTIBIOTIC USE AND RESISTANCE

Does your facility provide facility-specific reports on antibiotic use and outcomes with clinical providers and nursing staff?  □ Yes  □ No
If yes, indicate which of the following are being tracked (select all that apply)
Measures of antibiotic use at the facility
Measures of outcomes related to antibiotic use (i.e., *C. difficile* rates)
Report of facility antibiotic susceptibility patterns (within last 18 months)
Personalized feedback on antibiotic prescribing practices (to clinical providers)
Other:____________________________________________________

• EDUCATION

Does your facility provide educational resources and materials about antibiotic resistance and opportunity for improving antibiotic use?  □ Yes  □ No
If yes, indicate which of the following are being tracked (select all that apply)
Clinical providers (e.g., MDs, NPs, PAs, PharmDs)
Nursing staff (e.g., RNs, LPNs, CNAs)
Residents and families
Other:____________________________________________________
• Questions?