Performance Measurement to Sustain Improvement

Dr. Bernard Lawless, Provincial Lead, Critical Care & Trauma
Linda Kostrewa, Director, Critical Care Services Ontario

performance measurement system process at CCSO

identify a need for information
identify a data source
develop a reporting mechanism
key characteristics of success
bring experts together

identify targets
select indicators or metrics

where do we go from here?

what's next in performance measurement

CCSO: from measurement to management

results: a track record of success
CCSO's performance measurement system is at the core of the success of its strategic plans and programs, which include:

- increased critical care capacity
- improved patient outcomes
- enhanced teamwork and collaboration

e.g.
- Critical Care Strategies
- Quality Improvement Initiatives
- Patient Safety

CCSO Critical Care Services Ontario
www.criticalcareontario.ca

SOSMPC Services ontariens des soins aux malades en phase critique
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CCSO: Critical Care Services Ontario
www.criticalcareontario.ca

SOSMPC: Services ontariens des soins aux malades en phase critique

- Results: A track record of success
  - CritiCall Ontario
  - Values of operational excellence
    - Culture
    - Improvement
  - Critical Care Services Ontario
  - SOSMPC

- What's next in performance measurement
  - Evaluation
  - Reporting
  - Data quality and target

- CCSO: From measurement to management
  - Critical care services
  - Critical care outcomes
  - Process improvement

- Where do we go from here?
  - Evaluation
  - Reporting
  - Data quality and target

- e.g.
  - Early Warning System
  - Critical care outcome
  - Process improvement

- CCSO: "We measure to improve"
Disclosure

No commercial interests to declare

Critical Care Services Ontario is funded by the Government of Ontario
Session Objectives

1. Describe CCSO’s journey to developing a performance measurement system that drives accountability and improvements across Ontario’s Critical Care System.

2. Share key characteristics of success that enable CCSO to overcome challenges and ensure sustainability of the system.

3. Discuss next steps and the future of CCSO’s performance measurement system.
Critical Care Services Ontario

*a provincial managing body*
that provides leadership and coordination across hospitals, health regions in the province to deliver high quality critical care services in Ontario

**Key Functions:**

- strategically plan, vision and set priorities
  for an integrated critical care system for Ontario
- strengthen system accountability
  through performance management and data transparency
- integrate best practices
  across the critical care system
- advance policy and program development, implementation and evaluation initiatives

**CCSO’s work is the result of ongoing collaboration between clinicians, hospital administrators, health regions, the Government of Ontario, and other health sector partners**
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CCSO's Performance Measurement System

- **Quality**
  - Evidence
  - Toolkits
  - Data definitions
  - Reporting mechanisms
  - Targets & benchmarks

- **Access**

- **System Integration**
  - CritiCall Ontario expert panels
  - Advisory committee
  - Critical care networks

- **Value**

- **Critical Care System**
  - Neurosurgery
  - Trauma & burns
  - Life or Limb
  - Paediatric critical care
Ontario
1 of 10 provinces and 3 territories
13.5 million people (35 million Canadians)

94% of Ontarians live in the southern region
85% live in urban centres
94% of Ontarians live in the southern region

85% live in urban centres
Health Care in Canada

Canada Health Act, 1984

to protect, promote and restore the physical and mental well-being of residents of Canada and to facilitate reasonable access to health services without financial or other barriers

5 key principles:
universality comprehensiveness accessibility portability public administration
Like the rest of Canada, Ontario is bilingual and offers all health care services in English et en français (and in French).
Health Care in Ontario

A regional model

14 regions, each responsible for planning, integrating and funding local health care, with an emphasis on improving access and patient experience.

145 hospital corporations

246 hospital sites

5 paediatric hospitals
regions, each responsible for planning, implementing, and funding local health care, with an emphasis on improving access and patient experience.

- **145** hospital corporations
- **246** hospital sites
- **5** paediatric hospitals
Health Care in Ontario

A regional model

14 regions, each responsible for planning, integrating and funding local health care, with an emphasis on improving access and patient experience.

145 hospital corporations
246 hospital sites
5 paediatric hospitals
Ontario Provincial Programs

cancer care & renal dialysis

cardiac & stroke network

organ & tissue donation and transplant

critical care
2003

highlighting opportunities for improvement

most significantly, to improve measurement, collection and reporting of information about Ontario's critical care system

The SARS Crisis
The SARS Crisis

1. "Mystery Bug Shuts Hospital Emergency Room"
   - Article from "Toronto Star" discussing the closure of the emergency room at a hospital due to SARS concerns.

2. "TIME" magazine cover featuring a graphic with the text "The Truth About SARS".

3. Sign from a SARS clinic in China, with the text "No Visitors except: Exempted family members, colleagues, and patients’ fathers and mothers of high risk patients. All scheduled clinics cancelled."
highlighting opportunities for improvement

- for critical care capacity, the ability to respond to sudden increases in demand
- ensure a sufficient supply of health human resources
- better monitoring of critical care capacity and resource utilization
- standardization in health care provider training

most significantly, to improve measurement, collection and reporting of information about Ontario’s critical care system
for critical care capacity, the ability to
respond to sudden increases in demand
ensure a sufficient supply of health human resources

like critical care physicians, nurses, and allied health workers
better monitoring of critical care capacity and resource utilization
standardization

in health care provider training
most significantly, to improve measurement, collection and reporting of information about Ontario’s critical care system
**2005**

- A principal advisory body on critical care
- Critical Care Strategy: improving access, quality, system integration and value
- To enhance the overall health system by addressing the policy, funding, and operational issues that contribute to wait times for critical care across the system
- CCSO Critical Care Services Ontario: established in 2005 to oversee implementation of the Critical Care Strategy
- A commitment to implementation

**Critical Care Management Information System**

In 2005, Ontario lacked information on:

- **Capacity**
- **Human Resources**
- **Funding**

**Existing data sources in 2005:**
- Federal level health database
- Provincial Critical Care Research Network:
  - 40 hospitals, 3 provinces
  - (Ontario has 352 beds for critical care)

These data sources were insufficient to provide data required for:
- Provincial monitoring,
- Evaluation,
- And improvement of critical care

Information on critical care beds to enable implementation of the Strategy:

- **Availability**
- **Location**
Expert Panel Review

if critical care is not functioning optimally, this negatively affects the capability of the entire acute care hospital

&

the quality and delivery of critical care services varies across the province

33 recommendations for:

improving access
improving quality
system integration
Critical Care Strategy: improving access, quality, system integration and value to enhance the overall health system by addressing the policy, funding and operational issues that contribute to wait times for critical care across the system.

Critical Care Services Ontario (CCSO) was established in 2005 to oversee the implementation of the Critical Care Strategy, with a focus on ensuring quality and accessibility of critical care services in Ontario.
a principal advisory body on critical care

33 recommendations

Critical Care Strategy: improving access, quality, system integration and value to enhance the overall health system by addressing the policy, funding and operational issues that contribute to wait times for critical care across the system.

CCSO Critical Care Services Ontario
www.criticalcareontario.ca
established in 2005 to oversee implementation of the Critical Care Strategy
Care Strategy:
  access, quality, integration and value

In 2005, Ontario lacked information on:

- capacity
- human resources
- funding

Critical Care

Existing data sources in 2005:

- federal level health database
- grassroots Critical Care Research Network: 40 hospitals, 3 provinces
  (Ontario has 112 sites for critical care)

These 2 data sources were insufficient to provide data required for:

- provincial monitoring,
- evaluation,
- and improvement of critical care

Together, a rigorous forecasting model for critical care
& a provincial critical care management information system, for
individual and system performance could:

- support estimates of demand for critical care
- drive improvements in management processes, best practices, safety and research

Information on critical care beds to enable implementation of the Strategy:
In 2005, Ontario lacked information on:

- critical care
- human resources
- capacity
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existing data sources in 2005:

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*(Ontario has 112 sites for critical care)*

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Together, a rigorous forecasting model for critical care and a provincial critical care management information system, for individual and system performance could:

- support estimates of demand for critical care
- drive improvements in management processes, best practices, safety and research
information on critical care beds to enable implementation of the Strategy:

availability

location
laying the ground work for a provincial information system

- bringing experts together
  - to determine what kind of information should be collected in the reports
  - to identify common data definitions
  - to identify reporting requirements and components
- literature reviews
  - to identify types of information commonly used to assess quality of critical care
- jurisdictional scans
  - to study information systems in other provinces and countries
- gap analyses
  - to further specify gaps in the current system

depending on the health sector's priorities and technical capabilities

2006
bringing experts together

- to determine what kind of information should be collected in the reports
- to identify common data definitions
- to identify reporting requirements and recipients
literature reviews
to identify types of information commonly used to assess quality of critical care
jurisdictional scans
to study information systems in other provinces and countries
gap analyses
to further specify gaps in the current system
developing a process for data collection and entry into a centralized data warehouse

with input from health service providers and technical developers
2006

gap analyses

2007

begin phased implementation

pilot phase

7 waves of implementation

province-wide hospitals varying in size
pilot phase

11 Level 3 ICUs in large, urban hospitals

testing for early issues with data collection & entry
2006

2007
begin phased implementation

7 waves of implementation
province-wide hospitals varying in size

2009

CCSO begins distributing information back to sites enrolled in the system
- These were sent on a quarterly basis, and contained site-level reports of the information collected in CCIS.
- These reports could be summarized at unit, site, hospital, regional or provincial levels.

scorecard

development begins

scorecards aim to focus the attention of the critical care system on select indicators, to improve data utilization across the system
the Critical Care Information System (CCIS) collects data for:

- **83** hospital corporations
- **112** hospital sites
- **205** critical care units (and that's all of them!)
- **2018** critical care beds
- **1224** vented critical care beds

**CCIS information is:**
- Collected every 24 hours by critical care units and entered into CCIS
- Used to create aggregate level reporting on service utilization and patient outcomes

the information is used for:
- Assessing the effectiveness and utilization of interventions on health outcomes for critical care patients
- Assisting with individual patient triage, transfer, and discharge planning activities, which facilitates or improves the provision of health care in Ontario
the information is used for:

- assessing the effectiveness and utilization of interventions on health outcomes for critical care patients

- assisting with individual patient triage, transfer, and discharge planning activities, which facilitate or improve the provision of health care in Ontario
the data set includes

- Patient demographic data
- Data related to admission sources
- Services provided
- Date and times thereof
- Admitting diagnoses
- Discharge destinations
- Hospital administrative data (health card numbers, medical record numbers)
- Critical Care Response Team status
- Ventilator status
- Central venous and arterial line status
- Vasoactive/inotropic medications
- Intracranial pressure monitoring
- Paediatric logistic organ dysfunction
- Paediatric index of mortality
- Multiple organ dysfunction scores
- Continuous dialysis status
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province-wide hospitals varying in size

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provide health care leaders with data that enables them to assess the quality, access and system integration of critical care services at the unit, hospital and regional level

stakeholder consultations

provide the NH
- prepare a set of implementation guides
- provide a set of implementation guides
- provide a set of implementation guides

literature reviews & jurisdictional scans

scorecards

- score how well units perform in relation to a pre-determined target
- score trends in performance for a particular indicator

2013
toolkit

developed to support data utilization by the field

current distribution

quarterly reports

unit-level scorecard

regional scorecard

reports guide

run chart
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provide health care leaders with data that enables them to assess the quality, access and system integration of critical care services at the unit, hospital and regional level.

stakeholder consultations
- engage the field
- get consensus on what indicators should be included in the scorecard
- provide the field with an opportunity to provide input into target-setting

literature reviews & jurisdictional scans
look at existing systems & scorecards
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- engage the field
- get consensus on what indicators should be included in the scorecard
- provide the field with an opportunity to provide input into target-setting
literature reviews & jurisdictional scans
to look at existing systems & scorecards
scorecards
- show how well units perform in relation to a pre-determined target
- show trends in performance for a particular indicator

2013

peer groups
To be able to compare units similar in size and acuity
12 peer groups across Ontario

run charts
Aligning with IHI

toolkit
Developed to support data utilization by the field

region-specific
scorecards

- show how well units perform in relation to a pre-determined target
- show trends in performance for a particular indicator

### Critical Care Scorecard

**Adult Critical Care Units**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Score</th>
<th>Mini-MAP Score</th>
<th>MAP Score</th>
<th>Target</th>
<th>Status</th>
<th>Ideal</th>
<th>Ideal Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td></td>
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<td></td>
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<tr>
<td>KTR Goal</td>
<td>5</td>
<td>3.5</td>
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<td>4.5</td>
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<tr>
<td>System</td>
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<tr>
<td>System Intensives</td>
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</tr>
</tbody>
</table>

**Quality**
- KTR Goal: [value]
- System: [description]

**Assess:** The right care at the right time in the right setting by the right healthcare provider (Quality Improvement Guide, 2013). Healthcare should be able to provide timely and appropriate healthcare services to ensure the best possible health outcomes. The system should ensure the same quality of care regardless of location and when the care is provided (Quality Improvement Guide, 2013).

**Systems Integration:** The prevention of adverse outcomes requires effective communication and coordination of patient care within the health system. The health system should be organized and run in such a manner that emphasizes patient care in both inpatient and outpatient settings, ensuring that all care processes and clinical pathways are designed and implemented to achieve the highest quality and safety. The health system should continuously evaluate and improve the processes and technology to improve patient care.
### Critical Care Scorecard

**Adult Critical Care Units**

The Critical Care Strategy aims to improve quality and access, and work better as a system.

<table>
<thead>
<tr>
<th>DOMAIN</th>
<th>OBJECTIVE</th>
<th>PERFORMANCE MEASURE</th>
<th>Baseline</th>
<th>Most Recent</th>
<th>Target</th>
<th>Status</th>
<th>Trend</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUALITY</td>
<td>Deliver Safe Care</td>
<td>VAP Rate</td>
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<td></td>
<td></td>
<td>ICU Rate</td>
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<td></td>
<td></td>
<td>Incidence Rate - Unplanned Extubation</td>
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<td></td>
<td></td>
<td>Hand Hygiene Compliance (before patient contact)</td>
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<tr>
<td></td>
<td>Deliver Effective Care</td>
<td>48 hour Readmission Rate</td>
<td></td>
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<tr>
<td></td>
<td>Enhance Staff Competency</td>
<td>% Nurses with Critical Care Training</td>
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<tr>
<td>ACCESS</td>
<td>Provide Timely Care</td>
<td>Admission to Bed [90 minutes]</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>% of Beds not Available</td>
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<tr>
<td></td>
<td></td>
<td>Night-time Discharge Rate</td>
<td></td>
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</tr>
<tr>
<td>SYSTEM</td>
<td>Optimize Patient Flow</td>
<td>ICU Average Length of Stay (days)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>INTEGRATION</td>
<td></td>
<td>Avoidable Days Rate</td>
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<tr>
<td></td>
<td></td>
<td># of Chronically Ventilated Patients (&gt; 21days)</td>
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</tr>
</tbody>
</table>

**Quality:** A high quality health care system is one that is: “accessible, appropriate, effective, efficient, integrated, patient-centred, population health focused and safe” (ECFAA, 2010). All Ontarians should receive the high quality healthcare they need based on the best available scientific information, when they need it. People should not be harmed by an accident or mistakes when they receive care and the system should have appropriately qualified providers and adequate facilities to look after people’s health needs (Quality Improvement Guide, 2012).

**Access:** The right care at the right time in the right setting by the right healthcare provider (Quality Improvement Guide, 2012). Ontarians should be able to get timely and appropriate healthcare services in order to achieve the best possible health outcomes. People should receive the same quality of care regardless of who they are and where they live. (Quality Improvement Guide, 2012).

**System Integration:** The province’s health system needs to focus on supporting seamless transitions between health care providers (inter-disciplinary and cross-functional) throughout a patient’s continuum of care. All parts of the healthcare system should be organized, connected and work collaboratively with other healthcare partners to develop a fully integrated system that can provide high quality care (Quality Improvement Guide, 2012). The use of modern information technology is a key enabler to providing quality health care. Organizations within the health system need to embrace and harness the power of information and technology to improve patient care.
toolkit
developed to support data utilization by the field
run charts
aligning with IHI

Critical Care Unit Scorecard: Unit Level Run Charts
LHIN: Hamilton Niagara Halton Brant (4)
Regional Health Services - General 1
Unit ICU East South
Q3 2015/2016

Note: Data for the % of Beds not Available will be added in the following quarter.
peer groups to be able to compare units similar in size and acuity

12 peer groups across Ontario
2015 region-specific scorecard emphasizing regionally mandated indicators (improving access to care and the patient experience)
region-specific scorecard

emphasizing regionally mandated indicators

(improving access to care and the patient experience)
CCSO’s Performance Measurement System

- Quality
- Access
- System Integration
- Value

- Evidence
- Standardized data definitions
- Reporting mechanisms
- Targets & benchmarks

- Critical Care System
- ICUs
- ICUs & hospitals

CCSO’s Critical Care Information System (CCIS) collects data for:

- 83 hospital corporations
- 112 hospitals
- 205 critical care units
- 1,224 critical care beds

2003

2005

2006

2007

7 waves of implementation
province-wide hospitals varying in size

2009

Scorecard

Scorecards for specialty programs

Current distribution

2013

2015

CritiCall Ontario

A key partner

Responsible for housing & managing CCIS, data entry, technology, privacy and security of health information
quarterly reports

summarizing information on **46 indicators**, at the site, hospital, regional and provincial level
# Critical Care Unit Scorecard: Quarterly Summary

## Domain: Quality

<table>
<thead>
<tr>
<th>Objective</th>
<th>Performance Measure</th>
<th>Baseline</th>
<th>Last Reporting Period</th>
<th>Current Performance</th>
<th>Change from Last Reporting Period</th>
<th>Target</th>
<th>Status</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deliver Safe Care</td>
<td>Antimicrobial Utilization (per 100%)</td>
<td>75.87</td>
<td>86.10</td>
<td>81.70</td>
<td>nh</td>
<td>nh</td>
<td>CCIS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VAP Rate (per 1000)*</td>
<td>3.91</td>
<td>6.62</td>
<td>2.61</td>
<td>0.00</td>
<td></td>
<td>CCIS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CLI Rate (per 1000)*</td>
<td>1.46</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td>CCIS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Incidence Rate - Urinary Tract Infection (per 1000)</td>
<td>1.07</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td>CCIS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hand Hygiene Compliance before patient contact (%)</td>
<td>90.00</td>
<td>90.00</td>
<td>83.36</td>
<td>100.00</td>
<td></td>
<td>Hospital Data</td>
<td></td>
</tr>
<tr>
<td>Deliver Effective Care</td>
<td>48 Hour Bedreadmission Rate (%)</td>
<td>3.00</td>
<td>13.00</td>
<td>1.09</td>
<td>1.42</td>
<td></td>
<td>CCIS</td>
<td></td>
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<tr>
<td>Balance Staff Competency</td>
<td>% Nurses with Critical Care Training</td>
<td>95.00</td>
<td>94.00</td>
<td>88.89</td>
<td>0.00</td>
<td></td>
<td>Hospital Data</td>
<td></td>
</tr>
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</table>

## Domain: Access

<table>
<thead>
<tr>
<th>Objective</th>
<th>Performance Measure</th>
<th>Baseline</th>
<th>Last Reporting Period</th>
<th>Current Performance</th>
<th>Change from Last Reporting Period</th>
<th>Target</th>
<th>Status</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide Timely Care</td>
<td>% Admissions to Bed (within 90 minutes)*</td>
<td>48.00</td>
<td>48.00</td>
<td>39.20</td>
<td>90.00</td>
<td></td>
<td>Hospital Data</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of Beds not Available</td>
<td>6.34</td>
<td>9.23</td>
<td>25.93</td>
<td>0.00</td>
<td></td>
<td>CCIS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Night-time Discharge Rate (%)</td>
<td>27.83</td>
<td>30.00</td>
<td>28.09</td>
<td>8.04</td>
<td></td>
<td>CCIS</td>
<td></td>
</tr>
</tbody>
</table>

## Domain: System Integration

<table>
<thead>
<tr>
<th>Objective</th>
<th>Performance Measure</th>
<th>Baseline</th>
<th>Last Reporting Period</th>
<th>Current Performance</th>
<th>Change from Last Reporting Period</th>
<th>Target</th>
<th>Status</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimize Patient Flow</td>
<td>Available Days Rate ($)</td>
<td>2.26</td>
<td>0.66</td>
<td>0.60</td>
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</tr>
<tr>
<td></td>
<td>% Chronicly Ventilated Patients &gt;21 Days</td>
<td>60.00</td>
<td>13.00</td>
<td>8.00</td>
<td>0.00</td>
<td></td>
<td>CCIS</td>
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### Notes:
- Data not submitted by hospitals
- Data not available as data has not been submitted
- Data not available as data is not included
- Data not available as data is not included
- Data not available as data is not included

**Generation Date:** 09/01/2020 9:01 PM
## Critical Care Unit Scorecard: Quarterly Summary

### Domain: Quality

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<th>Objective</th>
<th>Performance Measure</th>
<th>Baseline</th>
<th>Last Reporting Period</th>
<th>Current Performance</th>
<th>Change from Last Reporting Period</th>
<th>Target</th>
<th>Status</th>
<th>Data Source</th>
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<tbody>
<tr>
<td>Deliver Safe Care</td>
<td>Antimicrobial Utilization (per 1000 %)</td>
<td>757.67</td>
<td>864.10</td>
<td>817.04</td>
<td>↓</td>
<td>n/a</td>
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<tr>
<td></td>
<td>VAP Rate (per 1000 %)</td>
<td>3.91</td>
<td>6.62</td>
<td>2.61</td>
<td>↓</td>
<td>0.00</td>
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<td>CLI Rate (per 1000 %)</td>
<td>1.46</td>
<td>0.69</td>
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<td>Incident Rate - Unplanned Extubation (per 1000 %)</td>
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<tr>
<td></td>
<td>Hand Hygiene Compliance-before patient contact (%)</td>
<td>90.00</td>
<td>90.00</td>
<td>84.36</td>
<td>↓</td>
<td>100.00</td>
<td>↓</td>
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</tr>
<tr>
<td>Deliver Effective Care</td>
<td>48 Hour Readmission Rate (%)</td>
<td>2.80</td>
<td>3.16</td>
<td>1.69</td>
<td>↓</td>
<td>1.42</td>
<td>↓</td>
<td>CCIS</td>
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<td>Enhance Staff Competency</td>
<td>% Nurses with Critical Care Training*</td>
<td>9.00</td>
<td>9.00</td>
<td>88.89</td>
<td>↑</td>
<td>100.00</td>
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<td>Hospital Data</td>
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### Domain: Access

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<th>Performance Measure</th>
<th>Baseline</th>
<th>Last Reporting Period</th>
<th>Current Performance</th>
<th>Change from Last Reporting Period</th>
<th>Target</th>
<th>Status</th>
<th>Data Source</th>
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</thead>
<tbody>
<tr>
<td>Provide Timely Care</td>
<td>% Admission to Bed (within 90 minutes)*</td>
<td>48.00</td>
<td>48.00</td>
<td>39.20</td>
<td>↓</td>
<td>90.00</td>
<td>↓</td>
<td>Hospital Data</td>
</tr>
<tr>
<td></td>
<td>% of Beds not Available</td>
<td>0.34</td>
<td>9.23</td>
<td>25.93</td>
<td>↑</td>
<td>0.00</td>
<td>↓</td>
<td>CCIS</td>
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<tr>
<td></td>
<td>Night-time Discharge Rate (%)</td>
<td>27.83</td>
<td>30.00</td>
<td>28.09</td>
<td>↓</td>
<td>8.04</td>
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<td>CCIS</td>
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### Domain: System Integration

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<th>Last Reporting Period</th>
<th>Current Performance</th>
<th>Change from Last Reporting Period</th>
<th>Target</th>
<th>Status</th>
<th>Data Source</th>
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<tbody>
<tr>
<td>Optimize Patient Flow</td>
<td>ICU Average Length of Stay (days)</td>
<td>7.73</td>
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<td>6.86</td>
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<td>Avoidable Days Rate (%)</td>
<td>2.26</td>
<td>0.66</td>
<td>0.60</td>
<td>↓</td>
<td>4.32</td>
<td>↓</td>
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<tr>
<td></td>
<td># Chronically Ventilated Patients &gt;21 Days</td>
<td>60.00</td>
<td>13.00</td>
<td>8.00</td>
<td>↓</td>
<td>0.00</td>
<td>↓</td>
<td>CCIS</td>
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### Notes:
- Baseline: Based on 2012-2013 fiscal year data for quarterly indicators except Antimicrobial Utilization.
- Based on 2013-2014 fiscal year data for annual indicators, Antimicrobial Utilization.
- Change From Last Reporting Period: Signals a change in the indicator from the last reporting period.
- Target/Status: Please refer to the Critical Care Unit Scorecard Reports Guide for target/status setting methodology.

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<tr>
<th>Status Code</th>
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<td>Indicates an increase in indicator value since the last reporting period</td>
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<tr>
<td>↓</td>
<td>Indicates a decrease in indicator value since the last reporting period</td>
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<td>Data not submitted by hospital</td>
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<tr>
<td>n/a</td>
<td>Status not available as data was not submitted</td>
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<td>*</td>
<td>Annual hospital reported indicators</td>
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<td>Site level data</td>
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Generation Date: 10/28/2015 2:40:55 PM

13 indicators
# Critical Care LHIN Scorecard: Quarterly Summary

**Q2 FY 2016**

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<tr>
<th>DOMAIN</th>
<th>OBJECTIVE</th>
<th>PERFORMANCE MEASURE</th>
<th>BASELINE</th>
<th>LAST REPORTING PERIOD</th>
<th>CURRENT PERFORMANCE</th>
<th>CHANGE FROM LAST REPORTING PERIOD</th>
<th>TARGET</th>
<th>STATUS</th>
<th>DATA SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>QUALITY</strong></td>
<td>Deliver Safe Care</td>
<td>VAP Rate per 1000 cases (%)</td>
<td>2.15</td>
<td>1.57</td>
<td>1.48</td>
<td>↓</td>
<td>-</td>
<td>-</td>
<td>CCIS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CRD Rate per 1000 cases (%)</td>
<td>0.94</td>
<td>0.68</td>
<td>0.65</td>
<td>↓</td>
<td>-</td>
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<td>CCIS</td>
</tr>
<tr>
<td></td>
<td>Deliver Effective Care</td>
<td>ICU Mortality Rate (%)</td>
<td>6.55</td>
<td>5.82</td>
<td>6.18</td>
<td>↑</td>
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<td>CCIS</td>
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<tr>
<td></td>
<td></td>
<td>60 Hour Transfer Time Rate (%)</td>
<td>2.12</td>
<td>2.36</td>
<td>1.89</td>
<td>↓</td>
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<td>-</td>
<td>CCIS</td>
</tr>
<tr>
<td><strong>ACCESS</strong></td>
<td>Provide Timely Care</td>
<td>Bed Occupancy Rate (%)</td>
<td>42.67</td>
<td>84.06</td>
<td>84.02</td>
<td>↑</td>
<td>-</td>
<td>-</td>
<td>CCIS</td>
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<tr>
<td></td>
<td></td>
<td>Ventilated Patient Day Rate (%)</td>
<td>48.75</td>
<td>43.65</td>
<td>43.96</td>
<td>↑</td>
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<td>CCIS</td>
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<tr>
<td></td>
<td></td>
<td>Night Time Discharge Rate (%)</td>
<td>7.31</td>
<td>7.34</td>
<td>7.83</td>
<td>↑</td>
<td>-</td>
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<tr>
<td></td>
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<td>Arrived In ED Days Rate (%)</td>
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<td>5.57</td>
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<td>CCIS</td>
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<tr>
<td></td>
<td></td>
<td>Life or Death Confirmed Cases Time to Arrive within 4 Hours (%)</td>
<td>77.21</td>
<td>97.34</td>
<td>93.48</td>
<td>↑</td>
<td>-</td>
<td>CCIC/Col Ontario</td>
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<tr>
<td><strong>SYSTEM INTEGRATION</strong></td>
<td>Optimize Patient Flow</td>
<td>Admissions from Hospitals within LHIN (%)</td>
<td>3.1</td>
<td>0.69</td>
<td>0.79</td>
<td>↑</td>
<td>-</td>
<td>CCIS</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Admissions from Hospitals outside LHIN (%)</td>
<td>4.13</td>
<td>2.34</td>
<td>3.63</td>
<td>↑</td>
<td>-</td>
<td>CCIS</td>
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<tr>
<td></td>
<td></td>
<td>Discharges to Hospitals within LHIN (%)</td>
<td>6.43</td>
<td>5.43</td>
<td>5.70</td>
<td>↑</td>
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<td></td>
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<td>Discharges to Hospitals outside LHIN (%)</td>
<td>3.66</td>
<td>2.75</td>
<td>2.83</td>
<td>↑</td>
<td>-</td>
<td>CCIS</td>
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<tr>
<td></td>
<td></td>
<td>Readmissions with No Delay Rate (%)</td>
<td>2.16</td>
<td>2.06</td>
<td>1.95</td>
<td>↓</td>
<td>-</td>
<td>-</td>
<td>CCIS</td>
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<tr>
<td></td>
<td></td>
<td>Readmissions with No Delay Rate (%)</td>
<td>60.62</td>
<td>52.63</td>
<td>34.41</td>
<td>↓</td>
<td>-</td>
<td>-</td>
<td>CCIS</td>
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</tbody>
</table>

**Notes:**
- Baseline and Last Reporting Period calculations are based on the VAP and CRD rates diagnosed after 7 days of admission. Process performance calculations based on the VAP and CRD rates diagnosed after 48 hours of admission.
- + indicates an increase in indicator value.
- - indicates a decrease in indicator value.
- Indicated no change since the last reporting period.

**Baseline:**
- Based on 2012-2013 fiscal year data for all indicators except Life or Death and Readmissions.

**Change from last reporting period:**
- Based on 2014-2015 fiscal year data for Life or Death and Readmissions indicators.

**Target Status:**
- Work in progress.
## Critical Care LHIN Scorecard: Quarterly Summary

**Q2 FY 2015/2016**

<table>
<thead>
<tr>
<th>DOMAIN</th>
<th>OBJECTIVE</th>
<th>PERFORMANCE MEASURE</th>
<th>BASELINE</th>
<th>LAST REPORTING PERIOD</th>
<th>CURRENT PERFORMANCE</th>
<th>CHANGE FROM LAST REPORTING PERIOD</th>
<th>TARGET</th>
<th>STATUS</th>
<th>DATA SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUALITY</td>
<td>Deliver Safe Care</td>
<td>VAP Rate (per 1000 cases %)‡</td>
<td>2.15</td>
<td>1.57</td>
<td>1.48</td>
<td>↓</td>
<td>-</td>
<td>-</td>
<td>CCIS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CLI Rate (per 1000 cases %)‡</td>
<td>0.98</td>
<td>0.68</td>
<td>0.65</td>
<td>↓</td>
<td>-</td>
<td>-</td>
<td>CCIS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICU Mortality Rate (%)</td>
<td>6.55</td>
<td>5.92</td>
<td>6.18</td>
<td>↑</td>
<td>-</td>
<td>-</td>
<td>CCIS</td>
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<tr>
<td></td>
<td></td>
<td>48 Hour Readmission Rate (%)</td>
<td>2.12</td>
<td>2.36</td>
<td>1.89</td>
<td>↓</td>
<td>-</td>
<td>-</td>
<td>CCIS</td>
</tr>
<tr>
<td>ACCESS</td>
<td>Provide Timely Care</td>
<td>Bed Occupancy Rate (%)</td>
<td>82.67</td>
<td>84.90</td>
<td>84.02</td>
<td>↓</td>
<td>-</td>
<td>-</td>
<td>CCIS</td>
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<tr>
<td></td>
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<td>Ventilated Patient Day Rate (%)</td>
<td>48.75</td>
<td>43.65</td>
<td>43.96</td>
<td>↑</td>
<td>-</td>
<td>-</td>
<td>CCIS</td>
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<tr>
<td></td>
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<td>Night Time Discharge Rate (%)</td>
<td>7.31</td>
<td>7.34</td>
<td>7.83</td>
<td>↑</td>
<td>-</td>
<td>-</td>
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<tr>
<td></td>
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<td>Avoidable Days Rate (%)</td>
<td>4.54</td>
<td>5.57</td>
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<td>↓</td>
<td>-</td>
<td>-</td>
<td>CCIS</td>
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<tr>
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<td>Life or Limb Confirmed Cases-Time to Arrival within 4 hours (%)</td>
<td>77.21</td>
<td>97.14</td>
<td>93.48</td>
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<tr>
<td>SYSTEM INTEGRATION</td>
<td>Optimize Patient Flow</td>
<td># Chronically Ventilated Patients &gt;21 Days</td>
<td>341</td>
<td>69</td>
<td>79</td>
<td>↑</td>
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<td>Admissions from Hospitals within LHIN (%)</td>
<td>4.13</td>
<td>3.34</td>
<td>3.63</td>
<td>↑</td>
<td>-</td>
<td>-</td>
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<tr>
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<td>Admissions from Hospitals outside LHIN (%)</td>
<td>6.43</td>
<td>5.41</td>
<td>5.39</td>
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<td>Discharges to Hospitals within LHIN (%)</td>
<td>3.06</td>
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<td>2.83</td>
<td>↑</td>
<td>-</td>
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<td>Discharges to Hospitals outside LHIN (%)</td>
<td>2.28</td>
<td>2.06</td>
<td>1.95</td>
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<td>Repatriation with No Delay Rate (%)</td>
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<td>52.63</td>
<td>34.48</td>
<td>↓</td>
<td>-</td>
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<td>CritiCall Ontario</td>
</tr>
</tbody>
</table>

**Baseline** Based on 2012-2013 fiscal year data for all indicators except Life or Limb and Repatriation.

**Change from last reporting period** Signals a change in the indicator from the last reporting period.

**Target/Status** Work in process.

- ‡ Baseline and Last Reporting Period calculations are based on the # VAP and CLI incidents diagnosed after day 2 of admission. Current performance calculation based on the # VAP and CLI incidents diagnosed after 48 hours of admission.

- Indicates no change since the last reporting period.

- Indicates a decrease in indicator value.

- Indicates an increase in indicator value.

**Generation Date:** 11/04/2014 12:29:40 PM

15 indicators; 6 shared with unit-level scorecard
# Critical Care Provincial Scorecard: Quarterly Summary

## Ontario

### Q2 2015/2016

<table>
<thead>
<tr>
<th>DOMAIN</th>
<th>OBJECTIVE</th>
<th>PERFORMANCE MEASURE</th>
<th>BASELINE</th>
<th>LAST REPORTING PERIOD</th>
<th>CHANGE FROM LAST REPORTING PERIOD</th>
<th>TARGET</th>
<th>STATUS</th>
<th>DATA SOURCE</th>
</tr>
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<tbody>
<tr>
<td><strong>QUALITY</strong></td>
<td>Help and Safe Care</td>
<td>Acute Respiratory Distress (per 1000 bed days)</td>
<td>116.35</td>
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<td>VAP Rate per 3000 bed days</td>
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<td>CBS</td>
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<td>CLABSI Rate per 1000 bed days</td>
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<td>0.40</td>
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<td>Infection Rate - Catheter related (per 1000 bed days)</td>
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<td>0.45</td>
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<td>-</td>
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<td>Hand Hygiene Compliance before patient contact (%) #</td>
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<td>82.84</td>
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<td><strong>Effectiveness</strong></td>
<td>Achieving Readmission Rate (%)</td>
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<td>95.90</td>
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<td>-</td>
<td>CBS</td>
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<tr>
<td></td>
<td>Reducing Error in Care</td>
<td>% Nurses with Clinical Care Training*</td>
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<td>59.32</td>
<td>59.32</td>
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<td>Hospital Data</td>
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<tr>
<td></td>
<td>Providing Timely Care</td>
<td>% Admission to Bed (minutes) in 99%tile</td>
<td>45.61</td>
<td>37.15</td>
<td>34.04</td>
<td>-</td>
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<td>S of Beds not Available</td>
<td>1.80</td>
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<td>1.54</td>
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<td>-</td>
<td>CBS</td>
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<td></td>
<td>No One Discharge Rate (%)</td>
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<td>9.02</td>
<td>8.54</td>
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<td>-</td>
<td>CBS</td>
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<tr>
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<td></td>
<td>% of Electrometrical Monitoring</td>
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<td>1.33</td>
<td>1.31</td>
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<td>% of Electrometrical Monitoring</td>
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<td>13.41</td>
<td>12.31</td>
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<td>-</td>
<td>TGI, NPI</td>
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### Note

- Base line and last reporting period values are from the last reporting period.
- Data provided for Ontario only.
- No indicators are available.
- The indicators for the province of Ontario will be updated regularly.
- Please refer to the full report for detailed information.

### Table Notes

- Change from last reporting period.
- Targets indicate the expected improvement from the last reporting period.
- Status indicates the current status of the indicator.

### Data Source

- CBS: Critical Care Scorecard
- Hospital Data
- TGI, NPI: Teaching General Internal, National Patient Index
## Critical Care Provincial Scorecard: Quarterly Summary

**Ontario**  
**Q2 2015/2016**

### Quality

<table>
<thead>
<tr>
<th>Domain</th>
<th>Objective</th>
<th>Performance Measure</th>
<th>Baseline</th>
<th>Last Reporting Period</th>
<th>Current Performance</th>
<th>Change from Last Reporting Period</th>
<th>Target</th>
<th>Status</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td>Deliver Safe Care</td>
<td>Antimicrobial Utilization (per 1000 bed-days)</td>
<td>816.35</td>
<td>861.98</td>
<td>865.67</td>
<td>↑</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>VAP Rate (per 1000 bed-days)</td>
<td>1.14</td>
<td>0.98</td>
<td>1.09</td>
<td>-</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>CLI Rate (per 1000 bed-days)</td>
<td>0.61</td>
<td>0.40</td>
<td>0.31</td>
<td>↓</td>
<td>-</td>
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<tr>
<td></td>
<td></td>
<td>Incident Rate - Unplanned Extubation (per 1000 bed-days)</td>
<td>2.68</td>
<td>2.05</td>
<td>2.45</td>
<td>↑</td>
<td>-</td>
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<tr>
<td></td>
<td></td>
<td>Hand Hygiene Compliance - before patient contact (%)</td>
<td>83.22</td>
<td>82.81</td>
<td>76.81</td>
<td>n/a</td>
<td>-</td>
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<td>Hospital Data</td>
</tr>
<tr>
<td></td>
<td>Deliver Effective Care</td>
<td>48 Hour Readmission Rate (%)</td>
<td>1.93</td>
<td>1.84</td>
<td>1.70</td>
<td>↓</td>
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<td>CCIS</td>
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<tr>
<td></td>
<td>Enhance Staff Competency</td>
<td>% Nurses with Critical Care Training*</td>
<td>62.08</td>
<td>58.32</td>
<td>59.32</td>
<td>n/a</td>
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<td>Hospital Data</td>
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### Access

<table>
<thead>
<tr>
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<th>Baseline</th>
<th>Last Reporting Period</th>
<th>Current Performance</th>
<th>Change from Last Reporting Period</th>
<th>Target</th>
<th>Status</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>Provide Timely Care</td>
<td>% Admission to Bed (within 90 minutes)*</td>
<td>45.61</td>
<td>39.15</td>
<td>34.04</td>
<td>n/a</td>
<td>-</td>
<td>-</td>
<td>Hospital Data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% of Beds not Available</td>
<td>1.80</td>
<td>0.96</td>
<td>1.54</td>
<td>↑</td>
<td>-</td>
<td>-</td>
<td>CCIS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Night-time Discharge Rate (%)</td>
<td>8.00</td>
<td>8.02</td>
<td>8.04</td>
<td>↑</td>
<td>-</td>
<td>-</td>
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### System Integration

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<th>Change from Last Reporting Period</th>
<th>Target</th>
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<tbody>
<tr>
<td>System Integration</td>
<td>Optimize Patient Flow</td>
<td>ICU Average Length of Stay (days)</td>
<td>4.05</td>
<td>3.97</td>
<td>3.98</td>
<td>↑</td>
<td>-</td>
<td>-</td>
<td>CCIS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Avoidable Days Rate (%)</td>
<td>6.74</td>
<td>7.58</td>
<td>7.64</td>
<td>↑</td>
<td>-</td>
<td>-</td>
<td>CCIS</td>
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<tr>
<td></td>
<td></td>
<td># Chronically Ventilated Patients &gt;21 Days</td>
<td>1319</td>
<td>343</td>
<td>321</td>
<td>↑</td>
<td>-</td>
<td>-</td>
<td>CCIS</td>
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### Facilitate Potential Organ Donation

<table>
<thead>
<tr>
<th>Domain</th>
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<th>Performance Measure</th>
<th>Baseline</th>
<th>Last Reporting Period</th>
<th>Current Performance</th>
<th>Change from Last Reporting Period</th>
<th>Target</th>
<th>Status</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Facilitate Potential Organ donation</td>
<td>Conversion Rate for Deceased Organ Donation (%)</td>
<td>51.00</td>
<td>49.00***</td>
<td>55.00***</td>
<td>↑</td>
<td>-</td>
<td>-</td>
<td>TGLN**</td>
</tr>
</tbody>
</table>

### Baseline

- Baseline data is based on 2012-13 fiscal year data for quarterly indicators except Antimicrobial Utilization and Conversion Rate for Deceased Organ Donation.
- Baseline data is also based on 2013-14 fiscal year data for quarterly indicators: Antimicrobial Utilization and Conversion Rate for Deceased Organ Donation.

### Change from Last Reporting Period

- Indicates a change in the indicator from the last reporting period.
- Indicates no change since the last reporting period.
- Indicates an increase in indicator value since the last reporting period.

### Target/Status

- Work in progress.

---

n/a Not available  
* Annual hospital reported indicators  
** Data presented for the Organ Donor indicator has a one quarter lag time  
† Baseline and Last Reporting Period calculations based on the # VAP and CLI incidents diagnosed after day 2 of admission. Current performance calculation based on the # VAP and CLI incidents diagnosed after 48 hours of admission.
run charts
scorecards for specialty programs

Enables understanding of successes and gaps within the system
affirms the commitment to quality improvement initiatives for enhanced performance and positive patient outcomes

neurosurgery

trauma

paediatrics
(in draft form)

burns
(in draft form)

reducing redundancy & aligning with existing programs
in some programs, CQI approach eliminated existing forms and data collection
also reduced duration of data collection for the field
Enables understanding of successes and gaps within the system

affirms the commitment to quality improvement initiatives for enhanced performance and positive patient outcomes

reducing redundancy & aligning with existing programs

in some programs, CCSO adopted
reducing redundancy & aligning with existing programs

in some programs, CCSO adopted existing benchmarks and data definitions

this also reduced the burden of data collection for the field
# Draft Neurosurgery Provincial Level Scorecard

## Quarterly Summary

### Adult Neurosurgery Scorecard: Quarterly Summary

#### Q3 FY2014/2015

<table>
<thead>
<tr>
<th>DOMAIN</th>
<th>OBJECTIVE</th>
<th>PATIENT POPULATION</th>
<th>PERFORMANCE MEASURE</th>
<th>Baseline (2011/2012)</th>
<th>Last Reporting Period</th>
<th>Q3 2014/2015</th>
<th>Change from Q2</th>
<th>Target</th>
<th>Status</th>
<th>Data Source</th>
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</thead>
<tbody>
<tr>
<td>ACCESS</td>
<td>Provide Timely Care</td>
<td>Inpatient</td>
<td>R-A1. 90th Percentile Wait Time for Inpatient Neurosurgery Rehabilitation Care</td>
<td>TBD</td>
<td>&quot;9&quot;</td>
<td>&quot;11&quot;</td>
<td>↑</td>
<td>TBD</td>
<td>-</td>
<td>NRS</td>
</tr>
<tr>
<td>QUALITY</td>
<td>Deliver Effective Care</td>
<td>Acute Inpatient</td>
<td>* A-Q2. Actual to Expected Acute Neurosurgical Length of Stay</td>
<td>0.96</td>
<td>0.99</td>
<td>0.98</td>
<td>↓</td>
<td>1.0</td>
<td>-</td>
<td>DAD</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>A-Q2. Unplanned Neurosurgical Readmission Rate within 30 Days for Any Reason to Any Hospital</td>
<td>7.8%</td>
<td>** 7.8%</td>
<td>*** 8.4%</td>
<td>↑</td>
<td>~7.0%</td>
<td>-</td>
<td>DAD</td>
</tr>
<tr>
<td>RESPONSIVENESS</td>
<td>Optimize Patient Flow</td>
<td>Acute Inpatient</td>
<td>A-R2. Percent ALC Length of Stay Neurosurgical Days</td>
<td>12.0%</td>
<td>10.0%</td>
<td>9.1%</td>
<td>↓</td>
<td>~9.4%</td>
<td>-</td>
<td>DAD</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>A-R1. Percent Days Waiting for Inpatient Neurosurgery Rehabilitation Discharge</td>
<td>TBD</td>
<td>&quot;5.1%&quot;</td>
<td>&quot;4.6%&quot;</td>
<td>↓</td>
<td>TBD</td>
<td>-</td>
<td>NRS</td>
</tr>
<tr>
<td>ACCOUNTABILITY</td>
<td>Assess Impact of System Investments</td>
<td>Acute Inpatient</td>
<td>R-AC1. Inpatient Neurosurgery Rehabilitation Cases</td>
<td>TBD</td>
<td>&quot;912&quot;</td>
<td>&quot;1385&quot;</td>
<td>N/A</td>
<td>TBD</td>
<td>-</td>
<td>NRS</td>
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#### Q4 FY2014/2015

<table>
<thead>
<tr>
<th>DOMAIN</th>
<th>OBJECTIVE</th>
<th>PATIENT POPULATION</th>
<th>PERFORMANCE MEASURE</th>
<th>Baseline (2011/2012)</th>
<th>Last Reporting Period</th>
<th>Q4 2014/2015</th>
<th>Change from Q3</th>
<th>Target</th>
<th>Status</th>
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<tbody>
<tr>
<td>ACCESS</td>
<td>Provide Timely Care</td>
<td>Acute Inpatient</td>
<td>A-A2b. Percent Neurosurgical Cases Completed within Priority Level 3 Wait Time Target</td>
<td>75.6%</td>
<td>79.6%</td>
<td>81.2%</td>
<td>↑</td>
<td>90.0%</td>
<td>-</td>
<td>WTS, CCO</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>A-A2c. Percent Neurosurgical Cases Completed within Priority Level 4 Wait Time Target</td>
<td>85.5%</td>
<td>91.5%</td>
<td>93.5%</td>
<td>↑</td>
<td>90.0%</td>
<td>-</td>
<td>WTS, CCO</td>
</tr>
<tr>
<td>RESPONSIVENESS</td>
<td>Optimize Patient Flow</td>
<td>Acute Inpatient</td>
<td>A-R1a. CritiCall R1 Neurosurgical Acceptance Rate</td>
<td>** 76.2%</td>
<td>77.2%</td>
<td>78.5%</td>
<td>↑</td>
<td>90.0%</td>
<td>-</td>
<td>CritiCall</td>
</tr>
<tr>
<td>ACCOUNTABILITY</td>
<td>Assess Impact of System Investments</td>
<td>Acute Inpatient</td>
<td>** A-AC1. Epilepsy Vagal Nerve Stimulation Volume (Adult and Paediatric)</td>
<td>0</td>
<td>&quot;20&quot;</td>
<td>&quot;38&quot;</td>
<td>N/A</td>
<td>N/A</td>
<td>-</td>
<td>Surgical / OR System</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>** A-AC2. Epilepsy Surgery Volume (Adult and Paediatric)</td>
<td>143</td>
<td>&quot;126&quot;</td>
<td>&quot;196&quot;</td>
<td>N/A</td>
<td>N/A</td>
<td>-</td>
<td>Surgical / OR System</td>
</tr>
</tbody>
</table>

| Baseline       | Based on 2011/2012 fiscal year data |
| Change from    | Indicates a upward trend / an increase in indicator value |
| Status         | Indicates no change in trend |
| Target         | Please refer to the indicator Guide for target information by indicator |

N/A: Not Available

* CMG+ Group Year = 2014

* Baseline is FY2012/13 data.

* Baseline (for FY2012/13); annual target (for reconciliation purposes) are set by MOH. The indicators are combined paediatric and adult for LHSC, HSC, and UHN.

* Quarterly Year-to-Date data

* Annual reporting for FY2012/13

* Annual reporting for FY2013/14

* Target updated, based on 10% improvement of last fiscal year's overall performance (FY1213)

* Target updated, based on 10% improvement of last fiscal year's overall performance (FY1314)
trauma
# Ontario Trauma Advisory Committee (OTAC)

## REPORTING PERIOD Q1 2015-2016

<table>
<thead>
<tr>
<th>Domain</th>
<th>Objective</th>
<th>Performance Measure</th>
<th>Baseline (Year Average)</th>
<th>Last Reporting Period</th>
<th>Current Performance</th>
<th>Change from Last Reporting Period</th>
<th>Target</th>
<th>Status</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>QUALITY</strong></td>
<td>Deliver Safe and Effective Care</td>
<td>Rate of Unplanned Returns to the Operating Room</td>
<td>***</td>
<td>0.0%*</td>
<td>N/R</td>
<td>0%</td>
<td>TBD</td>
<td>Hospital</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Quality Care Bundle – Reporting Indicators</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Time to Operating Room for Long Bone Open Fracture (% of cases ≤ 8 hours)</td>
<td>***</td>
<td>100.0%*</td>
<td>N/R</td>
<td>75%</td>
<td>TBD</td>
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<tr>
<td><strong>ACCESS</strong></td>
<td>Provide Timely Care</td>
<td>TTL Response Time to Bedside (≤ 20 minutes)</td>
<td>***</td>
<td>100.0%*</td>
<td>N/R</td>
<td>90%</td>
<td>TBD</td>
<td>Hospital</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>TTL Response Time to Phone (in minutes)</td>
<td>***</td>
<td>5.0</td>
<td>3.8</td>
<td>4 minutes</td>
<td>TBD</td>
<td>CritiCal</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Referring Hospital Time to Transport (≤ 3 hours 90%)</td>
<td>***</td>
<td>70.0%*</td>
<td>N/R</td>
<td>90%</td>
<td>TBD</td>
<td>Hospital</td>
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</tr>
<tr>
<td><strong>SYSTEM INTEGRATION</strong></td>
<td>Optimize Patient Flow</td>
<td>% Acceptance Rate R1 Transfers</td>
<td>***</td>
<td>100.0%*</td>
<td>80%*</td>
<td>100%</td>
<td>TBD</td>
<td>CritiCal</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>% Acceptance Rate R2-4 Transfers</td>
<td>***</td>
<td>100.0%*</td>
<td>100.0%*</td>
<td></td>
<td>TBD</td>
<td>CritiCal</td>
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## REPORTING PERIOD Q1 2015-2016

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<th>Target</th>
<th>Status</th>
<th>Data Source</th>
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<td><strong>QUALITY</strong></td>
<td>Deliver Safe and Effective Care</td>
<td>Rate of Unplanned Returns to the Operating Room</td>
<td>***</td>
<td>4.3%*</td>
<td>4.0%*</td>
<td>0%</td>
<td>TBD</td>
<td>Hospital</td>
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<td></td>
<td>Quality Care Bundle – Reporting Indicators</td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
<td>Time to Operating Room for Long Bone Open Fracture (% of cases ≤ 8 hours)</td>
<td>***</td>
<td>88.9%</td>
<td>70.0%</td>
<td>75%</td>
<td>TBD</td>
<td>Hospital</td>
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<tr>
<td><strong>ACCESS</strong></td>
<td>Provide Timely Care</td>
<td>TTL Response Time to Bedside (≤ 20 minutes)</td>
<td>***</td>
<td>100.0%</td>
<td>100.0%</td>
<td>90%</td>
<td>TBD</td>
<td>Hospital</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>TTL Response Time to Phone (in minutes)</td>
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<td>3.3</td>
<td>3.7</td>
<td>4 minutes</td>
<td>TBD</td>
<td>CritiCal</td>
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<td></td>
<td></td>
<td>Referring Hospital Time to Transport (≤ 3 hours 90%)</td>
<td>***</td>
<td>39.4%</td>
<td>51.4%</td>
<td>90%</td>
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<td><strong>SYSTEM INTEGRATION</strong></td>
<td>Optimize Patient Flow</td>
<td>% Acceptance Rate R1 Transfers</td>
<td>***</td>
<td>93.3%</td>
<td>93.2%</td>
<td>100%</td>
<td>TBD</td>
<td>CritiCal</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>% Acceptance Rate R2-4 Transfers</td>
<td>***</td>
<td>100.0%*</td>
<td>100.0%*</td>
<td></td>
<td>TBD</td>
<td>CritiCal</td>
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<td><strong>QUALITY</strong></td>
<td>Deliver Safe and Effective Care</td>
<td>Rate of Unplanned Returns to the Operating Room</td>
<td>***</td>
<td>6.5%</td>
<td>6.8%</td>
<td>0%</td>
<td>TBD</td>
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<td>Quality Care Bundle – Reporting Indicators</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Time to Operating Room for Long Bone Open Fracture (% of cases ≤ 8 hours)</td>
<td>***</td>
<td>75.0%*</td>
<td>66.7%</td>
<td>75%</td>
<td>TBD</td>
<td>Hospital</td>
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<tr>
<td><strong>ACCESS</strong></td>
<td>Provide Timely Care</td>
<td>TTL Response Time to Bedside (≤ 20 minutes)</td>
<td>***</td>
<td>53.7%</td>
<td>64.1%</td>
<td>90%</td>
<td>TBD</td>
<td>Hospital</td>
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<tr>
<td></td>
<td></td>
<td>TTL Response Time to Phone (in minutes)</td>
<td>***</td>
<td>3.8</td>
<td>3.4</td>
<td>4 minutes</td>
<td>TBD</td>
<td>CritiCal</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Referring Hospital Time to Transport (≤ 3 hours 90%)</td>
<td>***</td>
<td>48.0%</td>
<td>48.8%</td>
<td>90%</td>
<td>TBD</td>
<td>Hospital</td>
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</tr>
<tr>
<td><strong>SYSTEM INTEGRATION</strong></td>
<td>Optimize Patient Flow</td>
<td>% Acceptance Rate R1 Transfers</td>
<td>***</td>
<td>97.9%</td>
<td>98.6%</td>
<td>100%</td>
<td>TBD</td>
<td>CritiCal</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>% Acceptance Rate R2-4 Transfers</td>
<td>***</td>
<td>100.0%*</td>
<td>0%*</td>
<td></td>
<td>TBD</td>
<td>CritiCal</td>
<td></td>
</tr>
</tbody>
</table>
burns
(in draft form)
paediatrics

(in draft form)
CritiCall Ontario

a key partner

responsible for housing & managing CCIS, data entry, technology, privacy and security of health information

facilitating physician consultation

& monitoring status of acute care beds in real time

case facilitation reporting

supporting quality initiatives
facilitating physician consultation

& monitoring status of acute care beds in real time
case facilitation reporting

hospitals

health regions

province
supporting quality initiatives
performance measurement system process at CCSO

identify a need for information

develop a reporting mechanism

identify a data source

key characteristics of success

relevant

evidence-based

collaborative

responsive

bring experts together

select indicators or metrics

identify targets

adaptable
identify a need for information
identify a data source
bring experts together
select indicators or metrics
identify targets
develop a reporting mechanism
performance measurement system process at CCSO

identify a need for information

identify a data source

develop a reporting mechanism

select indicators or metrics

identify targets

bring experts together

key characteristics of success

evidence-based

relevant

responsive

collaborative

adaptable

what's the measurement?
a multi-pronged approach to developing a performance measurement system, that:

- measures performance at the unit and system level
- enables CCSO to provide leadership for an accessible, high-quality, integrated, and valuable critical care system
- is dynamic and continually evolving
evidence-based

literature reviews
- extensively conducted prior to every step of development
- academic, grey, and journal literature

jurisdictional scans
- reviewing evidence from systems in other provinces and countries

evaluation
- CCSO is committed to evaluating its initiatives
  e.g. recent evaluation of CCIS in 2014
  - identified opportunities for improvement in the system and methods of data collection
  - will inform future enhancements to CCIS

comprehensive reporting
- use of data triangulation ensures that policy decisions are truly evidence-based

supporting research
- supporting research (e.g., quality improvement) that uses CCIS data
- CCSO requests questions that are relevant to using CCIS and other health administrative data
literature reviews

extensively conducted prior to every step of development

includes:
- academic literature
- grey literature (government reports and media releases)
jurisdictional scans

reviewing evidence from systems in other provinces and countries
CCSO is committed to evaluating its initiatives

e.g. recent evaluation of CCIS in 2014

- identified opportunities for improvement in the system and methods of data collection
- will inform future enhancements to CCIS
comprehensive reporting

use of data triangulation ensures that policy decisions are truly evidence-based
supporting research

• supporting research (and quality improvement) that uses CCIS data

• CCSO research questions that are answered using CCIS and other health administration data
collaborative

continuous engagement with advisory panels and experts
- defining and including regions
- starting hospital and health system work
- engaging with measuring progress

close working relationship with CritiCall Ontario

support of broader provincial initiatives
- e.g., organ donation rates

partner with external programs and organizations for data
especially in specialty programs, multiple data sources enable a more robust, comprehensive report
specialty program reports are the result of a true collaborative effort from CCSO and partners
continuous engagement with advisory panels and experts

- defining and shaping reports
- ensuring hospital and health service provider engagement with reviewing reports

regional committees

provincial, profession-based committees

provincial, program-based committees
close working relationship with CritiCall Ontario
partner with external programs and organizations for data

especially in specialty programs, multiple data sources enable a more robust, comprehensive report

specialty program reports are the result of a true collaborative effort from CCSO and partners
support of broader provincial initiatives

e.g. organ donation rates
relevant

enabled by:

use of committees
enables performance measurement to stay relevant to current critical care practices
- e.g. efforts to curb antimicrobial use

use of peer groups
enables cross-patient data to compare performance across all hospitals and improve with exposure

supporting hospital decision support
- e.g. some hospitals have stopped using alarm
- performance measurement systems to inform critical care
- administrative decision-making

reporting used by the Government of Ontario
use reporting to:
- inform capacity review
- guide investments
- inform capacity planning
use of committees

enables performance measurement to stay relevant to current critical care practices

e.g. efforts to curb antimicrobial use
use of peer groups enables critical care units to compare performance to peers with similar patient populations and resources sustains improvement by fostering a sense of competition
evidenced by:

supporting hospital decision support

E.g. some hospitals have stopped using alternate performance measurement systems to inform critical care administrative decision-making

reporting used by the Government of Ontario use reporting to:

- inform capacity review
- guide investments
- inform capacity planning
reporting used by the Government of Ontario

use reporting to:

- inform capacity review
- guide investments
- inform capacity planning
responsive

stakeholder feedback

implementation of new policies and programs

- e.g. the Provincial Life or Limb Policy mandates that all patients who are life or limb threatened must reach a definitive point of care in 4 hours
  - Performance measurement system added two metrics related to the policy to the regional scorecards
  - This drives performance management for this policy at the regional level

quick response to evaluation results

- data quality audit revealed an opportunity for improvement in collection of Multi-Organ Dysfunction Score (MODS)
  - subsequent changes were made to improve the accuracy of data collection for MODS
stakeholder feedback

requests for additional metrics

- e.g. addition of antimicrobial and influenza-like illness indicators
  - Data is shared with Public Health Ontario and informs provincial pandemic planning and emergency preparedness development

- e.g. addition of organ donation rates
  - aligns with organ donation initiative managed by another Government of Ontario program

shift from:
anonymous comparisons of aggregate data
hospital-specific data
shift from:

anonymous comparisons of aggregate data

hospital-specific data
requests for additional metrics

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quick response to evaluation results

data quality audit revealed an opportunity for improvement in collection of Multi-Organ Dysfunction Score (MODS)

subsequent changes were made to improve the accuracy of data collection for MODS
adaptable

this model has been adapted to suit a wide variety of program areas that are overseen by CCSO, namely in neurosurgery, trauma, burns, and paediatrics

this process is adaptable to the development of systems for any purpose

information from the system is able to drive quality improvement at multiple levels

unit → hospital site → hospital corporation → health region → province
performance measurement system process at CCSO

identify a need for information
identify a data source
bring experts together
select indicators or metrics
identify targets
develop a reporting mechanism

key characteristics of success

- evidence-based
- collaborative
- relevant
- responsive
- adaptable

what's the measurement?
results: a track record of success

CCSO frequently fields requests from the Government of Ontario to take on projects and program areas that reside outside the scope of critical care

- Epilepsy
- Ehlers-Danlos Syndrome
- Quality-based Procedure (case costing) for low back pain
- Provincial patient flow
where do we go from here?

what's next in performance measurement

**evaluation**
- Turn attention to whether CCSO measures and reports the right indicators
- A continuous process; CCSO will continue to use established processes to ensure indicators are relevant to the field

**high-reliability**
- Identify areas where the system is not delivering consistent and reliable results
- Enhance the system and process to ensure reliable, consistent quality delivery

**benchmarks and target-setting**
- Continue to collaborate with health service providers to ensure that benchmarks and targets are relevant
- Understand best practices in target setting and benchmark setting
- Identify areas where it is appropriate to design for zero

**data quality**
- In collaboration with Criticalt teams, continue to:
  - Ensure data entry for clinicians
  - Validate data quality
  - Enhance indicators and metrics
  - Improve data throughput

CCSO has an ongoing commitment to data quality through data quality audits and feedback to the field through communication and education initiatives

CCSO: from measurement to management

**Performance Management: Provincial Life or Limb Policy**
- A policy that is in place to ensure that performance is monitored and managed
- Results: Improved performance and better outcomes for patients
- Strengthened accountability in the policies and processes

**strengthening accountability through committee structures**
- Regional committees
  - Lead local implementation
  - Ensure that performance measurement and improvement strategies are integrated

**review mechanisms for using performance as a determinant of funding**
- Critical care physicians
  - Nurse executives
  - Provincial committees for health professions
  - Joint meetings
  - CCBO will look at these mechanisms to support better performance measurement and improved outcomes for patients
What's next in performance measurement

Evaluation
- Turn attention to whether CCSO measures and reports the right indicators.
- A continuous process; CCSO will continue to use established processes to ensure indicators are relevant to the field.
- Embark on an evaluation of overall results over 2-3 years of data collection.
- Identify long-term trends and whether performance measurement has led to improvement.

High-reliability
- Value what is reliably available and practice using it in situations where it is relevant.
- Continuously monitor performance on measures and data from various sources.
- Minimize the possibility of error in indicators by ensuring accuracy and completeness.
- Establish a system for regular reviews of reliability.
evaluation

turn attention to whether CCSO measures and reports the right indicators

- a continuous process; CCSO will continue to use established processes to ensure indicators are relevant to the field

embark on an evaluation of overall results over 2-3 years of data collection

- identify long-term trends and whether performance measurement has led to improvement
high-reliability

• move to adopt a high reliability mindset and explore aligning reporting structures with the principles of highly reliable organizations

• examine the way metrics are worded and align with “Safety-II”

• explore the possible separation of indicators for safety and quality – and what that will mean for the reporting structures
benchmarks and target-setting

- continue to collaborate with health service providers to ensure that benchmarks and targets are relevant
- understand best practices in target-setting and benchmark development
- identify areas where it is appropriate to design for zero
data quality

in collaboration with CritiCall Ontario, continue to:

- streamline data entry for clinicians
- improve data quality
- enhance indicators and metrics
- ensure data relevance

CCSO has an ongoing commitment to data quality through data quality audits and feedback to the field through communication and education initiatives
Performance Management: Provincial Life or Limb Policy

Results: Decrease from 70 to 20 case reviews per quarter, over 15 months (5 quarters)

Success: aligning feedback reporting with performance expectations
using information to drive improvements in patient care

Using information obtained through the performance measurement system, CCSO reviews cases that do not meet policy criteria on a quarterly basis.

strengthened accountability in the critical care system

- continue to foster links between quality improvement initiatives and performance reporting measures and indicators at all levels
- identify best practices from across the province
- create opportunities for scale and spread of best practice
Life or Limb Performance 2014-2015

Criteria for Life or Limb Policy Monitoring:
- There was no response from on call physician in 20 minutes
- The on call physician provided a consultation, but was unable to accept the patient transfer
- The physician declined to provide consultation for a provisional life or limb case
- No MD on Call for specific service

CritiCall
Total responses received by CritiCall and CCSO: 128 responses
233 reviewed cases 54.9%

103 responses received
233 reviewed cases (44.2%)

Response received from Chief of Staff?

Yes
Case closed

No
233 reviewed cases 11656 declared cases (2.0%)

130 escalated cases
233 reviewed cases (55.8%)

Sends escalation letter to Chief of Staff (COS) inquiring about the case

Response received from COS with case findings?

Yes
Case closed

No
Sends letters to LHIN CEOs summarizing Q performance

Critical Care Services Ontario
63 case responses received
130 escalated cases (48.5%)

LHINs
Remaining open cases:
105 open cases
233 reviewed cases 45.1%

Receives reports and reviews hospital performance with Hospital CEOs, Critical Care LHIN Leader, and CCSO
Performance Management: Provincial Life or Limb Policy

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strengthening accountability through committee structures

regional committees
- recently formalized
- will drive the implementation of a newly developed Critical Care Strategic Plan for the years 2015-2018

provincial committees for health professions
- critical care physicians
  - regional representation
  - regional physicians leverage critical care physicians with localized experience and clinical practice
- nurse executives
  - nurse executives from across the province
  - operational guidance and implementation support

joint meetings
facilitating interprofessional collaboration

CCSO will look to these committees to support better links between performance measures and patient outcomes & experience
provincial committees for health professions

- critical care physicians
  - regional representation
  - regional physician leaders are critical care physicians with localized experience and clinical practice

- nurse executives
  - nurse executives from across the province
  - operational guidance and implementation support

joint meetings
facilitating interprofessional collaboration

Look to these for better links and performance measures
critical care physicians

- regional representation

- regional physician leaders are critical care physicians with localized experience and clinical practice
nurse executives

- nurse executives from across the province
- operational guidance and implementation support
Joint meetings facilitating interprofessional collaboration

- Operational guidance and support

Physician leaders are critical care with localized experience and advice.
regional committees

- recently formalized
- will drive the implementation of a newly developed Critical Care Strategic Plan for the years 2015-2018
CCSO will look to these committees to support better links between performance measures and patient outcomes & experience.
strengthening accountability through committee structures

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facilitating interprofessional collaboration

CCSO will look to these committees to support better links between performance measures and patient outcomes & experience

for using...
review mechanisms for using performance as a determinant of funding
Performance Measurement to Sustain Improvement

Dr. Bernard Lawless, Provincial Lead, Critical Care & Trauma
Linda Kostrzewa, Director, Critical Care Services Ontario

performance measurement system process at CCSO

- identify a need for information
- develop a reporting mechanism
- select indicators or metrics
- bring experts together
- select outcomes or measures
- collaborator
- key characteristics of success
- relevant
- responsive
- adaptable
- identify targets
- bring experts together
- what's next in performance measurement?
- CCSO: from measurement to management

results: a track record of success
CCSO recognizes that it takes much more than measurement to drive improvement, which is why the CCSO has developed a comprehensive suite of tools and resources to support Critical Care Services across Ontario.

- Palliative
- Elective General Support
- Quality-based Procedure (case closing for low risk patients)
- Provider patient flow

CCSO Critical Care Services Ontario
www.criticalcareontario.ca

SOSMPCs Services ontariens des soins aux malades en phase critique

