

Reducing Hospital-Acquired *C. diff*: Getting All Disciplines on Board to Achieve Success

Siobhan Geary, RN, CNS
Med-Surg CNS
Sutter Medical Center, Sacramento

Sutter Medical Center, Sacramento






C diff Overview

- Almost 500,00 cases/year in US
- Most common microbial cause of HAIs in U.S.
- 15,000 deaths/year directly attributable to *C diff* infection
- \$4.8 billion/year for acute care facilities alone

CDC (2015)



C diff definitions

- **Community Onset** – Specimen collected in an outpatient location or an inpatient location \leq 3 days after admission to the facility (i.e. hospital day 1 (admission), 2 or 3)
- **Healthcare Facility Onset** – Specimen collected $>$ 3 days after admission to the facility (i.e. on or after hospital day 4)
- **Community Onset Healthcare Facility Associated** – Specimen collected from a patient who was discharged from the facility \leq 4 weeks prior to the date current stool specimen was collected



How did we decrease our SIR?

- SIR – Standardized Infection Ratio
 - Summary measure used to track HAIs at a national, state and local level over time
- Sutter Medical Center, Sacramento
 - 4th Q 2017 – C. diff SIR = 0.417*



Interprofessional Team

- Nurses
- Physicians
- Pharmacists
- Infection Preventionists
- Lab staff
- Environmental Services
- EHR analysts



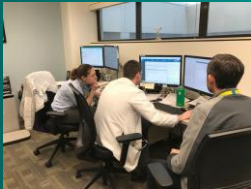
Focus on:

- Clean Patient
- Clean Healthcare Worker
- Clean Environment
- Evidence-based testing guidelines
 - Computer software support in the EHR
- *C. diff* treatment algorithm



Clean Patient

Antibiotic Stewardship



- Daily review
 - early de-escalation
- Rounding
- Rapid diagnostic testing
 - Flu, viral resp, blood cultures
- Focus on quinolones
- Procalcitonin levels
- PPI usage
- Physician education
 - Creating awareness
 - Encouraging restraint
 - Ongoing, "badgering"
 - Antibiotic Guidebook



Clean Healthcare Worker

- Improved signage
- Clarification of isolation processes
- Hand hygiene



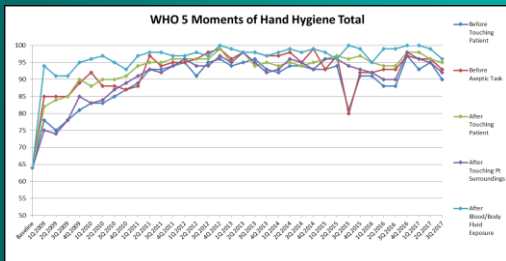
C. diff Isolation Sign



Signage for C. diff rooms



5 Moments for Hand Hygiene (WHO)



Clean Environment

- Standard cleaning agents/processes
 - Oxycide for all patient areas
 - Cleaning practices aligned with industry standards
- Xenex ultra-violet robot



Meet Xhaiden

(Amer. – "Cleansing beam of light")



Full spectrum UV Disinfection



Appropriate Testing for *C. diff*

- Testing Guidelines
 - Physician education
 - RN education
 - Testing sticker
- Decision support in EHR
 - “Duplicate order” fires if *C. diff* test has been performed in previous 7 days
 - *C. diff* orders automatically expire after 24 hours and must be reviewed and reordered by physician



Testing Guidelines

<i>C. diff</i> Testing Checklist	
Hospital Day 1, 2 or 3? (Day 1 is admit day)	
<input type="checkbox"/> Yes – SEND SAMPLE	<input type="checkbox"/> No – See below
Hospital Day 4 or after:	
Any laxatives, bowel prep, Lactulose or enema(s) given in the last 48 hours?	
<input type="checkbox"/> Yes – Do NOT send	<input type="checkbox"/> No – Go to next question
3 or more loose/watery stools in the last 24 hours?	
<input type="checkbox"/> No – Do NOT send	<input type="checkbox"/> Yes – Go to next question
Patient tested for <i>C. diff</i> in last 7 days?	
<input type="checkbox"/> Yes – Do NOT send	<input type="checkbox"/> No – SEND SAMPLE
<small>108720-111 (08/17)</small>	



Inappropriate tests being sent

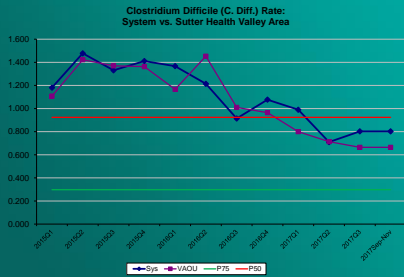
- 1st Q 2017 = 5-8/month
- 4th Q 2017 = 0-2/month

Improvement with:

- patients on laxatives
- patients with < 3 stools/24 hours



System vs. Valley C. difficile Rate



Thank You!