

NC CLASP OUTPATIENT STEWARDSHIP SESSION 1

April 26, 2023

CONFLICT OF INTEREST DISCLOSURES

- ▶ 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 U.S. 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)
 - ▶ Dr. Johnson and Ms. Thomas do not have any disclosures.
- ▶ 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.

INTRODUCTION TO NC CLASP TEAM PARTNERS

- ▶ Danielle Doughman, MSPH- project manager
- ▶ Elizabeth Thomas, MPH- project manager
- ▶ Evelyn C. Cook, RN, CIC- Associate Director of the North Carolina Statewide Program for Infection Control and Epidemiology (NC SPICE)
- ▶ Amy Powell, MPH- Program Manager, NC SPICE
- ▶ Chrissy Kistler, MD, MASc- Geriatrics researcher and LTC expert
- ▶ Jim Johnson, PharmD- pharmacist with antibiotic stewardship expertise
- ▶ Zach Willis, MD, MPH- Infectious disease clinician and HAI/AR expert

NC CLASP OVERVIEW

- **NC CLASP is a new initiative created to support acute care, outpatient, and nursing home settings to improve antibiotic stewardship and the health of our patients.**
- **NC CLASP is funded by NC DHHS. There is no cost to participate.**

OUTLINE OF TODAY'S SESSION

- ▶ Introductions
- ▶ CE/CME
- ▶ NC CLASP refresher
- ▶ Importance of Ambulatory Antimicrobial Stewardship
 - ▶ Breakout session: Barriers
- ▶ CDC Core Elements 1 and 2
- ▶ Discussion and Wrap-Up

INTRODUCTIONS

Please put your name, clinic, and location in the chat!

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
- ▶ Establish a MyAHEC account
- ▶ Complete surveys as requested

SETTING YOURSELF UP FOR LEARNING

- ▶ This time is for you and your learning.
- ▶ One-screen agreement
- ▶ Hearing and seeing each other
 - ▶ Cameras on
 - ▶ Stay muted unless speaking
- ▶ Use the chat
- ▶ Let's use and share our learning, but not in a way that identifies another facility's pain points.
- ▶ What would you add?



THE NORTH CAROLINA CLINICAL ANTIBIOTIC STEWARDSHIP PARTNERS (NC CLASP)

- ▶ All the information from today's session will be on our website <https://spice.unc.edu/ncclasp/>



NEED FOR OUTPATIENT STEWARDSHIP

80-90% of all antibiotic consumption by outpatients

At least **30%** of outpatient antibiotics are unnecessary

50% of antibiotics for acute respiratory infections are unnecessary

\$10.7 billion spent annually on outpatient antibiotics

Nearly **five times** more antibiotics prescribed in highest-use state compared to lowest-use state

DEFINING ANTIBIOTIC OVERUSE

Unnecessary
antibiotics

UNNECESSARY ANTIBIOTICS

Fleming-Dutra, et al., *JAMA*, 2016

- ▶ Classified diagnosis codes for 184,000 ambulatory visits as usually, sometimes, or never needing antibiotics
- ▶ 50% of antibiotic prescriptions for acute respiratory infections were unnecessary
- ▶ Overall, at least 30% of total ambulatory antibiotic prescriptions appeared to be unnecessary

ANTIBIOTIC SELECTION

Hersh et al., *JAMA Internal Medicine*, 2016

- ▶ First-line antibiotics prescribed for:
 - ▶ Children with acute otitis media: 67%
 - ▶ Adults with pharyngitis or sinusitis: 37%
- ▶ Non-first-line antibiotics used much more often than indicated.

Durations

Regardless of indication and guidelines...

10 days

King, et al., *Clin Infect Dis*, 2021

Condition and Population	Guideline-recommended Duration of Oral Antibiotic Therapy ^a	Median Course Duration in Days (IQR)
Pharyngitis		
Adult	10 days [2]	10 (10–10)
Pediatric	10 days [2]	10 (10–10)
Sinusitis		
Adult	5–7 days ^c [3]	10 (10–10)
Pediatric	10–14 days [3]	10 (10–10)
Acute otitis media		
Pediatric, all	10 days ^d [4]	10 (10–10)
Pediatric, <2 years	10 days ^d [4]	10 (10–10)
Pediatric, ≥2 years	10 days, shorter courses (5–7 days) may be appropriate for select older children ^d [4]	10 (10–10)
Community-acquired pneumonia		
Adult	≥5 days; 5 days appropriate for most patients ^e [5]	10 (7–10)
Pediatric	No recommendation ^f [6]	10 (10–10)
Cellulitis		
Adult	5 days ^g [7]	10 (7–10)
Pediatric	5 days ^g [7]	10 (10–10)
Abscess		
Adult	5–10 days [7]	10 (7–10)
Pediatric	5–10 days [7]	10 (10–10)
Acute cystitis		
Females 12–64 years	Varies by agent; 1–7 days [8]	7 (5–7)

BREAKOUT SESSION

- ▶ What are the **barriers to antibiotic stewardship in the outpatient setting?**
- ▶ Consider:
 - ▶ Outpatient vs inpatient vs nursing home
 - ▶ Barriers you've encountered
 - ▶ Incentives and motivation for participants
 - ▶ Implementation and Measurement

DEBRIEF

CDC Core Elements of Outpatient Stewardship

https://www.cdc.gov/antibiotic-use/community/pdfs/16_268900-A_CoreElementsOutpatient_508.pdf



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.

COMMITMENT

1

Identify a single leader who is accountable

2

Include stewardship duties in position descriptions and job evaluation criteria

3

Communicate with all clinic staff members to set patient expectations

4

Write and display public commitments in support of antibiotic stewardship

Nudging Guideline-Concordant Antibiotic Prescribing

A Randomized Clinical Trial

Meeker et al., *JAMA Internal Medicine*, 2014

- ▶ Randomized adult primary care providers
- ▶ Intervention: poster displaying a letter describing clinician's commitment to not using antibiotics unnecessarily
 - ▶ Physician's signature at the bottom
- ▶ 36% lower rate of inappropriate prescribing for viral RTIs
 - ▶ 52.7% vs 33.7%

ACTION FOR POLICY AND PRACTICE

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

Effect of Behavioral Interventions on Inappropriate Antibiotic Prescribing Among Primary Care Practices

A Randomized Clinical Trial

Meeker et al, JAMA 2016

Tested 3 strategies (all were effective):

1. Clinical decision support

- ▶ E.g., URI diagnosis + Abx prescribed → Pop-up

2. Accountable justification

- ▶ Required free-text explanation for use of Abx in each case

3. Peer comparison

- ▶ Emailed feedback with personal rate of inappropriate prescribing and percentile rank within the study

DISCUSSION

- ▶ How can a clinic meaningfully display commitment to antibiotic stewardship principles?
- ▶ How would this messaging go across with your patients and families?

“HOMEWORK”

- ▶ What are 2-3 strategies your clinic could possibly use to implement antibiotic stewardship? Be specific!
 - ▶ Use the Action for Policy and Practice slide for ideas.

REFERENCES

- ▶ [CDC Core Elements of Outpatient Antibiotic Stewardship](#)
- ▶ Durations paper: King LM, Hersh AL, Hicks LA, Fleming-Dutra KE. Duration of Outpatient Antibiotic Therapy for Common Outpatient Infections, 2017. Clin Infect Dis. 2021 May 18;72(10):e663–e666. PMID: PMC8018335
- ▶ Trial of 3 interventions: Meeker D, Linder JA, Fox CR, Friedberg MW, Persell SD, Goldstein NJ, Knight TK, Hay JW, Doctor JN. Effect of Behavioral Interventions on Inappropriate Antibiotic Prescribing Among Primary Care Practices: A Randomized Clinical Trial. JAMA. 2016 Feb 9;315(6):562–570. PMID: 26864410
- ▶ Antibiotic Overuse: Fleming-Dutra KE, Hersh AL, et al. Prevalence of Inappropriate Antibiotic Prescriptions Among US Ambulatory Care Visits, 2010-2011. JAMA. 2016 May 3;315(17):1864–1873. PMID: 27139059