



Public Health Overcoming Obstacles to Prevent *C. difficile* Infections

Division of Healthcare Quality Promotion

March 20th, 2018



CDI Snapshot – Summary of K2 CDI Prevention Activities

Shani Doss, MPH, BSN

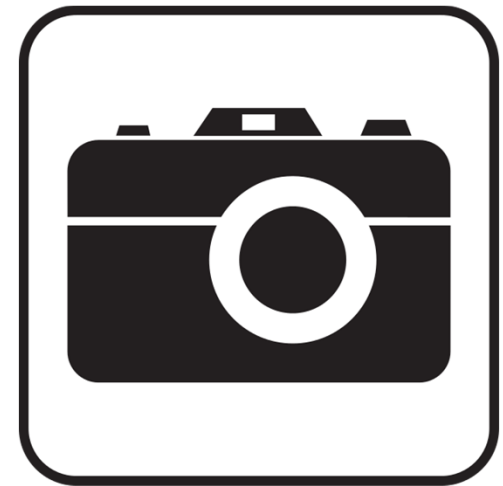
K2 Project Coordinator

Division of Healthcare Quality and Promotion (DHQP)

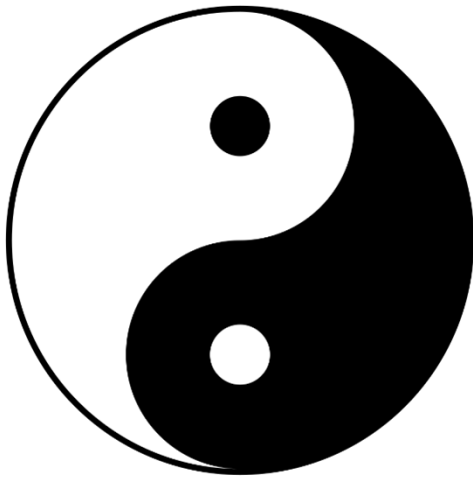
Contractor, Northrop Grumman

CDI Snapshot – Summary of K2 CDI Prevention Activities

- ❑ Obtained current information about Year 3 and 4 CDI prevention activities during recent ELC HAI/AR Project Calls
- ❑ Most K2 grantees have ongoing prevention activities focused on CDI
- ❑ *Major focus: Utilization of TAP Strategy for CDI*



CDI Snapshot – Summary of K2 CDI Prevention Activities



☐ Successes:

- Health departments working closely with partners in prevention (state hospital associations, QIN-QIOs, etc.)
- Participation in CDI prevention collaboratives
- Recruitment of LTCFs into NHSN for CDI reporting

☐ Challenges:

- Staffing delays
- Implementation of TAP Strategy in facilities
 - How to share data from TAP Reports
 - Recruitment of facilities for TAP Assessments



Targeted Assessment for Prevention (TAP) Strategy



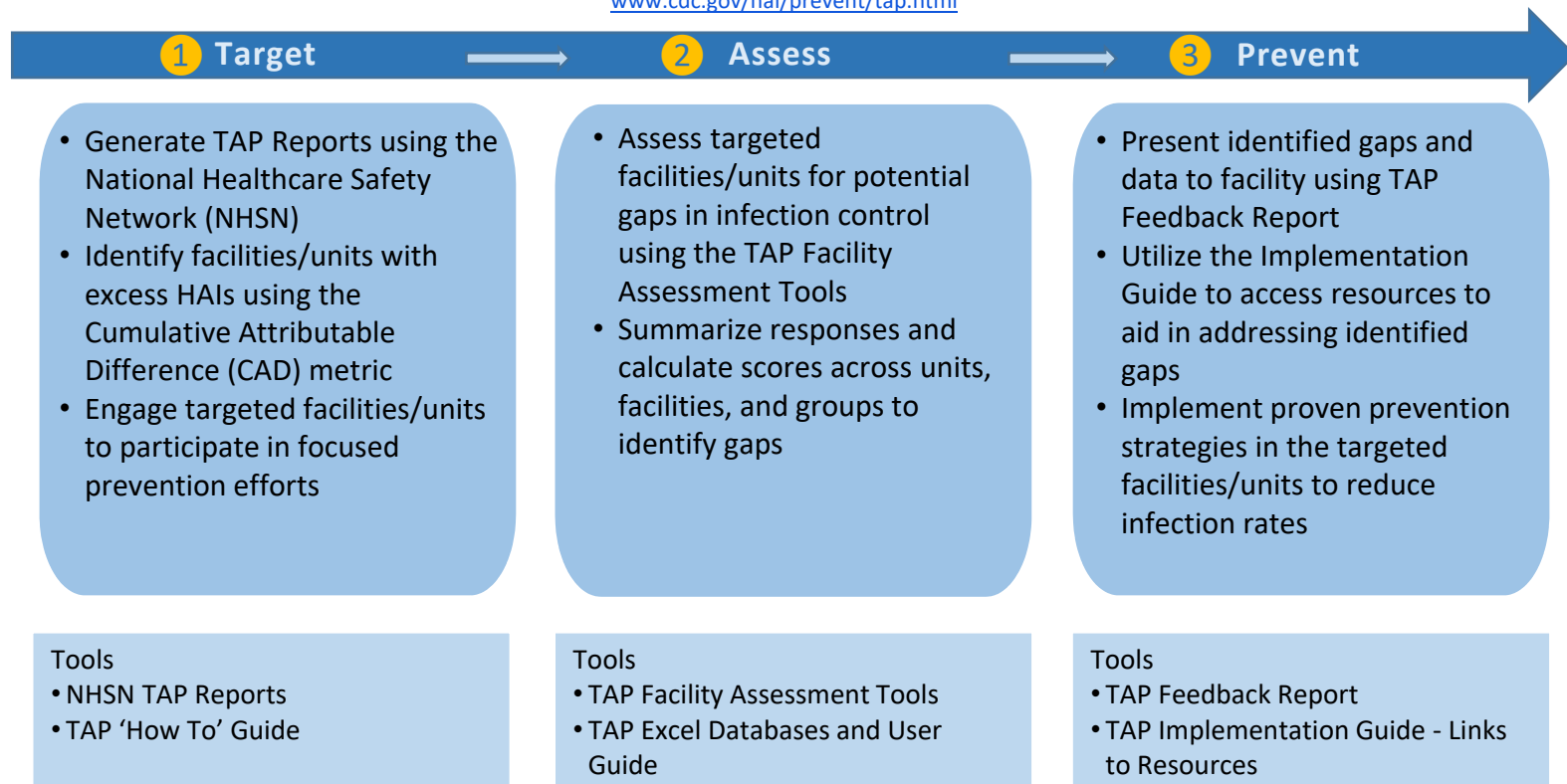
Katie Coutts White, MPH

Division of Healthcare Quality Promotion
Prevention and Response Branch
Centers for Disease Control and Prevention

TAP Strategy

Targeted Assessment for Prevention: *Using Data for Action*

www.cdc.gov/hai/prevent/tap.html



TAP Tools

	Tools	Location
Target	TAP Reports	NHSN Patient Safety Component
	'How To' Guide	TAP Website
	Partner Examples	ELC SharePoint Site
Assess	TAP Facility Assessments	TAP Website
	TAP Excel Spreadsheets	Email HAIPrevention@cdc.gov
	User Guide	Email HAIPrevention@cdc.gov
Prevent	TAP Feedback Report	Component of TAP Excel Spreadsheets
	TAP Implementation Guides	TAP Website

TAP Website: www.cdc.gov/hai/prevent/tap.html

Tips for Success

Target	Customize TAP Reports with appropriate timeframe and SIR goal
	If many facilities have high CADs, use SIR to help further target – facilities with high CAD <i>and</i> high SIR have greater burden and more opportunity for improvement
	Engage facility by sharing TAP Report data – see partner examples of how to present data on ELC SharePoint site
Assess	Gain facility buy-in by sharing sample TAP Feedback Report and encouraging alignment with facility priorities
	Explore and pilot deployment methods for TAP Facility Assessments, working with each facility to find method(s) that is best suited
	Encourage facility leaders to communicate intent of TAP Strategy and importance of completing TAP Facility Assessments
Prevent	Explore TAP Facility Assessment results by Respondent Role and/or Unit for a deeper-dive into potential gaps
	Walk through the TAP Feedback Report with facility to describe interpretation and highlight gaps identified
	Work with facility to prioritize gaps, identify resources, and outline next steps





Thank You!

HAIPrevention@cdc.gov

<http://www.cdc.gov/hai/prevent/tap.html>

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.





TAP Project

Presented by Pat Kopp

South Carolina Department of Health and Environmental Control
Healthy People. Healthy Communities.



South Carolina Department of Health and Environmental Control
Healthy People. Healthy Communities.

Summary of HIDA Reporting Hospital Types

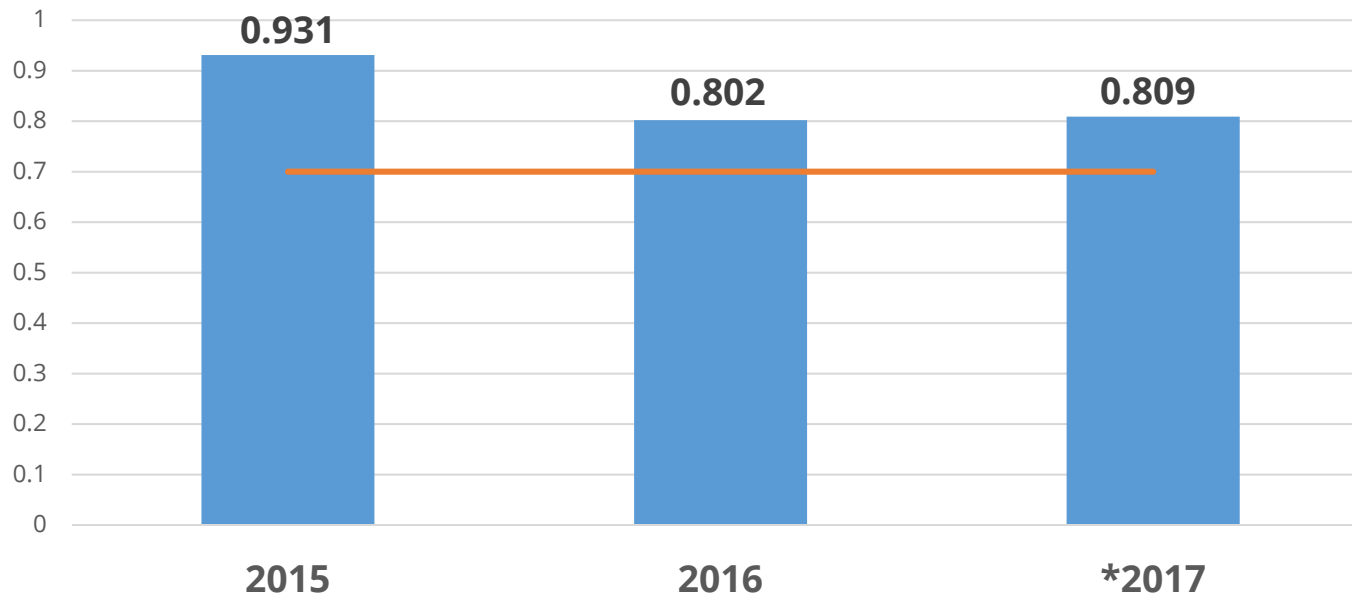
Facility Type	N
Acute Care Hospital (General)	56
Acute Care Hospital (Critical Access)	5
Acute Care Hospital (Surgical)	1
Acute Care Hospital (Women's and Children's)	2
Acute Care Hospital (Children's)	1
Inpatient Rehabilitation Hospital	8
Long Term Acute Care Hospital	6
Total Hospitals	79



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Clostridium difficile SIR – acute care hospitals

2015 baseline



*HHS 2020 goal = 0.70

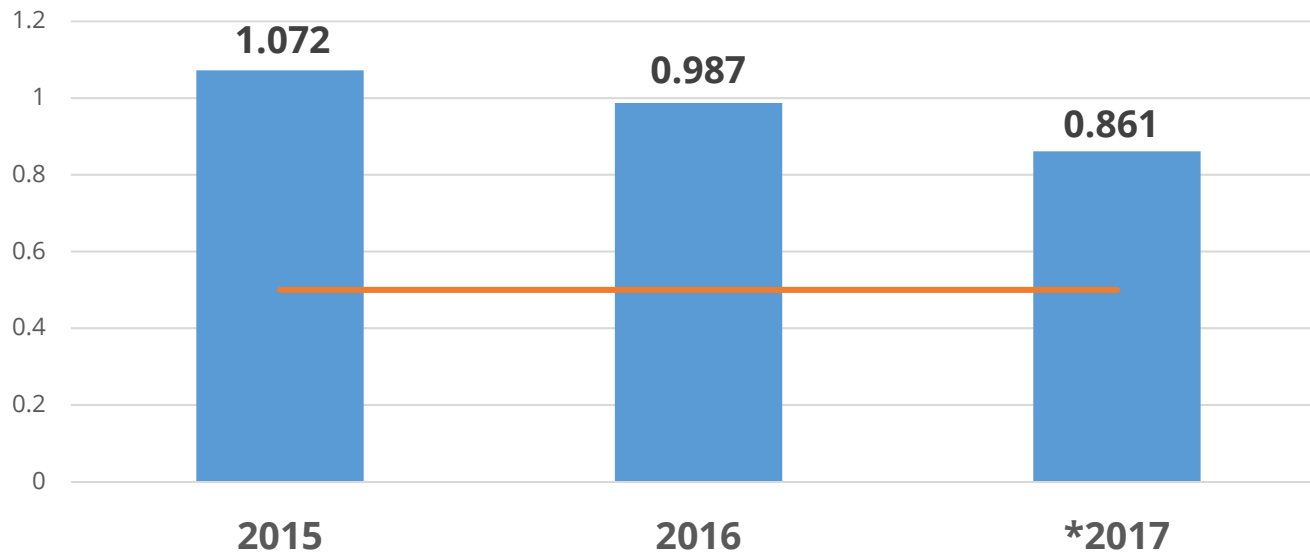
*2017 data not validated



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CLABSI SIR – acute care hospitals

2015 baseline



*HHS 2020 goal = 0.50

*2017 data not validated



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TAP Project

- Top 5 acute care hospitals on the CLABSI 2017 TAP report
- Top 5 acute care hospitals on the *C. difficile* 2017 TAP report
- 5 CLABSI hospitals in February
- 5 *C. difficile* hospitals in April
- Each hospital collect data for 1 month
- 1 month to analyze data
- Report due back to respective hospital 2 months after project begins



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Implementation

- Set up dedicated mailbox
- Call hospital Infection Preventionist
 - Explain state level TAP report
 - Give hospital rank on TAP report
 - Send a “test” survey
 - Send formal letter via email
 - May need to get CNO, Quality Manager, CDC involved



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Challenges

- Compete with current hospital initiatives
- Lack of IP time
- Surveys couldn't be submitted via email

Strengths

- Informs current initiatives
- IP can push survey to staff effectively
- Doesn't take a lot of staff time



South Carolina Department of Health and Environmental Control

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Clostridioides difficile Infection (CDI) Prevention Strategies in Acute Care Facilities in United States

Highlights

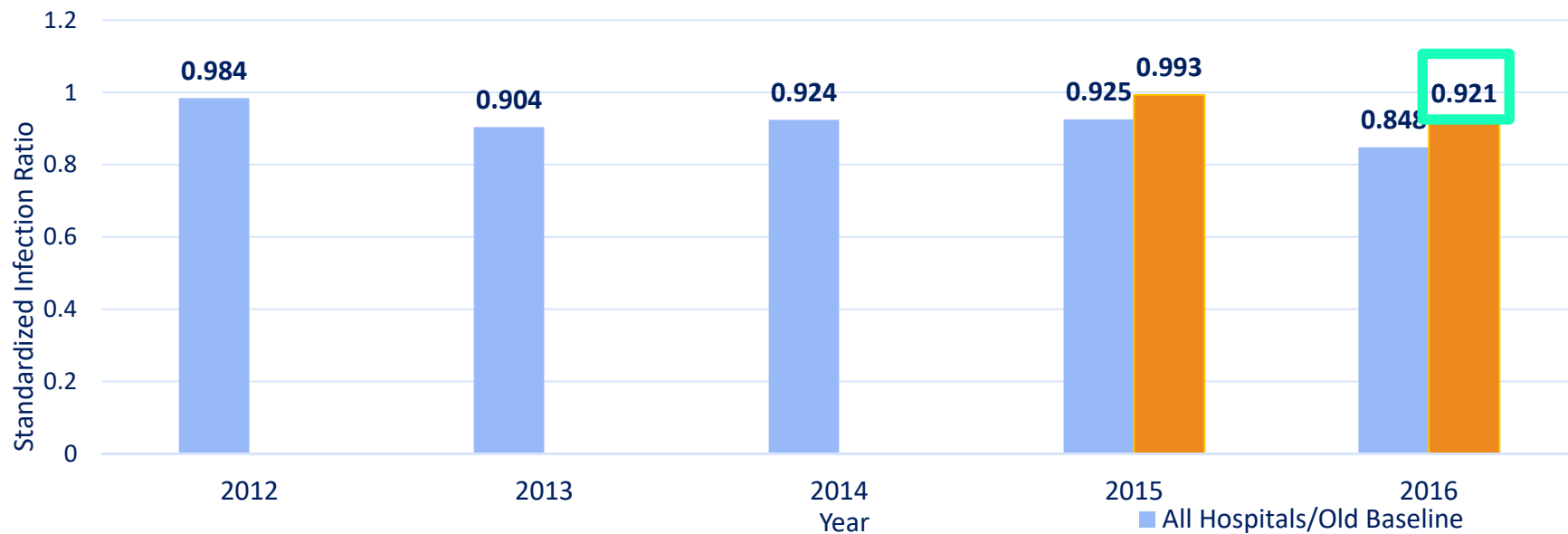
Preeta K. Kuty, MD, MPH

CDI Prevention

Division of Healthcare Quality Promotion

March 20, 2018

National CDI Standardized Infection Ratio (SIR) in U.S. Acute Care Hospitals



National Healthcare Safety Network



CDI Prevention Strategies for Acute Care Facilities

- Purpose
 - Intended to assist personnel from state and local health departments, quality improvement organizations, hospital associations, and acute care healthcare facilities
- Work-in-progress
 - Five core strategies and additional strategies
- Core strategies:
 - Isolate and initiate contact precautions for suspected or confirmed CDI
 - Confirm CDI
 - Enhance environmental cleaning
 - Develop infrastructure to support CDI prevention
 - Develop a facility-based antibiotic stewardship



1. Isolate and Initiate Contact Precautions for Suspected or Confirmed CDI

Reduction Strategy



- **Early detection**

- Create nurse-driven protocols to facilitate rapid identification and isolation

- **Isolation: Patient placement**

- Pre-emptive isolation while results are pending



- **Contact Precautions**

- Suspect or proven CDI should be placed on contact precautions
- Maintain contact precautions throughout the duration of hospitalization for proven CDI



Reduction Strategy: Additional

- Implement daily patient bathing or showering with soap and water.
- When transferring patients:
 - Notify receiving wards or facilities about the patient's CDI status so contact precautions are maintained at the patient's new location.
 - Healthcare personnel involved in the transport of a CDI patient should consider wearing gloves.



2. Confirm CDI

Critical Importance of Testing the Correct Patient with the Appropriate Laboratory Test at the Appropriate Time

- Clinical staff
 - Discontinue laxatives and wait for at least 48 hours before testing if still symptomatic
 - Once a patient has a positive CDI test do not repeat testing to detect cure; patients may remain positive for ≥ 6 weeks
- Laboratory personnel
 - Implement laboratory procedures to ensure testing of appropriate specimens (e.g., unformed stools) for *C. difficile* or its toxins
 - Report test results immediately to clinical care providers and the infection control staff through reliable means (e.g., a laboratory alert system)



3. Enhance Environmental Cleaning

Beyond the Norm: Environmental Cleaning and Disinfection is Required

- Create daily and terminal cleaning protocols and checklists for patient-care areas and equipment
- Perform daily cleaning in using a *C. difficile* sporicidal agent (EPA List K agent)
 - Clean and disinfect all shared equipment prior to use by another patient
- Perform terminal cleaning after CDI patient transfer/discharge with a *C. difficile* sporicidal agent (EPA List K agent) or measure (e.g., UV light)
- Clean additional areas that are contaminated by patients with CDI during transient visits (e.g., Radiology, Emergency Departments, Physical Therapy) with a *C. difficile* sporicidal agent (EPA List K agent)



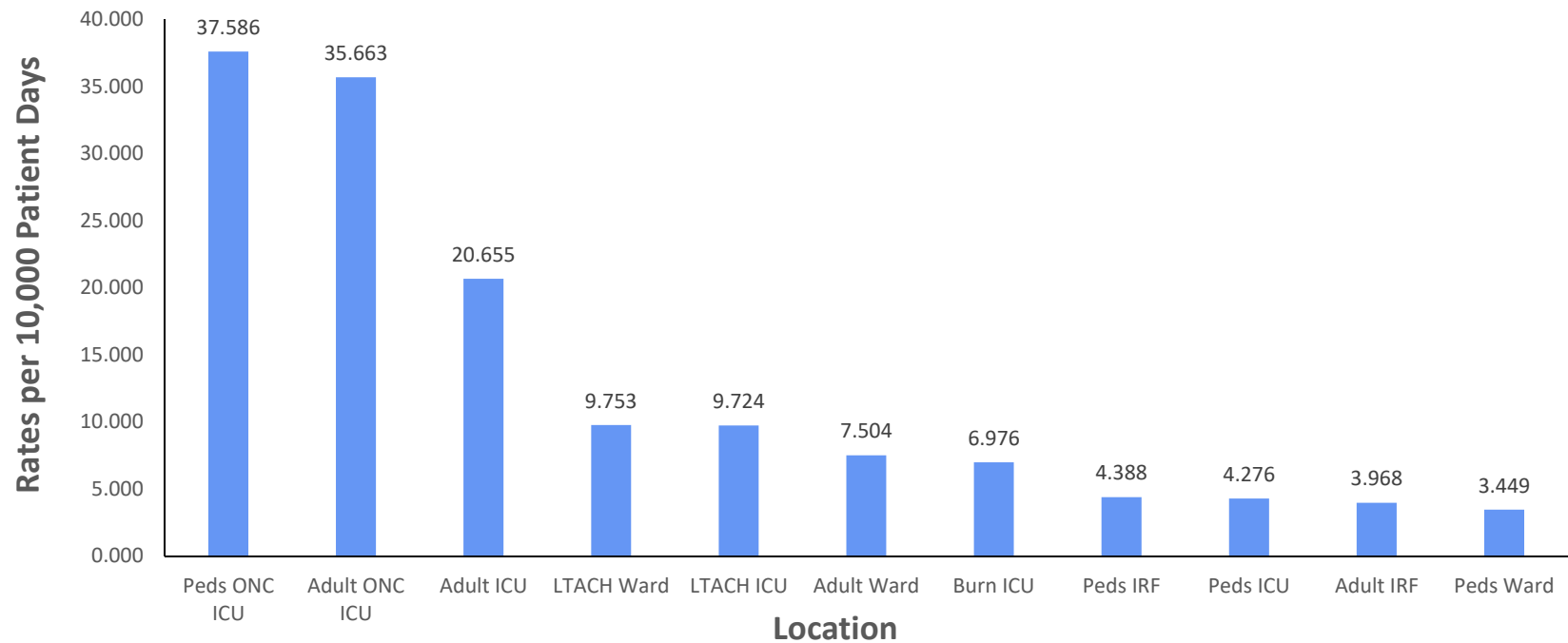
4. Develop Infrastructure to Support CDI Prevention

Facility

- Incorporate reduction of CDI into the facility healthcare-associated infection prevention program
 - Multidisciplinary workgroup
- Monitor facility CDI rates, and target units with highest incidence of CDI for evaluation and intervention
 - Review individual CDI episodes to assess modifiable CDI risk factors including clinical management decisions (e.g., use of high-risk antibiotics) and the use of infection-control measures to identify gaps
 - Inform multidisciplinary workgroup



Hospital-onset CDI Predominantly Occurs in Adult Medical Patients and Risk is Greatest in Oncology and Intensive Care



National Healthcare Safety Network, Acute Care, 2015



Move the Needle

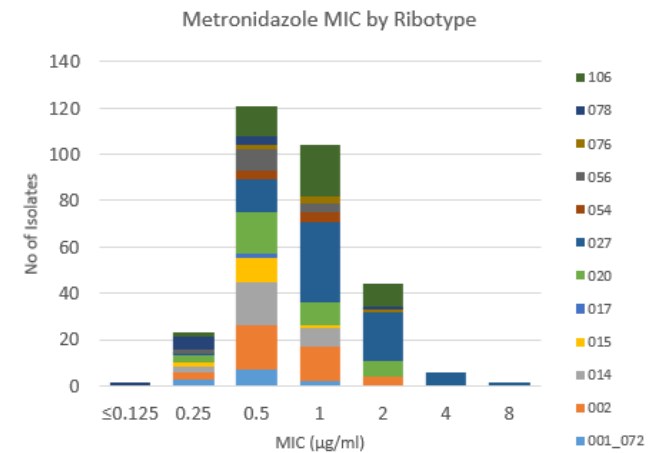
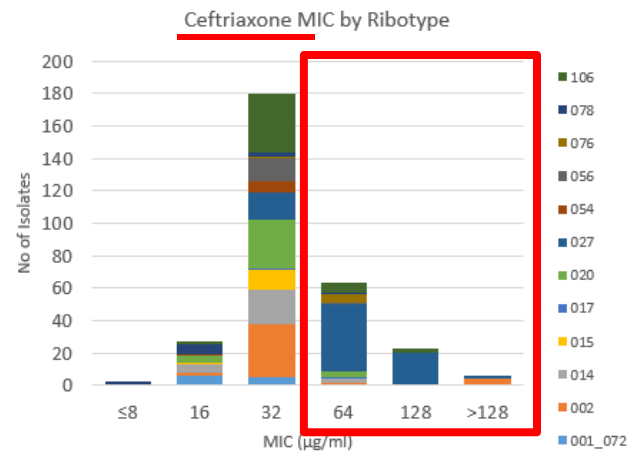
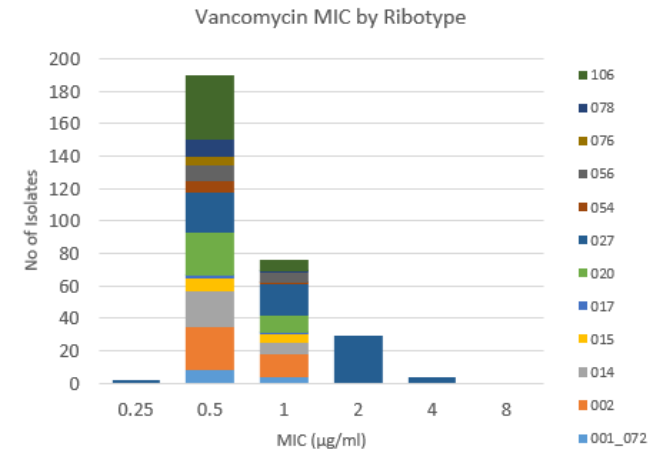
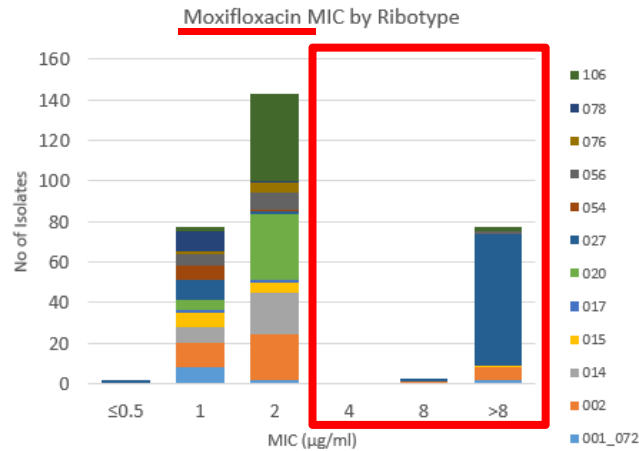
- Routinely audit
 - Adherence to hand hygiene and contact precautions.
 - Adequacy of room cleaning using methods
- Educate and train healthcare personnel on prevention practices for CDI



4. Develop a Facility-based Antibiotic Stewardship Program

Antimicrobial Susceptibility of *C. difficile* Isolates Collected in the United States:

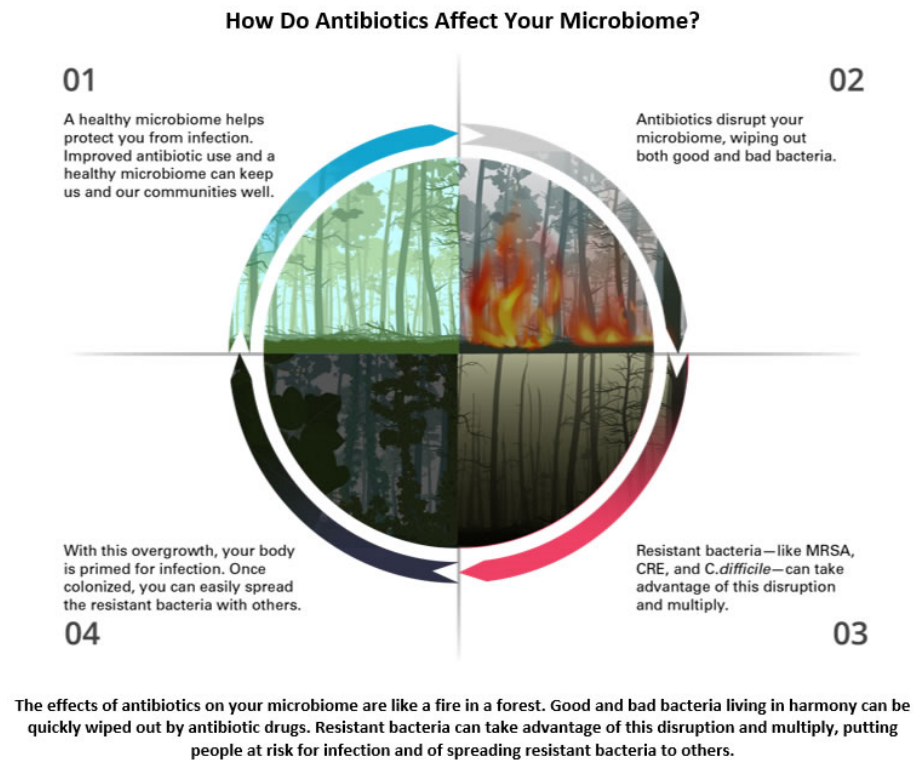
C. difficile Ribotype 027 is more resistant to both fluoroquinolones and cephalosporins



Karlsson, et al. 2017; Emerging Infections Program data, 2012-2014



Unintended Consequences of Antibiotic Use: Disruption of Human Microbiome



<https://www.cdc.gov/drugresistance/solutions-initiative/microbiome-innovations.html>

It's about Patient Safety

- Assess the appropriateness of antibiotic prescribing for agents that pose the highest risk for CDI, especially fluoroquinolones and 3rd and 4th generation cephalosporins
 - Evaluate antibiotic treatment of common infections such as urinary tract infection, upper respiratory infections, and community-acquired pneumonia to ensure it is in accordance with facility or national guidelines and facility antibiogram
 - Consider developing facility-specific treatment recommendations for common infections that include preferred first- and second-line antibiotics
 - Consider restriction of antibiotics for those with highest risk for CDI



Supplemental Strategies

Supplemental Strategies

- Consider participating in regional CDI prevention activities.
- Consider evaluating and testing patients at high risk for CDI to detect asymptomatic carriage
 - Isolate patients that test positive, but do not treat in the absence of symptoms
 - Avoid using high-risk antibiotics (e.g., fluoroquinolones, and 3rd and 4th generation cephalosporins).
- Develop processes to limit the use of patient medications (e.g., proton pump inhibitors, H2-receptor blockers) that may be associated with higher-risk for CDI.



Next Steps

- Work-in-progress
- Opportunities to assess



Thank you

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Utah's *C. difficile*
Prevention
Collaborative
Experience
April 2016 – July 2017





Prevention & Containment

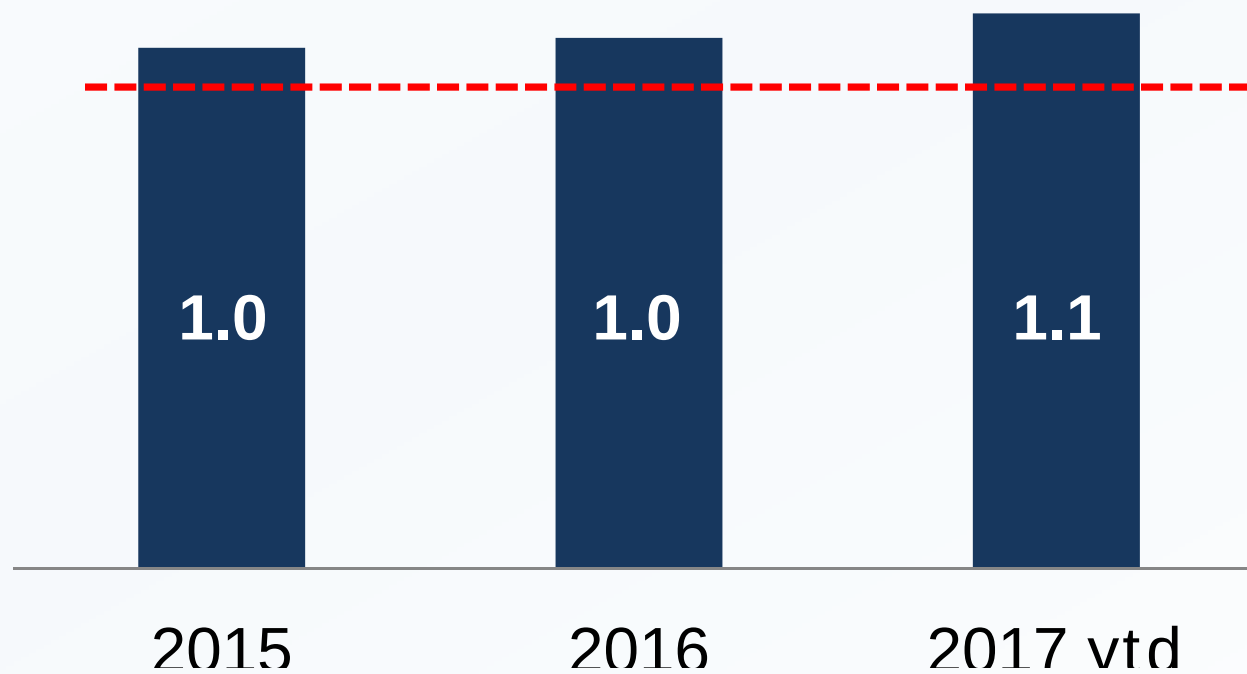
Overview of Community's CDI Burden

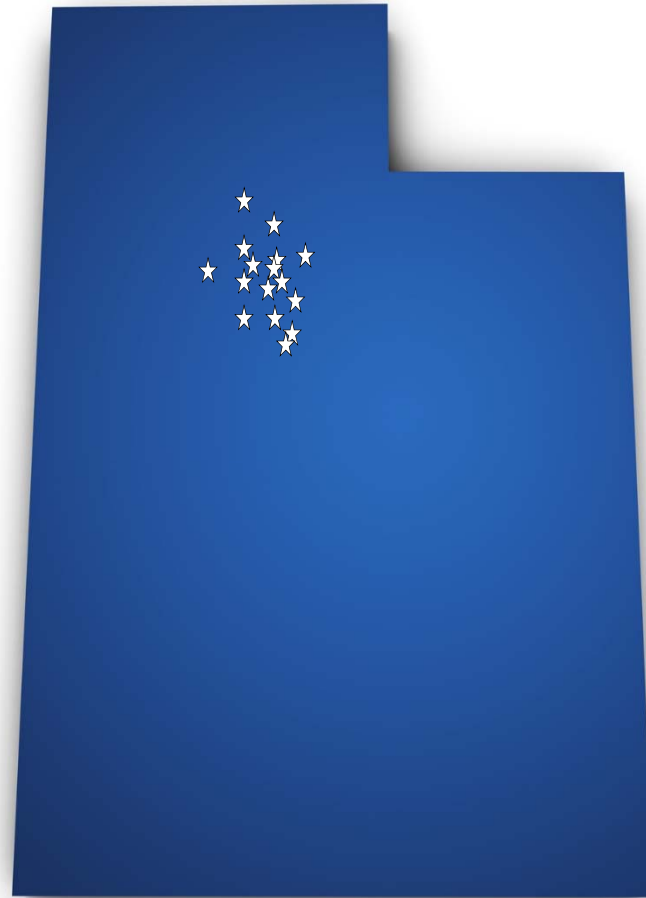


[nasa.gov](https://www.nasa.gov)

“Houston, we have a problem....”

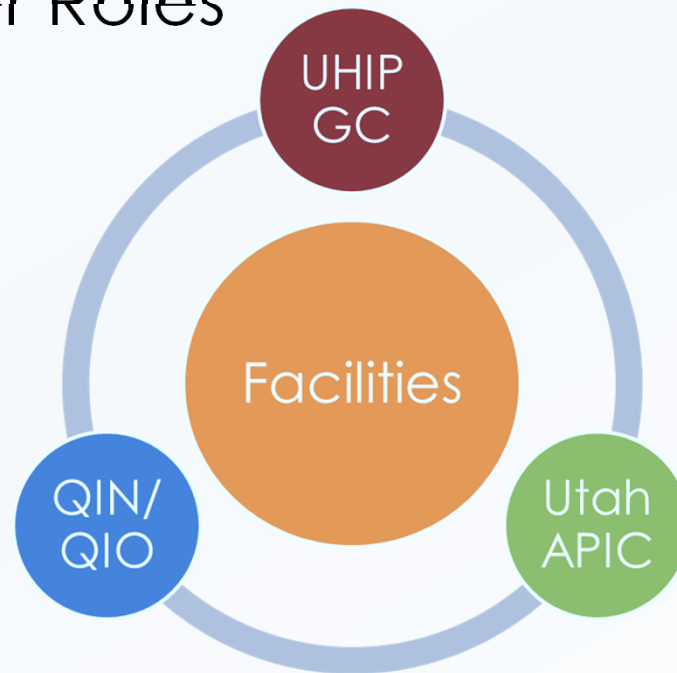
Utah LabID CDI: Acute Care Hospitals





Who should
participate in
Collaborative?

Member Roles



Participants' Common Objectives

- Assess effectiveness of current prevention practices among facilities that share common patients.
- Establish a community standard for diagnostic and prevention activities based upon evidence based best practices.
- Provide a MDRO Registry.
- Support antibiotic stewardship implementation among connected facilities.

Collaborative Ground Rules

- Recognize that multiple facilities contribute to transmission of *C. difficile* infection (CDI) due to patients transferring among facilities.
- Work to improve communication among region facilities.
- Better understand individual challenges of each facility.
- Promote mentoring relationships.
- Avoid blame.

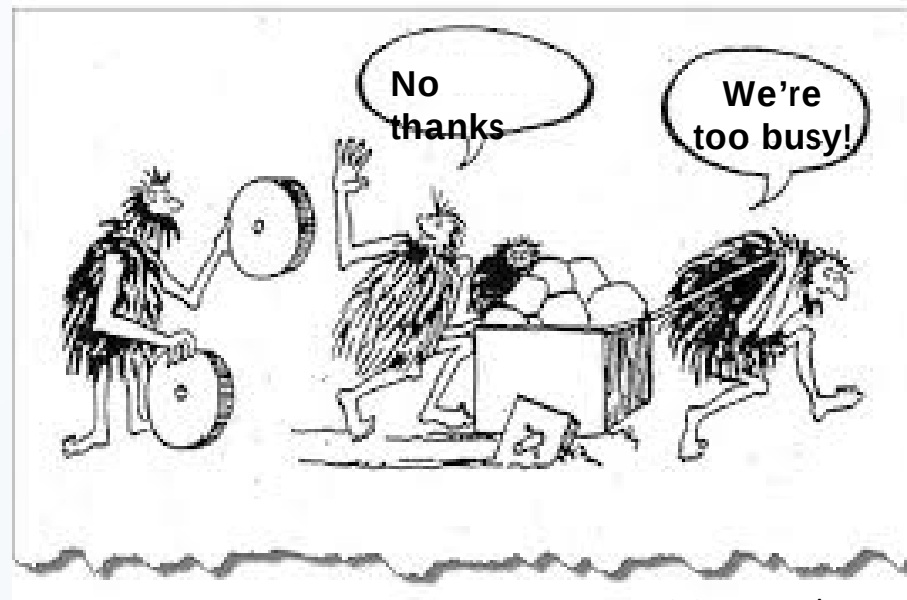


How were current practices assessed?

- Surveys
 - Cleaning & disinfection
 - Isolation duration & PPE expectations
 - Management of asymptomatic bacteriuria
- ICAR assessments cumulative data for facility types
- LabID CDI included in NHSN 2017 validation activities
- CDI TAP assessments

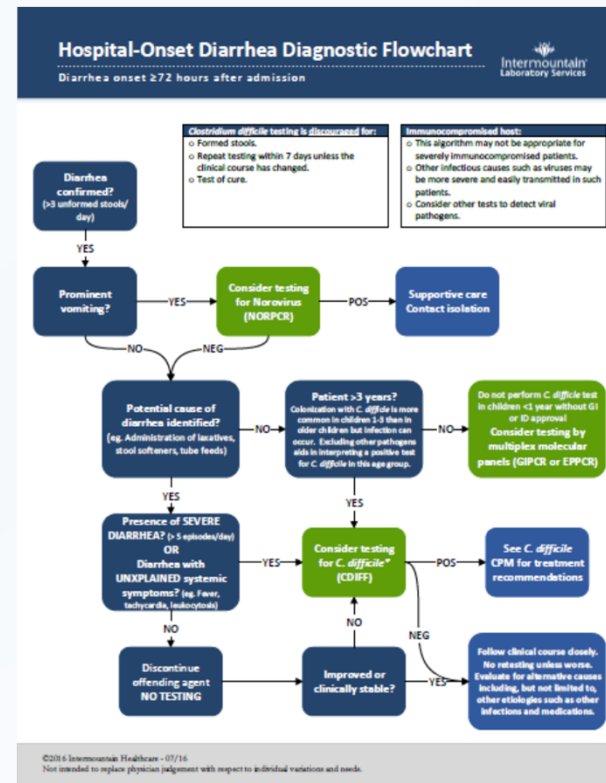
Identified Common Needs

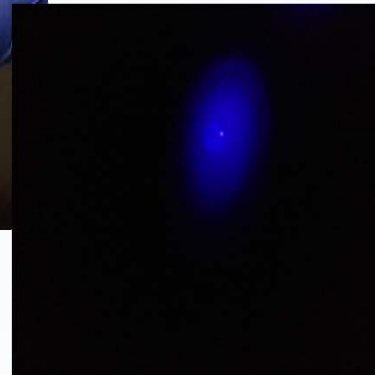
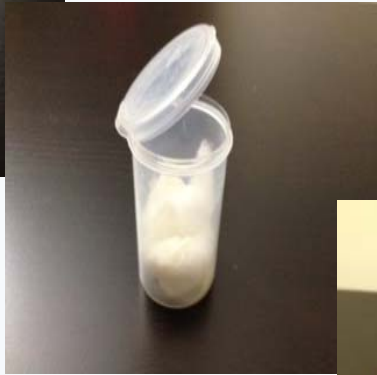
- Diagnostic practices
- Isolation practices, e.g. duration, PPE use
- High-tech disinfection methods
- Antibiotic stewardship
- Communication of patient's infective state
- Appropriate management of asymptomatic bacteriuria
- Environmental & equipment cleaning & disinfection
- Methods to determine cleaning effectiveness



creativityatwork.com

Diagnostic Stewardship

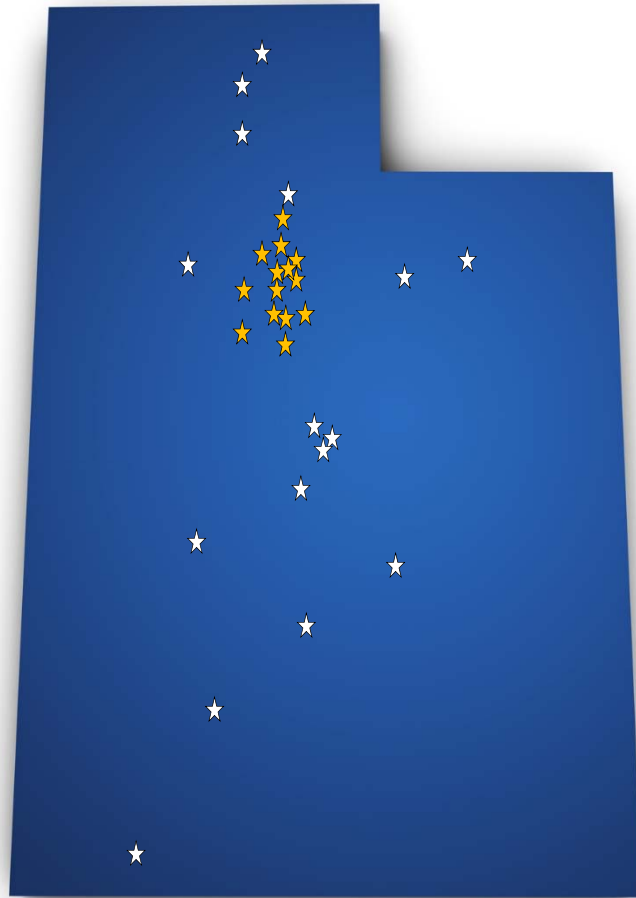






Appropriate Management of Asymptomatic Bacteriuria





Expanded
participation



Thank You



South Dakota DOH & Great Plains QIN/QIO CDI Collaborative



**Quality Improvement
Organizations**
Sharing Knowledge. Improving Health Care.
CENTERS FOR MEDICARE & MEDICAID SERVICES

Great Plains

Quality Innovation Network

Healthy People
Healthy Communities
Healthy South Dakota

Overview of LTCF CDI burden in South Dakota

Pre-QIN/QIO CDI Collaborative – Limited data

- No SD LTCF CDI NHSN data

CDI facts –

- Risk for CDI increases in patients with:
 - Long length of stay in healthcare settings
 - Advanced age

1. https://www.cdc.gov/hai/organisms/cdiff/cdiff_faqs_hcp.html

Project Background

October 2015 – CMS announces the *C. difficile* Infection Reporting and Reduction project

- South Dakota Great Plains QIN/QIO to enroll 20 Nursing Homes into CDI Reporting and Reduction Project.

Concurrently.. South Dakota Department of Health to perform ICAR assessments in Long Term Care Facilities through out the state of South Dakota.

Objectives of Partnership



SOUTH DAKOTA DEPARTMENT OF HEALTH

- LTCF enrollment for ICAR assessments



**Quality Improvement
Organizations**
Sharing Knowledge. Improving Health Care.
CENTERS FOR MEDICARE & MEDICAID SERVICES

Great Plains

Quality Innovation Network

- LTCF Enrollment for NHSN CDI Reporting



SOUTH DAKOTA DEPARTMENT OF HEALTH

Identifying Facilities

Facility Enrollment

- HAI Listserv
- QIN/QIO Facility E-mail List
- QIO Monthly Newsletter
- State Healthcare Trade associations
- Medical Directors newsletter

Roles clearly defined

1. Roles and activities discussed before project start
2. Roles and contact info provided to each enrolled facility
3. Memorandum of Understanding (MoU) Between SD DOH & QIN/QIO
 - Signed by Secretary of Health & CEO

Buy-in from C-Suite

- Medical Directors notified via Newsletter
- Participation agreement required
signature from:
 - Executive Leader (CEO/ Admin)
 - DON
 - IP/Team Leader

Assessing current Infection Prevention Practices

- Each enrolled facility received an ICAR assessment from a CIC certified Infection preventionist (IP).

Lessons Learned

Challenges

- ❖ Staff Turnover in LTCF

Successes

- ❖ Developed Quarterly call between SD DOH/QIO/Hospital Organization/LTCF trade organization to discuss current and future work.



CDI Prevention Partners Panel

- Pat Kopp, South Carolina
- Karen Singson, Utah
- Kipp Stahl, South Dakota
- Erika Baldry, Montana
- DHQP, CDC
 - Shani Doss
 - Katelyn C. White
 - Bola Ogundimu
 - L. Cliff McDonald
 - Preeta Kutty

