

# NC CLASP OUTPATIENT STEWARDSHIP SESSION 2

May 31, 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 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

# HOMework REVIEW

- ▶ 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...

Common



# POTENTIAL TARGETS: CONDITIONS

Condition	Potential Problems
Otitis media	Unjustified cephalosporin use
Sinusitis	<ul style="list-style-type: none"><li>-Use of azithromycin or fluoroquinolones</li><li>-Not applying strict diagnostic criteria</li><li>-Durations: 5-7 days now recommended</li></ul>
Viral URI (e.g., pharyngitis with negative testing, bronchitis)	Prescribing any antibiotic at all
UTI	<ul style="list-style-type: none"><li>-Overdiagnosis (asymptomatic bacteriuria)</li><li>-Prescribing doesn't match resistance patterns</li><li>-Excessive durations for cystitis</li></ul>

# POTENTIAL TARGETS: DRUGS

Drug or Class	Potential Problems
Azithromycin	Overuse in acute respiratory infections when beta-lactams are more likely to be effective
Fluoroquinolones	Overuse in acute respiratory infections and/or urinary tract infections in which beta-lactams would be equally effective with less toxicity
Third-generation cephalosporins	Overuse in acute respiratory infections in which amox+/-clav would be sufficient: pneumonia, sinusitis, streptococcal pharyngitis

# BREAKOUT SESSION

- ▶ What are some candidate targets for antibiotic stewardship in your clinic?
- ▶ How could you evaluate candidate targets?

# CDC CORE ELEMENTS OF OUTPATIENT STEWARDSHIP

[https://www.cdc.gov/antibiotic-use/community/pdfs/16\\_268900-A\\_CoreElementsOutpatient\\_508.pdf](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**

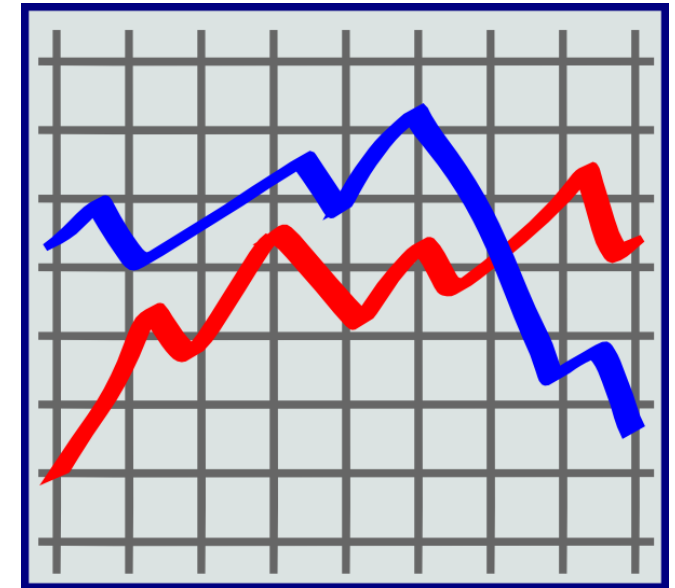
Provide educational resources to clinicians and patients on antibiotic prescribing, and ensure access to needed expertise on optimizing antibiotic prescribing.

# “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





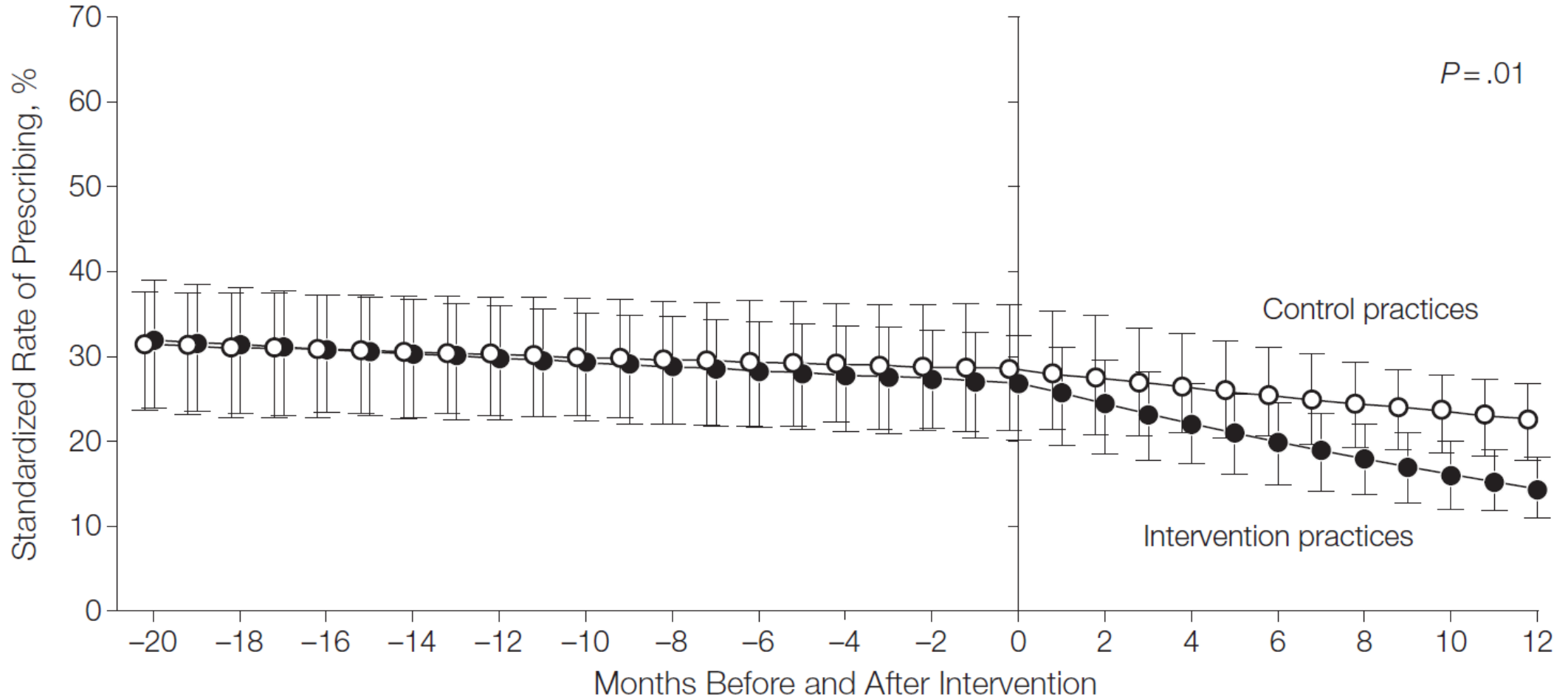
# Effect of an Outpatient Antimicrobial Stewardship Intervention on Broad-Spectrum Antibiotic Prescribing by Primary Care Pediatricians

A Randomized Trial

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

## Viruses or Bacteria What's got you sick?

Antibiotics are often prescribed when they are not needed for respiratory infections. Antibiotics are only needed for treating certain infections caused by bacteria. Viral illnesses cannot be treated with antibiotics. When an antibiotic is not prescribed, ask your healthcare professional for tips on how to relieve symptoms and feel better.

Common Respiratory Infections	Common Cause			Are Antibiotics Needed?
	Virus	Virus or Bacteria	Bacteria	
Common cold/runny nose	✓			No
Sore throat (except strep)	✓			No
COVID-19	✓			No
Flu	✓			No
Bronchitis/chest cold (in otherwise healthy children and adults)*		✓		No*
Middle ear infection		✓		Maybe
Sinus infection		✓		Maybe
Strep throat			✓	Yes
Whooping cough			✓	Yes

\* Studies show that in otherwise healthy children and adults, antibiotics for bronchitis won't help patients feel better.



To learn more about antibiotic prescribing and use, visit [www.cdc.gov/antibiotic-use](http://www.cdc.gov/antibiotic-use).



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<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

## ▶ Not just prescribers!

- ▶ Nurses play a huge role in triage, follow-up, and communication

## Resources

[AHRQ](#) has didactic sessions anyone can deliver

[CDC](#) has Continuing Education that anyone can do

# 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](#)