Targeted Assessment for Prevention (TAP) Strategy

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NHSN Training

March 1, 2018
12:45 – 2:45 PM
What is the TAP Strategy

- Targeted Assessment for Prevention (TAP) strategy
  - Uses data for action to prevent healthcare-associated infections (HAIs).
  - Targets healthcare facilities and facility units with a disproportionate burden of HAIs.
  - Assess the Gaps in Infection Prevention Using TAP Reports
  - Implementing Infection Prevention Strategies
Targeted Assessment for Prevention: Using Data for Action

www.cdc.gov/hai/prevent/tap.html

**Target**
- Generate TAP Reports using the National Healthcare Safety Network (NHSN)
- Identify facilities/units with excess HAIs using the Cumulative Attributable Difference (CAD) metric
- Engage targeted facilities/units to participate in focused prevention efforts

**Assess**
- Assess targeted facilities/units for potential gaps in infection control using the TAP Facility Assessment Tools
- Summarize responses and calculate scores across units, facilities, and groups to identify gaps

**Prevent**
- Present identified gaps and data to facility using TAP Feedback Report
- Utilize the Implementation Guide to access resources to aid in addressing identified gaps
- Implement proven prevention strategies in the targeted facilities/units to reduce infection rates

**Tools**
- NHSN TAP Reports
- TAP ‘How To’ Guide

- TAP Facility Assessment Tools
- TAP Excel Databases and User Guide

- TAP Feedback Report
- TAP Implementation Guide - Links to Resources
- **TAP Reports**
  - Uses data within NHSN to identify facilities and locations with excess infections
  - Translates a target SIR into a numeric HAI prevention goal, providing a concrete goal to drive action
TAP Reports bring together data elements from various data sources within NHSN:

- Annual Surveys
- SIRs
- Event-level Information (CLABSI, CAUTI, and CDI only)

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>CLABSI</th>
<th>CAUTI</th>
<th>CDI LabID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Care Hospital</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Long Term Acute Care Hospital</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Inpatient Rehab Facility</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Standardized Infection Ratio (SIR)

- The SIR is a measure that compares the number of HAIs reported to NHSN to the number of infections that would be predicted based on national baseline data:

\[
\text{SIR} = \frac{\text{Observed \# HAIs}}{\text{Predicted \# HAIs}}
\]

- **SIR interpretation:**
  - 1.0 = same number of infections reported as would be predicted given the US baseline data
  - Greater than 1.0 = more infections reported than what would be predicted given the US baseline data
  - Less than 1.0 = fewer infections reported than what would be predicted given the US baseline data
### Standardized Infection Ratio (SIR)

- The standardized infection ratio (SIR) is a summary measure used to track HAIs at a national, state, or local level over time.
- SIR compares the observed number of HAIs reported to what would be predicted, given the standard population.

### National Healthcare Safety Network

**SIR for Catheter-Associated UTI Data for Acute Care Hospitals (2015 baseline) - By OrgID**

As of February 16, 2018 at 2:00 PM

> Date Range: All BS2_CAU_RATESALL

<table>
<thead>
<tr>
<th>Facility Org ID</th>
<th>CCN</th>
<th>Summary YR</th>
<th>Events</th>
<th>Number Predicted</th>
<th>Urinary Catheter Days</th>
<th>SIR</th>
<th>SIR p-value</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>100000</td>
<td></td>
<td>2017</td>
<td>50</td>
<td>70.805</td>
<td>39772</td>
<td>0.706</td>
<td>0.0097</td>
<td>0.530, 0.923</td>
</tr>
</tbody>
</table>
Cumulative Attributable Difference (CAD)

- CAD is a measure that shows difference between the number of observed infections and ‘predicted infections multiplied by a SIR goal’ in a defined period.

\[
\text{CAD} = \text{Observed } \# \text{ HAIs} - (\text{Predicted } \# \text{ HAIs} \times \text{SIR goal})
\]

- Unlike SIR, CAD is calculated even if the predicted number of events is less than 1.

<table>
<thead>
<tr>
<th>Facility Org ID</th>
<th>CCN</th>
<th>Events</th>
<th>Number Predicted</th>
<th>Urinary Catheter Days</th>
<th>SIR</th>
<th>SIR p-value</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>10000</td>
<td></td>
<td>4</td>
<td>0.46</td>
<td>125</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>
Cumulative Attributable Difference (CAD)

- **SIR goal** represents an “HAI Reduction Goal”
- Custom SIR goal = value less than 1
  - HHS 25% reduction goal for CAUTI $\Rightarrow$ SIR goal = 0.75

<table>
<thead>
<tr>
<th>Facility Org ID</th>
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<th>Summary YR</th>
<th>Events</th>
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<td>39772</td>
<td>0.706</td>
<td>0.0097</td>
<td>0.530, 0.923</td>
</tr>
</tbody>
</table>

\[
CAD = \text{Observed } \# \text{ HAIs} - (\text{Predicted } \# \text{ HAIs} \times \text{SIR goal})
\]

\[
CAD = 50 - (70.805 \times \text{SIR goal})
\]
National Reduction Targets


<table>
<thead>
<tr>
<th>Measure</th>
<th>Original target for 2013 (from original baseline)</th>
<th>Progress made by 2014</th>
<th>2020 Target (from 2015 baseline)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLABSI</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>CAUTI</td>
<td>25%</td>
<td>No Change</td>
<td>25%</td>
</tr>
<tr>
<td>CDI</td>
<td>30%</td>
<td>8% reduction</td>
<td>30%</td>
</tr>
</tbody>
</table>
Q1. The SIR is 0.706. Since the SIR is already less than 1, can I still use TAP Reports?

A. No; an SIR less than 1 already means we have no excess infections.

B. Yes; an SIR less than 1 only means we have less infections than predicted.
Q1. The SIR is 0.706. Since the SIR is already less than 1, can I still use TAP Reports?

A. No; an SIR less than 1 already means we have no excess infections.

B. Yes; an SIR less than 1 only means we have less infections than predicted.
**Cumulative Attributable Difference (CAD)**

\[
\text{CAD} = \text{Observed # HAIs} - (\text{Predicted # HAIs} \times \text{SIRgoal})
\]

\[
\text{CAD} = 50 - (70.805 \times 0.75^*)
\]

\[
\text{CAD} = 50 - (53.10375)
\]

\[
\text{CAD} = -3.10
\]

*HHS Action Plan Goals for 2020 = 0.75*
**Cumulative Attributable Difference (CAD)**

\[ CAD = \text{Observed } \# \text{ HAIs} - (\text{Predicted } \# \text{ HAIs} \times \text{SIR goal}) \]

\[ CAD = 50 - (70.805 \times 0.50^*) \]

\[ CAD = 50 - (35.4025) \]

\[ CAD = 14.60 \]

*Custom SIR goal = 0.50*
### CAD and the HAI Reduction Goal

- SIR goal represents an “HAI Reduction Goal”

**Facility A**: Observed=50, Predicted=70.805, SIR=0.706 in 2017

<table>
<thead>
<tr>
<th>HHS Reduction Goal (Reduction in Reported)</th>
<th>SIR Goal</th>
<th>CAD Formula</th>
<th>CAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>25% HHS Reduction Goal</td>
<td>0.75</td>
<td>50 – (70.8 X 0.75)</td>
<td>-3.10</td>
</tr>
<tr>
<td>50%</td>
<td>0.50</td>
<td>30 – (70.8 X 0.50)</td>
<td>14.60</td>
</tr>
</tbody>
</table>

- CAD can be Positive or Negative
  - Positive CAD = additional burden of infections than what would be predicted with regard to a SIR goal (“excess” infections)
  - Negative CAD = fewer infections than what would be predicted
Cumulative Attributable Difference (CAD)

- **CAD Interpretation:**
  - Positive CAD = additional burden of infections than what would be predicted with regard to a SIR goal ("excess" infections)
  - Negative CAD = fewer infections than what would be predicted

\[
\text{CAD} = \text{Observed} \ # \ HAIs - (\text{Predicted} \ # \ HAIs \times \text{SIR goal})
\]

- CAD = 50 – \((70.805 \times 0.50^*)\)
- CAD = 50 – (35.4025)
- CAD = 14.60
Q2. Which of the following SIR goals results in a higher prevention goal?

A. 0.25
B. 0.50
C. 0.75
D. 1
E. 1.5

✓ A. 0.25
Which of the following SIR goals results in a higher prevention goal?

A. 0.25

B. 0.50

C. 0.75

D. 1

E. 1.5

The lower the SIR goal, the higher the Prevention goal will be.
Summary

- Beginning with the TAP Report and CAD metric, the TAP Strategy efficiently prioritizes healthcare facilities (and locations within a facility) that need enhanced prevention intervention to maximize the impact of given resources.
- CAD is a flexible measure that can be applied by individual hospitals as part of their internal quality improvement efforts and by groups such as state health departments, quality improvement organizations, and hospital systems.
- CAD is not a comparative metric!
Generating TAP Reports
Helpful Hints for Running TAP Reports

- TAP reports are built on the rules that influence SIRs.
- Ensure that locations are mapped correctly: https://www.cdc.gov/nhsn/pdfs/pscmanual/15locationsdescriptions_current.pdf.
- Verify that an up-to-date data set was generated.
- Use Time Periods of at least 1 quarter.
- Remember to look at the footnotes!
TAP Reports

- The TAP Reports for All HAI Types utilize 2015 baseline data
- Analyze all data dated from January 2015 forward
- Data from earlier time periods (before Jan 2015) must be analyzed using the originals baseline models
TAP Reports

- Baseline Set 1 data sets are still available within NHSN
- Analyze all data dated through December 31, 2016
- Data representing a later time period (i.e., after December 2016) must be analyzed using the new 2015 rebaseline models.
Running TAP Reports

- For each facility type, choose to either Run or Modify a TAP Report for the available HAI type:
  - Select Modify to customize TAP Report:
    - Title/Format
    - Time period of interest
    - SIR Goal
Running TAP Reports

- Title/Format Tab
  - Select “Show descriptive variable names” - variable labels will provide more descriptive column headers
  - Default output format is HTML
  - If another format, (e.g., pdf) is selected, change the orientation to “Landscape”
Running TAP Reports

- **Time Period**
  - Generate a report by time period
  - Best Practice: Time periods of at least 1 quarter
Running TAP Reports

- Filters (Group TAP Reports only)
  - ACH and CAH TAP Reports are together, but can be separated using the “factype” filter
Q3. Is it beneficial to filter TAP Reports by location?

A. No; TAP Reports were designed to prioritize units with an excess burden of HAIs. This is accomplished by showing the SIR and CAD for each location.

B. Yes; Identifying the CAD for a specific location tells the user how many infections needs to be prevented for that location.
Q3. Is it beneficial to filter TAP Reports by location?

A. No; TAP Reports were designed to prioritize units with an excess burden of HAIs. This is accomplished by showing the SIR and CAD for each location.

B. Yes; Identifying the CAD for a specific location tells the user how many infections needs to be prevented for that location.
Running TAP Reports

- Filters
  - With the exception of the “factype” filter, filters should not be used in TAP Reports.
  - Single-facility TAP report provides data at the unit level for all units in the facility reporting data to NHSN so that all the units can be ranked by their CAD.
Running TAP Reports

- **Display Options**: Change SIR Goal
  - Default NHSN goals are based on HHS 5 – Year HAI Reduction targets:
    - CAUTI SIRgoal : 0.75
    - CDI SIRgoal : 0.70
    - CLABSI SIRgoal: 0.50
  - Custom SIR Goals
    - Must be <1
  - National SIRs
    - *Will be added to NHSN when the current national SIRs become available*
Interpreting TAP Reports
Facility TAP Report - CLABSI

- Acute Care Hospital units designated as IRFs can be found in the IRF TAP Report.

<table>
<thead>
<tr>
<th>Facility Org ID</th>
<th>Facility Name</th>
<th>Facility CAD</th>
<th>Location Rank</th>
<th>Location</th>
<th>CDC Location</th>
<th>Events</th>
<th>Central Line Days</th>
<th>DUR %</th>
<th>CAD</th>
<th>SIR</th>
<th>SIR Test</th>
<th>No. Pathogens</th>
</tr>
</thead>
<tbody>
<tr>
<td>10000</td>
<td>DHQP Memorial Hospital</td>
<td>20.52</td>
<td>1</td>
<td>1 West</td>
<td>IN:ACUTE:WARD:M</td>
<td>14</td>
<td>2269</td>
<td>49</td>
<td>13.10</td>
<td>7.81</td>
<td></td>
<td>(17, 2, 3, 0, 5, 5, 0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 West</td>
<td>IN:ACUTE:WARD:M</td>
<td>4</td>
<td>1349</td>
<td>42</td>
<td>3.40</td>
<td>3.34</td>
<td></td>
<td>(4, 0, 2, 0, 1, 1, 0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SICU</td>
<td>IN:ACUTE:CC:S</td>
<td>3</td>
<td>1062</td>
<td>9</td>
<td>2.58</td>
<td></td>
<td></td>
<td>(2, 0, 0, 0, 0, 0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5 West</td>
<td>IN:ACUTE:WARD:M</td>
<td>2</td>
<td>983</td>
<td>9</td>
<td>1.61</td>
<td></td>
<td></td>
<td>(2, 0, 0, 2, 0, 0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>STEP2</td>
<td>IN:ACUTE:STEP</td>
<td>1</td>
<td>1007</td>
<td>32</td>
<td>0.55</td>
<td></td>
<td></td>
<td>(1, 0, 1, 0, 0, 0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CCU</td>
<td>IN:ACUTE:CC:C</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 East</td>
<td>IN:ACUTE:WARD:MS</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MICU</td>
<td>IN:ACUTE:CC:M</td>
<td>0</td>
<td>609</td>
<td>9</td>
<td>-0.24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ICU</td>
<td>IN:ACUTE:CC:MS</td>
<td>0</td>
<td>1233</td>
<td>50</td>
<td>-0.49</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Sample TAP Reports are available at your table

Please take a few moments to review the TAP Reports and discuss amongst your group
Part 1

As you prepare for a meeting with other key hospital staff and stakeholders, you decide to run the CLABSI TAP Report, CLABSI SIR Report, and CDI LabID TAP Reports to help explain where the facility should look to focus its prevention efforts. Answer the questions below pertaining to each TAP report.

National Healthcare Safety Network
TAP Report for CLABSI Data for Acute Care and Critical Access Hospitals (2015 Baseline)
Locations Ranked by CAD Within a Facility
SIR Goal : HHS Goal = 0.5

A TAP Report is the first step in the CDC TAP Strategy. For more information on the TAP strategy, please visit: http://www.cdc.gov/hsa/prevent/tap.html
As of: February 16, 2018 at 2:00 PM
Date Range: All 592 CLABSI_TAP summary Yr 2017 to 2017

<table>
<thead>
<tr>
<th>FACILITY</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility Org ID</td>
<td>Facility Name</td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td>10000</td>
<td>Ancorem Medical Center</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. This report includes CLABSI data for 2015 and forward. Following the 2015 baseline, Nonguistant Barrier Injury Laboratory Confirmed Bloodstream Infections (HBI-LCBI) are excluded from CLABSI rates, SIRs and TAP reports.
2. If location-level CABS are the same in a given facility, their ranks are tied.
3. (CNS,YS,SA,ES,KS,EC) = Nos. of CNS, Yeast (both candida and non-candida species), Staph aureus, Enterococcus species, K. pneumoniae/K. oxytoca, E. coli
4. SIR is set to 1 when predicted number of events is < 1.6
5. LOCATION CAD = (OBSERVED_LOCATION - PREDICTED_LOCATION) SELECTED SIR Goal
6. SIR TEST = 'SIG' means SIR > SIR Goal significantly
Source of aggregate data: 2016 National CLABSI Data
Data contained in this report were last generated on February 16, 2018 at 12:17 PM.
National Healthcare Safety Network
SIR for Catheter-Associated UTI Data for Acute Care Hospitals (2015 baseline) - By OrgID

As of February 16, 2018 at 2:00 PM
Date Range: All BS2_CAU_RATESALL

Facility Org ID=10000 CMS Certification Number=12345 Type of Affiliation=M

<table>
<thead>
<tr>
<th>Facility Org ID</th>
<th>CCN</th>
<th>Summary YR</th>
<th>Events</th>
<th>Number Predicted</th>
<th>Central Line Days</th>
<th>SIR</th>
<th>SIR p-value</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>10000</td>
<td></td>
<td>2017</td>
<td>42</td>
<td>60.703</td>
<td>55604</td>
<td>0.692</td>
<td>0.0119</td>
<td>0.505, 0.928</td>
</tr>
</tbody>
</table>

Questions:

1. Where can I find the facility CAD? What is the CAD? Where can I find the facility's SIR? What is the facility SIR?

2. This facility could dramatically decrease its number of events by targeting infection prevention in which locations?

3. Are most of the CLABSI within the facility caused by a specific pathogen? Is this true for any location?

4. What is the DUR% for the location with the highest CAD?
National Healthcare Safety Network

TAP Report for FACWIDEIN CDI LabID data for Acute Care and Critical Access Hospitals (2015 Baseline)

Facilities Ranked by CAD 'Cumulative Attributable Difference'

SIR Goal: NHSN Goal = 0.7

A TAP Report is the first step in the CDC TAP strategy. For more information on the TAP strategy, please visit: http://www.cdc.gov/HAI/prevent/tap.html

As of February 1, 2015 at 3:28 PM

Date Range: All IMS2 CDI TAP

<table>
<thead>
<tr>
<th>Facility Org ID</th>
<th>Facility Name</th>
<th>State</th>
<th>Type of Facility</th>
<th>Type of Affiliation</th>
<th>Number of Days</th>
<th>CAD</th>
<th>COHCFA Prevalence Rate</th>
<th>CDIF Facility Incident HO</th>
<th>LabID Incident HO</th>
<th>LabID Event Count</th>
<th>LabID Number Expected</th>
<th>Facility CAD</th>
<th>SIR</th>
<th>SIR Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>10001</td>
<td>Arcement Medical Center</td>
<td>LA</td>
<td>HOSP-GEN</td>
<td>M</td>
<td>543</td>
<td>148676</td>
<td>0.16</td>
<td>142</td>
<td>84.142</td>
<td>83.1</td>
<td>1.680</td>
<td>83.1</td>
<td>1.680</td>
<td>SIR</td>
</tr>
</tbody>
</table>

1. This report includes facility-wide (aspatient data from acute care hospitals for 2015 and forward.
2. Use the line list and frequency table output options to view location specific data. For instructions visit: Output/Report Option types on the Analysis Quick Reference Guides page: http://www.cdc.gov/nhsn/pa/analysis-resources/reference-guides.html.
3. Facility Rank = Priority ranking for Targeted Assessment of Prevention by CAD in descending order
4. COHCFA PREVALENCE RATE = Community-onset healthcare facility associated CDI prevalence rate per 100 admissions
5. CAD = Observed / Predicted SIR Goal
6. SIR is calculated when predicted number of events < 10.0. SIR TEST = SIR < SIR Goal significantly

Source of aggregate data: 2015 NHSN (CDI) Data
Data contained in this report were last generated on February 9, 2015 at 6:58 PM.

Questions:

1. Given a facility CAD of 83.1, how many events would our facility needed to have prevented to reach the SIR goal?

2. What does a low COHCFA rate tell us about the CAD for our facility?

3. Is the SIR significantly greater than the SIR goal for our facility?

4. How can the facility identify the location of CDI LabID events?
Try it out

Sample TAP Reports are available at your table

Please take a few moments to review the TAP Reports and discuss amongst your group

- Where can I find the facility CAD? What is the CAD? Where can I find the facility’s SIR? What is the facility SIR?
- This facility could dramatically decrease its number of events by targeting infection prevention in which locations?
- Are most of the CLABSI within the facility caused by a specific pathogen? Is this true for any location?
- What is the DUR% for the location with the highest CAD?
Where can I find the facility CAD? What is the CAD? Where can I find the facility’s SIR? What is the facility SIR?
The first 3 columns of the TAP Report pertain to the facility. The facility CAD can be found in the third column. The CAD is 11.65. The facility SIR is NOT in the TAP Report. The facility SIR is 0.692 and can be found above in the SIR report.

This facility could dramatically decrease its number of events by targeting infection prevention in which locations? The facility could dramatically decrease its burden of infection by targeting the locations with the highest CAD. Here, we would target 2 East, HSCT, 2 West, and ONC.

Are most of the CLABSI within the facility caused by a specific pathogen? Is this true for any location?
According to the pathogen list (which can be found in the footnotes), many of the events are caused by *E. coli*. *E. coli* is responsible for more events than any other common pathogen in locations 2 East, HSCT and 2 West.

What is the DUR% for the location with the highest CAD? The location with the highest CAD, 2 East, has a DUR% of 35. Which is to say, 35% of the patient days in this location were also central line days.
Example TAP Report Outputs For Group Users

Table 1 – Totals for all Facilities in Group

<table>
<thead>
<tr>
<th>Number of Facilities</th>
<th>Number of Beds</th>
<th>Location (LC)</th>
<th>Events (LC)</th>
<th>Device Days (LC)</th>
<th>DUR % (LC)</th>
<th>CAD (LC)</th>
<th>SIR (LC)</th>
<th>SIR Test</th>
<th>ICU No. Pathogens (CNS,YS,SA,ES,KS,EC)</th>
<th>NICU No. Pathogens (CNS,YS,SA,ES,KS,EC)</th>
<th>Ward No. Pathogens (CNS,YS,SA,ES,KS,EC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>2,420</td>
<td>67 (15, 6, 66)</td>
<td>44 (17, 0, 27)</td>
<td>60186 (20966, 509, 3865)</td>
<td>17 (45, 7, 13)</td>
<td>19 (7.5, -0.3, 11.8)</td>
<td>0.9 (0.9, 0.9)</td>
<td>19 (2, 8, 0, 2, 1, 0)</td>
<td>19 (2, 8, 0, 2, 1, 0)</td>
<td>19 (2, 8, 0, 2, 1, 0)</td>
<td>19 (2, 8, 0, 2, 1, 0)</td>
</tr>
</tbody>
</table>

1. This report includes CLABSI data for 2015 and forward. Following the 2015 rebaseline, Mucosal Barrier Injury Laboratory-Confirmed Bloodstream Infections (MBI-LCBI) are excluded from CLABSI rates, SIRs and TAP reports.
2. If location-level CADs are the same in a given facility, their ranks are tied.
3. (CNS,YS,SA,ES,KS,EC) = No. of CNS, Yeast (both candida and non candida species), Staph aureus, Enterococcus species, K. pneumoniae/K. oxytoca, E. coli
4. SIR is set to ‘.’ when predicted number of events is <1.0.
5. LOCATION CAD = (OBSERVED LOCATION - PREDICTED LOCATION* SELECTED SIR Goal)
6. SIR TEST = ‘SIG’ means SIR > SIR Goal significantly
Source of aggregate data: 2015 HHSN CLABSI Data
Data contained in this report were last generated on February 14, 2017 at 10:57 AM.
Example TAP Report Outputs For Group Users

- Location Category, abbreviated as (LC), gives a breakdown of the different types of locations contributing to the total in the following order: ICU, NICU, Ward+

<table>
<thead>
<tr>
<th>Number of Facilities</th>
<th>Number of Beds</th>
<th>Location (LC)</th>
<th>Events (LC)</th>
<th>Device Days (LC)</th>
<th>DUR % (LC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>2,420</td>
<td>87 (15, 6, 66)</td>
<td>44 (17, 0, 27)</td>
<td>60186 (20966, 569, 38651)</td>
<td>17 (45, 7, 13)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>19 (7.5, -0.3, 11.8)</td>
<td>0.9 (0.9, 0.9)</td>
<td>19 (2, 8, 0, 2, 1, 0)</td>
<td>0 (0, 0, 0, 0, 0, 0)</td>
<td>28 (4, 8, 4, 1, 2, 1)</td>
<td></td>
</tr>
</tbody>
</table>

- For CAUTI, there are only 2 Location Categories: ICU, Ward+. 
Example TAP Report Outputs For Group Users

- Number of common pathogens identified for each location.
- Pathogen list can be found in the footnotes.
- The Pathogen columns for each location category are in the same order as they are listed in parenthesis for the preceding columns.

<table>
<thead>
<tr>
<th>Number of Facilities</th>
<th>Number of Beds</th>
<th>Location (LC)</th>
<th>Events (LC)</th>
<th>Device Days (LC)</th>
<th>DUR % (LC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>2,420</td>
<td>87 (15, 6, 66)</td>
<td>44 (17, 0, 27)</td>
<td>60186 (20966, 569, 38651)</td>
<td>17 (45, 7, 13)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>19 (7.5, -0.3, 11.8)</td>
<td>0.9 (0.9, , 0.9)</td>
<td>19 (2, 8, 0, 2, 1, 0)</td>
<td>0 (0, 0, 0, 0, 0, 0)</td>
<td>28 (4, 8, 4, 1, 2, 1)</td>
<td></td>
</tr>
</tbody>
</table>
Example TAP Report Outputs For Group Users

Table 2 – Facilities Within the Group Ranked by CAD

<table>
<thead>
<tr>
<th>facRank</th>
<th>name</th>
<th>state</th>
<th>medType</th>
<th>numLocs</th>
<th>numEvent</th>
<th>numEvents</th>
<th>numDAEs</th>
<th>numDDays</th>
<th>numDUR</th>
<th>facCADloctype</th>
<th>facSIR</th>
<th>SIRtest</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DHQP Memorial Hospital</td>
<td>GA</td>
<td>M</td>
<td>27</td>
<td>27</td>
<td>157</td>
<td>112952</td>
<td>27</td>
<td>100</td>
<td>54877, 0, 58086</td>
<td>1.4</td>
<td>(1.3, 1.5)</td>
</tr>
<tr>
<td>2</td>
<td>DHQP Memorial Annex</td>
<td>GA</td>
<td>M</td>
<td>31</td>
<td>31</td>
<td>123</td>
<td>99541</td>
<td>20</td>
<td>89.1</td>
<td>39381, 6884, 53726</td>
<td>1.1</td>
<td>(1.2, 1.1)</td>
</tr>
<tr>
<td>3</td>
<td>Dukeduck Regional Life Center</td>
<td>IL</td>
<td>M</td>
<td>40</td>
<td>40</td>
<td>115</td>
<td>105785</td>
<td>20</td>
<td>60.4</td>
<td>20389, 5901, 70456</td>
<td>1.1</td>
<td>(0.7, 1.1)</td>
</tr>
<tr>
<td>4</td>
<td>CDC Health Hospital</td>
<td>GA</td>
<td>M</td>
<td>20</td>
<td>20</td>
<td>61</td>
<td>22527</td>
<td>16</td>
<td>49.3</td>
<td>6017, 1765, 14745</td>
<td>2.6</td>
<td>(3.4, 1.4, 2.5)</td>
</tr>
<tr>
<td>5</td>
<td>Weiner Center of Medicine</td>
<td>CA</td>
<td>M</td>
<td>20</td>
<td>20</td>
<td>53</td>
<td>20674</td>
<td>10</td>
<td>42.6</td>
<td>5814, 725, 14235</td>
<td>2.6</td>
<td>(3.5, 1.7, 2.2)</td>
</tr>
<tr>
<td>6</td>
<td>Arcement Medical Center</td>
<td>LA</td>
<td>M</td>
<td>19</td>
<td>19</td>
<td>65</td>
<td>25796</td>
<td>15</td>
<td>42.1</td>
<td>8169, 0, 17627</td>
<td>2.1</td>
<td>(2.2, 2.1)</td>
</tr>
<tr>
<td>7</td>
<td>Falcon Memorial Hospital</td>
<td>GA</td>
<td>M</td>
<td>19</td>
<td>19</td>
<td>79</td>
<td>75493</td>
<td>31</td>
<td>40.3</td>
<td>28370, 0, 47123</td>
<td>1.0</td>
<td>(0.6, 1.3)</td>
</tr>
<tr>
<td>8</td>
<td>All Saints Medical</td>
<td>LA</td>
<td>M</td>
<td>9</td>
<td>9</td>
<td>47</td>
<td>16681</td>
<td>14</td>
<td>40.2</td>
<td>5102, 0, 11589</td>
<td>3.4</td>
<td>(2.4, 4.1)</td>
</tr>
<tr>
<td>9</td>
<td>Louisiana Hospital of Texas</td>
<td>LA</td>
<td>M</td>
<td>20</td>
<td>20</td>
<td>62</td>
<td>40067</td>
<td>19</td>
<td>40.2</td>
<td>14674, 3760, 21735</td>
<td>1.4</td>
<td>(0.8, 0.3, 2.3)</td>
</tr>
<tr>
<td>10</td>
<td>Georgia Hospital of Louisiana</td>
<td>GA</td>
<td>M</td>
<td>40</td>
<td>40</td>
<td>47</td>
<td>16936</td>
<td>11</td>
<td>28.7</td>
<td>7862, 638, 8368</td>
<td>2.6</td>
<td>(1.3, 5.1, 3.7)</td>
</tr>
</tbody>
</table>

1. This report includes CLABSI data for 2015 and forward. Following the 2015 rebaseline, Invasive Bloodstream Infections (IBSI-ICSI) are excluded from CLABSI rates, SIRS and TAP reports.
2. If-located-level CADs are the same in a given facility, their ranks are tied.
3. (CNS, VSS, S, E, S, SS, SC, ES) = No. of CNS, Yeast (both candida and non-candida species), Staphylococcus, Enterococcus species, K. pneumoniae/K. oxytoca, E. coli
4. SIR = (SIR) = (SIR) / (SIR)
5. LOCATION CAD = (LOCATION) - (PREDICTED LOCATION) = SELECTED SIR Goal
6. SIR TEST = SIG means SIR > SIR Goal significantly

Source of aggregate data: 2015 HHS CLABSI Data

Data contained in this report were last generated on January 19, 2017 at 12:17 PM.
### TABLE 3 – Locations Ranked by CAD Within a Facility

<table>
<thead>
<tr>
<th>Facility Rank</th>
<th>Facility Org ID</th>
<th>Facility Name</th>
<th>Facility CAD</th>
<th>Location Rank</th>
<th>Location</th>
<th>CDC Location</th>
<th>SIR Test</th>
<th>No. Pathogens</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10000</td>
<td>CHQP Memorial Hospital</td>
<td>6.35</td>
<td>1</td>
<td>OP WARD</td>
<td>OUT ACUTE WARD</td>
<td>0</td>
<td>56</td>
</tr>
<tr>
<td>2</td>
<td>10100</td>
<td>CHQP Memorial Annex</td>
<td>5.35</td>
<td>1</td>
<td>ICU</td>
<td>IN ACUTE CC MS</td>
<td>3</td>
<td>218</td>
</tr>
<tr>
<td>3</td>
<td>20000</td>
<td>West Hospital</td>
<td>6.25</td>
<td>1</td>
<td>ICU</td>
<td>IN ACUTE CC MS</td>
<td>3</td>
<td>182</td>
</tr>
<tr>
<td>4</td>
<td>20100</td>
<td>West Annex</td>
<td>6.75</td>
<td>1</td>
<td>ICU</td>
<td>IN ACUTE CC MS</td>
<td>3</td>
<td>262</td>
</tr>
<tr>
<td>5</td>
<td>30000</td>
<td>Central Hospital</td>
<td>6.85</td>
<td>1</td>
<td>ICU</td>
<td>IN ACUTE CC MS</td>
<td>3</td>
<td>496</td>
</tr>
</tbody>
</table>

Location Rank and Location
Data is only applicable at the FACWIDEIN level

COHCFA Prevalence – allow facilities and groups to see a rate for those CDI events that are potentially associated with a previous stay in that hospital.

- CO event from a patient discharged from the facility ≤4 weeks earlier
Sample TAP Reports are available at your table

Please take a few moments to review the TAP Reports and discuss amongst your group
Try it out

Sample TAP Reports are available at your table

Please take a few moments to review the TAP Reports and discuss amongst your group

- Given a facility CAD of 83.1, how many events would this facility needed to have prevented to reach its SIR goal?
- What does a low COHCFA rate tell us about the CAD for this facility?
- Is the SIR significantly greater than the SIR goal for our facility?
- How can the facility identify the location of the CDI LabID events?
Given a facility CAD of 83.1, how many events would this facility needed to have prevented to reach its SIR goal?
84 events.

What does a low COHCFA rate tell us about the CAD for this facility?
Nothing. COHCFA is the Community-onset healthcare facility associated CDI prevalence rate per 100 admissions. Allows facilities and groups to see a rate for those CDI events that are potentially associated with a previous stay in a hospital. COHCFA events are not counted in the SIR numerator because they are Community Onset events, not Hospital Onset.

Is the SIR significantly greater than the SIR goal for our facility?
Yes, the SIR Test is set to “SIG”. According to the footnotes, this means that the SIR is significantly greater than the SIR goal.

How can the facility identify the location of the CDI LabID events?
Use frequency tables and Line Listing reports.
CDI LabID Events by Location
TAP Strategy
Targeted Assessment for Prevention: Using Data for Action
www.cdc.gov/hai/prevent/tap.html

**Target**
- Generate TAP Reports using the National Healthcare Safety Network (NHSN)
- Identify facilities/units with excess HAIs using the Cumulative Attributable Difference (CAD) metric
- Engage targeted facilities/units to participate in focused prevention efforts

**Assess**
- Assess targeted facilities/units for potential gaps in infection control using the TAP Facility Assessment Tools
- Summarize responses and calculate scores across units, facilities, and groups to identify gaps

**Prevent**
- Present identified gaps and data to facility using TAP Feedback Report
- Utilize the Implementation Guide to access resources to aid in addressing identified gaps
- Implement proven prevention strategies in the targeted facilities/units to reduce infection rates

**Tools**
- NHSN TAP Reports
- TAP ‘How To’ Guide

- TAP Facility Assessment Tools
- TAP Excel Databases and User Guide

- TAP Feedback Report
- TAP Implementation Guide - Links to Resources
TAP Facility Assessment Tools
Assess

- CAUTI TAP Facility Assessment Tool v2.0 – May 2016
- CDI Facility Assessment Tool – Instructions
- CDI Facility Assessment Tool
- CDI Facility Assessment Tool – Lab section
- CDI Facility Assessment Tool – Stewardship section
- CLABSI TAP Facility Assessment Tool v2.0 – August 2016
TAP Facility Assessment Tools

- Aim to capture *awareness and perceptions* among facility staff and healthcare personnel related to prevention policies and practices

- Should be administered to a variety of staff and healthcare personnel
  - Frontline providers
  - Mid-level staff
  - Facility’s senior leadership

- Collection of multiple assessments is recommended for interpreting results
CDI Facility Assessment Tool

Domain I. General Infrastructure, Capacity, and Processes
Domain II. Antibiotic Stewardship
Domain III. Early Detection and Isolation, Appropriate Testing
Domain IV. Contact Precautions / Hand Hygiene
Domain V. Environmental Cleaning

<table>
<thead>
<tr>
<th>1. General Infrastructure, Capacity, and Processes</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does your facility's senior leadership actively promote CDI prevention activities?</td>
<td>Yes ☐ No ☐ Unk ☐</td>
</tr>
<tr>
<td>2. Is unit-level leadership involved in CDI prevention activities?</td>
<td>Yes ☐ No ☐ Unk ☐</td>
</tr>
<tr>
<td>3. Does your facility have a team/work group focusing on CDI prevention?</td>
<td>Yes ☐ No ☐ Unk ☐</td>
</tr>
<tr>
<td>4. Does your facility have a staff person with dedicated time to coordinate CDI prevention activities?</td>
<td>Yes ☐ No ☐ Unk ☐</td>
</tr>
<tr>
<td>5. Does your facility have a nurse champion for CDI prevention activities?</td>
<td>Yes ☐ No ☐ Unk ☐</td>
</tr>
<tr>
<td>6. Does your facility have a physician champion for CDI prevention activities?</td>
<td>Yes ☐ No ☐ Unk ☐</td>
</tr>
</tbody>
</table>
TAP Facility Assessment Tools

- Actionable information from responses
  - “No” or “Never,” “Rarely,” “Sometimes” responses
  - “Unknown” responses
  - Divergent responses among different healthcare personnel
- Real-time teaching moments may make deployment an intervention in itself
  - Generates conversation, “Aha” moments, cues to action

TAP Assessments allow one to “prioritize and systematically close the gaps.” - Jamie Moran, MSN, RN, CIC Qualis Health
Deploying Assessments
Methods for Dissemination

- Collect assessments from facility-wide personnel
  - Senior Leadership
  - Mid-level Leadership
  - Infection Prevention
  - Quality
  - Environmental Services

- Collect assessments from frontline providers
  - From across facility
  - From specific units/locations identified from TAP Reports (for CAUTI and CLABSI) or line listing (for CDI)
Methods for Dissemination

- Provide respondents with the web link
- Send respondents an email with assessment attached
- Save assessment on a shared computer for completion
- Distribute paper copies

PDF forms can be returned via Submit button (which will generate a return email) or Printed
Methods for Dissemination

- PDF Assessments returned via Submit button must have Return Email Address entered on first page

Pre-populate field if:
- PDF distributed via email
- PDF saved on shared computer

Instruct respondents to complete field if:
- Web link is distributed via email
- Web link is shared on intranet
Distribute Paper Forms

- Provide paper Assessments for staff to complete
  - Have staff complete during a training or meeting
  - Provide a drop-box at a designated location
- Avoids any potential technology barriers
- Allows staff to complete at their own pace

*Deployment may include a combination of methods*
## Submitting Assessments

<table>
<thead>
<tr>
<th></th>
<th>Use 'Submit' button to return via email</th>
<th>Save form and attach to new email</th>
<th>Print and give to facility point of contact</th>
<th>Save in designated location with unique file name</th>
<th>Complete by hand and give to facility point of contact</th>
</tr>
</thead>
</table>

### Disseminating Assessments

- Provide web link
- Send as email attachment
- Save on shared computer
- Distribute paper copies

### Collecting Assessments

- Use drop box and/or designate point of contact
- Collect via flash drive or batch email
- Use drop box and/or designate point of contact
TAP Facility Assessments are available at your table.

Please take a few moments to complete the Assessment, answering as a respondent from your facility.
Try it out

*Discuss implementation with facility team members and others at your table*

- Who at your facility needs to be engaged to facilitate implementation of the TAP Assessments?
  - What are the most effective strategies for gaining buy-in?
- Which deployment method(s) do you think would work best for your facility?
  - How has your facility distributed surveys in the past?
Compiling Assessments
### TAP Excel Spreadsheet

- Developed to compile and summarize assessment responses
Compiling Assessments - PDFs

1. Save each Assessment PDF with unique name in one computer folder
2. Use Adobe Pro to electronically export responses to Excel
3. Copy responses *from* exported Excel file and Paste *into* TAP Excel Spreadsheet

*CDC can assist if partner does not have access to Adobe Pro*
Compiling Assessments - PDFs

Exporting from Adobe Pro to Excel

Copying from exported Excel

Starting with the first cell under ‘SurveyNumber’, Click and Drag to highlight all responses

Pasting into TAP Excel

Right Click in first cell under ‘SurveyNumber’
Select ‘Paste Values’ icon
Compiling Assessments – Paper Forms

1. Physically label each Assessment with a Survey Number
   - Can be any combination of alphanumeric characters
   - Allows you to refer back to Assessments if needed

2. Manually perform data entry in TAP Excel Spreadsheet
   - Spreadsheet is designed to streamline data entry
   - Typically takes less than 1 minute to enter each Assessment
Preparing TAP Excel Spreadsheet

- Confirm the tool versions match
- Confirm all Assessments have been entered into the ‘Input Data’ sheet and data appropriately aligns
- Each Assessment **must** have a value entered in the ‘Survey Number’ column
  - Can be any alphanumeric value
  - If ‘Survey Number’ is left blank, Assessment will not be included in summary features
Summarizing Assessments
## TAP Feedback Report

### Facility Name
*Clostridium difficile Infection (CDI) Facility Assessment Tool—Feedback Report*

#### Date Range:
- 54.00 to 55.67
- 2016

<table>
<thead>
<tr>
<th>Number of healthcare facility-onset CDIs</th>
<th>Number of predicted healthcare facility-onset CDIs</th>
<th>Facility Cumulative Attributable Difference (CAD), or the number of infections the facility would have needed to prevent to achieve an 50% reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>54</td>
<td>55</td>
<td>0.97</td>
</tr>
</tbody>
</table>

#### Healthcare facility-onset CDI Standardized Infection Ratio (SIR)
- 2014 National healthcare facility-onset CDI SIR: 0.92
- 2014 State healthcare facility-onset CDI SIR: 0.89

#### Assessment Overview
- **# Collected:** 53
- **# Analyzed:** 53
- **Overall Mean Score:** 51.8 out of 80, or 65%

#### Note:
If this report represents fewer than 10 assessments, results may not be fully representative of the awareness and perceptions of infection prevention practices among healthcare personnel scoring and results are for the purpose of internal quality improvement and should not be used as a method to benchmark against other units or facilities.

#### Top Opportunities for Improvement:

<table>
<thead>
<tr>
<th>I. General Infrastructure</th>
<th>II. Antibiotic Stewardship</th>
<th>III. Early Detection, Appropriate Testing</th>
<th>IV. Contact Precautions</th>
<th>V. Environmental Cleaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse champion for CDI prevention activities</td>
<td>Provider &amp; Patient/family education about risk of CDI with antibiotics</td>
<td>C. difficile tests ordered for appropriate indications: Diarrhea with no other known cause</td>
<td>Use of dedicated medical items for patients with confirmed or suspected CDI</td>
<td>Cleaning of high-touch surfaces in patient rooms: On a daily basis</td>
</tr>
<tr>
<td>Physician champion for CDI prevention activities</td>
<td>Monitor use of Fluoroquinolones (antibiotic that is high-risk for CDI)</td>
<td>C. difficile tests ordered for appropriate indications: Testing for diagnosis of CDI</td>
<td>Adherence to use of gowns/gloves: Families/Visitors</td>
<td>Delamination of items cleaned by Environmental Services and unit level personnel</td>
</tr>
<tr>
<td>Routine audits of personnel adherence to use of PPE</td>
<td>Monitor use of 3rd/4th Gen. Cephalosporins (antibiotic that is high-risk for CDI)</td>
<td>Promptness of C. difficile tests ordered</td>
<td>Adherence to hand hygiene policies: Families/Visitors</td>
<td>EPA product effective against CDI spores for daily disinfection in CDI rooms</td>
</tr>
<tr>
<td>Feedback of performance to personnel on contact precautions protocols</td>
<td>Reduce use of Fluoroquinolones (antibiotic that is high-risk for CDI)</td>
<td></td>
<td>Adequate time provided for terminal cleaning of patient rooms</td>
<td>Manufacturer's instructions followed for use of disinfectants</td>
</tr>
<tr>
<td>Feedback of performance to personnel on contact precautions protocols</td>
<td>Reduce use of 3rd/4th Gen. Cephalosporins (antibiotic that is high-risk for CDI)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Leading
- Leadership involvement in CDI prevention and Training, Competency Assessments, Audits, and Feedback of Performance for Hand Hygiene
- Preemptive placement on Contact Precautions, prompt indication, and prompt reporting of results when Cdiff tests are ordered
- Housing of C diff patients separately from patients without CDI and use of Contact Precautions signs
- Cleaning of shared medical equipment between patient use

#### Lagging
- Provider & Patient/family education about risk of CDI with antibiotics
- Monitor & Reduce use of Fluoroquinolones & Cephalosporins
- Environmental Cleaning including use of appropriate products, adequate time provided, and delineation of tasks
- Appropriate and prompt ordering of CDiff tests

---

1. Items displayed are based on questions with a frequency of >75% Yes or >75% for the sum of Often - Always
2. Items displayed are based on questions with a frequency of >50% Unknown, >50% No, or >50% for the sum of Never - Rarely - Sometimes - Unknown
3. Items displayed are based on questions within each domain with a frequency of >50% Unknown, >50% No, or >50% for the sum of Never - Rarely - Sometimes - Unknown

---

Summarizes facility infection data

Summarizes overall ‘Leading’ and ‘Lagging’ items

Identifies specific gaps by domain
## TAP Feedback Report

**Responses Per Question**

Please note: Selected LEADING results are highlighted in green (>75% Yes, or >75% for sum of Often+Always). Selected LAGGING results are highlighted in red (>33% Unknown, >50% No, >50% for sum of Never+Rarely+Sometimes+Unknown). It is strongly encouraged that each unit and facility review all of the data available to target other potential opportunities for improvement, aligning to ongoing and/or planned areas for intervention where possible. Data may not be representative of actual practices, as these are self-reported respondent perceptions.

### 1. General Infrastructure, Capacity, and Processes

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does your facility’s senior leadership actively promote CDI prevention activities?</td>
<td>75%</td>
<td>13%</td>
<td>11%</td>
</tr>
<tr>
<td>2. Is unit-level leadership involved in CDI prevention activities?</td>
<td>62%</td>
<td>17%</td>
<td>21%</td>
</tr>
<tr>
<td>3. Does your facility have a team/work group focusing on CDI prevention?</td>
<td>85%</td>
<td>2%</td>
<td>13%</td>
</tr>
<tr>
<td>4. Does your facility have a staff person with dedicated time to coordinate CDI prevention activities?</td>
<td>60%</td>
<td>13%</td>
<td>26%</td>
</tr>
<tr>
<td>5. Does your facility have a nurse champion for CDI prevention activities?</td>
<td>29%</td>
<td>51%</td>
<td>20%</td>
</tr>
<tr>
<td>6. Does your facility have a physician champion for CDI prevention activities?</td>
<td>43%</td>
<td>43%</td>
<td>14%</td>
</tr>
</tbody>
</table>

### Training

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Does your facility provide training on hand hygiene to all healthcare personnel:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Upon hire?</td>
<td>77%</td>
<td>13%</td>
<td>9%</td>
</tr>
<tr>
<td>7. Does your facility provide training on hand hygiene to all healthcare personnel:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. At least annually?</td>
<td>71%</td>
<td>17%</td>
<td>12%</td>
</tr>
<tr>
<td>8. Does your facility provide training on use of personal protective equipment (PPE) to all personnel who use PPE, including proper PPE selection and donning/doffing:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Upon Hire?</td>
<td>79%</td>
<td>9%</td>
<td>11%</td>
</tr>
<tr>
<td>8. Does your facility provide training on use of personal protective equipment (PPE) to all personnel who use PPE, including proper PPE selection and donning/doffing:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. At least annually?</td>
<td>87%</td>
<td>4%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Displays response frequencies per question and highlights potential gaps.
TAP Feedback Report

- Scoring methodology created to help further target prevention and track progress
  - For example, this facility may want to prioritize their Antibiotic Stewardship gaps because they scored lowest on this domain
- Scoring is **not** intended to compare performance across facilities
Creating the TAP Feedback Report

- Created on the ‘Feedback Report’ sheet of the TAP Excel Spreadsheet
- Instructions on the left side of the sheet guide users

1. User will fill in facility infection data in the top section
   - Specify **Date Range** and replace **X’s**

2. Individual question frequencies highlighted in **Red** identify potential gaps
   - User will Copy question summary (located to the left of each question) and Paste under matching Domain in **Top Opportunities for Improvement**

3. User will then summarize and emphasize primary gaps in **Lagging** section

4. Frequencies highlighted in **Green** identify where the facility is doing well
   - User will summarize these items in the **Leading** section

5. Click the ‘Save as PDF’ button to create a shareable version
Feedback Report Demo
Sample TAP Feedback Reports are available at your table

Please take a few moments to review the Feedback Reports and discuss amongst your group
Try it out

Sample TAP Feedback Reports are available at your table

Please take a few moments to review the Feedback Reports and discuss amongst your group

- Who would you share this Feedback Report with at your facility and how?
- Which domains and/or gaps might this facility focus on first?
- What other data or helpful information may you garner from this Feedback Report?
## TAP Strategy

**Targeted Assessment for Prevention: Using Data for Action**

[www.cdc.gov/hai/prevent/tap.html](http://www.cdc.gov/hai/prevent/tap.html)

### Target

- Generate TAP Reports using the National Healthcare Safety Network (NHSN)
- Identify facilities/units with excess HAIs using the Cumulative Attributable Difference (CAD) metric
- Engage targeted facilities/units to participate in focused prevention efforts

### Assess

- Assess targeted facilities/units for potential gaps in infection control using the TAP Facility Assessment Tools
- Summarize responses and calculate scores across units, facilities, and groups to identify gaps

### Prevent

- Present identified gaps and data to facility using TAP Feedback Report
- Utilize the Implementation Guide to access resources to aid in addressing identified gaps
- Implement proven prevention strategies in the targeted facilities/units to reduce infection rates

### Tools

- NHSN TAP Reports
- TAP ‘How To’ Guide
- TAP Facility Assessment Tools
- TAP Excel Databases and User Guide
- TAP Feedback Report
- TAP Implementation Guide - Links to Resources
Addressing Identified Gaps
TAP Implementation Guides
http://www.cdc.gov/hai/prevent/tap.html

Prevent

- TAP CAUTI Toolkit Implementation Guide: Links to Example Resources
- TAP CDI Implementation Guide: Links to Example Resources
- TAP CLABSI Implementation Guide: Links to Example Resources
TAP Implementation Guides

TAP Clostridium difficile infection (CDI) Implementation Guide: Links to Example Resources

Disclaimer: The links in the domains below are not mutually exclusive nor do they represent an exhaustive list of all the possible resources available. Furthermore, the links presented do not constitute an endorsement of these organizations or their programs by the Centers for Disease Control and Prevention (CDC) or the federal government, and none should be inferred.

Also refer to the following guidelines:

Strategies to Prevent Clostridium difficile Infections in Acute Care Hospitals, 2014 Update

Clinical Practice Guidelines for Clostridium difficile Infection in Adults: 2010 Update by the Society for Healthcare Epidemiology of America (SHEA) and the Infectious Diseases Society of America (IDSA) [PDF - 25 pages]

Other relevant CDC guidelines.

CDI Prevention Primer Slide Set [PPT - 7.3 MB]

- I. General Infrastructure, Capacity, and Processes
- II. Antibiotic Stewardship
- III. Early Detection and Isolation, Appropriate Testing
- IV. Contact Precautions/Hand Hygiene
- V. Environmental Cleaning
TAP Implementation Guides

- Each Domain provides actionable partner resources that can be used to address gaps and prevent infections

### 1. General Infrastructure, Capacity, and Processes

Engagement of Leadership, Champions, and Staff

- **Engage the Senior Executive Module – Comprehensive Unit-based Safety Program (CUSP) Toolkit**
  - Tools focused on engaging and defining the roles and responsibilities of senior executives in a quality improvement initiative, from the Agency for Healthcare Research and Quality (AHRQ)

- **Clostridium difficile Infection (CDI) Toolkit – A Healthcare Professional’s Guide to Preventing CDIs**
  - Compilation of guidelines, recommendations, and tools for reducing CDI, including general strategies to engage Atton Alliance

- **Prevent and Manage Infections Safely: C. difficile Leadership Fact Sheet**
  - Information about the importance of promoting prevention of C. difficile for nursing home leadership, from Advancing Excellence in America’s Nursing Homes
Prevention Resources

1. Feedback Report

III. Early Detection, Appropriate Testing

C. difficile tests ordered for appropriate indications: Diarrhea with no other known cause

C. difficile tests ordered for appropriate indications: Testing for diagnosis of CDI

Promptness of C. difficile tests ordered

2. Implementation Guide

III. Early Detection and Isolation, Appropriate Testing

Guidance to Providers: Testing for C. difficile Infection

Recommendations for CDI testing, including a sample diagnostic algorithm (pg. 2), from Vanderbilt University Medical Center

3. Partner Resource

* http://www.mc.vanderbilt.edu/documents/infectioncontrol/files/Guidance%20for%20Providers%20FINAL%202011.pdf; Vanderbilt University Medical Center
## Prevention Resources

### II. Antibiotic Stewardship

- **National Quality Partners Playbook: Antibiotic Stewardship in Acute Care**
  
  Practical strategies and suggestions for organizations committed to implementing antibiotic stewardship programs, aligning with the CDC's Core Elements of Hospital Antibiotic Stewardship Programs, from the National Quality Forum

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### Core Element 1: Leadership Commitment

#### Examples of Implementation

**Basic**
- Issue a formal board-approved statement on the importance of the ASP and include in annual report.
- Develop and distribute a newsletter column from the CEO and CMO and/or chief of the medical staff highlighting the ASP and their commitment to improving antibiotic use.
- Dedicate specific salary support for ASP leaders based on size and population of the hospital.
- Include specific time commitment (%FTE or hours/week, hours/month) in the job description of ASP leaders, and articulate targets and goals.

**Intermediate**
- Designate or appoint a hospital executive to serve as a “champion” of the ASP.

**Advanced**
- Support funding for remote consultation or telemedicine with experts in antibiotic stewardship (e.g., infectious diseases physicians and pharmacists) if local resources are not available.
- Communicate regularly the importance of improving antibiotic use and the hospital’s commitment to antibiotic stewardship.
- Share stories, speakers, and other resources that highlight how ASPs can improve patient outcomes.

- Include ASP outcome measures in the facility’s strategic dashboard and update leadership regularly on meeting those goals.
- Integrate ASP activities into quality improvement and/or patient safety initiatives and reports to medical executives.
- Include antibiotic stewardship in ongoing provider education programs and annual competencies.
- Ensure that ASP leaders have training in measuring and improving antibiotic use.
- Prioritize funding for information technology

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Prevention Resources

V. Environmental Cleaning

- EPA Registered Antimicrobial Products Effective against *Clostridium difficile* Spores
  Listing of disinfectant products with sporicidal activity against *C. difficile*, from the Environmental Protection Agency (EPA)

- **Not Just A Maid Service**
  Video describing how two hospitals engaged their environmental service workers to decrease transmission of CDI, from the Illinois Department of Public Health

* https://www.youtube.com/watch?v=nfZftqBELsA; Illinois Department of Public Health
Access the CDI Implementation Guide under ‘Prevent’ on the TAP Website www.cdc.gov/hai/prevent/tap.html

Work in groups to explore the resources available
Try it out

Access the CDI Implementation Guide under ‘Prevent’ on the TAP Website
www.cdc.gov/hai/prevent/tap.html

Work in groups to explore the resources available

- Based on the gaps highlighted in the Feedback Report, identify a few resources this facility may use to address their gaps
- Which types of resources do you think are most helpful for your facility – educational posters, audit tools, toolkits, etc.?
- Discuss how you may deploy/implement one of the identified tools within your facility
Getting Started
Tips for Success

- Leadership support
  - Engage senior leadership and ‘Champions’
  - Encourage leaders to communicate intent and importance of TAP Strategy
  - Share Sample Feedback Report as example of end result

- Collaborate with partners
  - State Health Departments, Hospital Associations, QIN-QIOs, HIINs, and others utilize the TAP Strategy and may be able to offer support
  - CDC is available to offer technical assistance
Tips for Success

- Explore Assessment deployment options
  - Use method(s) that best fits facility’s needs to optimize participation and completion

- Align prevention efforts
  - Integrate TAP Strategy with new and ongoing efforts to enhance prevention
  - Deploy Assessments during audits and/or training
TAP Strategy ‘How To’ Guide

- Running TAP Reports
- Interpreting TAP Reports
- Communicating TAP Report Data
- Assessing the Gaps
- Implementing Infection Prevention Strategies

https://www.cdc.gov/hai/pdfs/prevent/tap-guide-for-individual-facility-user.pdf
Obtaining TAP Tools

- **TAP Reports**
  - Generated in the Patient Safety Component of NHSN

- **TAP Facility Assessments**
  - Accessed and downloaded on TAP Website: [http://www.cdc.gov/hai/prevent/tap.html](http://www.cdc.gov/hai/prevent/tap.html)

- **TAP Excel Spreadsheets**
  - Email HAIPrevention@cdc.gov

- **TAP Implementation Guides**

- **Questions and/or Requests for Technical Assistance**
  - Email HAIPrevention@cdc.gov
TAP Strategy Resources

- TAP FAQs: http://www.cdc.gov/hai/prevent/tap.html
- Journal article by Soe et al. published in Infection Control & Hospital Epidemiology describing the cumulative attributable difference (CAD) metric.  
TAP Strategy Resources


- Help with the TAP Strategy: email HAIPrevention@cdc.gov
- Help with TAP Reports: email NHSN@cdc.gov
The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.