Implementing a C. difficile Testing Protocol

Stephanie Swanson, MPH, CIC
North Memorial Health

Session objectives:
- Review NHSN CDI surveillance definition(s)
  – Community vs. Hospital Onset
- Identify tactics for implementing a CDI testing protocol
- Understand challenges and barriers to successful implementation

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North Memorial Health

- Independent health care system serving northwest metro
- North Memorial Health Hospital – Level 1 trauma and certified primary stroke center
- Maple Grove Hospital
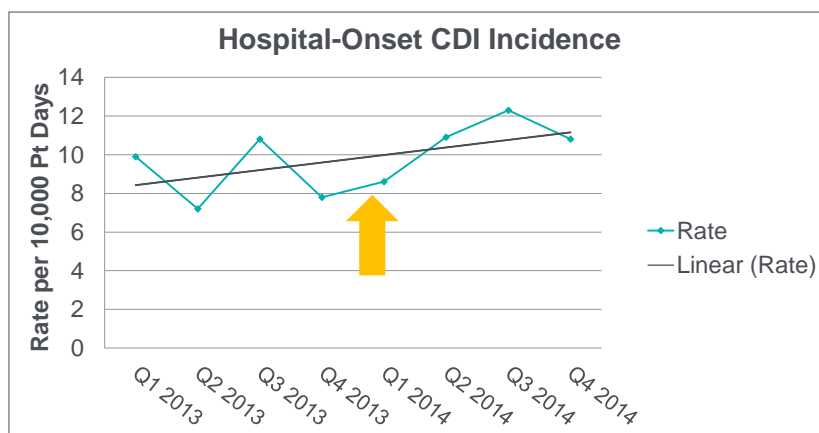- One of the largest hospital-based ambulance services in the country
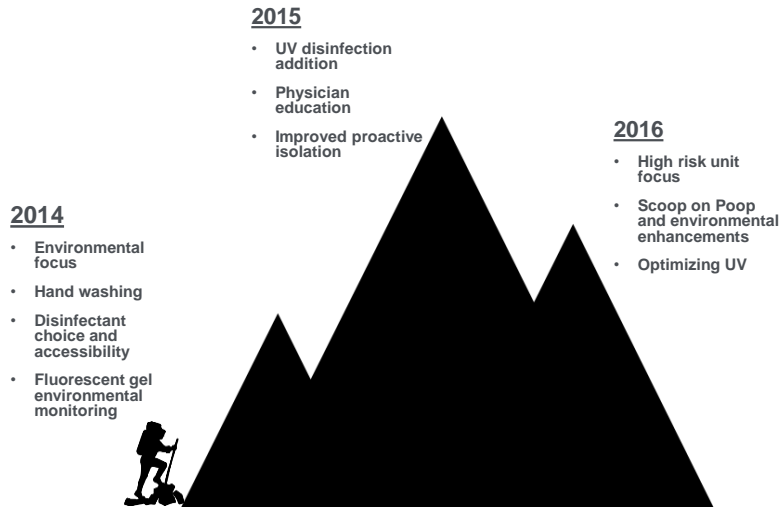
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C. difficile Reporting

- **January 2013:** Reporting to the Center for Medicare/Medicaid (CMS) Hospital Inpatient Quality Reporting Program began
  - National Healthcare Safety Network (NHSN)

- **LabID Events:** Based on <u>date admitted</u> to facility and <u>collection date</u>
  - **Community Onset (CO):** Specimen collected as an outpatient or an inpatient ≤ 3 days after admission
  - **Healthcare Facility-Onset (HO):** Specimen collected > 3 days after admission
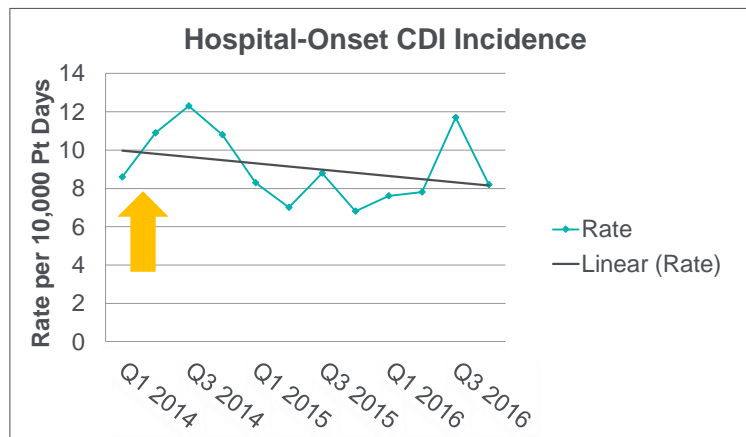 - Clinical symptoms not included in definition

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C. difficile Surveillance

Hospital-Onset CDI Incidence

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Laying the Groundwork for Prevention

2015
- UV disinfection addition
- Physician education
- Improved proactive isolation

2016
- High risk unit focus
- Scoop on Poop and environmental enhancements
- Optimizing UV

2014
- Environmental focus
- Hand washing
- Disinfectant choice and accessibility
- Fluorescent gel environmental monitoring

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C. difficile Surveillance

- **Improvement!...but not enough**
  - ○ Standardized Infection Ratio (SIR) remained above benchmark

Hospital-Onset CDI Incidence

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C. Difficile Testing Practices

- **Reviewed HO CDI for additional trends**
  - o 20% of cases identified on hospital admission <u>day 4</u> or <u>day 5</u> in NMH system in 2016
  - o 3% with symptoms at time of admission – **probable community-onset, yet didn't meet surveillance definition for CO**

  AND

  - o Threshold for C. diff testing <u>highly variable</u> among clinicians

- **PCR testing is NMH diagnostic standard**
  - o Difficult to ascertain disease vs. asymptomatic colonization
  - o What are we really reporting?

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Implementing a Protocol

- **July 2016:** Began process to develop a standardized C. diff testing protocol
  - o Multi-disciplinary team

  - o Used SHEA/IDSA **Strategies to Prevent *Clostridium difficile* Infections in Acute Care Hospitals: 2014 Update** as guide for testing best practice

  - o Included RN-driven component

- **Initial concerns: inappropriate testing/over use?**
  - o Education for both clinicians and nursing

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Implementing a Protocol

Frequency: ONCE | ONCE | Add On - Specimen In Lab | STAT | Timed Once

For: 1 | ● Occurrences ○ Hours ○ Days ○ Weeks

Starting: 9/11/2017 | Today | Tomorrow

First Occurrence: | Include Now | As Scheduled

First Occurrence: **Today 1400**   Last Occurrence: **Today 1400**

Scheduled Times: Hide Schedule Adjust Schedule

9/11/17 1400

Phase of Care:

Class: Unit Collect | Lab Collect | Unit Collect

❗ Has Your Patient Had 3 or More Loose / Watery Stools in the last 24 Hours?
Yes No

❗ Has a Positive C Diff Been Resulted in the Last 30 Days or a Negative C Diff Result within the Last 7 Days?
Yes No

❗ Has Patient Taken Laxatives within the Last 24 Hours?
Yes No

Reference Links: 1. Lab Orders - Priority and Frequency Setup

Sched Inst.: Not done on solid stools.

- **Lab Panel** includes 3 hard stops for all users
  - Assessment of symptoms
  - Recent test results
  - Use of laxatives

- **Providers can order outside of parameters for high clinical suspicion**

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Implementing a Protocol

BestPractice Advisory - Babineau,Blake

⚠ This Patient has had 3 or More Loose Stools Documented in 24 Hours. Please Order C - Diff Testing and Special Contact Isolation Orders.

Order | Do Not Order | ⤴ C -Diff PCR Panel

Acknowledge Reason

Decline Placing Orders

❗ Enter comment

✓ Accept

Last Resulted: **Order #137514851**
Ordered: 10/18/16 1:27 PM
Resulted: 10/18/16 1:27 PM
Collected: 10/18/16 1:27 PM

Component	Value	Units	Flag
1. C. DIFFICILE TOXIN BY PCR	No C. difficile toxin detected by PCR		

- **Best Practice Alert (BPA) for Nursing**
  - Trigger: 3 loose stool documented in a 24 hour period

  - Last result pulled in for quick reference

  - Criteria for discontinuation (specimen unable to be collected)

  - Excludes patients < 3 y.o. AND when order previously declined

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Implementing a Protocol

• **March 2017:** Testing protocol Go Live

C. diff Testing Volume

C. Diff Lab Order Placement

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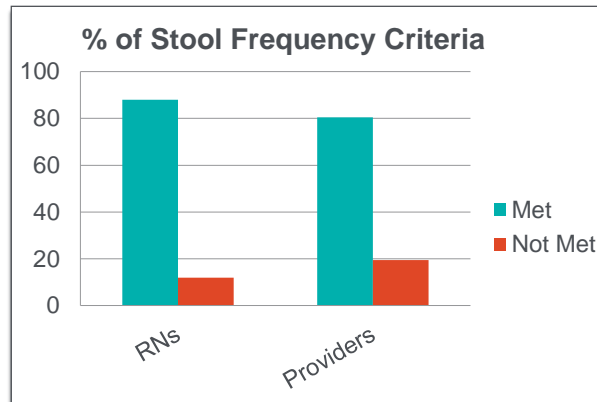# Implementing a Protocol - Challenges

• **Day of Go Live**
  o BPA not firing correctly: could not decline
  o Overall, overuse not issue among RNs

• **Case by Case Nuances**
  o Post-surgical return of bowel function
  o GI bleeds
  o Colostomy

• **Testing Appropriateness**
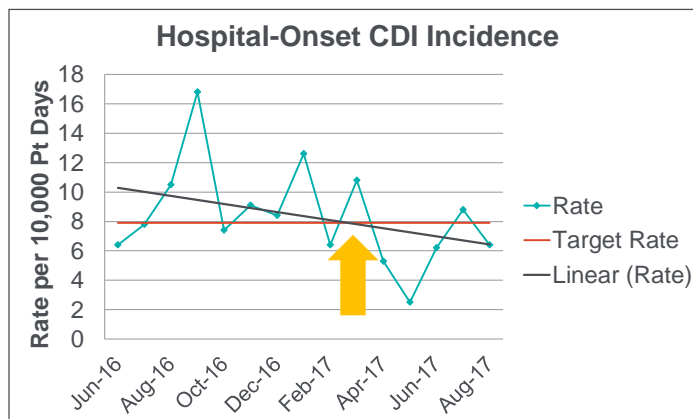 o Lack of IDSA/SHEA defined symptom (3 loose stool) most frequent miss

Implementing a Protocol - Challenges

- Testing (In)Appropriateness
- Infection Prevention daily review

% of Stool Frequency Criteria

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Implementing a Protocol - Results

- Early success
- 15% improvement in rate since 2016 or 9 CDI events

Hospital-Onset CDI Incidence

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Successes and Takeaways

- **Disease Identification:** Earlier identification of CDI *disease* with reduction in identification of asymptomatic colonization

- **Staff engagement:** IP daily review of suspect CDI, opportunity to educate/drive best practice

- **Resource stewardship:** Clearly defined criteria for protocol discontinuation
  - **48 hours**

- **Success hinges on the infection prevention groundwork:** Core strategies should be in place first
  - e.g. MHA CDI Prevention Strategies gap analysis (SAFE HAI 2.0 Roadmap)

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