



**CorHealth
Ontario**

*Advancing cardiac, stroke
and vascular care*

Sharing Best Practices

Timely Access to Reperfusion
Therapy for STEMI in Ontario



CorHealth Ontario

As of June 22, 2017, we are CorHealth Ontario, an organization formed by the merger of the Cardiac Care Network of Ontario and the Ontario Stroke Network, with an expanded mandate spanning cardiac, stroke and vascular through the entire course of care including secondary prevention, rehabilitation and recovery. CorHealth Ontario proudly advises the Ministry of Health and Long Term Care (MOHLTC), Local Health Integration Networks (LHINs), hospitals, and care providers to improve the quality, efficiency, accessibility and equity of cardiac, stroke and vascular services for patients across Ontario. For more information, visit corhealthontario.ca.

Sharing Best Practices: Timely Access to Reperfusion Therapy for STEMI in Ontario

Introduction

Quality Performance Measurement & Monitoring (QPMM) Cycle

As part of CorHealth Ontario's new strategic plan, a key strategic direction established for the organization is to measure and report on quality and outcomes for cardiac, stroke and vascular care. As a first step towards this strategic direction, in the fall of 2017, CorHealth initiated a Quality Performance Measurement & Monitoring (QPMM) Cycle with all cardiac programs, the MOHLTC, and LHINs to provide a platform for regular measuring and monitoring of quality metrics for cardiac care across the province. The goal of the QPMM Cycle is to ensure that patients receive high quality cardiac care regardless of where they live, and where they access care.

The QPMM Quality Scorecard is used as a tool for guiding quality improvement discussions. In 2017/18, the scorecard featured two processes as its indicators for quality: *Timely Access to Reperfusion Therapy for ST-Elevation Myocardial Infarction (STEMI)*, and *Appropriate use of Diagnostic Cardiac Catheterization (Cath)*. These services were selected as part of the initial QPMM scorecard because they have been identified as provincial priorities or areas that require system improvement, and are involved in ongoing quality improvement initiatives currently underway. The selection of these two cardiac quality indicators were developed in consultation with CorHealth's clinical working groups, Clinical Council, LHINs and the MOHLTC.

Background

Identifying Best Practices for Timely Access to Reperfusion Therapy for STEMI in Ontario

Timely reperfusion therapy is the most important determinant of better outcomes, including reduced morbidity and mortality, for patients suffering an ST-segment elevation myocardial infarction (STEMI). Current guidelines for timely reperfusion recommend: first medical contact-to-balloon time be within 90 minutes for patients presenting to a PCI-capable hospital; 120 min for patients presenting to a non-PCI-capable hospital; and door-to-needle time within 30 minutes for Fibrinolysis.

CorHealth Ontario established the Ontario STEMI Network comprised of a diverse group of key stakeholders to address variations and to standardize STEMI care across the province of Ontario. In 2013, CorHealth published the *Recommendations for Best-Practice STEMI Management in Ontario*, which outlines several goals for STEMI care in Ontario in alignment with current guidelines. To support the implementation of these recommendations, two new protocols were implemented in February 2016: the Ontario STEMI Bypass Protocol for patients calling 911; and the Ontario Emergency Department (ED) STEMI Protocol for patients presenting to an ED. In addition, CorHealth began to report STEMI performance targets through the *LHIN level STEMI Quarterly Performance Measurement Reports*.




QPMM and STEMI

Building off of the work of the Ontario STEMI Network, *Timely Access to Reperfusion Therapy for STEMI* was included in the Quality Scorecard as part of the QPMM Cycle.





In the fall of 2017, the first Quarterly QPMM meetings took place, where STEMI programs highlighted achievements, successes, barriers, and enablers in striving towards achieving the provincial target for STEMI care of 75%.

During these meetings, four key themes were highlighted across STEMI programs as factors in helping to drive quality improvement. In an effort to share learnings and best practices across the province, the four key themes are described in the next section along with detailed descriptions of the current quality improvement activities underway, as identified by programs.

Key Themes




 Engaging in partnerships Several STEMI programs established initiatives to actively engage and work collaboratively with system partners (feeder hospitals, EMS, ED) to better coordinate care	<ul style="list-style-type: none">• 11 programs identified specific examples of engaging in partnerships, including regular (monthly, quarterly, or annually) meetings with all partners and reports on performance• 2 programs stated interest in strengthening partnerships
 Leveraging technology Several STEMI programs leveraged technology to provide more efficient and timely access to STEMI care	<ul style="list-style-type: none">• 5 programs identified specific examples of leveraging technology, including doing ECG in the ED, streamlining the use of cellphones to activate Code STEMI, and utilizing applications to track EMS distance from hospital• 1 program is in negotiation to do ECG at the triage desk
 Adopting best practices and quality improvement initiatives Several STEMI programs adopted processes to incorporate best practice standards and/or quality improvement initiatives within their programs	<ul style="list-style-type: none">• 7 programs identified specific examples of adopting best practices and quality improvement initiatives, including establishing the STEMI Bypass Protocol and paramedic education• 3 programs are interested in launching Code STEMI and other quality improvement initiatives
 Continuous data monitoring and feedback Several STEMI programs implemented processes to monitor data and provide consistent feedback to providers and partners	<ul style="list-style-type: none">• 7 programs identified specific examples of continuous data monitoring and feedback, including continuous or live feedback loops with partners, reviewing data regularly with partners during meetings, and case by case feedback to physicians• 3 programs are interested in looking for opportunities to improve efforts on regularly monitoring data





Program Quality Improvement Activities

Program	Focus Areas	Details
<p>Hamilton Health Sciences Deb Bedini bedini@hhsc.ca</p>		<ul style="list-style-type: none"> • During STEMI surges, a backup team is available • Working on processes in the implementation of the Emergency Department (ED) STEMI Bypass Protocol and paramedic education
<p>Health Sciences North Joanne Collin jcollin@hsnsudbury.ca</p>		<ul style="list-style-type: none"> • Working with Emergency Medical Services (EMS) partners to improve drive time • EMS faxes Electrocardiograms (ECG) and patient go straight to cath lab
<p>Kingston General Hospital Reg Hart hartr@kgh.kari.net</p>		<ul style="list-style-type: none"> • Working on strengthening feedback loops and partnerships • Reviewing how data collection processes occur
<p>London Health Sciences Centre Lorinda Hallam lorinda.hallam@lhsc.on.ca</p>		<ul style="list-style-type: none"> • Quarterly meetings with EMS partners and STEMI team in hospital to review data, investigate outliers and develop strategies to address issues immediately • Diagnostic tests done immediately upon arrival to hospital • Sonographer and ECG technician stationed in ED, which has had notable impact over the last 3 years since implementation • Paramedic teams bring time stamps along with patients


 Engaging in partnerships  Leveraging technology




 Adopting best practices and quality improvement initiatives  Continuous data monitoring and feedback



Program	Focus Areas	Details
Peterborough Regional Health Centre Lauren Hendry lhendry@prhc.on.ca		<ul style="list-style-type: none">• Good communication and collaboration with partners• In negotiations to do ECG at the triage desk
Scarborough and Rouge Hospital Trixie Williams trwilliams@rougevalley.ca		<ul style="list-style-type: none">• STEMI committee (including ED) every two months to review and discuss data
Sunnybrook Health Sciences Centre Susan Michaud Susan.Michaud@sunnybrook.ca		<ul style="list-style-type: none">• Partnership agreements with surrounding hospitals with regular conversations and commitment to improve• ED and cardiac program work collaboratively• ECG kiosk in operation to facilitate early ECGs

Program	Focus Areas	Details
St. Mary's General Hospital Andrea Lemberg alemberg@smgh.ca		<ul style="list-style-type: none"> Scorecard and other STEMI reports provide opportunities for improvement with regular data monitoring
St. Michael's Hospital Tasha Osborne osborneTa@smh.ca		<ul style="list-style-type: none"> Feedback and data loop with all partners ensures consistent communication with a focus on improvement Regularly looking for ways to improve working relationship with EMS
Southlake Regional Health Centre Janice Allen jallen@southlakeregional.org		<ul style="list-style-type: none"> Partner hospitals receive full report on performance Working on a 3 lab model to help accommodate high volume emergency STEMI cases
Thunder Bay Regional Health Sciences Centre Meaghan Sharp sharpme@tbh.net		<ul style="list-style-type: none"> Developed Action Plan for Continued Improvement, including re-launching Code STEMI, establishing internal targets, streamlining data analysis, and continued collaboration with internal and external partners Commitment and dedication of all Heart Team to STEMI care

 Engaging in partnerships  Leveraging technology

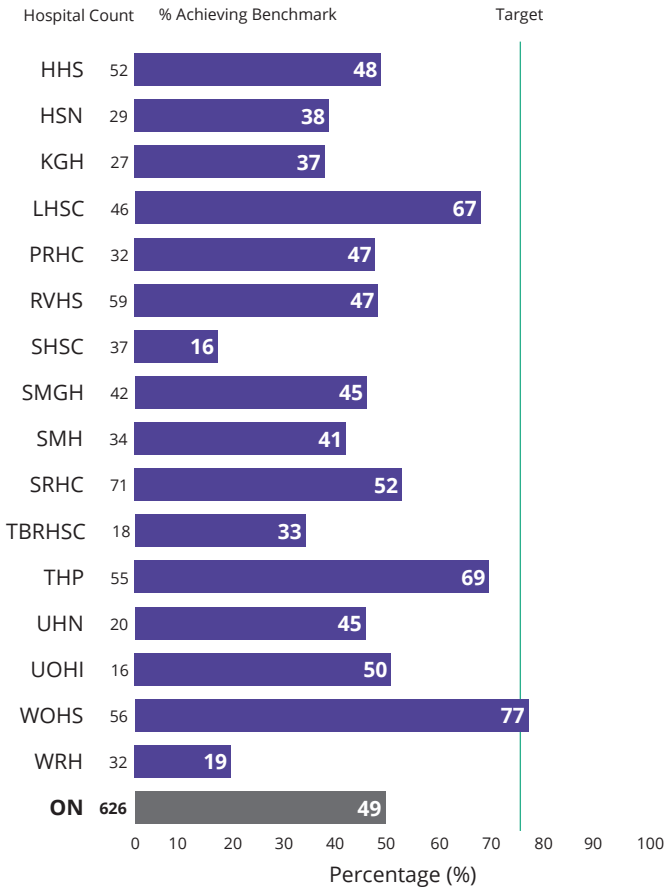
 Adopting best practices and quality improvement initiatives  Continuous data monitoring and feedback

Program	Focus Areas	Details
<p>Trillium Health Partners Robin Horodyski robin.horodyski@trilliumhealthpartners.ca</p>		<ul style="list-style-type: none">• Strong partnerships with providers, EMS, and partner hospitals• Consistent communication with EMS leading up to transfer of accountability• Feedback is provided within 24-48 hours to Heart Team through live feedback loops
<p>University Health Network Linda Flockhart linda.flockhart@uhn.ca</p>		<ul style="list-style-type: none">• Consistent communication with the STEMI team and ED team• Leveraging the use of cell phones to get the Heart Team in on time after hours• Opportunity to provide direct feedback to partners
<p>University of Ottawa Heart Institute Heather Sherrard hsherrard@ottawahospital.on.ca</p>		<ul style="list-style-type: none">• Increased focus on understanding the data and its impact• Opportunity to work in partnership with the Ottawa Hospital in lieu of ED at UOHI

Program	Focus Areas	Details
<p>William Osler Health System Anne-Marie Graham anne-marie.graham@williamoslerhs.ca</p>		<ul style="list-style-type: none"> • Continuous feedback loop with partners including: fall meetings with all stakeholders to discuss improvement initiatives; case by case feedback to physicians; physicians meet regularly; data is reviewed every quarter with EMS • Strong collaboration with all stakeholders, including EMS and ED • STEMI Clinical Educator hired as part of the Heart Team to educate and support • Continuously supporting the Heart Team as a high volume site by adhering to cath lab start times in order to limit the need for overtime and using developed guidelines to manage non-emergent weekend requests for angiograms • Opportunity to leverage STEMI Bypass Protocol
<p>Windsor Regional Hospital Kristin Kennedy Kristin.Kennedy@wrh.on.ca</p>		<ul style="list-style-type: none"> • Continuously finding innovative ways to support patients with only one cath lab using technology and partnerships • EMS 12 lead ECG transmission to standardizing paramedic services and revise protocol • Implemented a EMS truck tracker software application to see how far out the EMS from the hospital that assists in coordinating efforts between EMS and hospital • Working towards having one number to call to activate Code STEMI

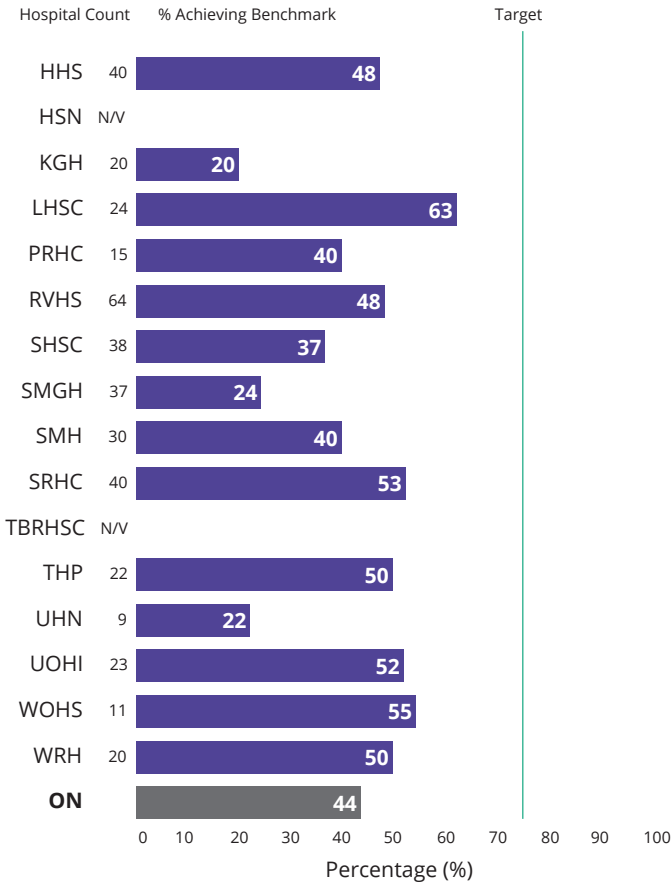
Q3 Scorecards: STEMI provincial view

Percentage of STEMI Cases Presenting Directly to a PCI Hospital Achieving Time ≤ 90 Minutes from First Medical Contact to First Balloon Inflation/ Device Deployment



Ontario DQ Note: 52 case(s) excluded due to missing or incomplete data.


Percentage of STEMI Cases Achieving Time ≤120 Minutes from Non-PCI Hospital ED Triage/Registration (Hospital Arrival) to First Balloon Inflation/Device Deployment




Ontario DQ Note: 8 case(s) excluded due to missing or incomplete data.

Ontario total count was suppressed due to Hospital (s) with less than 5 case counts.

(N/V) No Volume



Our Vision:
**The best cardiac, stroke and
vascular care for
all Ontarians.**

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