NC CLASP OUTPATIENT STEWARDSHIP
SESSION 2

May 31, 2023
The views and opinions expressed in this series are those of the speakers and do not reflect the official policy or position of any agency of the US or NC government or UNC.

Our speakers have the following financial relationships with the manufacturer(s) and/or provider(s) of commercial services discussed in this activity:

- Dr. Kistler served as a consultant for Base10, Inc on their UTI embedded clinical support tool and received funding from Pfizer to study pneumococcal carriage.
- Dr. Willis has performed contracted research with: Pfizer (pediatric nirmatrelvir-ritonavir and maternal RSV vaccine), Novavax (pediatric COVID-19 vaccine), and Merck (monoclonal antibody for RSV prevention)
- Ms. Doughman owns individual Gilead stock.

The speakers do not intend to discuss an unapproved/investigative use of a commercial product/device in this series, and all COI have been mitigated.

These slides contain materials from a variety of colleagues, as well as the CDC, WHO, AHRQ, etc.
INTRODUCTIONS

Please put your name, hospital, and location in the chat!
OUTLINE OF TODAY’S SESSION

- Housekeeping
- Review from last session
- Identifying Stewardship Targets
  - Breakout session
- CDC Core Element #3: Tracking and Reporting
- CDC Core Elements #4: Education and Expertise
- Discussion and "Homework"
CME AND CE CREDIT

- CME & CE for participants
  - Attendance and active participation per learning session
  - Click the link in the chat during the session to document your attendance
  - Complete surveys as requested
What are 2-3 strategies your clinic could possibly use to implement antibiotic stewardship? Be specific!

Recommended strategies:

1. Use evidence-based diagnostic criteria and treatment recommendations
2. Use delayed prescribing practices or watchful waiting, when appropriate
3. Provide communication skills training for clinicians
4. Provide clinical decision support
STEWARDSHIP TARGET IDENTIFICATION

Three ways to overuse antibiotics:
1. Antibiotics prescribed when not necessary
2. Antibiotics broader than necessary
3. Durations longer than needed

A target can be:
   - A condition (UTI, acute otitis media, bronchitis)
   - A drug or drug class (cefdinir, fluoroquinolones)
A GOOD TARGET SHOULD BE...
# Potential Targets: Conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>Potential Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Otitis media</td>
<td>Unjustified cephalosporin use</td>
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| Sinusitis                                     | - Use of azithromycin or fluoroquinolones  
- Not applying strict diagnostic criteria  
- Durations: 5-7 days now recommended         |
| Viral URI (e.g., pharyngitis with negative testing, bronchitis) | Prescribing any antibiotic at all                                                  |
| UTI                                           | - Overdiagnosis (asymptomatic bacteriuria)  
- Prescribing doesn’t match resistance patterns  
- Excessive durations for cystitis           |
<table>
<thead>
<tr>
<th>Drug or Class</th>
<th>Potential Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azithromycin</td>
<td>Overuse in acute respiratory infections when beta-lactams are more likely to be effective</td>
</tr>
<tr>
<td>Fluoroquinolones</td>
<td>Overuse in acute respiratory infections and/or urinary tract infections in which beta-lactams would be equally effective with less toxicity</td>
</tr>
<tr>
<td>Third-generation cephalosporins</td>
<td>Overuse in acute respiratory infections in which amox+/‐clav would be sufficient: pneumonia, sinusitis, streptococcal pharyngitis</td>
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BREAKOUT SESSION

- What are some candidate targets for antibiotic stewardship in your clinic?

- How could you evaluate candidate targets?
Commitment
Demonstrate dedication to and accountability for optimizing antibiotic prescribing and patient safety.

Action for policy and practice
Implement at least one policy or practice to improve antibiotic prescribing, assess whether it is working, and modify as needed.

Tracking and reporting
Monitor antibiotic prescribing practices and offer regular feedback to clinicians, or have clinicians assess their own antibiotic prescribing practices themselves.

Education and expertise
Provide educational resources to clinicians and patients on antibiotic prescribing, and ensure access to needed expertise on optimizing antibiotic prescribing.

https://www.cdc.gov/antibiotic-use/community/pdfs/16_268900-A_CoreElementsOutpatient_508.pdf
“TRACKING AND REPORTING”

1. Participate in CME and QI activities to track and improve antibiotic prescribing

2. Implement at least one antibiotic prescribing tracking and reporting system

3. Assess and share performance on quality measures and established reduction goals
METRIC EXAMPLES

- Proportion of acute visits with an antibiotic
- Proportion of visits with upper respiratory infection (URI) diagnosis codes that receive an antibiotic
- Proportion of antibiotics for upper respiratory tract infections that are narrow-spectrum
  - Amox or amox-clav
- Fluoroquinolone prescriptions per month
- Antibiotic prescriptions without a visit
BASIC DATA ELEMENTS

- Patient demographics
- Visit data – date, clinician, type (acute vs scheduled)
- Antibiotic orders
  - Drug name, duration
- Diagnosis codes
DATA FEEDBACK

- Data only helps if stakeholders see it
- Nonjudgmental presentation
- Present with other quality and population health metrics
- Benchmarks and comparisons
Gerber et al., JAMA, 2013

- Cluster randomized trial of pediatric practices in an academic network
- Intervention: education session plus quarterly emailed feedback on antibiotic prescribing with comparison to peers (“you are in the Xth percentile”)
- Outcomes: broad-spectrum antibiotics for sinusitis, pneumonia, and streptococcal pharyngitis
Figure 2. Standardized Rates of Broad-Spectrum Antibiotic Prescribing at Acute Care Office Visits Over Time
“EDUCATION AND EXPERTISE”

Patient Education
PATIENT EDUCATION

- Non-targeted education (brochures, posters) probably have limited effect
  - May plant the seed
  - CDC has many posters and brochures

- In-visit communication
  - When can antibiotics help
  - Adverse drug effects due to antibiotics

https://www.cdc.gov/antibiotic-use/pdfs/VirusOrBacteria-Original-P.pdf
CLINICIAN EDUCATION

Mechanisms:
- Face-to-face educational training
- Continuing education activities
- Access to experts
- Quality Improvement

Resources
- AHRQ has didactic sessions anyone can deliver
- CDC has Continuing Education that anyone can do

Not just prescribers!
- Nurses play a huge role in triage, follow-up, and communication
HOMEWORK

- Identify **two** biggest antibiotic prescribing problems you would like to address
  - Remember: common, impactful, measurable, actionable

- How would you *measure* those problems?
  - What data do you need?
RESOURCES

- Tracking and Reporting, Implementation, Clinician Education
  - AHRQ Toolkit

- Clinician Education
  - CDC stewardship Continuing Education

- Patient Education
  - Posters and Handouts: CDC Be Antibiotics Aware