

# Antibiotic Stewardship in Management of Respiratory Infection in Long Term Care

## FOCUS 2015

November 19, 2015

Joe Boero MD CMD [dr.boero.pfmc@gmail.com](mailto:dr.boero.pfmc@gmail.com)  
Paula Kock RN [paulak@parkmanorwi.com](mailto:paulak@parkmanorwi.com)

---

---

---

---

---

---

---

---

In September 2013, the Center for Disease Control published the monograph and website "Antibiotic Threats 2013". In the wake of that publication, President Barack Obama issued executive order #13676-Nov 2013, instructing the President's Council of Advisors on Science and Technology to prepare documents that would evaluate and report, strategize, and suggest implementation actions that can be taken by the federal government to combat the inevitable consequence of the emerging post-antibiotic era. Those three white papers issued by PCAST include the "Report to the President on Combating Antibiotic Resistance" July '14, "National Strategy for Combating Antibiotic Resistant Bacteria" Sept '14, and "National Action Plan for Combating Antibiotic Resistant Bacteria" March '15.

---

---

---

---

---

---

---

---

As a consequence to these four papers, the Long Term Care industry is recognizing an impetus to participate in our nation's movement to protect and improve the public health with respect to Antibiotic Resistance. Long Term Care facilities are repositories for the development and spread of multi-drug resistant bacteria. This reality grows from modifiable conditions which are favorable to the generation and spread of these nasty infectious micro-organisms. Current medical literature illustrates that antibiotics are the most commonly prescribed drugs in nursing homes, that 20-80 % of those antibiotics are un-necessary, improperly chosen, or improperly dosed.

---

---

---

---

---

---

---

---

As a consequence to the growing prevalence of MDRO's in our elderly population, the paucity of new, more potent antibiotics under development, and the higher cost and poorer outcomes when treating MDRO infections, our industry is being tasked with regulatory as well as moral duty to participate in actions to reduce antibiotic use and to use our remaining effective antibiotics wisely. In 2007, the Infectious Disease Society of America, said, "...the rate of inappropriate antibiotic use is a surrogate for the avoidable impact on the development of antimicrobial resistance." Current proposed revisions of CMS's Condition of Participation in Medicare and Medicaid are poised to hold our industry to the standard of development and implementation of vigorous antibiotic stewardship programs to reduce un-necessary antibiotic use, and to implement robust MDRO surveillance and Management.

---

---

---

---

---

---

---

---

The most common reason for antibiotic prescription in a nursing home is to treat Urinary Tract Infection. Since 50 % of elderly nursing home residents have chronic asymptomatic bacteriuria which equates to colonization without infection, antibiotic stewardship efforts aimed at optimal antibiotic use for UTI in nursing homes is a natural beginning point for antibiotic stewardship programs in long term care. Skills learned and practiced well by nursing home staff that lead to successful antibiotic stewardship in management of UTI are transferrable to other classes of infection. This case report describes application of stewardship principles and skills learned in UTI management to that of Respiratory system infection.

---

---

---

---

---

---

---

---

Because most clinical decisions made by physicians treating nursing home resident are made without the benefit of a face-to-face evaluation between physician and patient, it is imperative that nursing home antibiotic stewardship programs focus on the nurse/physician communication interaction regarding the resident change of condition report. Physicians will practice better antibiotic stewardship when the communicating nurse is educated in stewardship concepts, utilizes her education, experience and critical thinking to prepare accurate and timely communications reporting on the changing condition of her resident. The nurse is not telling the physician how to practice better, but rather, the nurse is giving the physician better information to help him practice better.

---

---

---

---

---

---

---

---

The cultivation of stewardship skills and techniques in a nursing staff are valuable assets that lend themselves to overall improvement in nursing care to elderly residents in nursing homes. For instance, stewardship principles learned in a UTI Stewardship Project are transferrable to managing Respiratory Infection, Skin and Soft Tissue infection and management of psychoactive medication. The exercise of professional critical thinking by the nursing staff is empowering to these professionals. It lets Nurses be Nurses. Such empowered nurses have an improved sense of professional validation and value. They also have improved personal job satisfaction and reduced burn-out and job turn-over.

---

---

---

---

---

---

---

---

**As simply as possibly stated, antibiotic stewardship in LTC is:**

- Deciding on best practice criteria for antibiotic use in bacterial infection within your institution
- Creating a system for gathering data
- Education line nursing staff in quality evaluation and assessment of resident change of condition
- Determining whether antibiotic use for that infection is within the institutional criteria
- Ensuring right drug, right indication, right dose, right length of time
- Providing feed-back to the prescribing providers and nursing staff so they can improve their practice behavior
- Measuring outcomes

---

---

---

---

---

---

---

---

**Getting Started - a QAPI Project**

Managing Respiratory Infection in a Long Term Care Center Utilizing Antibiotic Stewardship Principles – Perspectives from the DON

---

---

---

---

---

---

---

---

### 1. Nurse Education

- Be aware of problem & concern
- Develop approach and goals for solution
- Have clear cut expectations and objectives
- Gather resources
- Educate and involve all staff
- Empower nursing staff
- Embrace the culture and practice infection prevention and antibiotic stewardship everyday

---

---

---

---

---

---

---

---

### 2. Nurse Assessment Skills

- Review of respiratory system and assessment skills ie: You Tube
- Offer assist for nurses who need brushing up on assessment skills
- Decide what is included in a respiratory assessment
- Identify barriers-embarrassment, lack of confidence, etc

---

---

---

---

---

---

---

---

### 3. Critical Thinking and Judgment

- Conceptualize and analyze information gathered during assessment process
- Utilize all existing appropriate MD standing and prn orders before formulating change of condition report
- Utilize proper communication tools, ie: SBAR form/scripts
- Repeat any verbal order back to provider for accurateness

---

---

---

---

---

---

---

---

#### 4. Documentation

- Take credit in the EMR for the comprehensive assessment that you performed
- Include education, risks, benefits, notifications and informed consent when appropriate
- Include your thought process regarding change in condition. This will "show the whole picture"
- State justification if antibiotic ordered

---

---

---

---

---

---

---

---

#### 5. Respiratory Illness Surveillance

- System for data management
- Line list for staff and residents
- Spreadsheet to track and trend data
- Staff encouragement and feedback- good and bad
- Becoming comfortable in our new role as infection preventionists
- Working as a cohesive team

---

---

---

---

---

---

---

---

Feel free to take some Notes

---

---

---

---

---

---

---

---

**Bibliography**

Variability in Antibiotic Use Across Nursing Homes and the Risk of Antibiotic-Related Adverse Outcomes for Individual Residents" Daneman , et. al. JAMA Inter Med (on-line) June 29, 2015.

"ISDA Guidelines for Developing an Institutional Program to Enhance Antimicrobial Stewardship" Dellitt, et. al. CID 2007:44 (Jan 15)

"Surveillance Definitions of Infections in Long-Term Care Facilities: Revisiting the McGeer Criteria" Stone, et.al. Infect Control Hosp Epidemiol 2012;33(10):965-977

"Development of Minimum Criteria for the Initiation of Antibiotics in residents of Long-Term-Care Facilities: Results of a Consensus Conference" Loeb, et.al. Infect Control Hosp Epidemiol 2001;22(2):120-124

"Clinical Uncertainties in the Approach to Long Term Care Residents With Possible Urinary Tract Infection" Nace, et.al. JAMDA 15 (2014) 133-139

"Treatment of Bacteriuria Without Urinary signs, Symptoms, or Systemic Infectious Illness (S/S/S)" Drinka JAMDA 10 (2009) 516-519

"The Core Elements for Antibiotic Stewardship in Nursing Homes" CDC Sept 15, 2015  
<http://www.cdc.gov/longtermcare/pdfs/core-elements-antibiotic-stewardship.pdf>

Module 1: "Improving Communications and Decisions about Antibiotic use in Nursing Homes; AHQR  
<http://www.ahrq.gov/professionals/quality-patient-safety/patient-safety-resources/resources/nh-asp/quick/module1/index.htm>

"The Role of DONs in Cultivating Nurse Empowerment" Annals of Long Term Care Vol 24, April 2015

---

---

---

---

---

---

---

---

---

---