

C. difficile Infection: A Tiered Approach To Prevent, Contain and Reduce Hospitalizations



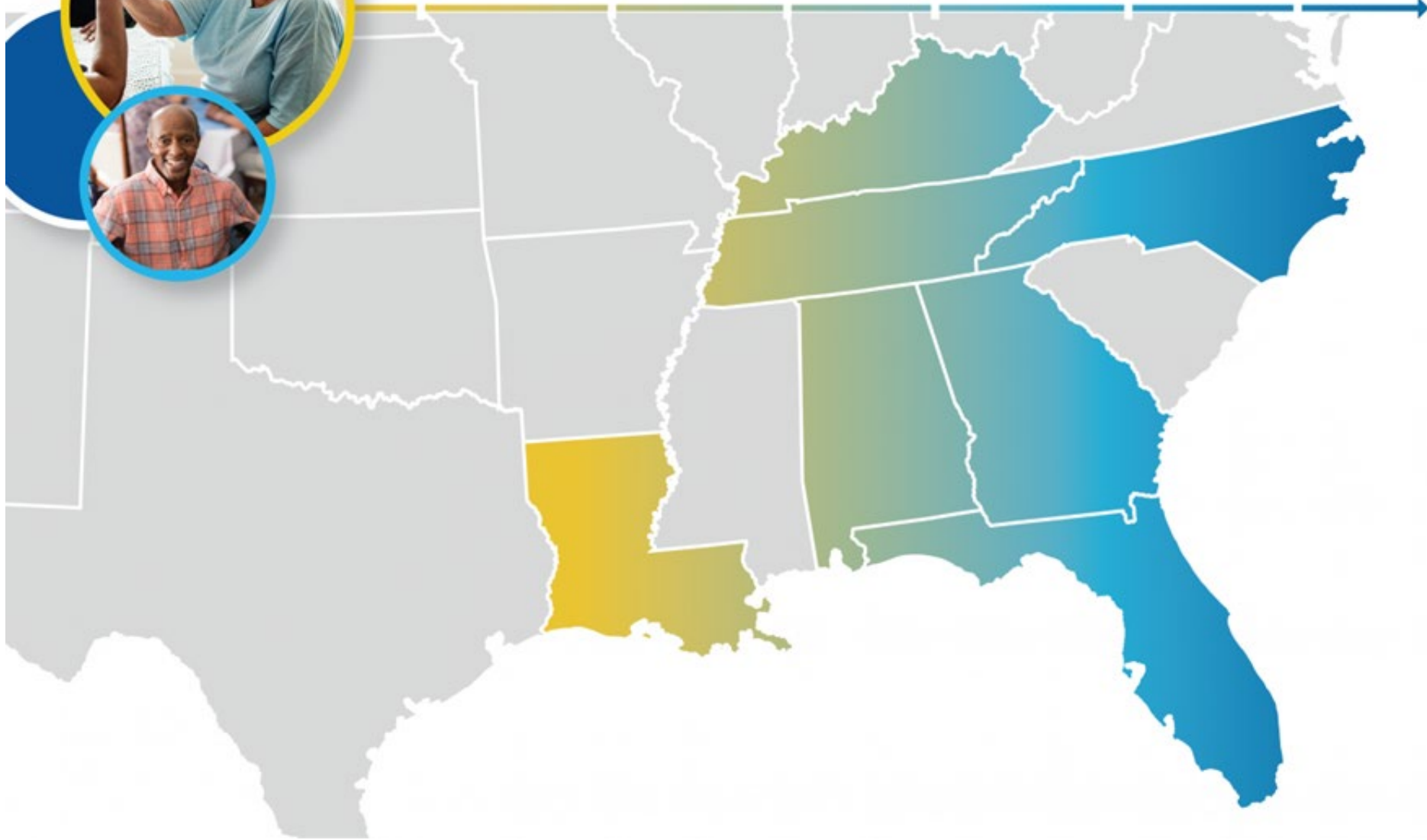
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QIN-QIO
Quality Innovation Network -
Quality Improvement Organizations
CENTER FOR MEDICARE & MEDICAID SERVICES
QUALITY IMPROVEMENT & INNOVATION GROUP

Making Health Care Better *Together*



About Alliant Health Solutions

Amy Ward, MS, BSN, RN, CIC, FAPIC

PATIENT SAFETY MANAGER

Amy is a registered nurse with a diverse background in acute care nursing, microbiology, epidemiology and infection control. She is passionate about leading and mentoring new and future infection preventionists in their career paths and assisting them in reducing healthcare-associated infections across the continuum of care.

Amy enjoys spending time with her family. She loves all the time she can get outdoors camping, biking, and running.

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Learning Objectives

By the end of the session, the learner will:

1. Verbalize the burden of C. difficile infection (CDI) on the health care system
2. Discuss the importance of early detection and control as the foundation of the CDI prevention program
3. Describe the three-tiered approach to CDI prevention

Hello, My Name Is...

Type into chat:

- Name
- Role
- Facility
- State
- What are you excited to learn today?

Risks and Cost of CDI

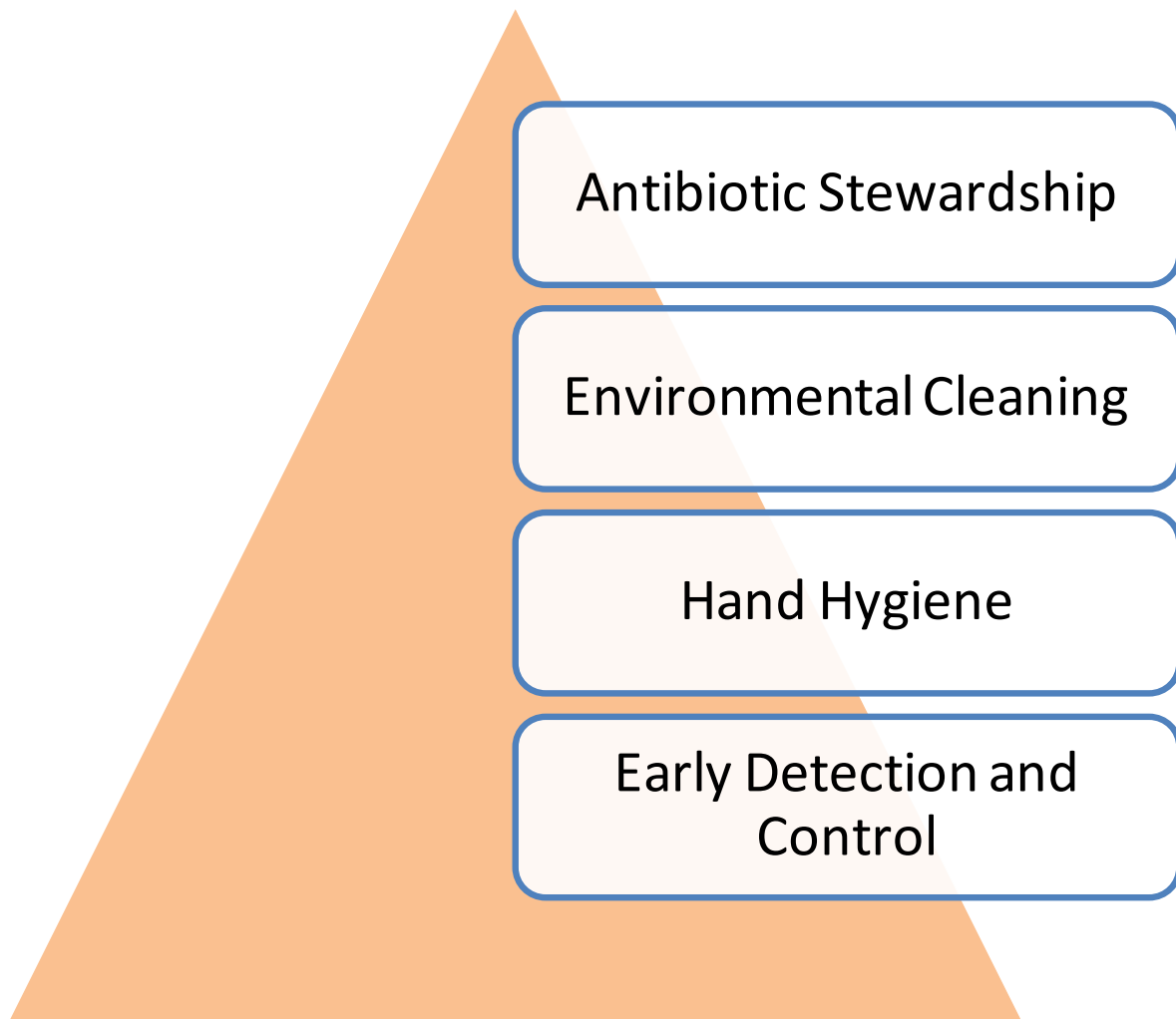
Risks:

- Medications disrupting intestinal flora (antibiotics, antacids, chemotherapy, etc.)
- Residents over 65 years old
- Residing in long-term care facility (LTCF) or hospitalization
- One-quarter of all CDI cases in the United States had onset in nursing homes

Cost:

- 14,000 deaths in 2007
- \$4.8 billion in excess health care costs in 2007
- Average cost of CDI event: \$7500

Tiered Approach to CDI Prevention And Control



Foundation: Early Detection and Control

Who should be clinically evaluated for CDI?

- Residents who develop profuse, watery diarrhea (>3 stools in 24 hours)
 - Diarrhea continues after diarrhea-causing medications are stopped
- Immediately initiate contact enteric precautions
- Discuss any change in resident status with the provider and infection prevention RN
- **DO NOT REQUEST TESTS FOR CURE!!**

Polling Question

Polling question:

Do you know which test type your lab uses for C. diff?

Options: Yes, No, I will find out

How Is CDI Diagnosed?

- Nucleic acid by Polymerase Chain Reaction (PCR) detected in the stool specimen
 - PCR is extremely sensitive and can pick up colonization
 - If the burden of CDI is significant within a facility and control measures are in place, consider adding a confirmatory test
- Toxin test – C. difficile toxin A or B (enzyme immunoassay or EIA test)
 - Used frequently as a confirmatory test



How Should Cases Be Identified and Reported?

- Nursing homes should monitor CDI rates to understand how they can improve resident outcomes.
 - Without data on CDI rates, how would you know if you saw an increase in cases?
- Perform CDI surveillance of all residents regularly.
 - Review orders for C. diff tests to evaluate the clinical picture.
 - Review lab results for positive C. diff results.
 - Review new admissions for recent or historical CDI.

NHSN C. diff Lab ID Definition

- **All non-duplicate *C. difficile* positive laboratory assays obtained while a resident is receiving care in the LTCF.**
- Lab results from outside facilities before a resident's admission should not be included in Lab ID Event reporting.
- Keep a log of all positive *C. diff* tests sent from your facility to track duplicate results to ensure they are not incorrectly entered as a CDI Lab ID Event (e.g., Line listing).
- New for 2020 reporting: Facilities must submit all positive *C. difficile* laboratory assays collected from a resident while he/she is physically housed in the reporting LTCF (see Settings for additional information about reportable events).

Example C. diff Line List

Resident Name	Gender	DOB	Date of first admission	Date of current admission	Transfer from Acute care in last 4 weeks	Location	Date of symptom onset	Date of Specimen Collection	Date Positive	Date reported to NHSN
John D	M	2/10/1852	6/2/2020	9/25/2020	Y	Hall B	11/5/2020	11/5/2020	11/6/2020	12/7/20
Susie Q	F	11/3/1776	7/5/2020	7/5/2020	N	Hall A	8/15/2020	8/16/2020	8/16/2020	9/8/20
Roxanne	F	3/17/1854	9/18/2020	9/18/2020	N	Hall B	11/2/2020	11/2/2020	11/3/2020	12/7/20
Jerry G	M	5/15/1945	7/15/2020	9/15/2020	N	Hall B	10/31/2020	11/1/2020	11/2/2020	12/7/20
Susie Q	F	11/3/1776	7/5/2020	9/28/2020	Y	Hall B	10/2/2020	10/2/2020	10/3/2020	11/5/20

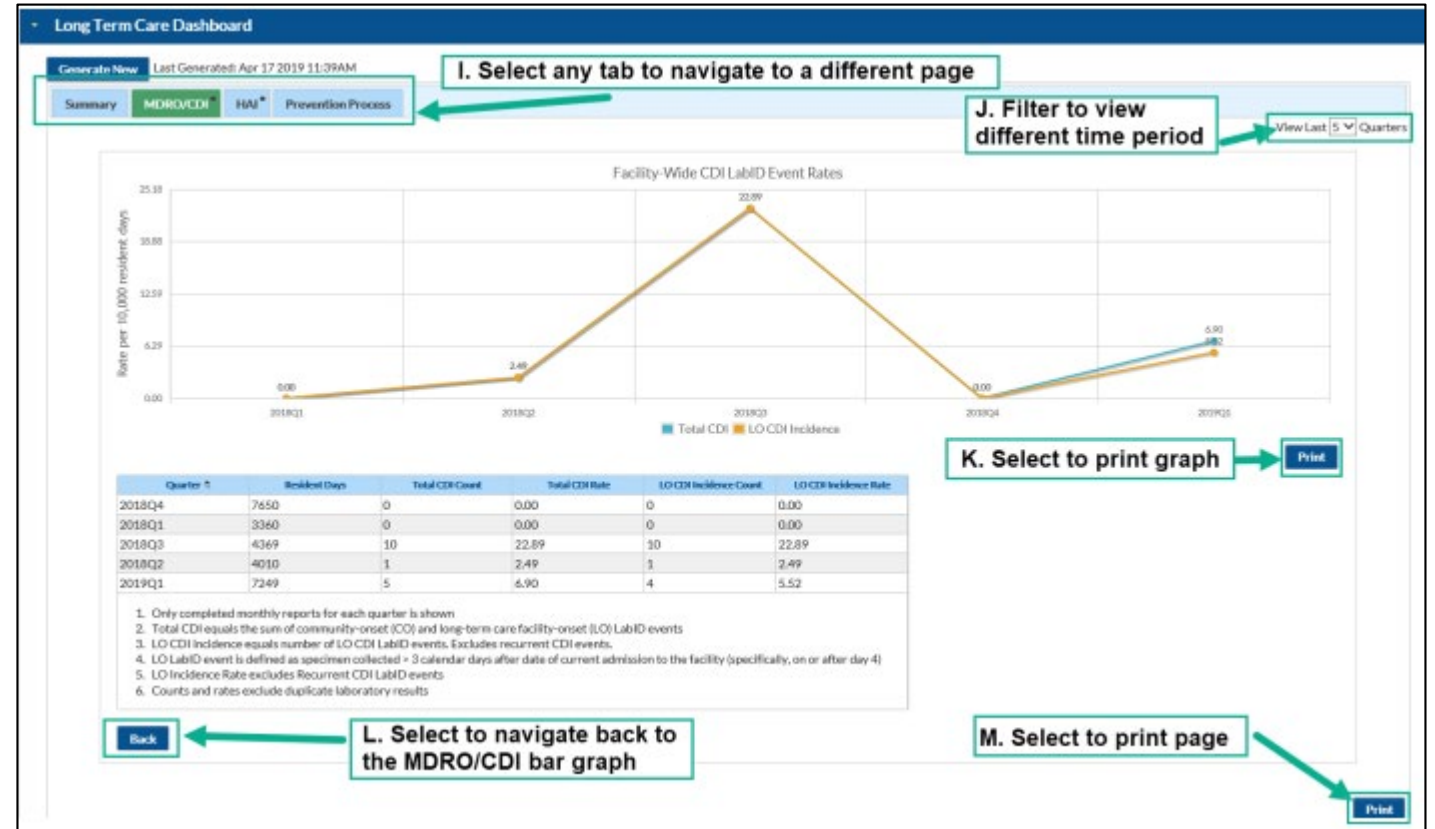
Lab ID Event Form

- Demographic information
 - Name, gender, DOB, ID number
- Event details:
 - Event Type – LabID
 - Organism Type – C. difficile
 - Specimen Body Site/System: GI tract
 - Specimen Source: Stool
 - Resident Care Location – ex. Hall B
 - Resident Service Type
 - Acute Care transfer? – from Medical record

 Form Approved OMB No. 0920-0666 Exp. Date: 12/31/22 www.cdc.gov/nhsn	
Laboratory-identified MDRO or CDI Event for LTCF	
Page 1 of 1	
*required for saving	
Facility ID:	Event #:
*Resident ID:	
Medicare number (or comparable railroad insurance number):	
Resident Name, Last:	First: Middle:
*Gender: M F Other	*Date of Birth: __/__/__
Ethnicity (specify):	Race (specify):
*Date of First Admission to Facility: __/__/__	*Date of Current Admission to Facility: __/__/__
Event Details	
*Event Type: LabID	*Date Specimen Collected: __/__/__
*Specific Organism Type: (check one)	
<input type="checkbox"/> MRSA <input type="checkbox"/> MSSA <input type="checkbox"/> VRE <input type="checkbox"/> C. difficile <input type="checkbox"/> CephR-Klebsiella <input type="checkbox"/> CRE-E. coli <input type="checkbox"/> CRE-Enterobacter <input type="checkbox"/> CRE-Klebsiella <input type="checkbox"/> MDR-Acinetobacter	
*Specimen Body Site/System:	*Specimen Source:
*Resident Care Location:	
*Primary Resident Service Type: (check one)	
<input type="checkbox"/> Long-term general nursing <input type="checkbox"/> Long-term dementia <input type="checkbox"/> Long-term psychiatric <input type="checkbox"/> Skilled nursing/Short-term rehab (subacute) <input type="checkbox"/> Ventilator <input type="checkbox"/> Bariatric <input type="checkbox"/> Hospice/Palliative	
*Has resident been transferred from an acute care facility in the past 4 weeks? Yes No	
If Yes, date of last transfer from acute care to your facility: __/__/__	
If Yes, was the resident on antibiotic therapy for this specific organism type at the time of transfer to your facility? Yes No	
Custom Fields	
Label	Label
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
Comments	

Why Report C. diff Lab ID Data to NHSN?

- Standard infection definitions
- Benchmarking
- Identify prevention targets/goals
- Track Progress
- [NHSN LTCF Dashboard Guidance \(cdc.gov\)](#)



Hand Hygiene

Competency

- Do staff follow all necessary steps when performing hand hygiene (HH)?

Adherence Monitoring

- Do staff perform HH when indicated?

Improvement Plan

- Use data collected from adherence monitoring to make plans for improvement
 - Are there specific shifts or disciplines that need to improve?
 - Is there a unit that is lacking equipment and therefore has low adherence rates?



Environmental Cleaning

- Create daily and terminal (discharge) cleaning protocols and checklists for resident care areas and shared equipment
- Perform daily cleaning of CDI patient rooms using a sporicidal agent ([EPA list K](#)) per manufacturer protocol
 - Clean and disinfect resident area at least once daily, including toilets
 - Clean and disinfect all shared equipment prior to use with another resident (Hoyer, wheelchair, glucometer, gait belt)
- Perform terminal cleaning after transfer/discharge/resolution of infection with a sporicidal agent ([EPA List K](#)) per manufacturer protocol
- Clean any additional areas that are contaminated during transient visits by those with suspected or confirmed CDI (activities, physical therapy, etc.)



Who Cleans What?

Create a table to identify cleaning and disinfection responsibility, frequency, agent, etc.

Item	Frequency	Cleaning Agent	Person/Staff Responsible	Notes/Resources
Medication cart	Between uses and at the end of each shift prior to locking	Sani-wipe	Nurse/clinical staff	
Glucometer	After each use and before docking	Bleach wipes	Clinical staff	Instructions for use booklet (link)
Hoyer sling	Assigned to resident, laundered after use	Standard Laundry process	Laundry staff	Assign to resident, do not leave on Hoyer lift; clean slings available in clean linen storage
Hoyer lift	After each use	Bleach wipes	Clinical staff/therapy staff	Store cleaned lift in clean equipment area, never store without disinfecting first

Antimicrobial Stewardship

- A set of commitments and actions designed to optimize the treatment of infections while reducing adverse events associated with antibiotic use.
 - *Leadership Commitment*
 - *Drug Expertise*
 - *Reporting*
 - *Action*
 - *Education*
 - *Tracking*
 - *Accountability*
- Studies have shown that CDI, gastroenteritis and diarrhea are the most common adverse events related to antibiotic use.
- Antibiotic stewardship is about resident safety and quality care.
- CMS mandates that nursing homes have stewardship programs in place.
- These programs will also reduce CDI–Bonus!



Polling Question

What content would you like to see included in upcoming sessions?

Select all that apply:

- Inter-facility communication
- Therapeutics and treatment regimens for C. diff infection
- Identification and diagnosis of C. diff
- Environmental cleaning and disinfection
- Process improvement and auditing
- Other (free text)

Questions?



Nursing Home and Partnership for Community Health: CMS 12th SOW GOALS



OPIOID UTILIZATION AND MISUSE

- Promote opioid best practices
- Reduce opioid adverse drug events in all settings



PATIENT SAFETY

- Reduce hospitalizations due to c. diff
- Reduce adverse drug events
- Reduce facility acquired infections



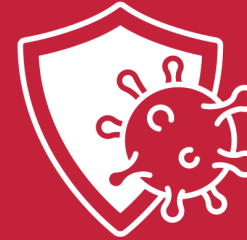
CHRONIC DISEASE SELF- MANAGEMENT

- Increase instances of adequately diagnosed and controlled hypertension
- Increase use of cardiac rehabilitation programs
- Reduce instances of uncontrolled diabetes
- Identify patients at high-risk for kidney disease and improve outcomes



CARE COORDINATION

- Convene community coalitions
- Reduce avoidable readmissions, admissions to hospitals and preventable emergency department visits
- Identify and promote optimal care for super utilizers



COVID-19

- Support nursing homes by establishing a safe visitor policy and cohort plan
- Provide virtual events to support infection control and prevention
- Support nursing homes and community coalitions with emergency preparedness plans



IMMUNIZATION

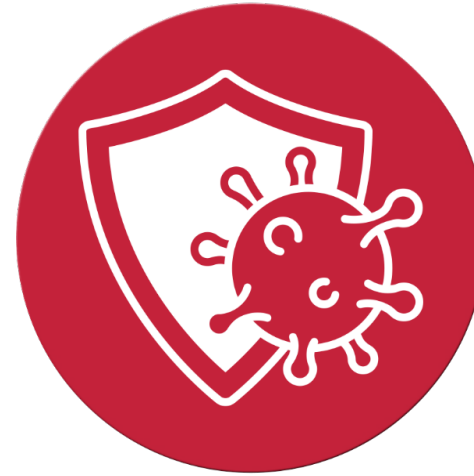
- Increase influenza, pneumococcal, and COVID-19 vaccination rates



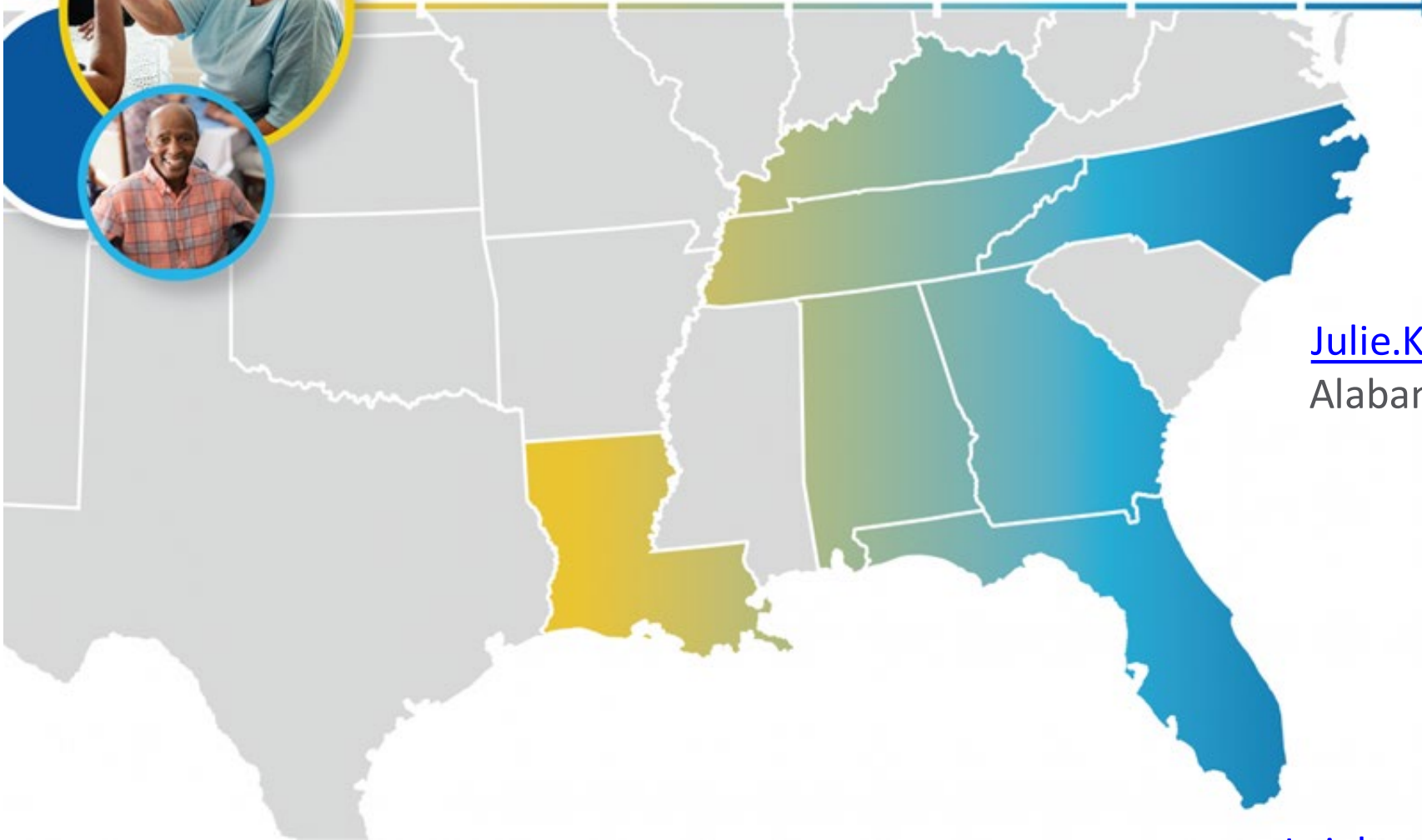
TRAINING

- Encourage completion of infection control and prevention trainings by front line clinical and management staff

Nursing Home and Partnership for Community Health: CMS 12TH SOW GOALS ICONS FOR USE



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