

**For Information**

---

**REPORT TITLE: Medical Priority Dispatch System for Paramedic Services**

**FROM: Nancy Polsinelli, Commissioner of Health Services**

---

**OBJECTIVE**

To update Regional Council on the implementation of the Medical Priority Dispatch System at the Mississauga Central Ambulance Communications Centre.

**REPORT HIGHLIGHTS**

- The Ministry of Health has confirmed that the Medical Priority Dispatch System (MPDS) will become operational at the Mississauga Central Ambulance Communications Centre (CACC) in late 2022.
  - The implementation of the MPDS is a significant milestone after years of Council-led advocacy that will benefit Paramedic Services and the Peel community.
  - The MPDS is an evidence-based technology that has become the industry standard for patient triaging technology globally and is subject to ongoing testing, development and quality assurance measures.
  - The MPDS tool will optimize the deployment of Paramedic resources to meet patient needs by matching resource capabilities with the clinical situation and allocating more Paramedic resources for the most urgent calls to 9-1-1.
  - Regional Council will be updated on progress as implementation unfolds particularly gradual changes to paramedic response times across all acuity levels.
- 

**DISCUSSION**

**1. Background**

Under the local service realignment initiative in 1998, Ontario's Ministry of Health (Ministry) is 100 per cent responsible for all aspects of ambulance communications which includes the answering of 9-1-1 calls, prioritization and processing of incoming requests for service, and the assignment of the most appropriate paramedic resource.

In Ontario, ambulance communication and dispatch are managed by Central Ambulance Communication Centres (CACCs). All of Ontario's 22 CACCs are funded and regulated by the Ministry, with 11 that are owned and operated by the Ministry.

Ambulance CACCs triage all 9-1-1 calls for paramedic services, communicating directly with 9-1-1 callers to determine the nature of the call, provide instructions to callers, triage

## **Medical Priority Dispatch System for Paramedic Services**

each call based on the level of urgency, and dispatch paramedic resources to attend to the patient.

Peel Paramedic Services' ambulances and rapid response units are dispatched by the Ministry-operated Mississauga CACC (along with Halton Region Paramedics Services), in accordance with Paramedic Services' deployment plan. The deployment plan sets out the positioning and movement of all paramedic resources across Peel to respond to all calls within the response time targets that are approved by Regional Council.

### **a) Regional Advocacy for Ambulance Dispatch Reform**

Patient triaging by CACCs determines the severity of the patient's condition and identifies those calls that are most time sensitive. The accurate prioritization of calls is crucial to ensuring that appropriate care is delivered and that paramedic resources are utilized in an efficient manner.

Ministry-operated CACCs, including the Mississauga CACC, currently use the Dispatch Priority Card Index as a tool for patient triaging. This tool determines the priority for each call, deploying a paramedic crew to respond based on a four-code scale, where Code 4 indicates the most urgent life-threatening emergency requiring the fastest 'lights and sirens' response.

Since 2006, Regional Council has supported Paramedic Services advocacy calling on the Ministry to adopt an industry-standard patient triaging system called the Medical Priority Dispatch System (MPDS) at the Mississauga CACC. The implementation of MPDS has been a long-standing advocacy priority for Peel, often in collaboration with the Association of Municipalities Ontario (AMO) and Halton Region. Appendix I provides an overview of Peel's advocacy efforts and key milestones since 2006.

Advocacy for the transition to MPDS has been based on evidence that patient triaging through the current Dispatch Priority Card Index lacks the required accuracy, resulting in an over-triaging of many calls for paramedics and the unnecessary dispatch of 'lights and sirens' response to calls that do not require an urgent response. Previous reports to Regional Council have highlighted that the current system at the Mississauga CACC dispatches 75 per cent of all calls for service as Code 4 'lights and siren' response, compared to a rate of 40 per cent at the Toronto and Niagara CACCs that are already using MPDS. For Paramedic Services, this means that low acuity patients receive a response time similar to critically ill patients. In addition, this creates operational pressures for paramedic services and impacts the Region's ability to meet response time targets.

In 2018, the Ministry announced plans to implement MPDS at all its CACCs. Since then, successive Ministry timelines for implementing MPDS at the Mississauga CACC have been delayed until confirmation was received in February 2022 that the tool will be operational in late 2022. This announcement is a significant milestone for Paramedic Services and for efficient and high-quality pre-hospital care in Peel. Appendix II includes a copy of the Ministry's notification.

## Medical Priority Dispatch System for Paramedic Services

### 2. Findings

The MPDS is anticipated to have a substantial positive impact on Peel's response time performance and will ensure that patients receive a paramedic response based on their condition.

#### a) Triage Incoming Emergency Calls

The purpose of triaging calls is to determine the severity of patient illness or injury and identify time critical cases from those that are not. The accurate prioritization of calls for service is critical to ensuring appropriate care to the community and that paramedic resources are utilized in an efficient manner.

This triage function is important because high-priority responses to non-critical calls reduces paramedic resources, including those needed to respond to a critical patient. Over-prioritizing calls risks creating traffic-related hazards that potentially expose responders or members of the public to additional risks. Conversely, the under-prioritization of calls by the CACC could mean that patients may not receive a response in an appropriate time, with potential negative impacts on the patient's outcome.

#### b) Medical Priority Dispatch System (MPDS)

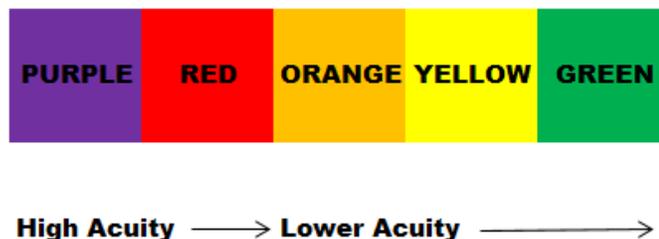
The MPDS has become the industry standard patient triaging technology used in approximately 35,000 ambulance communication centres in 46 countries. The technology uses detailed protocols that are based on current medical evidence and is subject to ongoing testing, development and quality assurance measures.

The main objective of MPDS is to send the right resource, to the right person, in the right way, at the right time so that resource capabilities are matched with the clinical situation, leaving more resources available for urgent responses.

Through MPDS, ambulance communications officers use a call processing structure ('key questioning') that gathers information from the caller that leads to a specific determinant code based on the caller's information. Call processing applies 36 protocols with over 2000 determinant codes. These codes identify the problem type, the level of medical emergency, and specific details associated with the chief complaint as well as specific pre-arrival instructions to the caller, such as performing CPR, or delivering a baby.

The type of paramedic response is established by a MPDS Medical Director with input from the Paramedic Service using five colour-based priority levels: Table 1 provides more detail regarding the MPDS colour priority levels and time sensitivity for response.

## Medical Priority Dispatch System for Paramedic Services



**Table 1: MPDS Call Priority Definitions**

Priority	Definition	Time Sensitivity for Response
Purple	Emergent and immediate life-threatening conditions	Time critical
Red	Emergent and potentially life-threatening	Time sensitive
Orange	Urgent and potentially life threatening	Time may be a factor
Yellow	Non-urgent and potentially serious and no immediate threat to life	Not time sensitive
Green	Non-urgent, not serious and no immediate threat to life which may be deferred without detriment to patient outcome	Not time sensitive

This contrasts with the current tool that prioritizes each call based on the answers given by the caller, and with two emergency priorities: Code 4 'lights and sirens'-dispatched immediately and Code 3 that denotes urgent but not a life threat-dispatched as received but can be delayed based on available resources.

### c) Implementation of MPDS

The Ministry announcement sets into motion and supports the planning well underway by Paramedic Services to ensure that all the operational requirements are in place for the transition to MPDS. Paramedic Services have been meeting with Halton Paramedic Services to develop response plans for each of the over 2000 MPDS determinant codes, for approval by the Ministry's Medical Director.

Paramedic Services has began communicating to paramedics making them aware of these changes and will begin education for Paramedics in anticipation of the go-live date in November for MPDS. In addition, the Ministry has engaged all municipal fire and emergency services and Peel Regional Police to advise of the transition to MPDS.

Tiered response agreements between Paramedic Services and local Fire and Emergency Services partners may require modification. Staff will continue to work with these partners to identify if and how agreements will require changes. At the onset, response criteria for a Fire response through these agreements will not be impacted. However, over time the medical evidence may support Fire Services responding to fewer calls.

## Medical Priority Dispatch System for Paramedic Services

### 3. Implications for Peel

While MPDS ensures the availability of paramedic resources for medical conditions that require short response time and the highest levels of clinical capability, the tool is also expected to reduce the priority for lower acuity calls that do not merit as prompt a response by paramedics. Paramedic Services anticipates that response times for lower acuity calls will be longer, while remaining within a clinically safe threshold.

Once implemented at the Mississauga CACC, MPDS will serve to improve Paramedic Services response and health outcomes for the most life-threatening calls. Implementation of MPDS is also expected to enable Paramedic Services to implement new models of care providing specialized responses for certain types of low acuity calls, such as referral to other services and secondary triage by other clinicians (e.g., nurses) within the CACC to direct callers to other care, when appropriate.

Peel Paramedics' performance, as measured through achieving Council-approved target response times will not be impacted by the move to MPDS. Response time targets will continue to be reported to Council based on the acuity of the patient's condition when first assessed by Paramedics upon arrival on-scene.

Paramedic Services is also engaging Region of Peel communications expertise to increase public understanding of the transition to MPDS as it progressively affects response times to all types of calls, particularly lengthening response times for calls that are triaged as being low acuity.

### FINANCIAL IMPLICATIONS

The Ministry assumes all costs directly tied to the implementation of MPDS at the Mississauga CACC. Paramedic Services expects some time-limited indirect internal costs associated with Paramedic training and communication regarding MPDS, which is managed through the 2022 operational budget.

### CONCLUSION

The implementation of MPDS at the Mississauga CACC is a positive milestone for Paramedic Services and for the Peel community and is the outcome from years of Council-led advocacy. Regional Council will be updated on progress as implementation unfolds particularly gradual changes to paramedic response times across all acuity levels.

### APPENDICES

Appendix I - Visual of Advocacy Activities and Milestones, 2006 to 2022

Appendix II - Feb 28, 2022, Ministry Letter re Medical Priority Dispatch System

---

*Authored By: Cullen Perry, Research and Policy Analyst, Health Services*



Nancy Polsinelli, Commissioner of Health Services