The impact of vancomycin-resistant Enterococci (VRE) policy and practice changes in BC

Guanghong Han, PhD

IPAC Conference · Charlottetown, PEI

June 19, 2017
Disclosure

• Surveillance epidemiologist at Provincial Infection Control Network of BC (PICNet)

• No conflict of interest to declare
Background

- VRE control policy was developed by each health authority
- Common practices included active screening, contact precautions, and isolation
- Four health authorities modified VRE control policy from 2010
  - Ended targeted or admission screening for VRE
  - Discontinued contact precautions with VRE patient
  - Isolated VRE patient with risk assessment
Objectives

- Identify changes in VRE prevention and control policy
- Evaluate impact of the changes on incidence rate of VRE infection and colonization
Methods

- Setting: all acute care facilities in BC
- Policy review: VRE screening and isolation policy in each health authority from 2010 to 2015
- Data collection: VRE infection and colonization for periods of three years before and after changes, or from 2008/09 to 2014/15
- Data analysis:
  - Overall trend of VRE rate
  - Comparison of VRE rates before and after changes
## Results

### Changes in VRE screening, contact precautions and isolation

<table>
<thead>
<tr>
<th>Health authority</th>
<th>VRE screening</th>
<th>Contact precautions and isolation</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Island Health</td>
<td>End targeted admission screening</td>
<td>Discontinued unless infected and have risk factors for transmission.</td>
<td>2010</td>
</tr>
<tr>
<td></td>
<td>End screening in critical care units</td>
<td>Electronic VRE alerts on patient removed</td>
<td>2012</td>
</tr>
<tr>
<td></td>
<td>End screening in renal units</td>
<td></td>
<td>2014</td>
</tr>
<tr>
<td>Fraser Health</td>
<td>End targeted admission screening</td>
<td>Discontinued unless infected and have risk factors for transmission.</td>
<td>Nov 2012</td>
</tr>
<tr>
<td>Vancouver Coastal Health*</td>
<td>High-risk units</td>
<td>Continue admission and weekly VRE screening</td>
<td>Mar 2013</td>
</tr>
<tr>
<td></td>
<td>Other units</td>
<td>Continue isolation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>End admission screening</td>
<td>Discontinued. VRE was removed from electronic flagging system</td>
<td>Mar 2013</td>
</tr>
<tr>
<td>Interior Health</td>
<td>End admission and pre-surgical screening</td>
<td>Discontinued isolation</td>
<td>Dec 2013</td>
</tr>
<tr>
<td>NHA, PHSA and PHC</td>
<td>Continue active screening, contact precautions and isolation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Excludes PHC. High-risk units include wards for intensive care, burn-trauma, and bone marrow and solid organ transplant.
Results

Rate of VRE infection and colonization in health authorities that made changes

1. Island Health
   - End targeted admission screening and contact precaution for VRE, except critical care and renal units
   - Screen renal units only
   - Stop all VRE screening

2. Fraser Health
   - End targeted admission screening and contact precaution

3. Vancouver Coastal Health (excludes PHC)
   - Screening CDI stools for VRE initiated Jan 2009
   - Screening CDI stools for VRE stopped Nov 2012
   - Risk managed approach implemented Mar 2013

4. Interior Health
   - End admission and presurgical screening
   - End counting urine VRE+ as infection
Results

Other impacts of VRE policy changes

- Focus more on syndromic management
- Cost avoidance from VRE screening and testing
- Free-up resources for other IPAC programs
- Improve patient flow
Results

Rate of VRE infection and colonization in health authorities that made NO changes

Northern Health

Providence Health Care*

Provincial Health Services Authority

* Part of Vancouver Coastal Health
Discussion

• No known negative impacts were observed following changes in four health authorities
• Concerns over potential transmission within facilities and unexpected impacts on other facilities
• Debate continued among BC health authorities over the value of VRE screening, contact precautions and Isolation and its impacts on patient safety
Discussion

Limitations

• Variations in VRE control policy, surveillance method, and case definition
• Small number of VRE infections
• Changes made at different times
• Other potential impacts were not evaluated
Conclusion

- No known negative impacts were observed after discontinuing VRE screening and isolation
- VRE continues to be closely monitored
- Further evaluations are needed
Acknowledgements

- Fraser Health: Tara Donovan, Louis Wong
- Interior Health: Dr. Julie Mori, Dr. Bing Wang
- Island Health: Dr. Pamela Kibsey, Anthony Leamon
- Northern Heath: Deanna Hembroff
- Providence Health Care: Dr. Elisa Lloyd-Smith
- Vancouver Coastal Health: Leslie Forrester, Dr. Elizabeth Bryce
- Provincial Health Service Authority: Jun Chen Collet
- Provincial Infection Control Network of BC: Bruce Gamage, Romali Ranasinghe
- BC Centers for Disease Control: Dr. Linda Hoang