LONG-TERM CARE COMMUNITIES ANTIBIOTIC STEWARDSHIP SESSION #3

October 4, 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.

▶ The speakers <u>do not</u> 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, Drs Zachary Willis, Philip Sloane, and David Weber, as well as the CDC, WHO, AHRQ, IHI, etc.

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OUTLINE OF TODAY'S SESSION

1. NC CLASP reminders
2. Antibiotic Review
3. CDC Core Element: Action
4. Group Discussion
5. Smart Aim
6. QI Conversations
7. Small Group Discussion
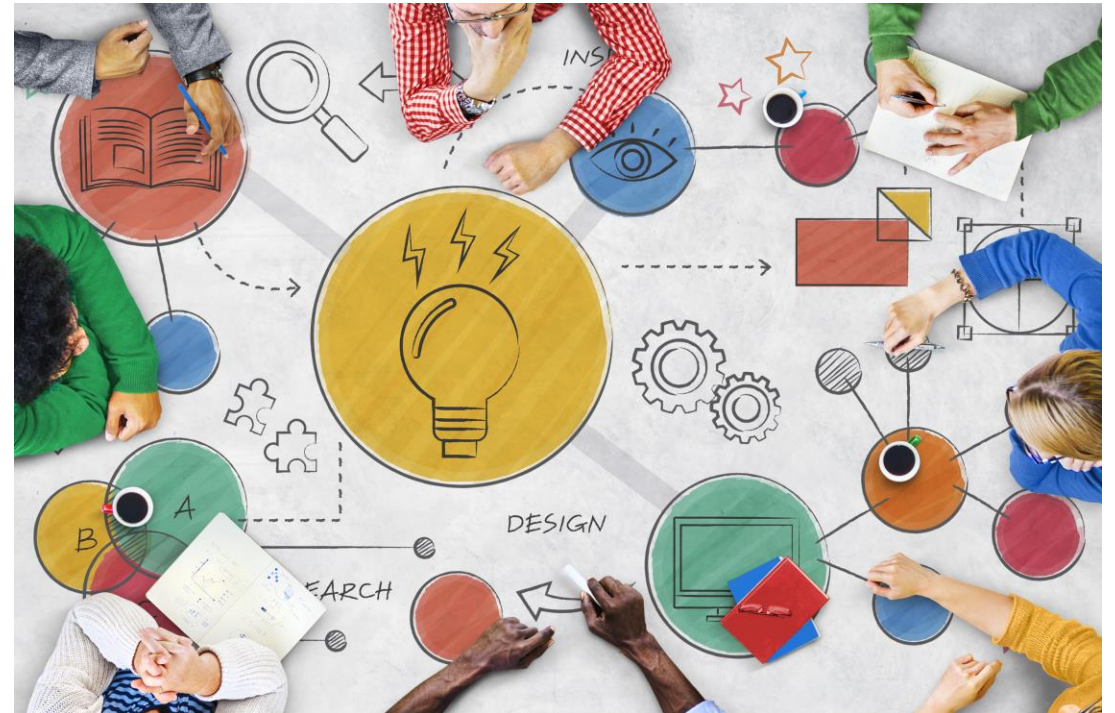
NC CLASP REMINDERS

▶ If you need to get a hold of us, please email:

  ▶ Danielle.Doughman@unchealth.unc.edu

▶ CME

  ▶ Attendance and active participation per learning session

  ▶ Use your MyAHEC account

  ▶ Complete surveys as requested

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LET US KNOW WHO'S HERE TODAY!

Please put your name and nursing home community in the chat

If using computer with no mic, please mute the computer and dial in +1 646 931 3860 US
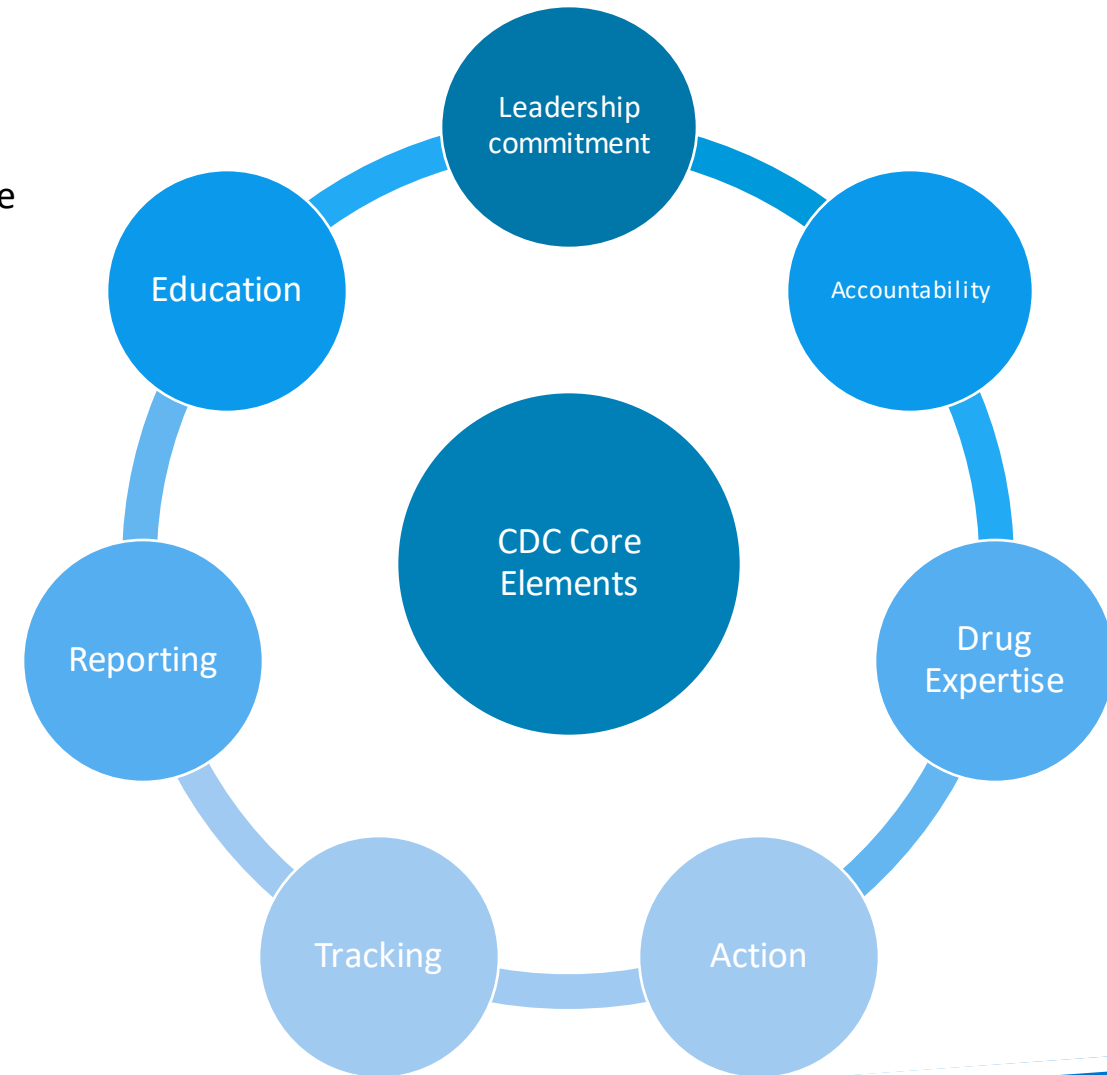
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Passcode: 496304

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SESSION REMINDERS

▶ This time is for you and your learning.

▶ Please turn on your videos!

  ▶ Cameras on

  ▶ Stay muted unless speaking

▶ Use the chat

▶ Let's use and share our learning, but not in a way that identifies protected information.

ACTION TO IMPROVE ANTIBIOTIC USE

▶ **Policies that support optimal antibiotic use**
  - ▶ CMS regulations for medication reconciliation
  - ▶ F880 and F881: concerns related to infection prevention and control or the antibiotic stewardship program
  - ▶ Modified Loeb or McGeer criteria for suspected infection

▶ **Broad interventions to improve antibiotic use**
  - ▶ Communication guides
  - ▶ Culture criteria
  - ▶ Antibiotic time-out

▶ **Pharmacy interventions**
  - ▶ Standing review of type, dose, duration of antibiotics and antibiograms based on community cultures

▶ **Infection and syndrome specific interventions to improve antibiotic use**
  - ▶ Target specific clinical situations that drive inappropriate antibiotic use develop/implement interventions

CDC Core Elements: Leadership commitment, Accountability, Drug Expertise, Action, Tracking, Reporting, Education

THREE WAYS TO OVERUSE ANTIBIOTICS

Using antibiotics when none are indicated

Using antibiotics that are too broad or not effective

Using antibiotics for longer than indicated

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OVERVIEW OF CURRENT ANTIBIOTICS

| ATYPICALS | MRSA | ENTEROCOCCUS | GPCs | GNRs | PSEUDOMONAS | ANAEROBES Oral   Gut | ESBLs |

Beta-Lactams

Non-Beta-Lactams

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BETA-LACTAM ANTIBIOTICS

▶ Good against gram positive organisms (and some gram-negative/anaerobes)

▶ Penicillins, cephalosporins

▶ Tend to accumulate well at sites of infection:

  ▶ Respiratory tract

  ▶ Urinary tract (most in very high concentrations)

▶ Toxicity is pretty minimal

  ▶ Diarrhea is fairly common

  ▶ Allergy is the most common major issue

▶ Most are inexpensive, available in liquid, usually taste OK to good

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NON-BETA-LACTAM ANTIBIOTICS

▶ Good against a variety of gram-positive, gram-negative organisms and atypicals

▶ Azithromycin, Doxycycline, TMP-SMX, Clindamycin, Fluoroquinolones

▶ Variable penetrance at the tissue level but useful in all the following

   ▶ GI

   ▶ Skin and soft tissue

   ▶ Respiratory tract

   ▶ Urinary tract (most in very high concentrations)

▶ Toxicity can be high

   ▶ C. Diff

   ▶ Resistance is common

   ▶ More adverse events: Pulmonary issues, QT prolongation, delirium/neurologic issues, renal complications, myelosuppression

▶ Antibiotics targeting gram-negatives tend to taste bad…

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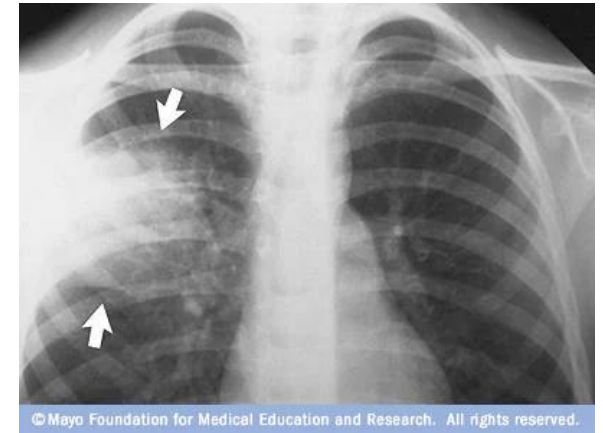
WHAT IS AN ANTIBIOTIC TIME-OUT?

A time-out provides a structured opportunity to review a resident's antimicrobial therapy 36 to 72 hours into treatment.

▶ The provider takes new information into account...

- ▶ results from blood or urine cultures
- ▶ how the patient is responding to the drug

...and decides if adjustments are needed to the drug, dose, duration, or route.

▶ For example, antibiotics can be

- ▶ narrowed to more precisely target the organism identified in a culture
- ▶ discontinued if the patient is not found to have an illness that will respond to antimicrobials after all
- ▶ changed from the IV to oral route and vice versa.

READY FOR A
TIME-OUT?

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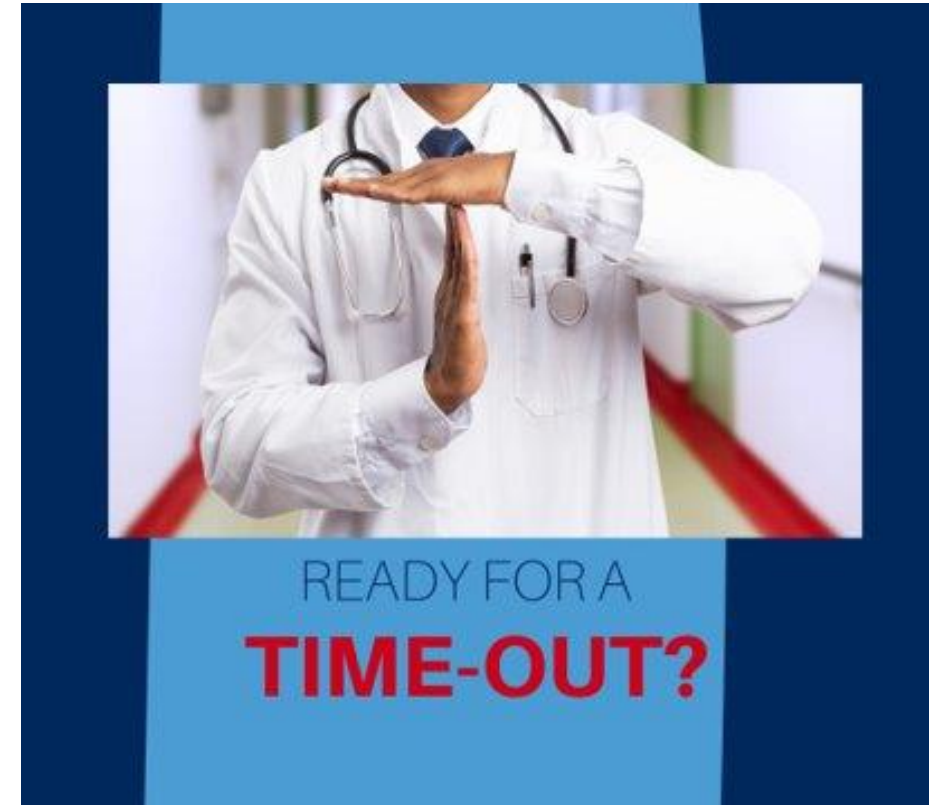
TIME-OUTS READINESS CHECKLIST

▶ The checklist can help a patient care team determine whether conditions are favorable to begin implementation of antibiotic time-outs.

▶ Answering "yes" to most or all questions indicates that antibiotic time-outs may be the right next step.

Defining Need

1. Do you feel that there is an opportunity to optimize antibiotic prescribing within your service?
2. Do you believe antibiotic time-outs would be an appropriate strategy to address this need?

Willingness to implement change

3. Are care team members receptive to implementing quality improvement initiatives?
4. Does your service have an established history of successful implementation of new practices, such as successful Quality Improvement projects?
5. Are there no other major changes being implemented at this time that may compete with the culture change introduced by the ATO initiative?
6. Are service supervisors supportive of the ATO initiative? Are they willing to make accommodations to help staff successfully carry out the initiative?

Carolina Antimicrobial Stewardship Program
www.med.unc.edu/casp/

Resource: https://www.med.unc.edu/casp/wp-content/uploads/sites/563/2020/10/ATO-Toolkit_Readiness-Assessment.pdf

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SMALL GROUP DISCUSSION

Don't forget to choose a reporter!

▶ Are there antibiotics that you think are overused in your nursing homes? Which ones?

▶ If you needed expertise on antibiotic selection, what resources are available? Is this a gap in your practice?

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ANTIBIOTIC TIME-OUT/ DE-ESCALATION SMART AIM

Specific (Who?) : Nursing staff will use an antibiotic time-out at 72 hours

Measurable (How?): Time-outs will be documented in a nursing note

Achievable (What?): 75% of antibiotic starts will have a time-out

Relevant (For Whom?) Nursing Staff (and NH residents who will receive less abx)

Timely (By when?) 1/1/2024

Complete Aim Statement: By 1/1/24, documented time-outs will occur in 75% of antibiotics prescribed.

NC Clinical Antimicrobial Stewardship Program		
NC CLASP Work Plan		
OVERALL NC CLASP Goal		
To optimize antibiotic stewardship in your nursing home		
Your Nursing Home Community SMART Goal		
Intervention Strategy		
[How you propose to reach your goal]		
NC CLASP Nursing Home Community		
[name of your nursing home here]		
Anticipated Outcome(s):	*[what concrete product or deliverable do you hope to achieve by the end of the sessions]*	
How will you measure strategy success? **[List how you plan to measure things]**	Mid-point Check-in: Session 5 Summary of progress, challenges:	Final Check-in: Session 10 Summary of progress, challenges:

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SMART AIMS AND RELIABLE PROCESSES

GOAL: IMPROVE COMMUNICATION WITH FAMILIES AND RESIDENTS ABOUT APPROPRIATE ANTIBIOTIC USE.

FROM GENERAL TOPIC TO SMART AIM
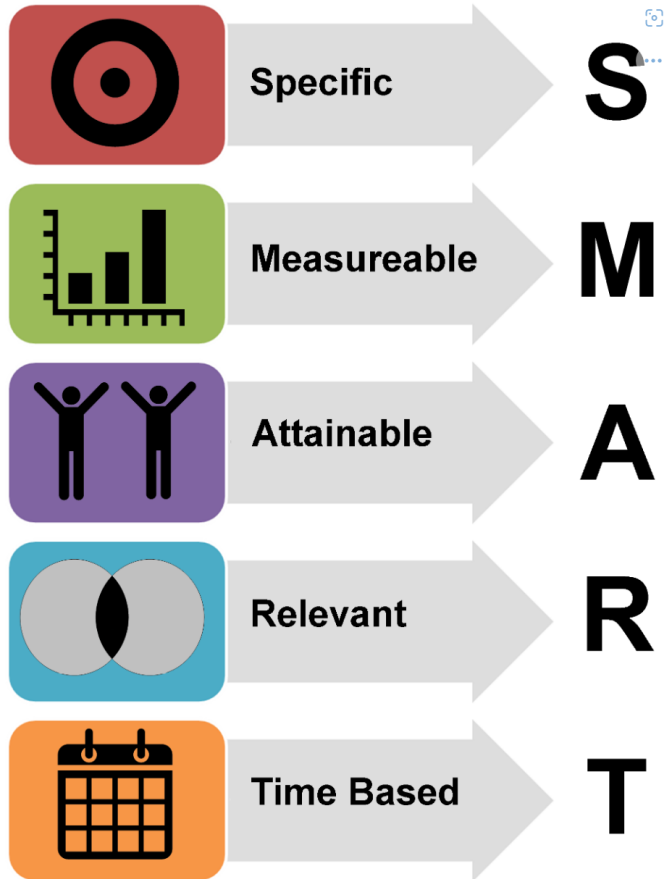
Specific: What will the goal accomplish? Who is the target population?

Measurable: How much change? Increase or decrease? How will you know whether you reached your goal?

Attainable: Is it possible in the time you have specified? Does your team have the resources to do it?

Relevant: Is the goal in line with your organization's mission/vision? Does it pass the 'so what' test?

Time-based: By when?

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GOAL: IMPROVE COMMUNICATION WITH FAMILIES AND RESIDENTS ABOUT APPROPRIATE ANTIBIOTIC USE.

The goal statement helps to identify a measurable goal that is to be achieved during a given time period.

S	**Specific**	Identify the exact process you are targeting, including what/who is included or specifically excluded.	
M	**Measurable**	Identify at least one or more specific measurement that will tell you change was an improvement.	
A	**Attainable**	Ensure the improvement can be completed in the time allotted with the resources available.	
R	**Relevant**	Ensure the project is strategically aligned and the appropriate parties are accountable to the work.	
T	**Time-Bound**	Always include the deliverable or end date.	

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NC CLASP WORK PLAN

▶ Worksheet to help document goals, activities, and outcomes

▶ Tool to help share learning and progress, not for judgment!!

https://spice.unc.edu/ncclasp/nursinghomes/

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QI Essentials Toolkit:
PDSA Worksheet

The Plan-Do-Study-Act (PDSA) cycle is a useful tool for documenting a test of change. Running a PDSA cycle is another way of saying testing a change — you develop a plan to test the change (Plan), carry out the test (Do), observe, analyze, and learn from the test (Study), and determine what modifications, if any, to make for the next cycle (Act).

Fill out one PDSA worksheet for each change you test. In most improvement projects, teams will test several different changes, and each change may go through several PDSA cycles as you continue to learn. Keep a file (either electronic or hard copy) of all PDSA cycles for all the changes your team tests.

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Smart Aim (don't forget to choose a spokesperson)

Who do you think you need to talk to, to get closer to success?

What do you want to ask them about?

What is working v not working, for whom, for your QAPI goals?

SMALL GROUP DISCUSSION