Reframe Your Perspective on Antimicrobial Stewardship and Long-Term Care

Minnesota Department of Health

Jean Rainbow, RN, MPH
Sara Tomczyk, PHN, MSc
Linn Warnke, RN, MPH

www.health.state.mn.us/divs/idepc/dtopics/antibioticresistance

Objectives

- Describe antimicrobial use/overuse and consequences in long-term care (LTC)
- Define antimicrobial stewardship and discuss asymptomatic bacteriuria as a stewardship opportunity
- Demonstrate how UTI management can be an opportunity for antimicrobial stewardship in LTC

Antibiotic Use in LTC

- UTI is most frequent indication for antibiotic use in LTC
  - 41%: abnormal urinalysis unnecessarily treated
  - 56%: inappropriate drug
  - 67%: excessive duration

Up to 75% of LTC antibiotic use is inappropriate

Why Worry?

- Secondary infections (Clostridium difficile)
- Increasing antimicrobial resistance, emergence of MDRO
- Lack of new drugs in the pipeline
- Unnecessary adverse drug effects or drug interactions
- Increased cost of care

Colgan. Am Fam Physician 2006
Denouche. Clin Inf Dis 2005

A solution is available:

KEEP CALM AND DO Antimicrobial Stewardship

- Why keep calm and do antimicrobial stewardship?
  - Antimicrobial stewardship improves the quality of resident care and resident safety

What is Antimicrobial Stewardship?

Multidisciplinary and coordinated interventions designed to:
1. Measure antimicrobial use
2. Improve the appropriate selection of antimicrobials

Right:
- Diagnosis
- Drug
- Dose
- Duration
- De-escalation
Better outcomes
Cure/Prevent Infection
Minimize Toxicity
Prevent Resistance
Management of UTI vs. Asymptomatic Bacteriuria: An Opportunity for Antimicrobial Stewardship

UTI Diagnosis

- Based on symptoms and objective findings from resident assessment
- Urinalysis and culture can provide supportive evidence, but must be used with clinical signs/symptoms

UTI is Primarily a Clinical Diagnosis…
Symptoms + bacteriuria indicates infection


Antibiotic Treatment of Asymptomatic Bacteriuria in LTC: Results of Randomized Trials

- No effect on
  - Morbidity or mortality
  - Symptoms of chronic incontinence
  - Acute episodes of UTI

- Negative consequences
  - Increased drug side effects
  - Increased future isolation of resistant organisms
  - Increased cost

Nicolle et al. NEJM 1983

A challenging environment….

- Limited on-site provider time; providers rely on phone communications with nursing
- Many expectations already in place by the time provider is called
  - Families request antibiotics
  - On-call provider unfamiliar with resident
  - Societal expectations for a “quick fix”
- Resident readmitted with hospital-initiated antibiotics
- Clinical data reside in multiple formats and locations
  - Require integration into a meaningful whole

What is the solution?

- Leadership by medical directors
  - Inclusion of antimicrobial review in quarterly QA meetings (e.g., prepared by consulting pharmacist or infection preventionist as part of infection surveillance)
  - Review of relevant clinical guidelines

- Develop the environment
  - Posters with stewardship education messages for families and staff
  - Updates in family monthly newsletters, emails, family council meeting presentations, factsheets in admission packets

- Driven by nurses and nursing assistants….

LTCF Antimicrobial Stewardship

Driven by Nurses and Nursing Assistants

- Timely & accurate resident assessment → Correct symptom recognition
- Communication to relevant staff → Correct action
- Documentation of resident signs and symptoms → Correct follow-up

Nursing actions facilitate accurate physician diagnosis, drug, dose, duration, and de-escalation.
Capacity to implement antimicrobial stewardship: A conceptual model

Key antimicrobial stewardship resources

IDS A Infection Evaluation Guidelines by High et al.
- Clinical practice guideline for the evaluation of fever and infection in older adult residents of long-term care facilities: 2008 update by the Infectious Diseases Society of America.

Minimum Criteria for Initiation of Antibiotics by Loeb et al.
- Development of minimum criteria for initiation of antibiotics in long-term care residents: Results of a consensus conference.

IDS A Urinalysis and Urine Culture Recommendations
- Urinalysis and urine cultures should not be performed for asymptomatic residents (A-I).
- In non-catheterized residents, the diagnostic laboratory evaluation of suspected UTI should be reserved for those with acute onset of UTI-associated symptoms and signs (e.g., fever, dysuria, gross hematuria, new or worsening urinary incontinence, and/or suspected bacteremia) (A-II).
- In residents with long-term indwelling urethral catheters, evaluation is indicated if there is suspected urosepsis (i.e., fever, shaking chills, hypotension, or delirium), especially in the context of recent catheter obstruction or change (A-II).

Minnesota Antimicrobial Stewardship Program Toolkit for LTCF
Provides action steps, corresponding strategies & a gap analysis tool related to:
- Identify a stewardship champion AND a stewardship committee/team
- This could also be integrated in existing nursing, QA, or infection control meetings.
- Regularly incorporates a specific set of clinical guidelines relevant to stewardship and infection management.
- Measures and regularly reviews antimicrobial use as part of infection surveillance.
- Provides stewardship related training to healthcare personnel.
- Communicates stewardship related messages to families/visitors.
- Develops policies and protocols related to stewardship, infection management, and diagnostic testing (e.g. clinical algorithms).
- Assesses and sets expectations for the nursing process or how a change in a resident’s condition is addressed across roles including use of tools such as SBAR.

You are the champions of change
Think Globally, Act Locally

NATIONAL ACTION PLAN FOR COMBATING ANTIBIOTIC-RESISTANT BACTERIA

- Implement public health programs and reporting policies that advance antibiotic resistance prevention and foster antibiotic stewardship in healthcare settings and the community.

  Sub-Objective: Strengthen antibiotic stewardship in inpatient, outpatient, and long-term care settings by expanding existing programs, developing new ones, and monitoring progress and efficacy.

On the Horizon……

- CMS–required reporting through National Healthcare Safety Network (NHSN) for LTC
  - NHSN: Secure, internet-based system; gold standard for HAI surveillance; guide prevention efforts
- NO DATE established for LTCF reporting
- LTC NHSN Modules currently available (voluntary use)
  - Urinary tract infection (UTI)
  - Hand hygiene process
  - MDRO LabID Events
  - Clostridium difficile

The time to act is now

- Evidence supports active antimicrobial stewardship action
- Future will provide increased incentives to participate

Act now by:

- Utilize MDH stewardship resources for AS program implementation in addition to other guidelines such as CDC, Loeb et al., etc.
- Enroll in NHSN
- Keep a look-out for future engagement opportunities!
- Webinar for nursing staff on how to use MDH toolkit
- An antibiotic resistance summit in January to engage leadership on priority setting on actions to prevent antibiotic resistance and promote better antibiotic use
- OTHER IDEAS??
- How to best engage MMDA to provide better support?

Statewide Infection Control and Response (ICAR) Initiative

- CDC project funded through March 2018
- MDH infection prevention staff working regionally
- Carrying out assessments and facilitating infection prevention and antimicrobial stewardship quality improvement initiatives for acute care, long-term care, hemodialysis centers, other ambulatory care
- Potential additional funding for antimicrobial stewardship improvement

Questions?

HHS proposes to improve care and safety for nursing homes residents

Revisions mark first major rewrite of long-term care conditions of participation since 1991

Select changes include:

- Making sure that nursing home staff is properly trained on caring for residents with dementia and in preventing elder abuse
- Ensuring that nursing homes take into consideration the health of residents when making decisions on the kinds and levels of staffing a facility needs to properly take care of its residents
- Ensuring that staff members have the right skill sets and competencies to provide person-centered care to residents
- The care plan developed will take the resident’s goals of care and preferences into consideration
- Improving care planning, including discharge planning for all residents with involvement of the facility’s interdisciplinary team and consideration of the care plan’s capacity, giving residents information they need for follow-up, and ensuring that instructions are transmitted to any receiving facilities or services.
- Updating the nursing home’s infection prevention and control program, including requiring an infection prevention and control officer and an antibiotic stewardship program that includes antibiotic use protocols and a system to monitor antibiotic use.
- Strengthening rights of nursing home residents, including placing limits on when and how binding arbitration agreements may be used.
- The recommended reforms are being published in proposed rule CMS-3260-P in the July 16, 2015 Federal Register.
- There is a 60 day comment period on the proposed revisions.

On the Horizon……

- CMS–required reporting through National Healthcare Safety Network (NHSN) for LTC
- NHSN: Secure, internet-based system; gold standard for HAI surveillance; guide prevention efforts
- NO DATE established for LTCF reporting
- LTC NHSN Modules currently available (voluntary use)
  - Urinary tract infection (UTI)
  - Hand hygiene process
  - MDRO LabID Events
  - Clostridium difficile

The time to act is now

- Evidence supports active antimicrobial stewardship action
- Future will provide increased incentives to participate

Act now by:

- Utilize MDH stewardship resources for AS program implementation in addition to other guidelines such as CDC, Loeb et al., etc.
- Enroll in NHSN
- Keep a look-out for future engagement opportunities!
- Webinar for nursing staff on how to use MDH toolkit
- An antibiotic resistance summit in January to engage leadership on priority setting on actions to prevent antibiotic resistance and promote better antibiotic use
- OTHER IDEAS??
- How to best engage MMDA to provide better support?

Questions?