CLINICAL AND SAFETY PERFORMANCE METRICS

Executive Dashboard

NIH Clinical Center
April 2022
Infection Control Metrics

• Hand Hygiene
• Central-Line Associated Bloodstream Infections
  • Whole-House
  • Intensive Care Unit
• Catheter Associated Urinary Tract Infections
  • Intensive Care Unit
  • Surgical Oncology
• Surgical Site Infections
Hand Hygiene Compliance
Whole-House Central-Line Associated Bloodstream Infection (CLABSI) Rate

![Graph showing the CLABSI rate from 2020-Q3 to 2021-Q4. The rate starts at 2.50 infections per 1,000 catheter days in 2020-Q3, decreases to 0.50 in 2020-Q4, increases to 1.00 in 2021-Q1, decreases to 1.50 in 2021-Q2, increases to 2.00 in 2021-Q3, and then increases sharply to 2.25 in 2021-Q4.}
ICU Central-Line Associated Bloodstream Infection (CLABSI) Rate

2013 CDC National Healthcare Safety Network (NHSN) Benchmark: Critical Care Units, Medical/Surgical -major teaching mean 1.1 (through 2021 Q3)
ICU Catheter-Associated Urinary Tract Infections (CAUTI) Rate

ICU CAUTI Rate
NHSN ICU Benchmark

2013 CDC National Healthcare Safety Network (NHSN) Benchmark: Critical Care Units, Medical/Surgical -major teaching mean 2.7 (through 2021 Q3)
Surgical Oncology Catheter-Associated Urinary Tract Infections (CAUTI) Rate

2013 CDC National Healthcare Safety Network (NHSN) Benchmark: Inpatient Wards, Medical/Surgical mean 1.3 (through 2021 Q3)
Surgical Site Infections

Infections per 100 procedures

SSI Rate 2018 - 2019 Clinical Center Average

2020-Q2 2020-Q3 2020-Q4 2021-Q1 2021-Q2 2021-Q3
Nursing Quality Metrics

• Falls
• Pressure Injury
• Medication Administration Barcoding
Inpatient Falls Rate

Quarterly rate
NDNQI Benchmark - Total
Falls with injury
NDNQI Benchmark - Injury falls

Falls per 1,000 Patient days

Q3 CY20 | Q4 CY20 | Q1 CY21 | Q2 CY21 | Q3 CY21 | Q4 CY21
Emergency Response

• Code Blue and Rapid Response
  • Types of Patients
  • Type of Event
  • Patient Disposition
## Code Blue Response: Types of “Patients”

<table>
<thead>
<tr>
<th></th>
<th>21-Qtr 1</th>
<th>21-Qtr 2</th>
<th>21-Qtr 3</th>
<th>21-Qtr 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpt</td>
<td>14</td>
<td>32</td>
<td>36</td>
<td>15</td>
<td>97</td>
</tr>
<tr>
<td>Outpt</td>
<td>15</td>
<td>14</td>
<td>14</td>
<td>10</td>
<td>53</td>
</tr>
<tr>
<td>Employee</td>
<td>11</td>
<td>12</td>
<td>9</td>
<td>11</td>
<td>43</td>
</tr>
<tr>
<td>Visitor</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Incorrect Calls</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### Graph Description

- **Inpt** represents patients who were admitted to the hospital.
- **Outpt** represents patients who were discharged.
- **Employee** represents employees who were involved.
- **Visitor** represents visitors who were present.
- **Incorrect Calls** represents incorrect calls made.

The bar graph visually compares the number of patients across different categories and quarters.
### Code Blue Response: Type of Event

<table>
<thead>
<tr>
<th></th>
<th>21-Qtr 1</th>
<th>21-Qtr 2</th>
<th>21-Qtr 3</th>
<th>21-Qtr 4</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brain Code</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Arrest</td>
<td>2</td>
<td>11</td>
<td>14</td>
<td>4</td>
<td>31</td>
</tr>
<tr>
<td>Acute Emergency</td>
<td>13</td>
<td>18</td>
<td>8</td>
<td>12</td>
<td>51</td>
</tr>
<tr>
<td>Stable Event</td>
<td>24</td>
<td>28</td>
<td>35</td>
<td>23</td>
<td>110</td>
</tr>
</tbody>
</table>

- Total: 250
Code Blue Response: Patient Disposition

<table>
<thead>
<tr>
<th>Category</th>
<th>21-Qtr 1</th>
<th>21-Qtr 2</th>
<th>21-Qtr 3</th>
<th>21-Qtr 4</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfer to ICU</td>
<td>7</td>
<td>16</td>
<td>13</td>
<td>10</td>
<td>46</td>
</tr>
<tr>
<td>Transfer to OSH</td>
<td>15</td>
<td>11</td>
<td>10</td>
<td>14</td>
<td>50</td>
</tr>
<tr>
<td>Remained on Unit</td>
<td>13</td>
<td>17</td>
<td>27</td>
<td>11</td>
<td>68</td>
</tr>
<tr>
<td>Expired</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Released</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>4</td>
<td>24</td>
</tr>
</tbody>
</table>
### Rapid Response Team: Patient Disposition

<table>
<thead>
<tr>
<th></th>
<th>21-Qtr 1</th>
<th>21-Qtr 2</th>
<th>21-Qtr 3</th>
<th>21-Qtr 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ICU</strong></td>
<td>11</td>
<td>2</td>
<td>7</td>
<td>1</td>
<td>21</td>
</tr>
<tr>
<td><strong>Unit/Other</strong></td>
<td>1</td>
<td>9</td>
<td>4</td>
<td>4</td>
<td>18</td>
</tr>
<tr>
<td><strong>Remained on Unit</strong></td>
<td>12</td>
<td>14</td>
<td>36</td>
<td>13</td>
<td>75</td>
</tr>
</tbody>
</table>

**Number of Patients Dispositioned by Quarter:**

- **ICU:**
  - 21-Qtr 1: 11
  - 21-Qtr 2: 2
  - 21-Qtr 3: 7
  - 21-Qtr 4: 1
  - Total: 21

- **Unit/Other:**
  - 21-Qtr 1: 1
  - 21-Qtr 2: 9
  - 21-Qtr 3: 4
  - 21-Qtr 4: 4
  - Total: 18

- **Remained on Unit:**
  - 21-Qtr 1: 12
  - 21-Qtr 2: 14
  - 21-Qtr 3: 36
  - 21-Qtr 4: 13
  - Total: 75

**Number:**

- **21-Qtr 1:**
  - ICU: 11
  - Unit/Other: 1
  - Remained on Unit: 12

- **21-Qtr 2:**
  - ICU: 2
  - Unit/Other: 9
  - Remained on Unit: 14

- **21-Qtr 3:**
  - ICU: 7
  - Unit/Other: 4
  - Remained on Unit: 36

- **21-Qtr 4:**
  - ICU: 1
  - Unit/Other: 4
  - Remained on Unit: 13

- **Total:**
  - ICU: 21
  - Unit/Other: 18
  - Remained on Unit: 75
Blood and Blood Product Use

• Crossmatch to Transfusion (C:T) Ratio
• Transfusion Reaction by Class
• Unacceptable Blood Bank Specimens
The NIH CC goal is to have a C:T ratio of 2.0 or less. Monitoring this metric ensures that blood is not held unused in reserve when it could be available for another patient.
Transfusion Reactions by Class

- Anaphylactic: 0.9%
- Other: 0.8%
- Febrile, Nonhemolytic: 0.0%
- Hemolytic, Septic, Anaphylactoid, and TRALI: 0.1%
Unacceptable Blood Bank Specimens

<table>
<thead>
<tr>
<th>CC Threshold</th>
<th>% Specimens with Collection Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td></td>
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<tr>
<td>2.0</td>
<td></td>
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<tr>
<td>2.5</td>
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<td>3.0</td>
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<td>3.5</td>
<td></td>
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<td>4.0</td>
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<tr>
<td>4.5</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td></td>
</tr>
</tbody>
</table>

Percent unacceptable specimens for 2021.
Clinical Documentation

- Medical Record Completeness
  - Delinquent Records
  - “Agent for” Countersignature Adherence
  - Unacceptable Abbreviation Use

- Accuracy of Coding
Delinquent Records
(>30 days post discharge)

% Records Delinquent after 30 days

Q1 CY 2020  Q2 CY 2020  Q3 CY 2020  Q4 CY 2020  Q1 CY 2021  Q2 CY 2021  Q3 CY 2021  Q4 CY 2021
"Agent for" Orders Countersignature Compliance

% of Compliance

CC Goal

0%

20%

40%

60%

80%

100%

% verbal orders signed in 72 hours

Q1 CY2020

Q2 CY2020

Q3 CY2020

Q4 CY2020

Q1 CY2021

Q2 CY2021

Q3 CY2021

Q4 CY2021
"Do Not Use" Abbreviation Adherence

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Compliance with Abbreviation Use</th>
<th>CC Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>CY2020 Q1</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>CY2020 Q2</td>
<td>90%</td>
<td>100%</td>
</tr>
<tr>
<td>CY2020 Q3</td>
<td>80%</td>
<td>100%</td>
</tr>
<tr>
<td>CY2020 Q4</td>
<td>70%</td>
<td>100%</td>
</tr>
<tr>
<td>CY2021 Q1</td>
<td>60%</td>
<td>100%</td>
</tr>
<tr>
<td>CY2021 Q2</td>
<td>50%</td>
<td>100%</td>
</tr>
<tr>
<td>CY2021 Q3</td>
<td>40%</td>
<td>100%</td>
</tr>
<tr>
<td>CY2021 Q4</td>
<td>30%</td>
<td>100%</td>
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<tr>
<td>CY2022 Q1</td>
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<td>100%</td>
</tr>
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<td>CY2022 Q2</td>
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<td>CY2022 Q3</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>CY2022 Q4</td>
<td>0%</td>
<td>100%</td>
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</tbody>
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Employee Safety

• Occupational Injury and Illness compared with U.S. Hospitals
Recordable Occupational Injuries/Illnesses (OI)
Case Incidence Rates for Hospitals Nationwide vs. NIH CC

Total recordable cases (TRC)  Other recordable cases (ORC)

<table>
<thead>
<tr>
<th>Year</th>
<th>TRC 6</th>
<th>TRC 5</th>
<th>TRC 4</th>
<th>TRC 3</th>
<th>TRC 2</th>
<th>TRC 1</th>
<th>TRC 0</th>
<th>ORC 8</th>
<th>ORC 7</th>
</tr>
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<tbody>
<tr>
<td>2016</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>2018</td>
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</tr>
</tbody>
</table>

* U.S. Bureau of Labor Statistics

Environmental Safety Committee Report to CC
RHB 2022
Recordable Occupational Injuries/Illnesses (OI)
Case Incidence Rates for Hospitals Nationwide vs. NIH CC

Days job transfer, restriction (DJTR)  Days away from work (DAFW)

<table>
<thead>
<tr>
<th>Year</th>
<th>U.S. Hospitals</th>
<th>CC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>0.5</td>
<td>1.0</td>
</tr>
<tr>
<td>2017</td>
<td>1.0</td>
<td>2.5</td>
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<tr>
<td>2018</td>
<td>1.5</td>
<td>2.5</td>
</tr>
<tr>
<td>2019</td>
<td>1.0</td>
<td>2.0</td>
</tr>
<tr>
<td>2020</td>
<td>0.5</td>
<td>1.5</td>
</tr>
<tr>
<td>2021</td>
<td>1.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

* U.S. Bureau of Labor Statistics

Environmental Safety Committee Report to CC
RHB 2022
Recordable Occupational Injuries/Illnesses (OI)
Case Incidence Rates for Hospitals Nationwide vs. NIH CC

Days away, RESTRICTION, TRANSFER (DART)

**COMPARISON for 2020**

- CC rates for TRC and ORC were lower than similar rates for U.S. hospitals
- CC DJTR rates continued to decline from 2019 through 2021
- CC rate for DAFW declined whereas the rate for U.S. hospitals increased
- CC rate for DART (DJTR+DAFW) dipped below that of U.S. hospitals
- Majority of all CC DART cases attributed to musculoskeletal trauma
- BLS data for U.S. hospitals not available for 2021

* U.S. Bureau of Labor Statistics

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Environmental Safety Committee Report to CCRHB 2022