

Overview

Critical Care Information System (CCIS)

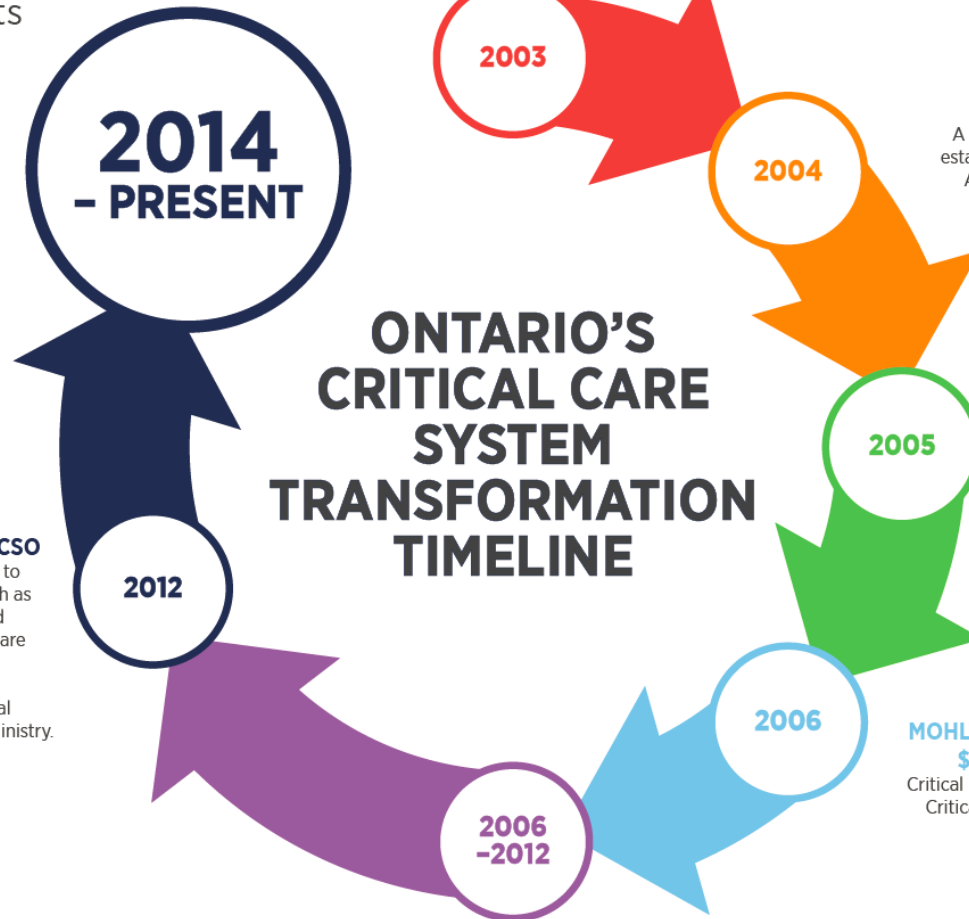
23 March, 2020

CCSO Critical Care Services Ontario

Evolution of CCIS

CCSO leading improvements and system innovation in critical care

Transformation to CCSO
The Secretariat expanded to incorporate programs such as Neurosurgery, Trauma and Burns, Paediatric critical care and Chronic Ventilation. The evolution of CCSO is supported by the Proficnial Programs Branch at the Ministry.



SARS highlighted the need to improve Ontario's critical care system to better respond to sudden surges in demand.

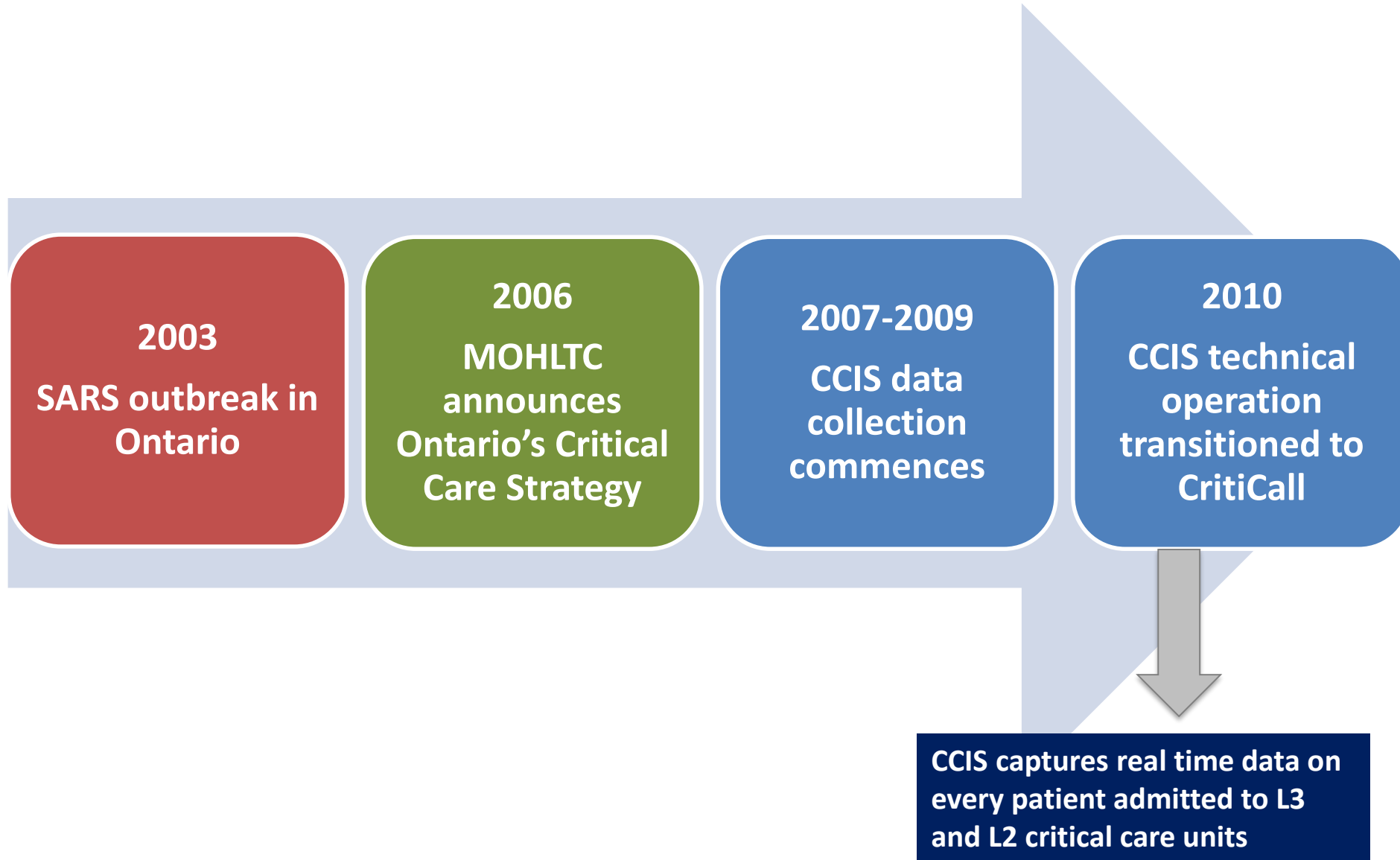
MOHLTC began a formal review of adult critical care services in Ontario. A Steering Committee was established to study Access, Accountability, HR, Surge Capacity and New Technologies.

Steering Committee report published with recommendations to improve the quality and efficiency of adult critical care services in Ontario.

MOHLTC announced \$90 Million for a Critical Care Strategy. The Critical Care Secretariat was established.

The Critical Care Secretariat played an important role in developing the initiatives under Ontario's Critical Care Strategy.

CCIS Background



CCSO and CritiCall Ontario

CCSO

- Provides strategic oversight related to CCIS initiatives and enhancements
- Responsible for data quality and hospital accountability related to data entry
- Responsible for keeping inventory updated in CCIS
- Uses CCIS data for performance improvement, to inform capacity planning, capacity investment, and system improvements
- Uses CCIS critical care occupancy data in managing critical care moderate surge process

CritiCall Ontario

- Houses the CCIS application and provides technical support for CCIS users
- Ensures compliance with privacy legislation and holds data sharing agreements with hospitals entering data into CCIS
- Implements enhancements and technical upgrades to the system
- Produces CCIS reports in collaboration with CCSO and facilitates moderate surge
- Provides training and education to the CCIS users

CCIS Architecture Includes Five Key Aspects

CCRT &
PCCRT

1. **Web based data repository**

For collection of data submitted by hospitals

Patient Admission & Discharge
Life Support Intervention (LSI)
Outcomes (VAP/CLI)
Severity of Illness (MODs)

5. **On-line document library**

Stores relevant guides and training materials

2. **A bed availability dashboard**

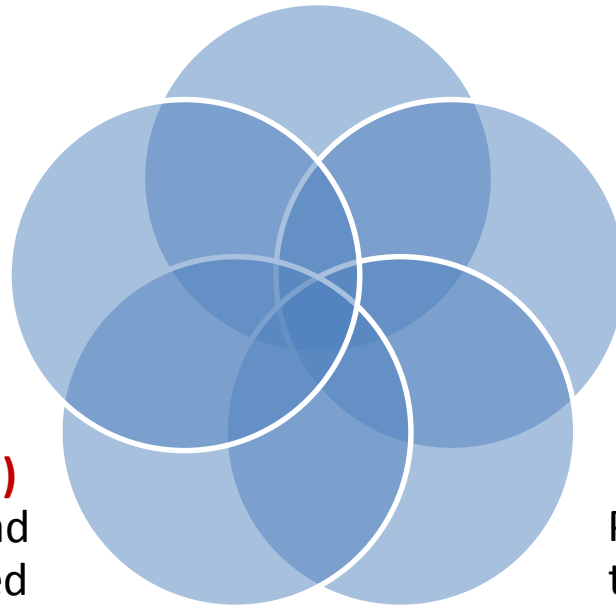
Providing information on bed occupancy

4. **Core Data Export (CDE)**

– Allows users to download data that has been entered in CCIS for additional analysis

3. **Reports Portal**

Pre-defined reports that CCIS users can access to trend and compare data



In addition, Quarterly & Scorecard Reports are disseminated to all CC units every quarter

Key Features of CCIS

- Is integral to the Critical Care Strategy
- It captures near real time data on every patient admitted to Level 3 and Level 2 critical care units in the province
- It supports the information needs of the critical care system and helps monitor critical care capacity in the province
- It provides data to support decision-making about
 - ✓ Performance improvement
 - ✓ Resource utilization
 - ✓ Capacity planning
 - ✓ Forecasting and strategic planning

Data Captured in CCIS

Patient Demographics *e.g. Patient name / MRN / Date of Birth / Gender*

Admission/ Discharge Information *e.g. Admission Source , Date and time , Discharge Destination, Awaiting Transfer*

Life Support Interventions (LSI) *e.g. Ventilation Note: NEMS value is calculated from LSI data.*

Outcomes *e.g. VAP/CLI incidence, Unplanned Extubation*

Multiple Organ Dysfunction Score (MODS) / Paediatric Logistic Organ Dysfunction (PELOD) For under 18yrs
e.g. Neurological: Glasgow Coma Score (Eye + Verbal + Motor Response)

Antimicrobial Indicators *e.g. Number of different Antibacterial / Antifungal Therapies , C. Diff incidents*

CCRT / PCCRT *e.g. New Consult , Follow-Up Consult , Monthly Statistics (# deaths and #admissions)*

Bed Availability Dashboard *e.g. occupancy rates, reserved beds, Not Available Beds (reasons)*

New Enhancement: COVID-19 Data in CCIS

- Critical Care Services Ontario (CCSO) in collaboration with CritiCall Ontario, enhanced the provincial Critical Care Information System (CCIS) to capture COVID-19 specific data elements
- As of March 19, 2020, all critical care Level 2 and Level 3 units are able to enter COVID-19 data in CCIS on admission and at any time during the patient's ICU stay.
- The capture of near real time information on the COVID-19 status of patients admitted to Ontario critical care units will facilitate monitoring the incidence and trend over time of COVID-19 in this patient population
- CCSO will use the data to develop dashboards to provide hospitals, regions and provincial leadership with information pertinent to COVID-19 activity in critical care, and to inform responsive system planning and address any emerging pressures in critical care capacity

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