Navigating through VRE Outbreaks... *Lessons Learned*

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Woodstock Hospital
Objectives

1. History of VRE cases and outbreaks at Woodstock Hospital
2. Review standard VRE outbreak measures
3. Discuss outbreak prevention initiatives and changes
4. Key lessons learned
History: Nosocomial Cases

Nosocomial Cases at Woodstock Hospital
2016-2017 vs 2017-2018

Number of Nosocomial Cases

- VRE: 89 (2016 FY), 21 (2017 FYTD)
- C. diff: 7 (2016 FY), 7 (2017 FYTD)
Types of Outbreaks per Year

- VRE
- MRSA
- C. diff
- Gastro

<table>
<thead>
<tr>
<th>Year</th>
<th>VRE</th>
<th>MRSA</th>
<th>C. diff</th>
<th>Gastro</th>
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<td>2014 FY</td>
<td>2</td>
<td>1</td>
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<td>0</td>
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<tr>
<td>2015 FY</td>
<td>2</td>
<td>1</td>
<td>1</td>
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<tr>
<td>2016 FY</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>2017 FYTD</td>
<td>1</td>
<td>0</td>
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Standard Outbreak Measures

- Identify cases and contacts
- Establish Communication and assemble MDT
- Increase surveillance
- Increase audits
- Enhanced Environmental Cleaning
- Enhanced patient care procedures
- Limit Bed Move

More on these later...
The single biggest problem in communication is the illusion that it has taken place.

George Bernard Shaw
Key Stakeholders include the following...

- Senior Leadership
- Environmental Service Manager
- Patient Access and Flow
- CED
- Stores
- PT/OT Director
- Director of In-patient Unit
- Oxford County Public Health
- Public Health Unit
- Dietary Director
- Charge Nurse
- Public Health Ontario
- Oxford County Public Health
- Senior Leadership
New Outbreak Initiatives: Public Health Support

May 2016 – PHO Suggestions:
1. Terminal clean - all medical units
2. Limit patient supplies in room
3. Clean isolation carts
4. Commode cleaning process
5. Mattress assessment process
6. Curtain changing schedule
7. Dedicated VRE cleaning cart
8. Review of current cleaning products
9. Education of standard wiping protocol
10. Extend repatriation isolations (48 hr → 7 days)
Repatriation Results... 2016-2017

Bar chart showing the number of repatriations and VRE positivity rates by month.
Commode Cleaning Process

**Commodes Daily and Terminal Cleaning Process**

- Commode is cleaned with hospital grade disinfectant.
- Ensure to clean both the inside and outside of the commode lid and the underside of the seat and legs.
- Commode is stored in the patient room after the daily and terminal clean is completed.

**Terminal Commode Cleaning Process**

1. Enter E. coli or VRE outbreaks
2. Enter C. difficile (C. diff)
3. If the commode remains visibly soiled after first cleaning

- Commode is wiped down with Sporicidal disinfectant (Clorox®)
- Commode is covered with a yellow gown
- Commode is placed into dirty utility room
- Housekeeping call 8000 and leave a message for porter to pick up commode chair
  - Indicate unit
  - Soiled utility room number
  - Instructions to send to CED dirty side for commode washing

- Porter identifies dirty commode by yellow gown.
- Takes commode to dirty side of CED through door L738 and places in designated “dirty” area
- Washes hands upon leaving
- Enter the commode in sign in book in CED

- CED will put commode through cart washer
- Once commode is dry CED will place outside of CED on “clean” side
- CED will contact Porter at 8300 to return cart to unit

Please Note:

- After 4pm, commodes that require cart washing remain in Soiled Utility Room until next morning. Housekeeping will then notify Porter (est 8300) to take the commode chairs down to CED (as per the above process).
- On weekends and holidays, commodes that require cart washing remain in the Soiled Utility Room until Monday morning. On Monday morning, CED will call porter to take the commode down to CED.
Testing on Microfibre Cloths

- Vendor for the Every day disinfectant (ED) contacted to determine if PPM level of disinfectant was being reduced by Quat-binding

- The test showed Quat-binding was occurring and suggestions were made to mitigate this challenge
Hydrogen Peroxide-Based Disinfectant

- **Oxivir Plus** for daily disinfecting effective on Non-Enveloped viruses like Norwalk, MRSA and VRE

- Not as harsh on surfaces

- Contact time is 5 minutes versus 10 minutes

- This product is Eco-certified
Cleaning Refresher
Product Change
Double clean VRE rooms. once in the morning and again in the afternoon
Mattress Check Protocols
Commode Cleaning Process
Terminal Cleaning Process
Curtain Changing Process
Regular Auditing
Infection Control Prevention

- Additional Surveillance
- Additional Audits
  - PPE
  - Hand Hygiene
  - Environmental
- Daily huddles highlighting outbreak measures to all staff
- Daily e-mail memos highlighting outbreak measures and list of affected patients
- Reinforce outbreak measures with frontline staff
- Reinforce uniform policy in regards to artificial nails, chipped nail polish & jewelry
2. Standard Outbreak measures:

Communication
Nursing Prevention Strategies

- Reinforce use of dedicated equipment
- Support staff and families throughout Outbreak
- Listen to front line staff concerns of any outbreak measures
- Ensure staff have necessary equipment and supplies
- Bring in Vendors to educate staff on new products
- Celebrate success of outbreak resolution with outbreak highlights and lessons learned
Nosocomial VRE Cases
Pre/Post Accel Trial

Hospital Wide VRE Cases

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<thead>
<tr>
<th>Month</th>
<th>Apr-16</th>
<th>May-16</th>
<th>Jun-16</th>
<th>Jul-16</th>
<th>Aug-16</th>
<th>Sep-16</th>
<th>Oct-16</th>
<th>Nov-16</th>
<th>Dec-16</th>
<th>Jan-17</th>
<th>Feb-17</th>
<th>Mar-17</th>
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<th>Jun-17</th>
<th>Jul-17</th>
<th>Aug-17</th>
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<th>Nov-17</th>
<th>Dec-17</th>
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<tbody>
<tr>
<td>Cases</td>
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<td>1</td>
<td>2</td>
<td>4</td>
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New Outbreak Initiatives: Corporate Supported

1. Changed ABHR product
2. Trial of Accelerated Hydrogen Peroxide products
3. Isolation trial on repatriations
4. Patient bed realignment
5. Outbreak calculator

A leader is one who knows the way, goes the way, and shows the way.

John C. Maxwell
Acute Inpatient Changes

Option C: Acute IP Reconfiguration

- Overflow Bed
- Surge Bed
- Add. Surge Bed
- MD Sleep Room

New Surgical (was 2300)
New Medical (was 2400)
### Pre and Post Acute Inpatient Reconfiguration

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<th>Pre-reconfiguration</th>
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<td>Outbreaks</td>
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<tr>
<td>Nosocomial</td>
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**Delayed Bed Assignment and Bed Moves/Cleans TTIB Outliers by Unit (Post Reconfiguration)**

**Bed Clean Index: Avoidable Bed Cleaning**

Ratio of Hospital Beds Cleaned to Reported Discharges, Transfers Out, and Deaths on Acute Inpatient Units

<table>
<thead>
<tr>
<th>Month</th>
<th>Avoidable Bed Cleans</th>
<th>Pre Reconfiguration Average Avoidable Bed Cleans</th>
<th>Post Reconfiguration Average Avoidable Bed Cleans</th>
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<td>Jan-16</td>
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<td>May-16</td>
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<td>Jun-16</td>
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<td>Jul-16</td>
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<td>Aug-16</td>
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Challenges Present During the VRE Outbreaks

- Staff engagement since VRE screening protocol is not consistent in region
- Errors in prevalence collection thus delaying results
- Outbreak exhaustion
- Artificial nail/excessive jewelry management of policy
- Lack of additional staffing to properly manage outbreak measures.
Take Home Messages

- Network with local and Regional resources
- Engage Senior Leadership for Support
- Never assume staff have Infection control knowledge
- Listen for feedback and suggestions from Front Line
- Use a multidisciplinary approach
- Celebrate the lessons learned
Thank You!