ORBCoN
Ontario Regional Blood Coordinating Network

Inspiring and facilitating best transfusion practices in Ontario.

Addressing potential barriers to change/gaps in recommendations and practice

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Faculty Disclosure

- This program has received no financial external support
- Speaker disclosure
  - **Participation in industry-initiated clinical trials:** Sanofi (iTTP; current), Takeda (iTTP; completed), Roche (aHUS; current), and SOBI (CAD; current)
  - None are relevant to this presentation

Objectives

- To discuss barriers to the implementation of MHP
- To propose possible solutions

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Research

A regional massive hemorrhage protocol developed through a modified Delphi technique

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Abstract

Background: A massive hemorrhage protocol (MHP) enables rapid delivery of blood components in a patient who is exsanguinating pending definitive hemorrhage control, but there is variability in MHP implementation rates, content and compliance owing to challenges presented by infrequent activation, variable team performance and patient acuity. The goal of this project was to identify the key evidence-based principles and quality indicators required to develop a standardized regional MHP.

Methods: A modified Delphi consensus technique was performed in the spring and summer of 2018. Panellists used survey links to independently review and rate (on a 7-point Likert scale) 43 statements and 8 quality indicators drafted by a steering committee composed of transfusion medicine specialists and technologists, and trauma physicians. External stakeholder input from all hospitals in Ontario was sought.

Results: Three rounds were held with 36 experts from diverse clinical backgrounds. Consensus was reached for 42 statements and 8 quality indicators. Additional modifications from external stakeholders were incorporated to form the foundation for the proposed MHP.

Interpretation: This MHP template will provide the basis for the design of an MHP toolkit, including specific recommendations for pediatric and obstetrical patients, and for hospitals with limited availability of blood components or means to achieve definitive hemorrhage control. We believe that harmonization of MHPs in our region will simplify training, increase uptake of evidence-based interventions, enhance communication, improve patient comfort and safety, and, ultimately, improve patient outcomes.

Massive Hemorrhage Protocol

"All hospitals shall have a protocol to guide management of a massively bleeding patient" –

Find resources to help your organization meet this Ontario recommendation.

Ontario MHP

Provincial MHP Toolkit

Find out more

Supplementary Resources

Find out more

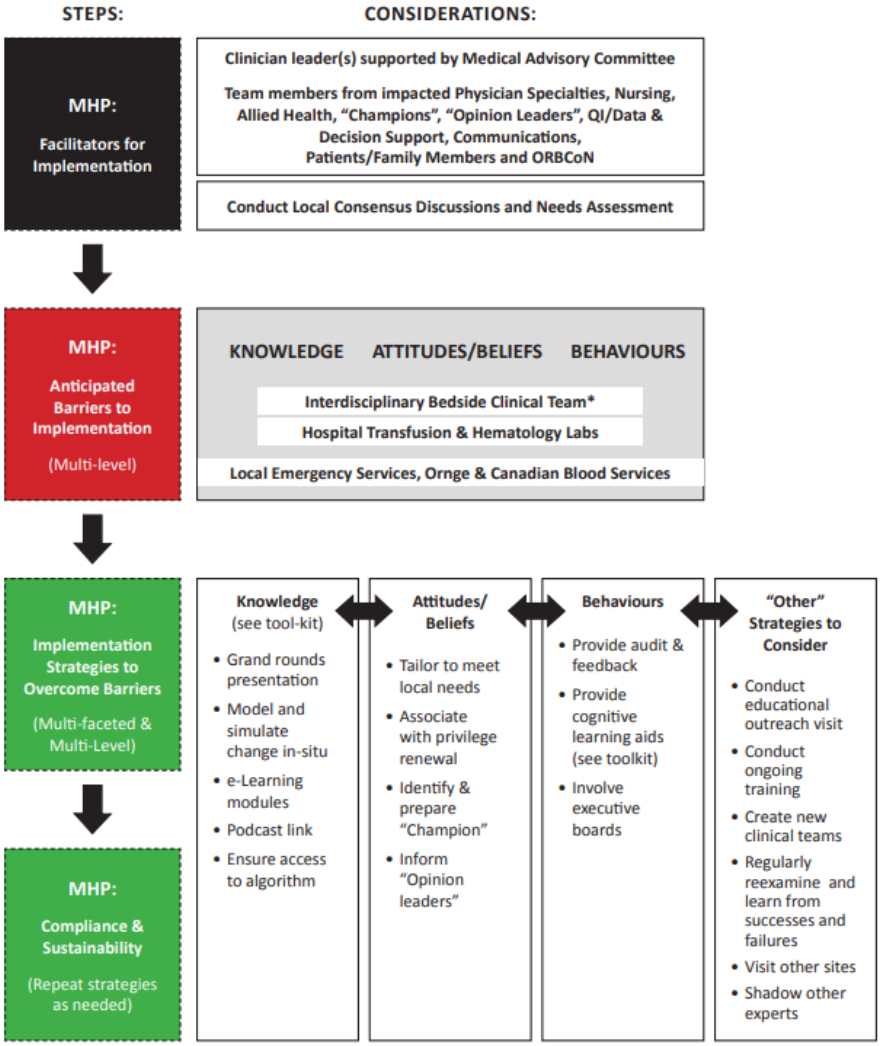
Recommendation Statements

Find out more

eLearning

Find out more

Figure 1: Educational strategies to facilitate implementation of a massive hemorrhage protocol in a clinical setting

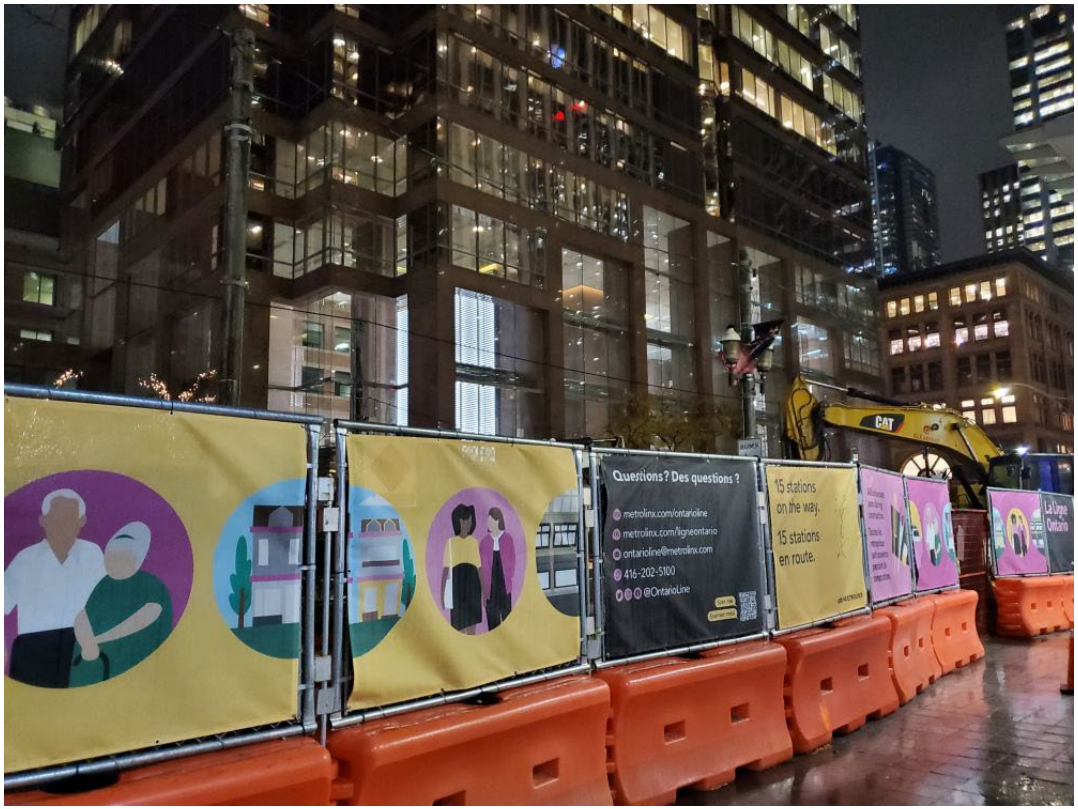


*Composition of interdisciplinary team will vary according to contextual local needs (e.g., obstetrics, pediatrics etc.)

Current State of MHP in Ontario

- 65% of hospitals in 2018 versus 77% of hospitals in 2023
- In 2023
  - 47% have MHP aligned with the provincial document
  - 30% have MHP and it is partially or not aligned with the provincial document
  - 18% do not have MHP but are working on it and plan to align with the provincial document
  - 7% do not have MHP and are not actively working on developing one

BARRIERS


Questions? Des questions ?
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metrolinx.com/ligneontario
ontarioline@metrolinx.com
416-202-5100
@OntarioLine
15 stations
on the way.
15 stations
en route.
CAT

Common Barriers to Implementation

- Lack of motivation/will
- Conflicts with other existing policies/priorities
- Inadequate resources
- Opposition from key stakeholders
- Lack of coordination and collaboration between parties responsible for implementation
- Lack of clarity on roles and responsibilities for implementation

https://www.healthpolicyproject.com/pubs/272_ImplementationBarriersResourceGuide.pdf

Perceived Lack of Importance

- We have more pressing priorities – have you heard of COVID-19?
- We rarely have MHPs
- We are not a trauma centre

Perceived Lack of Relevance

- What is the point of MHP if we don't even carry plasma or platelets, cannot assess fibrinogen, provide definitive hemorrhage control…

Lack of Resources

- MHP implementation is a lot of work
  - MHP = policy for hospital + SOP for TM Lab + education/training + CQI
- Lack of time, human resources, funding and support
- Perfect storm of
  - MLT, RN and MD shortage/staff turn-over
  - Budget pressures
  - Post COVID-19 increased patient volume +/- case complexity
  - Blood shortage, rush of new blood components/products

Hospital Bureaucracy

- Slow death by a thousand committees

"I was not elected to watch my people suffer and die while you discuss this … in a committee!"

Star Wars Episode I – The Phantom Menace

Lack of Consensus

- Our stakeholders are unable to agree on most MHP content
- Everyone is doing their own thing and not talking to each other

This is Not My Responsibility

- Why should the lab lead this? I will wait for ED/surgery/OB/etc. to do this…

Lost in Translation

- MHP demands we store thawed plasma
- MHP demands we store 2 O pos and 2 O neg RBC
- How can we possibly determine if an unidentified bleeder is potentially child-bearing? Younger than 45?

Assemble dedicated team

Identify the root cause of each barrier

Develop a strategy to address each barrier

Be patient and persevere

HOW DO I?

How to Implement a Change

- Communicate about the change
- Focus on mission/vision
- Focus on culture
- Provide encouragement/incentives
- Involve stakeholders

Phillips J, Klein JD. Change Management: From Theory to Practice. TechTrends. 2023;67(1):189-197.

Building an Argument for MHP

- Massive hemorrhage is a high stakes medical situation, with a high mortality rate
- It may occur in the context of trauma, postpartum complications, vascular emergencies, GI bleeding, etc.
- Patients with massive hemorrhage can present to any centre – small vs. large, academic vs. community

Building an Argument for MHP

- MHP = Protocol for a massively bleeding patient
  - Aim (the 7 **R**'s):
    - **R**ight health care workers, doing the **r**ight things, for **r**ight patients, in the **r**ight order, at the **r**ight time, in the **r**ight place, with the **r**ight outcome
- Only useful if it reflects your setting/resources
  - It is not necessarily about what you have in your fridge but what you are going to do
  - May be as simple as recognizing MHP and arranging transport

Gawande 2009; Haynes et al NEJM 2009 ; Allen et al JBI Libr Syst Rev 2009

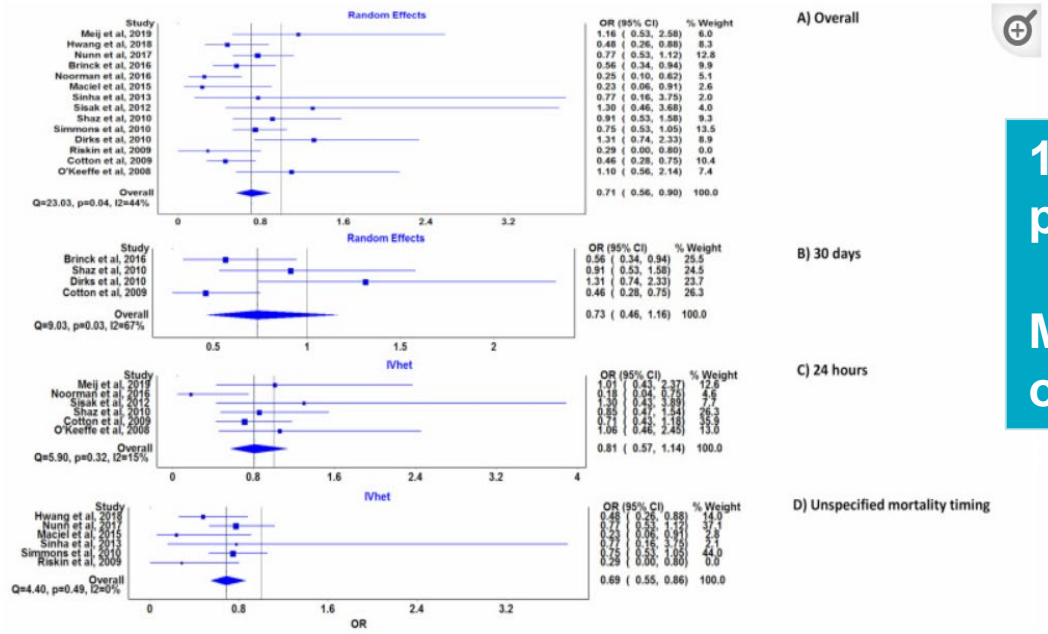
Building an Argument for MHP

- MHP implementation is associated with
  - Better patient outcomes
    - Reduction in mortality, organ failure, post-injury complications
      - independent of what exactly is in the protocol
    - Decreased length of hospital and critical care stay
    - Decreased variability in treatment
  - Better system performance
    - Faster delivery of blood components to patient
    - Less blood component wastage
    - Less blood component utilization (and less cost)

Dente et al J Trauma 2009; Cotton et al J Trauma 2009; Riskin et al J Am Coll Surg 2009; Reed et al Injury 2017; Cotton et al J Trauma 2008; O'Keeffe et al Arch Surg 2008; Khan et al Injury 2013; Mothukuri et at EMJ 2015

Effect of MHP on Survival in Trauma: A Systematic Review and Meta-analysis

Figure 2



Consunji et al Blood Transfusion 2020

14 studies, 3,201 trauma patients

MHP significantly reduced the overall mortality for trauma

Implementation + Compliance

- As per literature, compliance with MHP is not optimal
  - Canadian study:
    - Bawazeer et al: 1.4-94.5% for various interventions
  - American studies
    - Cotton et al: 27% overall protocol compliance
    - Plackett et al: 27-97% for various interventions
      - Significant variability between surgeons
- Full compliance may be an independent predictor of survival

Bawazeer et al Injury 2015; Cotton et al J Trauma 2009; Plackett et al J Trauma Acute Care Surg 2017

Prioritize MHP

- Consistent with our healthcare **mission**
  - MHP brings the necessary resources to your bleeding patient to
    - achieve the best possible patient outcomes
    - ensure appropriate use of our limited resources
    - enable our staff to perform better
      - job satisfaction, preventing moral injury

Prioritize MHP

- Consistent with our **culture** - commitment to quality
  - Protocols and training required for optimal performance – esp. in high stakes (high morbidity/mortality), rare clinical scenarios
  - Review of safety events and tracking of quality indicators
  - Competitiveness
    - Peer pressure/FOMO

Leverage Resources You Have

- Use the toolkit
- Consider regional/network collaboration
- Borrow and give generously
  - Exchange materials/tools, share lessons learned and winning strategies

Take Ownership

- Transfusion Medicine has long been a pioneer in quality
- A well-designed MHP will ultimately benefit you – HR and inventory management, reduced stress for your staff, etc.

Build Consensus

- Bring stakeholders to the table and build consensus
  - This is hard and requires a lot of time and patience
    - Emphasize the published evidence/best practices
    - Emphasize the published benefits of MHP
    - Emphasize the success of peer hospitals
    - Emphasize internal wins and how this will benefit your hospital
    - Engage champions – external and internal
    - Invite “resistors” to the table and bring food
    - Start with least controversial topics and build from there

Chance favours only the prepared mind (Louis Pasteur)

Failing to plan is planning to fail (Anon)

The marvelous thing about lack of planning is that failure comes as a complete and utter surprise (Peter Green)

DO NOT FAIL TO PREPARE