Hand Hygiene Program Evaluation

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Quality and Patient Safety

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Background

• The VCH Board has made Hand Hygiene a priority for staff and physicians
• Hospital acquired infections cost an additional $10 000 - $24 000 in care per infected patient and increase the overall the Length of Stay
• In Canada, healthcare associated infections kill 8,000-12,000 people every year
Background

- Hand hygiene is universally accepted as the single most important method for infection prevention and control
- Hands of healthcare workers are the most common mode of transmission of pathogens to patients
Purpose

To protect patients, staff, and visitors from transmitting and/or acquiring hospital associated infections through hand hygiene practices.
Program Evaluation

Goal: Long-term Outcome
• Determine that VCH has established a culture of safety

Goal: Intermediate Outcomes
• VCH Staff are complying with the hand hygiene initiative (best practices)
• Participating teams take ownership of the hand hygiene initiative
Program Evaluation

Goal: Short-term Outcome

• Quality and Patient Safety Team and VCH staff have access to the educational information resources for teaching and learning about appropriate hand hygiene.
• VCH staff have access to the appropriate tools for hand hygiene
• VCH Staff have the knowledge and resources to comply with the hand hygiene initiative
Activities

• Develop and implement strategies for the hand hygiene initiative
• Coordinate resources for the hand hygiene initiative
• Facilitate, educate, and in-service VCH staff on the hand hygiene initiative
Auditing

Since January 2009 hand hygiene audits have been conducted using the Canadian Patient Safety Institute standard tool.
## Auditing

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vancouver General Hospital</td>
<td>24</td>
</tr>
<tr>
<td>Richmond Hospital</td>
<td>7</td>
</tr>
<tr>
<td>Lion’s Gate Hospital</td>
<td>7</td>
</tr>
</tbody>
</table>

- 30 minutes at each unit
- Capture 16 opportunities
Your 4 Moments for Hand Hygiene

1. BEFORE INITIAL PATIENT / PATIENT ENVIRONMENT CONTACT
2. BEFORE ASEPTIC PROCEDURE
3. AFTER BODY FLUID EXPOSURE RISK
4. AFTER PATIENT / PATIENT ENVIRONMENT CONTACT
1. Number of hand-washing moments to hand washing opportunities by unit by occupational group:
   
   • Nurses
   • Physicians
   • Other
Indicator

2. Inappropriate hand hygiene before and/or after glove use
   • Observe the instances where gloves are put on or removed without appropriate hand hygiene
3. Number of hand sanitizers located at each hospital

Example:
1712 hand sanitizers at VGH
- Outside patient rooms
- Entrances/Exits of units
- Access point to buildings
Indicator

4. Number of posters in the hospital for the hand hygiene
Staff Awareness

- Lanyards (2000)
- Pens (500)
- Clips (2000)
- Posters (2000)
- Light Boxes (17)
- Window Wrappers (1)
- Screen Savers (10,000+)

- Free hand sanitizers
- Dispensers (2,200+)
- Trophies (2)
- Staff/Client Cut-outs (20+)
Senior Leadership Cutouts

Make hand hygiene your responsibility. Someone’s life may depend on it.

Dr. John Shepherd
Chair, Health Authority Medical Advisory Committee
Vancouver Coastal Health
Light Boxes
5. Number of staff at in-services and education sessions

![Bar chart showing the number of staff at in-services and education sessions from February to December 2009. The chart indicates a peak in September with a considerable number of employees attending the sessions.]

**Education Sessions**

- February: 50 employees
- March: 150 employees
- April: 50 employees
- May: 50 employees
- June: 200 employees
- July: 50 employees
- August: 10 employees
- September: 300 employees
- October: 50 employees
- November: 100 employees
- December: 50 employees
# New Hires
## Online module

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Code</th>
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</thead>
<tbody>
<tr>
<td>Vancouver General Hospital</td>
<td>514</td>
</tr>
<tr>
<td>Richmond Hospital</td>
<td>134</td>
</tr>
<tr>
<td>Lion’s Gate Hospital</td>
<td>229</td>
</tr>
</tbody>
</table>
Dirty Hand (bus ride)

Clean Hand (microsan)
Gloved Hand
(after touching taps in staff washroom)
# 2009 Audit Results

**VCH**

## Hand Hygiene Audit: Number of Observations and Completed Hand Hygiene Events

(VGH, RHS, LGH)

<table>
<thead>
<tr>
<th>Month</th>
<th>HH Opportunities</th>
<th>HH Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td>Feb</td>
<td>150</td>
<td>75</td>
</tr>
<tr>
<td>Mar</td>
<td>120</td>
<td>60</td>
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<tr>
<td>Apr</td>
<td>100</td>
<td>50</td>
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<tr>
<td>May</td>
<td>80</td>
<td>40</td>
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<tr>
<td>Jun</td>
<td>60</td>
<td>30</td>
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<tr>
<td>Jul</td>
<td>40</td>
<td>20</td>
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<tr>
<td>Aug</td>
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<td>15</td>
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<tr>
<td>Sep</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Oct</td>
<td>15</td>
<td>7.5</td>
</tr>
<tr>
<td>Nov</td>
<td>350</td>
<td>175</td>
</tr>
<tr>
<td>Dec</td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>

**HH Opportunities** – The total number of opportunities for hand hygiene before/after patient/environment contact.

**HH Completed** – The total number of times hand hygiene was performed.
Hand hygiene compliance is presented by occupational group at the facility level. Compliance rates may vary significantly with small numbers. In March there were a total of 282 hand hygiene opportunities for Nurses (compliance 27%), 46 for Physicians (compliance 26%) and 148 for Other (compliance 22%).
Audit Results - VCH

Hand Hygiene Compliance Vancouver Coastal Health 2009-2010

Percentage

Month

Jan-09 Feb-09 Mar-09 Apr-09 May-09 Jun-09 Jul-09 Aug-09 Sep-09 Oct-09 Nov-09 Dec-09 Jan-10 Feb-10 Mar-10 Apr-10 May-10 Jun-10 Jul-10 Aug-10 Sep-10 Oct-10 Nov-10 Dec-10

R² = 0.7609
Audit Observations

• Staff wearing the same gloves from room to room and over unit
• Staff leaving room wearing gloves to linen cart, medication cart, etc. and then returning to room
• Staff walking all over unit wearing isolation gowns – room to room and off unit
• Nurse wearing gloves at nursing station – on phone – then dispensing medications – same gloves
More Observations

• Used Microsan with gloves on
• Contact Precautions – nurse emptied urine bag into sink in washroom, touched handles and walls without removing gloves
• Blood Collection: Gloves on in patient room, leaves patient room, labels blood tubes, tubes blood via tubing system, leaves unit, gets on elevator – still wearing the same gloves
Conclusions – Phase I

• 40% increase in Hand Hygiene Compliance
• Decrease in hospital acquired MRSA rates
• Overall increase in staff awareness
• Substantial increase in hand hygiene Microsan resources for staff (100 → 2000+)
Next Steps – Phase II

• Community Engagement
  – “It’s Good to Ask”
• Unit Ownership
• Ongoing awareness
  – Poster Contest
  – Video Contest
  – May 5th WHO Hand Hygiene Day
  – Annual VCH Patient Safety Conference
Thank You

Ask Me...

My hands are clean - are yours?
Hand hygiene is everyone’s responsibility.

Vancouver Coastal Health