SA20- Antibiotic Stewardship, Infection Prevention and Control: Three Perspectives on the Reform of Requirements from the Centers for Medicare & Medicaid Services

Saturday, March 24
4:00 PM- 5:30 PM

Session Description

The Center for Medicare & Medicaid Services (CMS) issued a comprehensive reform of the requirement for LTC facilities to participate in Medicare and Medicaid programs. This session will review the changes relevant to infection prevention and control and antibiotic stewardship, from the perspectives of an infection preventionist, a consultant pharmacist, and an infectious disease physician.

Learning Objectives

Discuss the infection preventionist's role and responsibilities indicated in the 2016 Reform of Requirements of Participation.

Review the pharmacy services and the consultant pharmacists' expanded role in infection prevention and control and antibiotic stewardship programs.

Describe basic components of an antibiotic stewardship program, including an antibiotic stewardship policy and antibiotic use protocols appropriate for PA/LTC settings.

Presenter(s): Robin Jump, MD, PhD; Joseph Marek, RPh, CGP; Deborah Burdsall, PhD, RN

Presenter(s) Disclosures: All speakers have reported they have no relevant financial relationships to disclose.
Antibiotic Stewardship, Infection Prevention and Control: Three Perspectives on the Reform of Requirements from the Centers for Medicare & Medicaid Services

The CMS Conditions of Participation - Burdsall

The CMS Conditions of Participation

Deb Patterson Burdsall PhD, RN-BC, CIC, FAPIC
Long Term Care Infection Prevention
Palatine, IL

Speaker Disclosures

• No direct conflicts of interest.

Learning Objectives

By the end of the session, participants will be able to:

• Describe why more comprehensive infection prevention and control programs are needed in long-term care
• Value the need for person-centered care
• Discuss the Infection Preventionist’s role and responsibilities indicated in the 2016 Reform of Requirements of Participation

Preventing Infections in LTC

• Increase in complex medical care in LTC
• Increased risk for healthcare associated infections (HAIs)
• Regulatory revisions provide opportunities for broad based improvement
• Reduce infections, reduce healthcare costs
• Facility specific targeted interventions

Gaps in Infection Prevention in LTC

• Residents and patients frequently colonized with multi drug-resistant organisms (MDRO) and extensively drug-resistant organisms (XDRO)
• 30%-50% of frail, elderly long-term care residents with asymptomatic bacteriuria-over treatment
• Poor communication, lack of training
• Lack of hand hygiene and environmental cleaning/disinfecting
• Knowledge deficits
• Over-use of antibiotics
• Antibiotic-related complications (e.g., C. difficile infections)

Personal Cost of Healthcare Associated Infections (HAI)

• Between 1.6 million and 3.8 million HAI in nursing homes every year
• Infections result in an estimated 150,000 hospitalizations, 388,000 deaths

Source: CDC: https://www.cdc.gov/getsmart/healthcare/learn-from-others/factsheets/nursing-homes.html#need

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Economic Cost of Long-Term Care

- Over $82,000 for a semi-private room
- Over $90,000 for a private room
- $55 billion annually
- HAI cost between $673 million and $2 billion in additional healthcare costs

Cost of Hospitalization with Pneumonia in Medicare Beneficiaries

- 50% hospitalization rate
- 30 day mortality: HAI 13.4% / CAI 6.4%
- $15,682 higher medical costs compared to matched control patients without pneumonia
- Annual excess cost hospital treated pneumonia is estimated conservatively at > $7 billion in 2010

Paradigm Shift: Remember Restraints?

- 1964 nursing textbook
  - "Guard against injury or accident by the use of side rails and careful observation"
- Research showed side rails increased the risk of severe injury
- 1998 study by Elizabeth Capezuti, Neville Strumpf, Lois Evans, Jeanne Ann Grisso & Greg Maislin
- Regulatory change

CMS Conditions of Participation

- Changing LTC population Evidence-based research
- Reform of Requirements for Long Term Care Facilities November 28, 2016

Framework: Infection Prevention and Control in LTC is a Human issue, and needs to be dealt with within a biopsychosocial and spiritual framework

Must Provide Person-Centered Care

- Require facilities to develop and implement a baseline care plan within 48 hours of admission
- Includes instructions needed to provide effective and person-centered care
- Meets professional standards of quality care
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**Phase I**
- **November 28, 2016**
- Basis and Scope Definitions
- Facility Assessment
- Basic IPCP

**Phase II**
- **November 28, 2017**
- IPCP linked to Facility Assessment
- Antibiotic Stewardship
- Present QAPI plan to State Survey Agency
- Number and Competency of Nursing Services Staff

**Phase III**
- **November 28, 2019**
- Infection Preventionist (IP)
- IP participation on QAA committee (QAPI)

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**Phase III: Qualified Infection Preventionist**
- Designate specific Infection Preventionist (IP)
- Position may be shared
- Require education/training, certification, or experience for IP responsible for Infection Prevention and Control Program
- November 28, 2019

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**Infection Prevention and Control Program (IPCP)**

**Resident**
- Antimicrobial stewardship
- Infection prevention

**IPCP based on Facility Assessment**

**Facility Wide Assessment**

- Resident/Patient/Client Population
- Plant/Operations
- Personnel

**Facility Assessment**
- Infection Prevention and Control and Antibiotic Stewardship

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**Must Address:**
- Residents, patients, and clients

- The facility’s resident population, including, but not limited to:
  - Number of residents and resident capacity
  - The care required by the resident population:
  - Types of diseases, conditions, physical and cognitive disabilities
  - Overall acuity and other pertinent facts that are present within that population
  - Any ethnic, cultural or religious factors that may potentially affect the care provided:
  - Activities
  - Food
  - Nutrition
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Must Address: The Facilities
- Physical environment, equipment, services
- Physical plant considerations
- The facility’s resources
- All buildings
- Other physical structures and vehicles
- Equipment (medical and non-medical)
- Community-based risk assessment, utilizing an all-hazards approach

Must Address: Services and Resources
- Therapies and pharmacy
- Contracts, memorandums of understanding
- Third party agreements to provide services or equipment
- Both normal operations and emergencies
- Health information technology resources
- Managing patient records (EHR)
- Electronic sharing of information with other organizations

Must Address: Personnel
- Necessary staff competencies for level and types of care needed
- Any ethnic, cultural or religious factors that may potentially affect the care
- All personnel, including managers, staff (both employees, volunteers, and those who provide services under contract)

Infection Prevention Education and Training
- Goal: staff comply with infection control practices
- Initial and ongoing infection control education
- Updated education and training
- when policies and procedures are revised
- when there is a special circumstance (e.g., outbreak)
- requires modification or replacement of current practices

Specific Infection Control Training
- Task and discipline specific infection control training
  - insertion of urinary catheters
  - suctioning
  - intravenous care
  - blood glucose monitoring
- Follow-up competency evaluations identify staff compliance

Terms
- IP Infection Preventionist
- IPCP Infection Prevention and Control Program
- QAA Quality Assessment and Assurance
- QAPI Quality Assurance Performance Improvement
- PIP Performance Improvement Project
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The CMS Conditions of Participation - Burdsall

### Infection Prevention and Control Framework F880

- Provide a safe, sanitary and comfortable environment
- Help prevent the development and transmission of communicable diseases
- Infection prevention and control program (IPCP) that must include
  - System for preventing, identifying, reporting, investigating, and controlling infections and communicable diseases following accepted national standards
  - Written standards, policies and procedures for the program

### Medical Director Role

- Quality assessment and assurance (QAA) committee member
- Be notified of any irregularities detected by the pharmacist in the monthly drug regimen review (DRR)
- Develop procedures for the safe and accurate provision of medications to meet the needs of the residents
- Provide surveillance and develop policies to prevent the potential infection of residents
- Assist in development of an antibiotic stewardship program

### Infection Prevention and Control Framework F880

- Surveillance
  - Identify possible communicable diseases or infections before they can spread to other persons
- Process for reporting communicable disease
- Standard and transmission-based precautions
- Least restrictive isolation possible under the circumstances
- Hand hygiene

### Thank you!

Dburdsall@gmail.com
Antibiotic Stewardship, Infection Prevention and Control: Three Perspectives on the Reform of Requirements from the Centers for Medicare & Medicaid Services

Antibiotic Stewardship Policy & Protocols - Jump

Speaker Disclosures

- No direct conflicts of interest.
- Dr. Jump has research support from Steris and Pfizer. She has previously consulted for Pfizer and Merck.

The opinions presented herein are my own and do not represent those of the Veterans Affairs system or the federal government.

Learning Objectives

By the end of the session, participants will be able to:

- Review the Center for Medicare & Medicaid Conditions of Participation for an antibiotic stewardship program in long-term care facilities (LTCFs).
- Discuss successful antibiotic stewardship interventions in LTCFs.
- Describe strategies for implementing antibiotic stewardship in LTCFs.

Page 181

185 pages; search for specific terms using Ctrl-F or ⌘-F

§ 483.80 Infection control.

The facility must establish and maintain an infection prevention and control program designed to provide a safe, sanitary, and comfortable environment and to help prevent the development and transmission of communicable diseases and infections.

(3) An antibiotic stewardship program that includes antibiotic use protocols and a system to monitor antibiotic use.


Effective November 28, 2017

State Operations Manual

Appendix PP - Guidance to Surveyors for Long Term Care Facilities

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(Rev. XXX, XV-XVII)
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<td>• Accountability</td>
</tr>
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<td>• Drug expertise</td>
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<td>• Action</td>
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<td>• Tracking</td>
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<tr>
<th>Protocols Must Monitor Use… (page 658)</th>
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<tbody>
<tr>
<td>Incorporate monitoring of antibiotic use, including the frequency of monitoring/review.</td>
</tr>
<tr>
<td>Review when the resident is</td>
</tr>
<tr>
<td>• new to the facility</td>
</tr>
<tr>
<td>• returns or is transferred from a hospital or other facility</td>
</tr>
<tr>
<td>• during each monthly medication review</td>
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<tr>
<th>Protocols Must Also… (page 658)</th>
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<tr>
<td>• Assess residents for any infection using standardized tools and criteria</td>
</tr>
<tr>
<td>• Contain a system of reports related to monitoring antibiotic usage and resistance data.</td>
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<tr>
<td>• Educate prescribing practitioners and nursing staff on antibiotic use (stewardship) and the facility’s antibiotic use protocols.</td>
</tr>
<tr>
<td>Record how it’s done (verbal, online etc.)</td>
</tr>
<tr>
<td>Record how often</td>
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<td>Give feedback to prescribing practitioners regarding</td>
</tr>
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<td>• antibiotic resistance data</td>
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<tr>
<td>• their antibiotic use and</td>
</tr>
<tr>
<td>• their compliance with facility antibiotic use protocols</td>
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<tr>
<td>Record how and when feedback is given</td>
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<tr>
<td>Do protocols address antibiotic prescribing practices?</td>
</tr>
<tr>
<td>• Documentation of the indication, dose, and duration of the antibiotic</td>
</tr>
<tr>
<td>• Review of laboratory reports to determine if the antibiotic is indicated or needs to be adjusted;</td>
</tr>
<tr>
<td>• An infection assessment tool or management algorithm is used when prescribing</td>
</tr>
<tr>
<td>Is there a system to monitor antibiotic use (i.e., antibiotic use reports, antibiotic resistance reports)?</td>
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<table>
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<th>Examples of Deficiencies… (page 659-60)</th>
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<td>Immediate Jeopardy:</td>
</tr>
<tr>
<td>• Results of microbiological culture (indicating resistant bacteria) not communicated to practitioner; antibiotic not changed; resident hospitalized for complications</td>
</tr>
<tr>
<td>Actual Harm:</td>
</tr>
<tr>
<td>• No protocols or monitoring system. 2 residents on antibiotics without appropriate indication. Both developed C. difficile infection.</td>
</tr>
</tbody>
</table>
Antibiotic Stewardship, Infection Prevention and Control: Three Perspectives on the Reform of Requirements from the Centers for Medicare & Medicaid Services
Antibiotic Stewardship Policy & Protocols - Jump

Learning Objectives
By the end of the session, participants will be able to:
• Review the Center for Medicare & Medicaid Conditions of Participation for an antibiotic stewardship program in long-term care facilities (LTCFs).
• Discuss successful antibiotic stewardship interventions in LTCFs.
• Describe strategies for implementing antibiotic stewardship in LTCFs

Review of Antimicrobial Stewardship in LTCFs
• 20 studies with quantitative outcomes
  • 5 randomized controlled trials
  • 15 quasi-experimental analyses
• Quality: 11 good, 7 fair, 2 poor
• 14 with measurable changes
  • Reduced antibiotic starts
  • Reduced total antimicrobial use
  • Increased adherence to guidelines
  • Reduce incidence of C. difficile infection and rates of drug-resistant bacteria

Work System

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tools and Technology</td>
<td>Objects that individuals use to carry out their work</td>
<td>Alert on an electronic health record</td>
</tr>
<tr>
<td></td>
<td>Pocket card with antibiotic prescribing guidelines</td>
<td></td>
</tr>
<tr>
<td>Tasks</td>
<td>Specific actions within a larger work process</td>
<td>Act of administering a medication</td>
</tr>
<tr>
<td></td>
<td>Daily checklist of antibiotic monitoring criteria</td>
<td></td>
</tr>
<tr>
<td>Organization</td>
<td>Culture</td>
<td>Incentive program for following antibiotic</td>
</tr>
<tr>
<td></td>
<td>Communication between individuals.</td>
<td>prescribing guidelines</td>
</tr>
<tr>
<td></td>
<td>Support from stakeholders for promotion of antibiotic</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>stewardship program</td>
</tr>
<tr>
<td>Person(s)</td>
<td>Characteristics of people within the work system</td>
<td>Knowledge, expertise or training of nursing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>home staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Outside consultants</td>
</tr>
<tr>
<td>Environment</td>
<td>Physical internal or external environment</td>
<td>Placing commitment posters in a high traffic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>work area</td>
</tr>
</tbody>
</table>

So what works?
Organization: Integrate change into the workflow
• Nurses—pre-prescription
• Prescribers—post-prescriptive; communication via electronic medical record

Persons: Involve professionals with infectious disease expertise

Two Additional Components
• Involvement of Nurses (14 studies)
• Structured Education (16 studies)
• Primary intervention for 7 studies

• Sustained Changes
  • Compared local policy to published guidelines
  • Individualized feedback to providers
  • Focus on UTIs (vs. asymptomatic bacteriuria)
### Intervention for Catheter-Associated Asymptomatic Bacteriuria

**Intervention site:** 5 acute care and 5 CLC units at a VA medical center  
**Control site:** 3 acute and 2 CLC units  
On CLC wards, targeted nurses and prescribers  
Case-based audit and feedback and interactive slides. Control site given didactic slides and emailed guidelines

### Monthly Rates of Urine Cultures

<table>
<thead>
<tr>
<th>Month</th>
<th>Intervention</th>
<th>Control</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 2010</td>
<td>50</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>January 2011</td>
<td>40</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>July 2011</td>
<td>30</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>January 2012</td>
<td>20</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>July 2012</td>
<td>10</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>January 2013</td>
<td>5</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>July 2013</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

### Infectious Disease Expertise: Rounds by a Consultant

- Weekly rounds by an Infectious Disease physician and NP at a VA Community Living Center (CLC)  
- Communication in-person and formal recommendations, orders left in **electronic medical record**  
- Total antibiotic use decreased by 30%  
- Decreased rate of positive *C. difficile* tests

### Learning Objectives

By the end of the session, participants will be able to:  
- Review the Center for Medicare & Medicaid Conditions of Participation for an antibiotic stewardship program in long-term care facilities (LTCFs).  
- Discuss successful antibiotic stewardship interventions in LTCFs.  
- Describe strategies for implementing antibiotic stewardship in LTCFs

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### Outcomes for CLC residents

<table>
<thead>
<tr>
<th>Outcomes for CLC Residents</th>
<th>Baseline (n = 208)</th>
<th>Intervention (n = 36)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases of ASB, n (%)</td>
<td>135 (65%)</td>
<td>25 (70%)</td>
</tr>
<tr>
<td>Cases of CAUTI, n (%)</td>
<td>73 (35%)</td>
<td>11 (31%)</td>
</tr>
<tr>
<td>Overtreatment of ASB</td>
<td>70/135 (52%)</td>
<td>5/25 (20%)</td>
</tr>
<tr>
<td>Undertreatment of CAUTI</td>
<td>9/73 (12%)</td>
<td>2/11 (18%)</td>
</tr>
</tbody>
</table>

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### Infectious Disease Expertise: Chart Review

Beaulac *et al.* ICHE 2016 37(4): 433-9  
- ID physicians & pharmacists reviewed daily pharmacy reports  
- Accessed electronic medical records  
- Recommendations to providers via email  
- Decrease in antibiotic use and CDI rates

Pate *et al.* ICHE 2012 33(4): 405-8  
- Physician and pharmacist reviewed charts weekly. Non-binding recommendations placed in chart; not permanent part of record.  
- 21% reduction in antibiotic use

---

*Beaulac et al. JAMA Intern Med 2015;175(7):1120-7*  
*Jump et al. JAGS 2013 61(5): 782-7*
**Antibiotic Use Protocols**

Focus on common infections and
- Diagnostic criteria
- Appropriate antibiotic choices
- Length of therapy

Use standardized assessment criteria

*Consider adapting from the Loeb Minimum Criteria, revised McGeer Criteria or from the AHRQ website*

---

**Measure Antibiotic Use**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days of Therapy (DOT): Any dose of antibiotic given on a single day per 100 (or 1000) resident days</td>
<td>Estimates total burden of antibiotic use, tracks changes in overall use.</td>
<td>Does not measure length of treatment. Labor intensive.</td>
</tr>
<tr>
<td>Defined Daily Dose (DDD): Standardized doses of antibiotics per 100 (or 1000) resident days</td>
<td>World Health Organization standardized measures of antibiotics</td>
<td>Does not account for dose adjustments made based on age, creatinine clearance.</td>
</tr>
<tr>
<td>Antibiotic Starts: Number of new antibiotic prescriptions per month or per 100 (or 1000) resident days</td>
<td>Measures frequency of prescribing, tracks changes in starts.</td>
<td>Does not measure total antibiotic burden or length of treatment.</td>
</tr>
<tr>
<td>Number of antibiotic prescriptions for duration &gt;7 days per month</td>
<td>Tracks efforts to reduce excessive length of prescriptions.</td>
<td>Does not measure the frequency of overall antibiotic prescriptions.</td>
</tr>
</tbody>
</table>

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**Monitor Antibiotic Use and Resistance**

Focus on common infections and
- Diagnostic criteria
- Appropriate antibiotic choices
- Length of therapy

Use standardized assessment criteria

*Consider adapting from the Loeb Minimum Criteria, revised McGeer Criteria or from the AHRQ website*

---

**Leverage the Data**

**Collect & Analyze**
- Compliance with Antibiotic Use Protocols
- Measure Antibiotic Use
- Monitor Antibiotic Use and Resistance

**Share**
- Feedback to Individuals
- Feedback to Whole Facility
- Education

---

**Example of Individualized Feedback**

**Facility**
- Antibiotic prescription with dose, duration & indication
  - Facility: 27 of 42 (64%)
  - Dr. A: 8 of 8 (100%)
- Urine culture ordered for residents indication of UTI
  - Facility: 16 of 20 (80%)
  - Dr. A: 2 of 4 (50%)

**Reviewed and discussed:**
- Antibiotic Use Protocols
- Antibiotic Stewardship: Policy
- Antibiotic Use

**Length of Therapy**

Facility
- 1 to 7 days: 3
- 8 to 14 days: 4
- 15 to 28 days: 5
- >28 days: 0

Dr. A
- 1 to 7 days: 1
- 8 to 14 days: 2
- 15 to 28 days: 1
- >28 days: 0

---

**Feedback**

Written reports to all staff:
- Overall antibiotic use
- Compliance with protocols
- Surveillance data for drug-resistant bacteria and for *C. difficile*

Written reports to individual providers:
- Provider’s antibiotic use
- Provider’s compliance with antibiotic use protocols
- Written acknowledgement of feedback
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Antibiotic Stewardship Policy & Protocols - Jump

**Education**

Antibiotic Stewardship
- To all staff, at least annually
- Document mode & frequency
- To residents (and family members)

Antibiotic Use Protocols
- To all prescribers, medical & nursing staff
- Document mode & frequency

**There's help...**

- Template of an Antibiotic Stewardship Policy
- Crosswalk between the policy and specific elements in the Interpretive Guidance Document
- List of (Free) Resources to help support your efforts


OPEN ACCESS

**Antibiotic Stewardship Haiku**

Do those bugs need drugs?
Antibiotic stewardship:
Only when needed

Thank you!
robinjump@gmail.com or Robin.Jump@va.gov
Antibiotic Stewardship, Infection Prevention and Control: Three Perspectives on the Reform of Requirements from the Centers for Medicare & Medicaid Services - ABS & IPC: 3 Perspectives > Consultant Pharmacist & Pharmacy Services Role - Marek

ABS & IPC: 3 Perspectives > Consultant Pharmacist & Pharmacy Services Role

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CommuniCare Health Services
Chairman, Board of Directors
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Learning Objectives
By the end of the session, participants will be able to:
• Review consultant pharmacist & LTC pharmacy services in relation to the new IPCP & ABS requirements of the CMS SOM Mega Rule
• Describe the consultant pharmacists' & LTC pharmacies expanded role as part of IPCP and ABS programs in PA/LTCF's

Antibiotic Resistance: The Global Health Crisis
• Presidential Executive Order (September, 2014)
  • Combating Antibiotic-Resistant Bacteria
  • Antibiotic misuse an official national security priority
  • Established a National Task Force in charge of Combating Antibiotic-Resistant Bacteria
    • Multi-Departmental Effort
    • Developed a 5-Year National Action Plan
  "We can either work to improve antibiotic use and prevent infections, or watch as the clock turns back to a world where simple infections kill people."  Tom Frieden, CDC

Alarming Facts on Antibiotic Use in PA/LTC
• In LTC 20% of prescribers account for 80% of antibiotics prescribed
• Almost 50% of antibiotics are given longer than needed
• The cost of antibiotics is $38 - $137 million/year
• Residents with high antibiotics use have a 24% higher risk of harm
• All residents are at increased risk due to antibiotic resistant bacteria or C.difficile from other patients

CMS MEGA RULE 2016-2019

Speaker Disclosures
Joseph Marek has no relevant financial relationship(s) or direct conflicts of interest to disclose
Antibiotic Stewardship, Infection Prevention and Control: Three Perspectives on the Reform of Requirements from the Centers for Medicare & Medicaid Services - ABS & IPC: 3 Perspectives > Consultant Pharmacist & Pharmacy Services Role - Marek

### How MEGA is It?

<table>
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<th>Phase</th>
<th>Primary Implementation</th>
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</table>
| Phase 1 | - Resident Rights and Facility Responsibilities*  
- Freedom from Abuse Neglect and Exploitation*  
- Admission, Transfer and Discharge*  
- Resident Assessment  
- Comprehensive Person-Centered Care Planning*  
- Quality of Life  
- Quality of Care*  
- Physician Services  
- Nursing Services*  
- Pharmacy Services*  
- Laboratory, radiology and other diagnostic services  
- Dental Services*  
- Food and Nutrition*  
- Specialized Rehabilitation  
- Administration (Facility Assessment – Phase 2)*  
- Physical Environment  
- Resident Assessment  
- Quality Assurance and Performance Improvement*  
- Infection Control – Program*  
- Physical Environment* |

*This section is partially implemented in Phase 2 and/or 3 |

### Phased Implementation (continued)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Primary Implementation</th>
</tr>
</thead>
</table>
| Phase 2 | - Behavioral Health Services*  
- Quality Assurance and Performance Improvement* - QAPI Plan  
- Infection Control – Facility Assessment and Antibiotic Stewardship **  
- Compliance and Ethics*  
- Physical Environment - smoking policies* |

<table>
<thead>
<tr>
<th>Phase 3</th>
<th>Primary Implementation</th>
</tr>
</thead>
</table>
| Phase 3 | - Quality Assurance and Performance Improvement*  
- Infection Control – Infection Control Preventionist *  
- Compliance and Ethics*  
- Physical Environment - call lights at resident bedside *  
- Training * |

*This section is partially implemented in other phases |

### Pharmacy & Consultant Pharmacist Services

**LTC Pharmacy**

**Consultant Pharmacist**

### F755 Pharmacy Services Requirement (LTC Rx Provider & Consultant Pharmacist)

(a) Procedures. A facility must provide pharmaceutical services (including procedures that assure the accurate acquiring, receiving, dispensing, and administering of all drugs and biologicals) to meet the needs of each resident.

(b) Service Consultation. The facility must employ or obtain the services of a licensed pharmacist who—

(b)(1) Provides consultation on all aspects of the provision of pharmacy services in the facility.

### F756 Drug Regimen Review

(1) The drug regimen of each resident must be reviewed at least once a month by a licensed pharmacist.

(2) This review must include a review of the resident’s medical chart.

(3) The pharmacist must report any irregularities to the attending physician and the facility’s medical director and director of nursing, and these reports must be acted upon.
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F757 Unnecessary Drugs—General

Each resident's drug regimen must be free from unnecessary drugs. An unnecessary drug is any drug when used:

1. In excessive dose (including duplicate drug therapy); or
2. For excessive duration; or
3. Without adequate monitoring; or
4. Without adequate indications for its use; or
5. In the presence of adverse consequences which indicate the dose should be reduced or discontinued; or
6. Any combinations of the reasons stated above.

Infection Prevention & Control (IPCP) & Antibiotic Stewardship (ABS) Programs

F880 Infection Control

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:

(a)(1) A system for preventing, identifying, reporting, investigating, and controlling infections and communicable diseases for all residents, staff, volunteers, visitors, and other individuals providing services under a contractual arrangement based upon the facility assessment conducted according to §483.70(e) and following accepted national standards.

(a)(2) Written standards, policies, and procedures for the program, which must include, but are not limited to:

Cryptocapsule

F881 Antibiotic Stewardship Program

483.80(a)(3) An Antibiotic Stewardship Program that includes antibiotic use protocols and a system to monitor antibiotic use.

CMS GUIDANCE in SOM:

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.

F881 Antibiotic Stewardship Program

CMS GUIDANCE:

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 F756, Drug Regimen Review.
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Roles in IPCP & ABS Programs

LTC Pharmacy

Consultant Pharmacist

THE PARADIGM SHIFT FOR CONSULTANT PHARMACISTS & LTC PHARMACY PROVIDERS

Long-Term Care >> Post-Acute Care

LTC Pharmacy Provider Role in ABS

- **Current State**
  - Provide access to medications 24/7 (Rx offsite)
  - Basic drug use evaluation (DUE) prior to dispensing of Ab's
    - Interactions, doses, allergies, etc.
  - Infusion pharmacist services
    - Pharmacokinetic dosing (if ordered ?)
  - Antibiotic Utilization Reporting
    - Tracking & trending using dispensing data

- **Current >> Future State..**
  - Full review of antibiotic orders prior to dispensing
  - Using facility-set dispensing protocols prospectively
  - Mimic hospital ABS programs

- **Limitations & Concerns in PA/LTC**
  - Clinical information limited prior to dispensing (off-site pharmacy)
  - not transmitted to Rx beyond the order (may have access to EHR)
  - New admissions – hospital information limited
  - Expanded pharmacy service > fee based service to Facility (cost)

Consultant Pharmacist's Role in IPCP/ABS

- **Drug Regimen Review**
  - Retrospectively > Prospectively
  - Reporting, Education, Training
    - Basics > facility-specific
  - Interdisciplinary Team Integration
    - Facility & Medical team collaboration

Drug Regimen Review Aspects

- **Performed?**
  - Monthly - tracking/trending, reporting
  - Weekly – adjust antibiotic, if indicated
  - Daily – prospective antibiotic reviews

- **Single Antibiotic Evaluation > Overall Utilization (DUE)**
  - Diagnosis, Dose, Duration, Route, Monitoring, ADR's
  - What about: other comorbidities & medications?
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Drug Regimen Review Aspects

- **What about New Admissions on AB’s?**
  - Who is reviewing the hospital-stay medical information?
  - Are an ID notes available or even reviewed?
  - When was the antibiotic started (stop date accurate)?
  - What does the C&S results show?
- **Transitions of Care (TOC) issues are real!**

Medication Discrepancies in TOC

- Up to 70% of patient care transitions result in medication discrepancies
- 30% of these discrepancies lead to Adverse Drug Events
- Antibiotics are listed high on the list
- Other studies tell the same story during transitions..

Education, Training, Reporting CP Services

- **Facility Staff & Facility Prescribers**
  - Based on Standards/Guidelines
  - **Examples** (pharmacokinetics/dynamics):
    - Renal dosing of antibiotics guide
    - Antibiotic ↔ Warfarin interactions
    - Antibiotic-specific protocols (broad spectrum, high cost, etc.)
    - IV to PO conversions
    - Etc.

Integration

- **ABS Program: Interdisciplinary Team Integration**
  - How are you interacting or collaborating now?
    - Medical Director
    - Facility team
    - Consultant pharmacist
  - Together? Routinely?
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### Interdisciplinary Team Integration

- **Existing Facility or IDT meetings at the facility?**
  - QAPI (Quality Assurance/Performance Improvement)
  - Pharmacy & Therapeutics (P&T)
  - IPCP/ABS
  - Other?

*(Find an existing meeting or ‘combine’ them to make it work)*

### The QAPI Meeting (by Mega Rule Phase 3)

- The merger of two complementary approaches to quality management:
  - Quality Assurance (QA)
  - Performance Improvement (PI)

- The **Cycle of Quality** – it’s not just reporting the numbers, it’s doing something about them….

### Approaches to Integrating Rx & CP Services

- **Bring IDT team together (sit down..)**
- Review existing **facility** systems and programs
  - Who is doing what?
  - Facility Infection Preventist (IP) is key
  - What data is available?
  - What processes are occurring?
- Resources to guide you
  - CDC, AHRQ, many others..

### Summary: Consultant Pharmacist’s Role in IPCP/ABS

- Integrate & collaborate with facility IDT team routinely
- Perform drug regimen reviews on all antibiotic orders in conjunction with the facility IP
- Assess & monitor facility antibiotic usage
- Develop strategies for ABS with LTC pharmacy provider in consultation with the facility IDT team
  - Retrospective
  - Prospective