WELCOME!

Please MUTE your phones!

EQuIP for LTC webinar will begin at 10:00 AM

Today’s topic is

“AMS and Nursing Homes: How Nurses Can Make a Difference”

5/24/17
Housekeeping

Please...

- Mute your phone if you are not speaking
- Do not put the phone line on hold
- Use the chat box to ask questions during and after the presentation
Enrollment in EQuIP

• Formal participation encouraged (not mandatory)
• Requires signed enrollment form by facility leadership & contact info for facility attendees
• Annual facility self-assessment
• Opportunity to participate in small group collaborative and QI projects
  – Work together
  – Share outcome data
  – Community of support
• Establish ASP & be recognized on DOH Honor Roll for Stewardship

http://www.doh.wa.gov/YouandYourFamily/IllnessandDisease/HealthcareAssociatedInfections/EQuIP/LTC
Leadership Commitment Poster

- Customize for your facility
- Post in prominent location
- Include in admission packet

Your nursing home photo and logo here!
AMS and Nursing Homes: How Nurses Can Make a Difference

Rita Olans, DNP, CPNP, APRN-BC
Assistant Professor
School of Nursing
Massachusetts's General Hospital Institute of Health Professions
The Critical Role of the Staff Nurse in Antimicrobial Stewardship—Unrecognized, but Already There

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An essential participant in antimicrobial stewardship who has been unrecognized and underutilized is the “staff nurse.” Although the role of staff nurses has not formally been recognized in guidelines for implementing and operating antimicrobial stewardship programs (ASPs) or defined in the medical literature, they have always performed numerous functions that are integral to successful antimicrobial stewardship. Nurses are antibiotic first responders, central communicators, coordinators of care, as well as 24-hour monitors of patient status, safety, and response to antibiotic therapy. An operational analysis of inpatient admissions evaluates these nursing stewardship activities and analyzes the potential benefits of nurses’ formal education about, and inclusion into, ASPs.

Keywords. antimicrobial stewardship; antimicrobial stewardship program; antibiotic resistance; nursing; turnaround time.
Antimicrobial Stewardship & Nursing Homes
How Nurses Can Make a Difference
5.24.17
rolans@mghihp.edu
Learning Objectives

☐ Recognize the scope of antibiotic resistance in nursing homes and hospitals

☐ Understand how the nurse is already contributing to antibiotic stewardship activities

☐ Identify 3 areas where nurses can increase their skill set to enhance antibiotic stewardship performance in nursing homes

☐ Utilize the SBAR format to communicate critical information to prescribers about possible infection
“Antimicrobial [antibiotic] Stewardship is a quality paradigm whose desired goal is the best use of antibiotics to produce a lower rate of antibiotic resistance while achieving optimal clinical outcomes”

Transatlantic Taskforce On Antimicrobial Resistance TATFAR (2011). Recommendations for the future collaboration between the U.S. and EU.
Antibiotic & Antimicrobial Resistance is Interchangeable
27,000 nursing home residents have antibiotic-resistant infections

2 out of 3 nursing home residents receive at least one course of antibiotics annually

250,000 nursing home residents have infections

1.6 million people live in nursing homes
Antibiotic Stewardship Goals

- To prevent or slow the emergence of antibiotic resistance,
- To optimize the selection, dosing, and duration of antibiotic therapy in individual patients,
- To reduce adverse drug events, including secondary infections (e.g., *C. difficile*),
- To reduce morbidity, mortality, length of hospitalization, and health care-related costs.

The use of antibiotics in nursing homes is intense and usually empiric. ... Programs that will limit the emergence and impact of antibiotic resistance and infections in nursing homes need to be developed.
Nurses

Physicians

Pharmacists
What Happens When Nurses Are Engaged

Pennsylvania

FIGURE. Central line–associated bloodstream infection rate* in 66 intensive care units (ICUs), by ICU type and semiannual period — southwestern Pennsylvania, April 2001–March 2005

- All other unit types†
- Medical/surgical units

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Semiannual period

*Pooled mean rate per 1,000 central line days.
†Includes cardiothoracic, coronary, surgical, neurosurgical, trauma, medical, burn, and pediatric ICUs.
§p<0.001.

MMWR 2005;54:1013-16

Michigan

103 ICUs at 67 Michigan hospitals, 18 months

BSIs/1,000 catheter days

0 18


[Slide courtesy of Arjun Srinivasan, MD]
Summary of Core Elements for Antibiotic Stewardship in Nursing Homes

- **Leadership commitment**: Demonstrate support and commitment to safe and appropriate antibiotic use in your facility.
- **Accountability**: Identify physician, nursing and pharmacy leaders responsible for promoting and overseeing antibiotic stewardship activities in your facility.
- **Drug expertise**: Establish access to consultant pharmacists or other individuals with experience or training in antibiotic stewardship for your facility.
- **Action**: Implement at least one policy or practice to improve antibiotic use.
- **Tracking**: Monitor at least one process measure of antibiotic use and at least one outcome from antibiotic use in your facility.
- **Reporting**: Provide regular feedback on antibiotic use and resistance to prescribing clinicians, nursing staff and other relevant staff.
- **Education**: Provide resources to clinicians, nursing staff, residents and families about antibiotic resistance and opportunities for improving antibiotic use.

## Recognition of an Infection

<table>
<thead>
<tr>
<th>AS Activity or Task</th>
<th>CDC Core AS Element for Nursing Homes</th>
<th>Nurses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate triage &amp; isolation</td>
<td>Accountability</td>
<td>Identifies source</td>
</tr>
<tr>
<td></td>
<td>Drug Expertise</td>
<td>Appropriate precautions</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Accurate antibiotic allergy history</td>
<td>Accountability</td>
<td>Takes allergy history</td>
</tr>
<tr>
<td></td>
<td>Drug Expertise</td>
<td>Medication reconciliation</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Records in resident’s record</td>
</tr>
<tr>
<td>Early &amp; appropriate cultures</td>
<td>Accountability</td>
<td>Obtains/sends cultures</td>
</tr>
<tr>
<td></td>
<td>Drug Expertise</td>
<td>Monitors/reports results</td>
</tr>
<tr>
<td></td>
<td>Tracking</td>
<td></td>
</tr>
<tr>
<td>Timely antibiotic initiation</td>
<td>Drug Expertise</td>
<td>Receives orders</td>
</tr>
<tr>
<td></td>
<td>Action</td>
<td>Reviews dose/time</td>
</tr>
<tr>
<td></td>
<td>Tracking</td>
<td>Checks allergy/</td>
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<tr>
<td></td>
<td></td>
<td>Administers &amp; records</td>
</tr>
</tbody>
</table>

Modified from the ANA/CDC Working Group
<table>
<thead>
<tr>
<th>AS Activity or Task</th>
<th>CDC Core AS Element for Nursing Homes</th>
<th>Nurses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress reporting</td>
<td>Drug Expertise Action Tracking</td>
<td>At bedside 24/7 Monitors Communicates</td>
</tr>
<tr>
<td>Antibiotic adjustment based on microbiology reports</td>
<td>Drug Expertise Action Tracking</td>
<td>Labs ‘chase’ resident Receives 1st Communicates</td>
</tr>
<tr>
<td>Antibiotic dosing, Culture &amp; Sensitivity reporting, &amp; de-escalation</td>
<td>Drug Expertise Action Tracking Education</td>
<td>Updates labs Micro susceptibilities</td>
</tr>
</tbody>
</table>

Modified from ANA/CDC Stewardship Working Group
<table>
<thead>
<tr>
<th>AS Activity or Task</th>
<th>CDC Core AS Element for Nursing Homes</th>
<th>Nurses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverse events</td>
<td>Action</td>
<td>Monitors &amp; reports adverse events</td>
</tr>
<tr>
<td></td>
<td>Tracking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Superinfection/Resistant Infection</td>
<td>Drug Expertise</td>
<td>Identifies resident’s status change</td>
</tr>
<tr>
<td></td>
<td>Action</td>
<td>Initiates appropriate changes in isolation</td>
</tr>
<tr>
<td></td>
<td>Tracking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Antibiotic resistance</td>
<td>Education</td>
<td>Reviews Culture &amp; Sensitivity results</td>
</tr>
<tr>
<td></td>
<td>Tracking</td>
<td>Reports bug/drug mismatches</td>
</tr>
</tbody>
</table>

Modified from ANA/CDC Stewardship Working Group
## Transition to and/or from the Hospital

<table>
<thead>
<tr>
<th>AS Activity or Task</th>
<th>CDC Core AS Element for Nursing Homes</th>
<th>Nurses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of stay</td>
<td>Action</td>
<td>24/7 Progress monitor</td>
</tr>
<tr>
<td></td>
<td>Tracking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Resident education, Medication reconciliation</td>
<td>Drug Expertise</td>
<td>Continuous resident &amp; family education Discharge teaching</td>
</tr>
<tr>
<td></td>
<td>Action</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tracking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Hospital transitions</td>
<td>Action</td>
<td>Communicates /or receives Diagnosis, management, medications to/ or from transferring facility</td>
</tr>
<tr>
<td></td>
<td>Tracking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td></td>
</tr>
</tbody>
</table>

Modified from ANA/CDC Stewardship Working Group
Why?

Antibiotic Stewardship in Nursing Homes

UP TO 70% of nursing home residents received antibiotics during a year

UP TO 75% of antibiotics are prescribed incorrectly

Improving Antibiotic Use ->
Potential Roles for Nurses?

- Take a good recent antibiotic use history
- Nuanced antibiotic allergy
- Appropriate cultures, appropriately
- Informed patient response
- *C. diff* differential testing/diagnosis
- Improved transitions in care
- Interdisciplinary communication
- Patient & family engagement
- Public education
Take a good recent antibiotic use history

Check the chart!

- Ask the patient, “What antibiotics have you taken in the last 6 months?”
- “Why did you take them?”
- “How long did you take them?”
- “Did you finish all the pills?”
- “Did you get better?”
“Tell me more about your allergy to penicillin...”
“Did someone tell you that you had an allergy to an antibiotic?”
“Was it in childhood?”
“What were your symptoms?
“Have you ever taken Keflex?”
Testing Stewardship
Informed patient response

C. diff
differential testing/
diagnosis
Improved transitions in care
Interdisciplinary communication
Patient & Family Engagement
Public Education
• **Situation** (identify yourself, the resident, and the problem).
• **Background** (history, vitals, results, etc).
• **Assessment** (findings, severity, life-threatening?).
• **Recommendation** (what is next?, needs, timeframe) or Request for Orders (can be called in or faxed).
I am contacting you about a suspected UTI for the above resident.

Vital Signs

BP _____ / _______       HR _______
Resp. rate ________       Temp. _________
Active Diagnosis
☐ No ☐ Yes  The resident has an indwelling catheter
☐ No ☐ Yes  Patient is on dialysis
☐ No ☐ Yes  The resident is incontinent.
  If yes, new/worsening?  ☐ No  ☐ Yes
☐ No ☐ Yes  Advance directives. Specify ____________
☐ No ☐ Yes  Medication Allergies. Specify ____________
☐ No ☐ Yes  The resident is on Warfarin (Coumadin®)

https://www.ahrg.gov/sites/default/files/wysiwyg/nhguide/4_TK1_T3-Not_all_Infections_need_antibiotics_final.pdf
<table>
<thead>
<tr>
<th>Resident with indwelling Catheter</th>
<th>Resident without indwelling Catheter</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Criteria met if 1 met)</td>
<td>(Criteria met if 1 of 3 met)</td>
</tr>
<tr>
<td><strong>No/Yes</strong></td>
<td><strong>No/Yes</strong></td>
</tr>
<tr>
<td>□□ T 100° /repeat T99°</td>
<td>□□ Acute dysuria alone</td>
</tr>
<tr>
<td>□□ New back/flank pain</td>
<td>--------or----------</td>
</tr>
<tr>
<td>□□ Acute pain</td>
<td>□□ Single T 100°&amp; 1 or worsening sxs</td>
</tr>
<tr>
<td>□□ Rigors/shaking chills</td>
<td>--------or----------</td>
</tr>
<tr>
<td>□□ New/dramatic Δ MS</td>
<td>No fever or 2 or more sxs</td>
</tr>
<tr>
<td>□□ Hypotension</td>
<td>□ urgency □ frequency</td>
</tr>
<tr>
<td></td>
<td>□ incontinence □ suprapubic</td>
</tr>
<tr>
<td></td>
<td>□ gross hematuria</td>
</tr>
</tbody>
</table>

https://www.ahrq.gov/sites/default/files/wysiwyg/nhguide/4_TK1_T3-Not_all_Infections_need_antibiotics-_final.pdf
Request for Orders

________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________

Physician’s signature_______________________Date___________

https://www.ahrq.gov/sites/default/files/wysiwyg/nhguide/4_TK1_T3-
Not_all_Infections_need_antibiotics__final.pdf
Using this UTI SBAR as an example…

- The UTI SBAR form is based on criteria developed by an expert consensus panel which modified clinical practice guidelines for infections in older adults in long-term care facilities.

- The UTI SBAR form can be faxed or used to communicate with a prescribing clinician. It takes only minutes to fill in and can be used as part of the resident’s medical record.
SBAR can be part of Team Strategies & Tools to Enhance Performance & Patient Safety
<table>
<thead>
<tr>
<th>Profession</th>
<th>Very High %</th>
<th>High %</th>
<th>Average %</th>
<th>Low %</th>
<th>Very Low %</th>
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<tbody>
<tr>
<td>Nurses</td>
<td>29</td>
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<td>13</td>
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<tr>
<td>Pharmacists</td>
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<td>52</td>
<td>26</td>
<td>6</td>
<td>2</td>
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<tr>
<td>Medical doctors</td>
<td>15</td>
<td>50</td>
<td>29</td>
<td>5</td>
<td>2</td>
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<tr>
<td>Engineers</td>
<td>13</td>
<td>52</td>
<td>29</td>
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<tr>
<td>Dentists</td>
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<td>49</td>
<td>34</td>
<td>5</td>
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<tr>
<td>Police officers</td>
<td>16</td>
<td>42</td>
<td>29</td>
<td>10</td>
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<tr>
<td>College teachers</td>
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<td>37</td>
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<tr>
<td>Clergy</td>
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<td>32</td>
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<td>45</td>
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<tr>
<td>Chiropractors</td>
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<tr>
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Dec. 7-11, 2016

GALLUP

What does Google say?

The use of antibiotics in nursing homes is intense and usually empiric... Programs that will limit the emergence and impact of antibiotic resistance and infections in nursing homes need to be developed.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC172878/
CDC has a lot of resources for the public and for nursing homes.
Teaching Materials to Post in your Facility
Antibiotic resistance is a growing problem, both in the United States and across the world. An important driver of antibiotic resistance is the overuse of antibiotics. When antibiotics are used correctly, you get the best effect on your health, your family's health, and the health of those around you. Here are some questions to ask your healthcare provider about antibiotics.

**Questions to Ask your Healthcare Provider Before Asking for an Antibiotic**

1. Could my symptoms be caused by something other than bacteria (e.g., a virus or something that is not an infection)?
2. What signs or symptoms should I look for that could mean I might need an antibiotic?
3. Can I be monitored to see if my symptoms improve with other remedies, without using antibiotics?

**Questions to Ask your Healthcare Provider When you are Prescribed an Antibiotic**

1. What infection is the antibiotic treating and how do you know I have that infection?
2. What side effects might occur from this antibiotic?
3. Could any of my other medications interact with this antibiotic?
4. How will I be monitored to know whether my illness is responding to the antibiotic?
These can be posted in public places inside your facility to show patients & families you care.
Antimicrobial stewardship is everyone’s responsibility
By recognizing and better understanding each others’ roles and contributions to antimicrobial stewardship, we create a safer, more collaborative, and better integrated interdisciplinary antimicrobial stewardship process. In doing this, we improve both our individual patient’s as well as the broader public’s health, now and in the future.

Are Nurses antibiotic prescribers? NO

Antibiotic stewards? YES!

Stewardship definition: the conducting, supervising, or managing of something; especially, the careful and responsible management of something entrusted to one's care

https://www.merriam-webster.com/dictionary/stewardship
☑ Recognize the scope of antibiotic resistance in nursing homes and hospitals
☑ Understand how the nurse is already contributing to antibiotic stewardship activities
☑ Identify 3 areas where nurses can increase their skill set to enhance antibiotic stewardship performance in nursing homes
☑ Utilize the SBAR format to communicate critical information to prescribers about possible infection
Antimicrobial Stewardship 2.0
Thank you,
Rita Olans
rolans@mghihp.edu