North Carolina SPICE
Statewide Program for Infection Control & Epidemiology

NC CLASP OUTPATIENT STEWARDSHIP SESSION 3

June 28, 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
- Outpatient Antibiotic Stewardship Strategies
  - Provider Feedback
  - Local Antibiotic Prescribing Guidelines
  - Communications Training
- SMART Aim Development
- Planning for Year 2

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

- 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?

Outpatient Stewardship Strategies

Evidence-Based Strategies

- Communication training
- Peer comparison
- Clinical decision support
- Nudging strategies
  - Written justification
  - Signed commitment letter

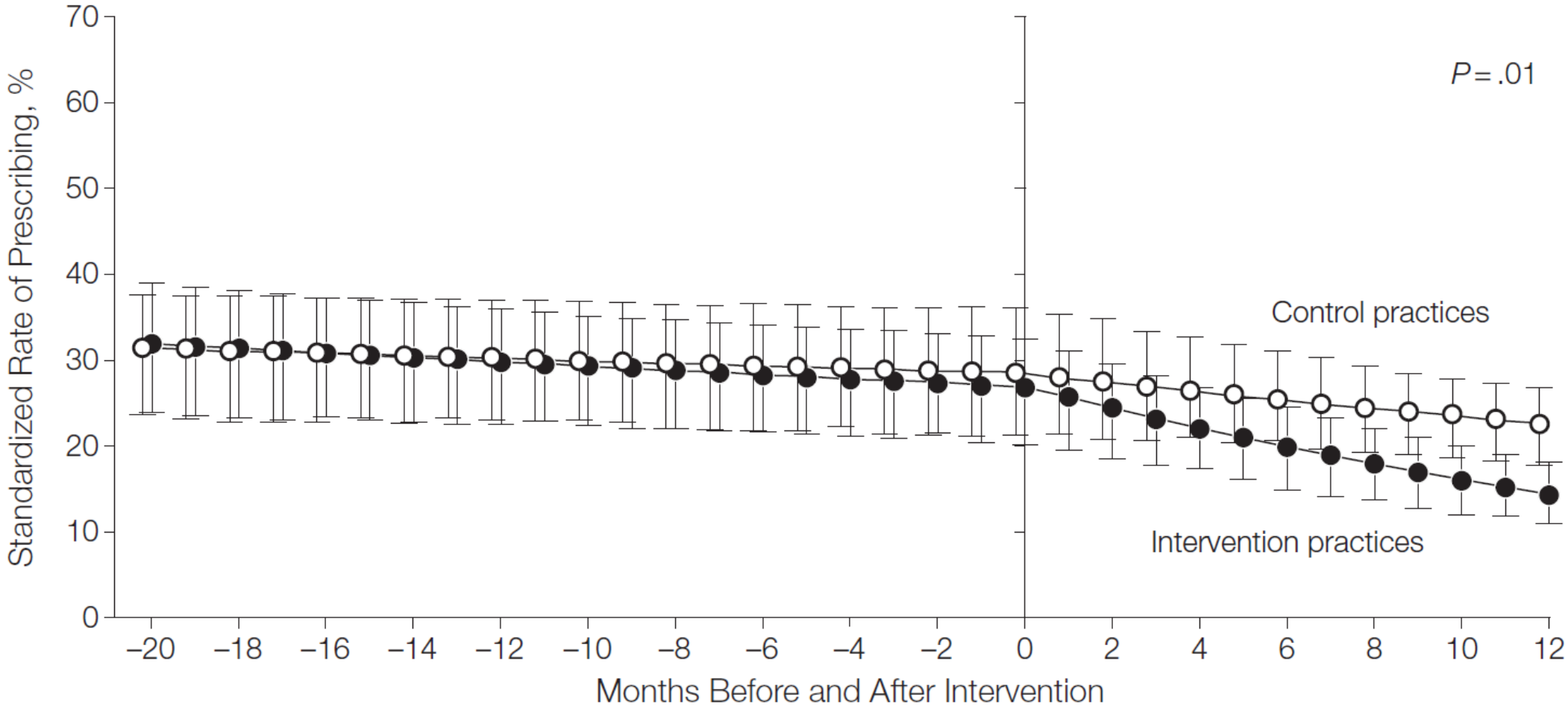
Effect of an Outpatient Antimicrobial Stewardship Intervention on Broad-Spectrum Antibiotic Prescribing by Primary Care Pediatricians

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



Effect of Behavioral Interventions on Inappropriate Antibiotic Prescribing Among Primary Care Practices
A Randomized Clinical Trial

Meeker et al, JAMA 2016

- RCT of 248 clinicians in 47 practices
- Outcome: antibiotic prescribing rate for patients with diagnosis codes consistent with viral infection (URTI, acute bronchitis, influenza)
- Three interventions tested
  - A practice could have none, 1 of 3, 2 of 3, or all 3 interventions
- >31,000 visits studied
- 18 months pre- and post-intervention

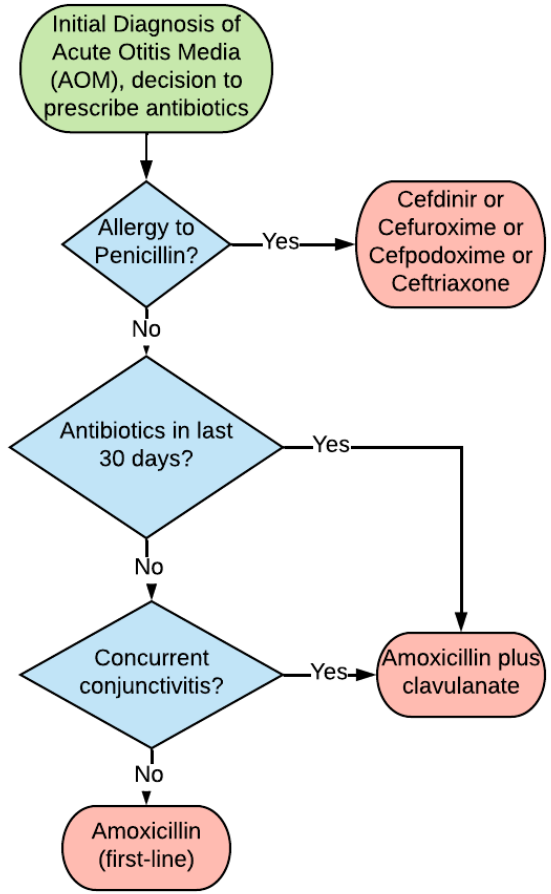
Effect of Behavioral Interventions on Inappropriate Antibiotic Prescribing Among Primary Care Practices
A Randomized Clinical Trial

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
   - Clinicians received monthly emailed feedback with personal rate of inappropriate prescribing
   - Top 10% were told they were top performers; all others were told they were “not a top performer.”

CLINICAL DECISION SUPPORT

- Complex version:
  - Antibiotic order linked to viral diagnosis → flag
- Simpler versions:
  - Make internal guidelines for common infections
  - Cards taped to monitors or behind workstations
  - For EHRs:
    - Wise use of default dosing and durations in antibiotic orders
    - Slightly harder: make an antibiotic order panel that starts by clicking on the patient's diagnosis



NUDGES

- "Accountable justification"
  - All antibiotic orders accompanied by *free text* justification
  - In the trial, they could write anything
    - No one was reading it
  - Still effective!
  - It does seem the effect could be temporary
- Poster – separate trial
  - Sites displayed a poster signed by all the clinicians stating commitment to use antibiotics responsibly
  - Patient education + clinician nudge
  - Effective, but short study

COMMUNICATION TRAINING

- DART Project (Dialogue Around Respiratory Illness Treatment)
  - Developed by University of Washington researchers
- Common clinician concern: *not* prescribing takes longer than prescribing
- Common patient concern: they took off work, traveled, paid a copay…
  - …and got told they had to get better on their own

COMMUNICATION TRAINING

- 4 key components to successful communication
  1. Review your physical exam findings
     - "Lungs sound nice and clear"
  2. Deliver a clear diagnosis
     - "You have bronchitis"
  3. Use a two-part negative/positive treatment recommendation
     - Negative: "This is caused by a virus that antibiotics won't touch"
     - Positive: what things the patient *can* do to feel better
     - Start with negative and *then* do positive – shift the focus away from antibiotics
  4. Provide a contingency plan

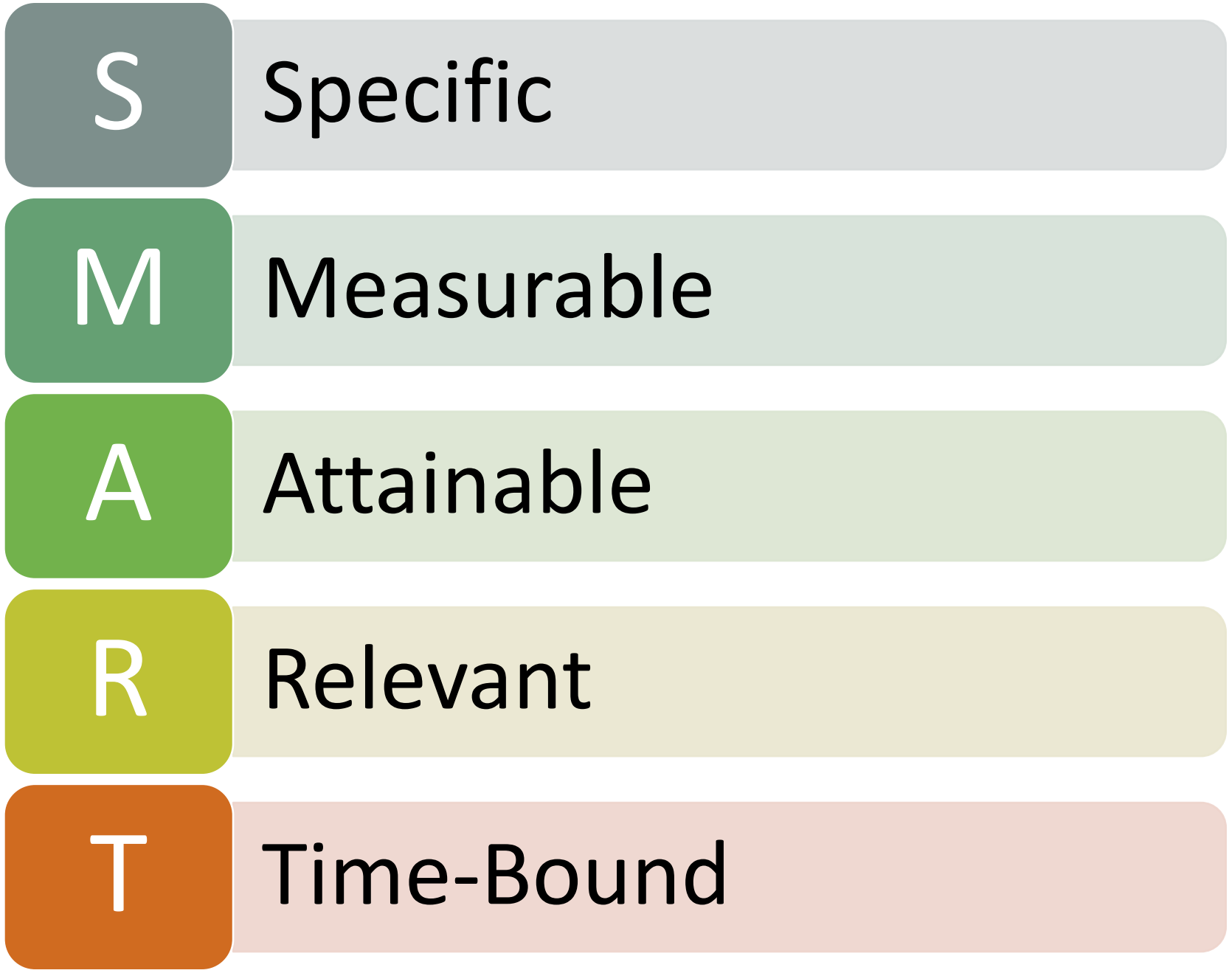
POLL QUESTION

- What strategies have you used to improve antibiotic prescribing in your clinic?
  - Clinician/staff education
  - Patient education
  - Clinical decision support
  - Prescribing feedback to clinicians
  - Communications training
  - Other

[select all that apply]

SMART AIMS

SPICE


S
Specific
M
Measurable
A
Attainable
R
Relevant
T
Time-Bound

SMART AIMS

- Specific
  - Have a clear goal in mind.
  - NOT: “Use fewer fluoroquinolones.”
  - “Reduce X by 25%.” “Increase Y by 50%.” “Achieve 90% compliance.”
- Measurable
  - Can’t be specific if you can’t measure it
- Attainable
  - Is there a strategy that’s likely to work?
  - Don’t set your goal too high
- Relevant
  - “If we achieve our aim, will our patients be safer/have better outcomes?”
  - Make sure your aim affects a lot of patients (or makes a big difference for a small number)
- Time-bound
  - Set a deadline
  - Work backward from there

SMART AIM EXAMPLES

- “By 12/31/2023, we will prescribe antibiotics 25% less for patients with viral diagnoses, compared to the same time period in 2022.”
- “By 9/30/2024, we will prescribe fluoroquinolones 50% less frequently to patients with UTIs, compared to 2022.”
- “By 6/30/24, we will prescribe amoxicillin or amox-clav to 80% of patients with sinusitis or pneumonia.”

QUICK REVIEW

- Importance of Outpatient Stewardship
- CDC Core Elements of Outpatient Stewardship
- Stewardship target selection
- Strategies to improve antibiotic prescribing
- SMART Aims

NC CLASP: YEAR TWO

11 learning sessions September 2023-May/June 2024

CE included: CME, RN, Pharmacist (ACPE)

Sign-up begins soon

- **<u>In-depth discussion possible topics include:</u>**
  - Optimal antibiotic therapy for common conditions
    - What's in guidelines and why?
  - Consequences of antibiotic overuse
  - Penicillin Allergies
  - Antibiotic overuse by setting:
    - Primary care, urgent care, ED
    - Dentistry
    - Rural vs urban vs suburban
  - Implementing Stewardship
    - Coaching

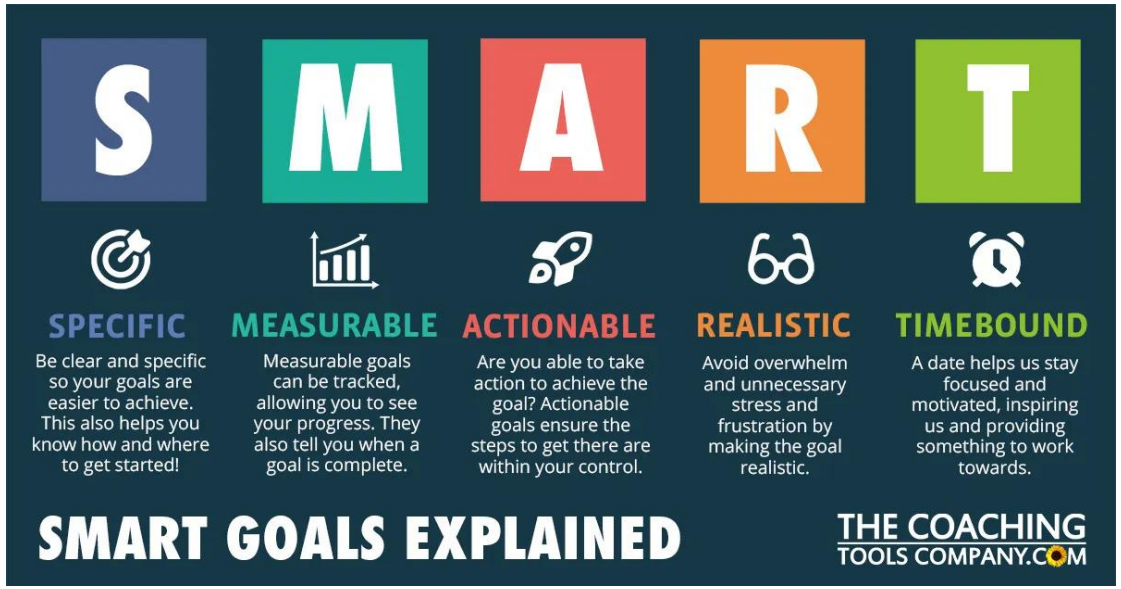
BREAKOUT SESSION

- What would help you most in the second year?

- Can you implement a project?
  - We can provide coaching support
  - You would need to stay on track and provide updates

HOMEWORK

- Develop your target into a SMART Aim
  - By [6/30/24], we will [reduce] [use of antibiotics for X] by [X%], compared to [baseline].
  - How will you measure progress toward your goal?
  - What will be the primary action you will take to achieve this goal?



SAVE THE DATE

Antibiotic Stewardship Conference

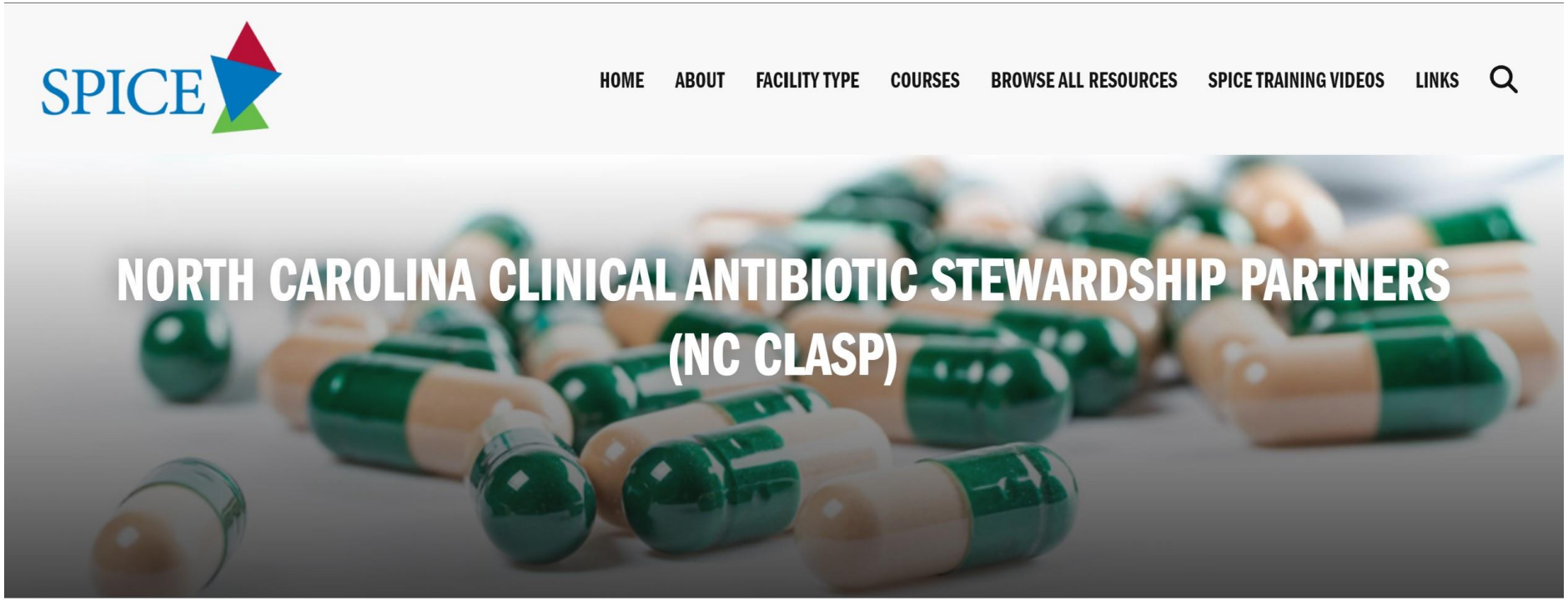
11.15.23 | 9 am - 4 pm
The Friday Conference Center
Chapel Hill, NC

North Carolina Clinical Antibiotic Stewardship Partners

More information at spice.unc.edu/ncclasp/

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/



RESOURCES

- Tracking and Reporting, Implementation, Clinician Education
  - AHRQ Toolkit
- Clinician Communication Training
  - DART: https://www.uwimtr.org/dart/
- SMART Aims
  - CDC Guide with template