

# Preventing and Managing C. difficile

## Welcome!

- All lines are muted, so please ask your questions in chat
- For technical issues, chat to the 'Technical Support' Panelist
- Please actively participate in the poll that will pop up on the lower righthand side of your screen at the end of the presentation



**We will get started shortly!**

# Melody Brown, MSM

## AIM MANAGER, PATIENT SAFETY

Melody's healthcare career started as a Medical Technologist over 35 years ago. She later shifted her focus to Infection Control, Quality Management, and JCAHO Coordination in a rural hospital setting. Melody has had varied roles at Alliant Health Solutions working on the CMS contract for the Quality Innovation Network – Quality Improvement Organization (QIN – QIO). Coaching hospitals and nursing homes on all facets of healthcare quality improvement has been her focus as the Task Manager for Performance Improvement, and most recently supporting the nursing home reporting to the CDC NHSN database for CDI.

**Melody enjoys spending time with family, including her two grandchildren, camping, gardening and shopping.**

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# Amy Ward, MS, BSN, RN, CIC

## INFECTION PREVENTION SPECIALIST



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. Over the past several years, her focused efforts in C. difficile infection reduction lead to significant local improvements in patient outcomes, antimicrobial stewardship, and C. difficile rates. Amy enjoys spending time with family. She loves all the time she can get outdoors cycling and running.

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# Objectives

- Learn Today:
  - Compare and contrast C. difficile infection and colonization
  - Understand three foundational principles of C. difficile prevention
- Use Tomorrow:
  - Effectively manage residents with C. difficile infection and prevent transmission

# The Risks and Cost of C. diff Infection (CDI)

## Risks

- Medications disrupting intestinal flora (antibiotics, antacids, chemotherapy, etc.)
- >65 years of age
- Residing in LTCF or hospitalization

## Cost

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

# C. diff Pilot Study

Conducted 2016-2018 in Nursing Homes

- ~2330 NH participated
  - 21% of total nationwide
- C. diff data reported to NHSN
- Collaboration with CMS and QIO's
- Must have SAMS grid card to participated
- Objectives
  - ↑ NHSN reporting
  - Establish CDI Baseline
  - Understand interventions
  - Provide mechanism for monitoring and improving CDI rates and outcomes

# Who Should be Clinically Evaluated for CDI?

- Residents who develop profuse, watery diarrhea (>3 stools in 24 hours)
  - Continues after diarrhea causing medications are stopped
- Immediately initiate contact enteric precautions
- Discuss change in resident status with Provider and Infection Prevention RN
- **DO NOT REQUEST TESTS FOR CURE!!**

# Laboratory Testing for CDI

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



# How Should Cases be Identified and Reported to NHSN?

- Nursing homes should monitor for CDI rates to understand how they can improve outcomes for residents.
- Perform CDI surveillance of all residents regularly
  - Review orders for C. diff tests to evaluate clinical picture
  - Review lab results for positive C. diff results
  - Review new admissions for recent or historical CDI

## C. 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 LabID Event reporting.
- Keep a log of all positive *C. difficile* tests sent from your facility to track duplicate results to ensure they are not incorrectly entered as CDI LabID Events. (Line listing, for example)
- 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

# LabID Event Form

- Demographic information (requires SAMS level 3 access)
- 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

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*required for saving	
Facility ID:	Event #:
*Resident ID:	
Medicare number (or comparable railroad insurance number):	
Resident Name, Last:	Middle:
*Gender: M F Other	*Date of Birth: __/__/__
Ethnicity (specify):	Race (specify):
*Date of First Admission to Facility: __/__/__	*Date of Current Admission to Facility: __/__/__
<b>Event Details</b>	
*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	
<b>Custom Fields</b>	
Label	Label
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
<b>Comments</b>	
_____	

# Polling Questions - Case Scenarios

Mrs. Antilla is admitted to your skilled nursing facility for rehab following a motor vehicle accident. According to her chart, she recently tested positive for CDI and is admitted to your facility on treatment.

Ms. Smith was admitted to your LTCF today. According to her chart she was recently treated for CDI but continues to have episodes of diarrhea. The attending physician ordered a *C. difficile* test and the specimen was collected on the following day. The results were positive for *C. difficile* toxin A,

# Why Report C. diff Measures to NHSN?

- Standard infection definitions
- Epidemiology
- Benchmarking
  - National
  - Facility level
- Identify prevention targets/goals
- Track Prevention Progress

# Sustain the Gains

## Using data to improve

- Utilize NHSN data analysis functions to improve upon your own C. diff rates
  - Report your data by the definition – we are all in this together!
  - Most widely used HAI tracking system (>22,000 facilities reporting!)
    - Acute care hospitals, Ambulatory Surgery Centers, LTCF
  - Facilities can use the data to
    - Identify problem areas
    - Measure progress of prevention efforts
    - Comply with reporting requirements

# C. Difficile Prevention

## Pillars of Prevention

Hand Hygiene

Environmental  
Cleaning

Antimicrobial  
Stewardship



# Hand Hygiene

- Competency
  - Do staff follow all necessary steps when performing HH?
- Adherence Monitoring
  - Do staff perform HH when indicated?
- Improvement Plan
  - Use data collected from adherence monitoring to make plans for improvement
    - Is there specific shifts or disciplines that need to improve?
    - Is there a hallway that is lacking equipment and therefore has low adherence rates?



# Transmission Based Precautions

- Initiate immediately when CDI is suspected
- Utilize *Contact Enteric Precautions* for all who enter the patient care area
  - Hand hygiene – preferentially and in outbreaks use soap and water versus ABHR
  - Gown
  - Gloves

<https://spice.unc.edu/resources/nc-standardized-isolation-signage/>



## CONTACT PRECAUTIONS



*Visitors must report to Nursing Station before entering.*

### SPECIAL ENTERIC



Perform hand hygiene **before** entering room AND wash hands with **soap and water** before leaving room.  
Lávese las manos con agua y jabón.



Wear gloves when entering room or cubicle, and whenever touching the patient's intact skin, surfaces, or articles in close proximity.



Wear gown when entering room or cubicle and whenever anticipating that clothing will touch patient items or potentially contaminated environmental surfaces.



Use patient-dedicated or single-use disposable shared equipment or clean and disinfect shared equipment (BP cuff, thermometers) between patients.

### PRECAUCIONES DE CONTACTO

*Los visitantes deben presentarse primero al puesto de enfermería antes de entrar. Lávese las manos. Póngase guantes al entrar al cuarto.*

# Environmental Cleaning

## Clean and disinfect patient rooms and care equipment

- Policies and Procedures
  - EPA registered *sporicidal* disinfectants
    - Quats and daily disinfectants may not be effective against C. diff
    - During outbreaks, consider use of sporicidal agent for all routine disinfection
  - Follow manufacturer instructions for use
  - Clean shared equipment between each use (glucometer, bladder scanner, etc.)
  - Follow routine practices – changing wiper/mop head, clean to dirty workflow, frequent cleaning of high touch surfaces
  - Use checklists
- Audits and Observations
  - Define responsibilities – who cleans what
  - Regularly audit to ensure cleaning is completed per policy
  - Report audit findings to QAPI committee to develop action plans when needed

# 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 nursing homes have stewardship programs in place
- These programs will reduce CDI also – Bonus!

# Objectives Check In!



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**Complete this sentence in Chat:** *I will...*

# Thank You for Your Time!



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Infection Prevention Specialist

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# References

- NHSN C. difficile for LTCF <https://www.cdc.gov/nhsn/ltc/cdiff-mrsa/index.html>
- Polage, C. R., Gyorke, C. E., Kennedy, M. A., Leslie, J. L., Chin, D. L., Wang, S., ... Cohen, S.H. (2015, September 8). Overdiagnosis of Clostridium difficile infection in the molecular test era. JAMA Internal Medicine, 175, 1792-1801. <http://dx.doi.org/10.1001/jamainternmed.2015.4114>
- IDSA Clinical Practice Guidelines <https://academic.oup.com/cid/article/66/7/e1/4855916>

# CMS 12<sup>th</sup> SOW Goals



## Behavioral Health Outcomes & Opioid Misuse

- ✓ Promote opioid best practices
- ✓ Decrease high dose opioid prescribing and opioid adverse events in all settings
- ✓ Increase access to behavioral health services



## Patient Safety

- ✓ Reduce risky medication combinations
- ✓ Reduce adverse drug events
- ✓ Reduce C. diff in all settings



## Chronic Disease Self-Management

- ✓ Increase performance on ABCS clinical quality measures (i.e., aspirin use, blood pressure control, cholesterol management, cardiac rehab)
- ✓ Identify patients at high-risk for developing kidney disease & improve outcomes
- ✓ Identify patients at high risk for diabetes-related complications & improve outcomes



## Quality of Care Transitions

- ✓ Convene community coalitions
- ✓ Identify and promote optimal care for super utilizers
- ✓ Reduce community-based adverse drug events



## Nursing Home Quality

- ✓ Improve the mean total quality score
- ✓ Develop national baselines for healthcare related infections in nursing homes
- ✓ Reduce emergency department visits and readmissions of short stay residents



## Making Health Care Better *Together*



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# Program Directors



# Upcoming Events

Nursing Homes

Tuesdays, 2pm ET/1pm CT

Community Coalitions

Thursdays, 12:30 pm ET/11:30am CT

December 15<sup>th</sup>, 2020: Preventing  
Healthcare Acquired Infections

November 19<sup>th</sup>, 2020: Effective  
Medication Reconciliation Practices  
Reduce Hospital Utilization and  
Readmissions

January 2021: TBD

December 17<sup>th</sup>, 2020: Gear up for the  
New Year! Positioning your Organization  
to Gather, Track, and Use Data in 2021

# Making Health Care Better Together



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