About VHQC

• Non-profit health quality consulting company since 1984

• Quality Innovation Network - Quality Improvement Organization (QIN-QIO) for Maryland and Virginia

• Provider Transformation Network
VHQC Offerings

- Pertinent and valuable information
- Tools and resources
- Timely, useful and easy-to-understand reports
- Support, guidance, expert consultation
- Data
- QAPI process coaching

Join the Nursing Home Improvement Network NOW
**C. diff Prevention in MD & VA:**

**Why be concerned about C. diff?**

**2014:** Maryland’s rate of hospital-onset *C. diff* infections was significantly higher than the national baseline

**CDC threat report 2014**

**2015:** Thirteen Maryland hospitals had higher than national baseline *C. diff* infection rates

[healthcarequality.mhcc.maryland.gov](http://healthcarequality.mhcc.maryland.gov)

**2015:** Among 82 hospitals in Virginia, 18% had an SIR – *standardized infection ratio* significantly higher (worse value) than the national SIR


**2016**

It’s not just a hospital issue: About half of *C. diff* infections first show symptoms in hospitalized or recently hospitalized patients, and **half show initial symptoms in nursing homes** or in people recently cared for in doctors’ offices and clinics
**C. diff Infection – What Is It?**

- **C. diff** stands for *Clostridium difficile* and a "C. diff infection" is often referred to as a **CDI**

- *Clostridium difficile* is a spore forming, gram positive bacterium that releases **TWO potent toxins:**
  - **Toxin A and Toxin B**

- These toxins bind to receptors in the lining of the colon causing diarrhea and painful inflammation of the large intestine

- Newer strains of **C. diff** are producing **20 more times toxin** A & B than in previous years

Nursing Homes & Hospitals Share Patients and *C. diff* Infections

66% of all SNF residents who develop *C. diff* were recently discharged from hospital

35% of known *C. diff* patients are discharged to Nursing Homes

26% of Nursing Home residents diagnosed with *C. diff* are hospitalized

Adapted from Telligen QIN – *C. diff*
Opportunities for Prevention March 2016
and Dr. Ghinwa Dumyati MD, Rochester
Emerging Infection Program Surveillance
Data 2015
C. diff infection – Resident Misery

- Fever
- Watery diarrhea
- Nausea
- Loss of appetite
- Abdominal pain & tenderness

**High Cost Meds**

- Vancomycin: $2400 per episode
- Dificid: $4100 per episode
What’s Going on Here?

- Half a million cases per year –
  - at least 104,000 are Nursing Home onset
- Returns at least once in 1 in 5 patients
- 15,000 deaths per year
- Antibiotic Risk: esp. Fluoroquinolones
  - Longer exposure = higher risk
  - *(Cipro, Levaquin, Avelox)*
- Something scary happened between 2000-2001:
  - a HYPERVIRULENT strain emerged resistant to previously effective drugs

(CDC.Gov HAI pdf CS253604)
How is *C. diff* Spread?

- *C. diff* is found in human feces

- **When contaminated surfaces are touched and then the mouth or mucous membranes are touched**
  - Following ingestion, they traverse the acidic environment of the stomach and germinate in the large intestine

- Staff can spread bacteria to residents or surfaces through **hand contact**

- Any surface can become contaminated:
  - Stethoscope
  - Toilet paper mount
  - Hand rails
  - Paper tape roll
  - Wheelchair arm
  - Pens
• *C. diff* spores can live on surfaces for **5 months**

• Disinfection of surfaces is recommended using an EPA registered disinfectant with a *C. Diff* sporicidal label claim or 5000 ppm chlorine containing cleaning agent

*Am J Gastroenterol* 2013; 108:478–498; doi:10.1038/ajg.2013.4; published online 26 February 2013
What Do You Mean Alcohol and Detergent Won’t Kill \textit{C. diff}?

Where can I direct my Environmental Manager to ensure we are using the appropriate cleanser?

\textbf{A current list of EPA-approved disinfectants with sporicidal claim is available at:}

http://www.epa.gov/pesticide-registration/list-k-epas-registered-antimicrobial-products-effective-against-clostridium

\textbf{And remember: when using sporicidal disinfectants:}

- Have a method to communicate when sporicidal disinfectants should be used
- Avoid toxicity to patients and environmental services staff
- Avoid damage to equipment

**Steps You Can Take to Break the Chain of *C. diff* Infection**

FIRST assess your policies and practices related to CDI prevention

1. Leadership
2. Training, auditing/feedback
3. Antibiotic stewardship
4. Early detection and isolation
5. Appropriate testing practices
6. Contact Precautions/hand hygiene
7. Environmental cleaning


Advancing Excellence: https://www.nhqualitycampaign.org/files/EarlyID_Assessment.pdf
Assess where you are today, and where you need to go:

- Download the CDC’s Infection Control Assessment Tool for Long-term Care Facilities: [http://www.cdc.gov/hai/pdfs/IC/CDC_IC_Assessment_Tool_LTCF.pdf](http://www.cdc.gov/hai/pdfs/IC/CDC_IC_Assessment_Tool_LTCF.pdf)
- Review the latest regulations for nursing homes from CMS
- Recognize that leadership is critical for Infection Prevention
  - There is need to understand organizational culture and change it when it hinders performance
  - Direct evidence linking laissez faire or reactive leadership to infection rates is limited but consistent themes have been identified

Require Training and Competency in these Core Areas

Break the Chain of Infection

**Hand Hygiene**
- Appropriate selection and use of products

**Resident Monitoring**
- Knowledge of signs and symptoms to initiate transmission-based precautions

**Personal Protective Equipment**
- Appropriate selection of PPE
- Procedures to don, doff, and dispose of PPE

**Resident Transfer**
- Appropriate interventions for Care Transitions
- Notification of receiving caregivers within and outside of facility upon transfer

Major Impact: Antibiotic Stewardship

• Your Consultant Pharmacist is an Expert

• Prescribers should consider infection criteria (Loeb’s*, McGeer’s) along with clinical judgement before initiating antimicrobials; not prescribing them due to family pressure or “that’s what we’ve always done in the nursing home” philosophy

• Nursing staff need to monitor residents closely to give prescribers a comfort level that escalation of symptoms will not be missed

• Institute a mandatory “time out” to check the antibiotic started against the resident’s condition as well as the culture results

• Does your IP check every morning to determine who was put on antibiotics the night before? Does he/she immediately follow up to ensure it was appropriate?

## CDC Antibiotic Stewardship Resource

### Core Elements of Antibiotic Stewardship for Nursing Homes

Download
“Core Elements of Antibiotic Stewardship for Nursing Homes”
http://www.cdc.gov/longtermcare/prevention/antibiotic-stewardship.html

<table>
<thead>
<tr>
<th>II. Antibiotic Stewardship for CDI Prevention</th>
<th>Response Choices</th>
<th>Comments (and/or “As Evidenced By”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does your facility review appropriateness of antibiotics prescribed for treatment of other conditions (e.g., UTI) for patients with new or recent CDI diagnosis?</td>
<td>Yes ☐ No ☐ Unk ☐</td>
<td></td>
</tr>
<tr>
<td>2. Does your facility educate providers about the risk of CDI with antibiotics?</td>
<td>Yes ☐ No ☐ Unk ☐</td>
<td></td>
</tr>
<tr>
<td>3. Does your facility educate patients/family members about the risk of CDI with antibiotics?</td>
<td>Yes ☐ No ☐ Unk ☐</td>
<td></td>
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<tr>
<td>Does your facility monitor the use of the following antibiotics that are high-risk for CDI:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Fluoroquinolones</td>
<td>Yes ☐ No ☐ Unk ☐</td>
<td></td>
</tr>
<tr>
<td>5. 3rd/4th generation cephalosporins?</td>
<td>Yes ☐ No ☐ Unk ☐</td>
<td></td>
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<tr>
<td>Does your facility use strategies to reduce the use of the following antibiotics that are high-risk for CDI:</td>
<td></td>
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<td>6. Fluoroquinolones</td>
<td>Yes ☐ No ☐ Unk ☐</td>
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What Can We Do?

- **WORK together** with physicians toward Antibiotic Stewardship and reduce PPI’s
- **Disinfect** properly and learn the latest tips and best practices
- **Implement effective strategies** to quickly diagnose, treat & prevent *C. diff*
- **Enforce** hand hygiene and staff infection control precautions
- **Communicate** *C. diff status* with other healthcare partners

Empower your Infection Prevention Nurse to lead the team
What are Others Doing?

- **Using hand hygiene reminder signage** at elevator buttons, nursing station keyboards, water fountains, and copy machine buttons since these are areas known to possess a high bacterial burden.

- **Disinfecting** weekly with BLEACH throughout the entire facility – some have adopted “Bleach Wednesdays”

- **Posting Cleaning Checklists** for resident rooms and nursing stations to ensure greater cleaning consistency in all areas.

- **Secretly and Openly observing hand hygiene** of EVERY team member (including therapy, activities, housekeeping) to determine adherence rates – then strategize

- **Using INTERACT to Communicate C. diff status** with other healthcare partners

- **Implementing a “Diarrhea Decision Tree”** to quickly reduce possibility of C. diff transmission in the facility

Within 1-2 hours of the survey team arrival, you can be required to provide:

• Infection Prevention Policies with Infection Prevention/Risk Assessment & Plan
• Infection Preventionist job description
• Evidence that Infection Control concerns have been brought up in Quality Committee Mtgs
• Any root cause analysis related to breaches in Infection Prevention Practices
• PROTOCOLS on antibiotic prescribing
• Last quarter of Infection Prevention Surveillance
• Report summarizing antibiotic use within the last 6 months
• Hand hygiene surveillance and rates plus policies for both staff & residents
• Documented specialized IP (infection preventionist) training organized by state/ professional societies
• Documented Training on antibiotic stewardship to nursing staff & clinical providers
• Documented Antibiotic Stewardship Educational materials provided to patients and families
• Documented Cleaning and disinfection training and competencies
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<td>Infection Prevention Steps to Success from Advancing Excellence in America’s Nursing Homes</td>
<td><a href="https://www.nhqualitycampaign.org/goalDetail.aspx?g=inf">https://www.nhqualitycampaign.org/goalDetail.aspx?g=inf</a></td>
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<td>Clinical Uncertainties in the Approach to Long Term Care Residents with Possible Urinary Tract Infection (available with AMDA subscription – check with your Medical Director)</td>
<td><a href="http://www.jamda.com/article/S1525-8610(13)00642-7/fulltext">http://www.jamda.com/article/S1525-8610(13)00642-7/fulltext</a></td>
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