Healthcare-associated Methicillin-Resistant Staphylococcus aureus (MRSA) infections

Description:
MRSA is a staphylococcus bacterium that has developed resistance to several antibiotics. MRSA does not cause more infections than other types of staphylococcus, but limits the options for antibiotic therapy. In general, staphylococci do not cause infections in healthy individuals. They can sometimes cause skin or wound infections and, more rarely, pneumonias or blood infections. An infection caused by a staphylococcus can be treated with an antibiotic. MRSA is primarily transmitted between a carrier patient and another patient via caregivers’ hands or a contaminated environment.

Healthcare-associated infections are infections that are related to the delivery of healthcare.

Calculation:
\[
\text{Number of patients infected with MRSA} \times 10,000 \\
\text{Number of patient days}
\]

Analysis:
The rates are relatively stable and are well below the national benchmark of 1.82.


Action plan:
Continue monitoring MRSA rates, communicating the results, and strengthening good hand hygiene practices. Continue hand hygiene audits.
Description:
Clostridium difficile, also referred to as C. difficile, is a bacterium that has been known for some time. A small percentage of the population (approximately 5%) may carry this bacterium in their colon without having any health problems; no treatment is therefore required. Indeed, the bacterium lives in balance with the other types of bacteria found in the human bowel. The spores of this bacterium are able to survive in the environment for quite some time. In most cases, antibiotic consumption is the precipitating factor. Providing a safe environment involves monitoring the rate of infection with this bacteria and taking action to prevent its transmission.
Healthcare-associated infections are infections that are related to the delivery of healthcare.

Calculation:
\[
\text{Number of patients infected with } C. \text{ difficile} \times 10,000 / \text{Number of patient days}
\]

Healthcare-associated C. difficile infection rates by quarter

<table>
<thead>
<tr>
<th>Quarter</th>
<th>2015-16</th>
<th>2016-17</th>
<th>2017-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>2.22</td>
<td>1.40</td>
<td>1.14</td>
</tr>
<tr>
<td>Q2</td>
<td>2.94</td>
<td>2.10</td>
<td>1.45</td>
</tr>
<tr>
<td>Q3</td>
<td>1.00</td>
<td>1.58</td>
<td>1.65</td>
</tr>
<tr>
<td>Q4</td>
<td>2.10</td>
<td>1.14</td>
<td>1.84</td>
</tr>
</tbody>
</table>

Vitalité

Healthcare-associated C. difficile infection rates by hospital

<table>
<thead>
<tr>
<th>Hospital</th>
<th>2015-16</th>
<th>2016-17</th>
<th>2017-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGLUHC</td>
<td>3.02</td>
<td>3.89</td>
<td>2.19</td>
</tr>
<tr>
<td>SMKH</td>
<td>4.11</td>
<td>3.66</td>
<td>1.96</td>
</tr>
<tr>
<td>Edmundston</td>
<td>0.00</td>
<td>0.96</td>
<td>3.08</td>
</tr>
<tr>
<td>Grand Falls</td>
<td>2.86</td>
<td>2.68</td>
<td>0.90</td>
</tr>
<tr>
<td>St-Quentin</td>
<td>3.48</td>
<td>3.89</td>
<td>1.90</td>
</tr>
<tr>
<td>Campbelton</td>
<td>4.29</td>
<td>4.29</td>
<td>2.19</td>
</tr>
<tr>
<td>Bathurst</td>
<td>2.63</td>
<td>1.96</td>
<td>1.96</td>
</tr>
<tr>
<td>Tracadie</td>
<td>0.00</td>
<td>2.29</td>
<td>2.29</td>
</tr>
<tr>
<td>Caraquet</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>L'Anse-à-la-Madeleine</td>
<td>0.00</td>
<td>0.89</td>
<td>0.00</td>
</tr>
</tbody>
</table>

2015-2016 and 2016-2017 results are for the entire year. Results for the current year show the latest available data.

Analysis:
Since the third quarter of 2016-2017, Vitalité Health Network has been experiencing an upward trend, with most facilities increasing their rate since last year but not exceeding the national benchmark of 4.33. The high rate in St. Quentin represents two cases in 2017-18.

Action plan:
Continue monitoring C. difficile rates, communicating the results, and strengthening good hand hygiene practices and environmental cleaning.
Continue hand hygiene audits. Continue hand hygiene audits. Coordinate with local antibiotic stewardship committees and promote proper antibiotic prescribing practices.

Healthcare-associated Vancomycin-Resistant Enterococcus (VRE) infections

Description:
Enterococcus is a common bacterium that lives in the bowels of healthy people usually without causing infection. However, this bacteria can cause infections known as Enterococcus infections. When Enterococcus develops resistance to certain antibiotics such as vancomycin, it is called Vancomycin Resistant Enterococcus (VRE). They can sometimes cause urinary tract infections, wound infections, and, more rarely, blood infections. VRE infections are acquired during stays in healthcare facilities and are difficult to treat with antibiotics. VRE is primarily transmitted from a patient carrying the bacteria to another by the caregivers’ hands or a contaminated environment.

Calculation: \[
\frac{\text{Number of patients infected with VRE}}{\text{Number of patient days}} \times 10^4
\]

Analysis:
The rates remain at 0.00

Action plan:
None
Hand Hygiene Compliance

**Description:**
The audits consist of observing compliance with the 4 moments of hand hygiene (performed or not).

**Calculation:**
\[
\frac{\text{Number of compliant observations}}{\text{Total number of observations}} \times 100
\]

**Analysis:**
Most facilities have exceeded the target and have improved their result.

**Action plan:**
Continue performing hand hygiene audits with help from the nursing staff to acquire a sufficient number of observations for a valid result (50 observations per unit each quarter). Find ways to increase hand hygiene compliance rates and then implement and evaluate these.

2015-2016 and 2016-2017 results are for the entire year. Results for the current year show the latest available data.
Bed Occupancy Rate

Description:
The bed occupancy rate indicates the utilization level of available beds for a given period.

Calculation: \[ \frac{\text{Number of patient days}}{\text{Number of set-up beds}} \times 100 \]

Analysis:
Generally speaking, the bed occupancy rates in our hospitals remain close to the target of 95%.

Action plan:
Long-Term Care

Description:
Beds occupied by long-term care (LTC) cases include all patients awaiting or undergoing long-term care assessment and patients who have been medically discharged but are awaiting a placement and who are occupying acute care beds at the end of each month.

Calculation: Total number of patients on last day of the month undergoing LTC assessment or awaiting placement \times 100
Total number of approved beds for the facility (excluding Veterans' beds)

Analysis: Generally, the rates are similar to those of last year.

Action plan:
- Develop level 3B beds
- Add new level 3 beds
**Cost per Capita**

**Description:**
Cost per capita for Vitalité Health Network is the ratio of the total cost of operations (including depreciation) to the population. The cost per capita excludes expenses related to the Restigouche Hospital Centre.

**Calculation:**
Calculated based on the budget for each quarter divided by the population.

---

### Cost per Capita by Quarter

<table>
<thead>
<tr>
<th>Quarter</th>
<th>2015-2016</th>
<th>2016-2017</th>
<th>2017-2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>$2,703</td>
<td>$2,603</td>
<td>$2,843</td>
</tr>
<tr>
<td>Q2</td>
<td>$2,843</td>
<td>$2,854</td>
<td>$3,001</td>
</tr>
<tr>
<td>Q3</td>
<td>$2,765</td>
<td>$2,856</td>
<td>$3,056</td>
</tr>
<tr>
<td>Q4</td>
<td>$2,765</td>
<td>$2,870</td>
<td>$2,830</td>
</tr>
</tbody>
</table>

---

### Cost per Capita by Zone

<table>
<thead>
<tr>
<th>Zone</th>
<th>2015-2016</th>
<th>2016-2017</th>
<th>2017-2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1B</td>
<td>$2,703</td>
<td>$2,603</td>
<td>$2,843</td>
</tr>
<tr>
<td>Zone 4</td>
<td>$2,765</td>
<td>$2,854</td>
<td>$3,001</td>
</tr>
<tr>
<td>Zone 5</td>
<td>$2,765</td>
<td>$2,870</td>
<td>$3,056</td>
</tr>
<tr>
<td>Zone 6</td>
<td>$2,765</td>
<td>$2,830</td>
<td>$3,056</td>
</tr>
</tbody>
</table>

2015-2016 and 2016-2017 results are for the entire year.
Results for the current year show the latest available data.

**Analysis:**
Generally speaking, the costs by hospital have increased but remain near or below the target.

**Action plan:**