

The Regional Municipality of York

Committee of the Whole
Community and Health Services
June 10, 2021

Report of the Commissioner of Community and Health Services

2019 and 2020 Paramedic Response Time Performance Plan Final Results

1. Recommendations

The Regional Clerk circulate this report to the local municipalities for information.

2. Summary

This report informs Council of Paramedic Services Response Time Performance Plan results for 2019 and 2020.

Key Points:

- Paramedic Services met all response time targets in 2019 and 2020 (local municipal fire services helped Paramedic Services to exceed target response times for sudden cardiac arrests)
- Despite a moderate decrease in call volumes in 2020 due to the COVID-19 pandemic, demand on York Region's Paramedic Services is projected to continue to increase each year
- Hospital transfer of care times remain below the 30-minute target, allowing ambulances to get back in service faster and meet response time targets
- Paramedic Services will continue to follow the current response time framework established by Council in 2012
- Improvements to response times may be achieved through implementation of the province's new Medical Priority Dispatch System in the Georgian Central Ambulance Communication Centre once available and implementation of the updated Paramedic Services Master Plan once finalized

3. Background

Council established a response time performance plan in 2012

Under Ontario Regulation 257/00 of the *Ambulance Act*, upper-tier municipalities that operate land ambulance services are required to have response time performance plans. In [September 2012](#), Council adopted the *York Region Emergency Medical Services Response Time Performance Plan 2013*, which identified targeted response times from Dispatch to arrival on scene.

Response times are based on the Canadian Triage Acuity Scale (CTAS), a five-level tool used to assess the severity of a patient's condition and the need for timely care. CTAS level 1 is the most severe (resuscitation) and CTAS level 5 is the least severe (non-urgent). The Ministry of Health sets the response times for Sudden Cardiac Arrests and CTAS level 1. Ontario Regulation 257/00 permits each upper-tier municipality to set its own response times for CTAS levels 2 to 5.

Paramedic Services will continue to follow the current response time framework established by Council and may be adjusted when the Georgian Central Ambulance Communications Centre receives the new Medical Priority Dispatch System

Under the *Ambulance Act*, the Ministry of Health is responsible for the funding and delivery of Ambulance Communication Services (dispatch) across the province. York Region Paramedic Services is dispatched by the Ministry's Georgian Central Ambulance Communications Centre. The Ministry of Health is investing in a new Medical Priority Dispatch System across the province, including the Georgian Central Ambulance Communications Centre. The new Medical Priority Dispatch System provides a modern medical triage algorithm to enable better differentiation and triage of emergencies and ensure patients in need of the most urgent care receive it in the appropriate time frame with the resources available. The Medical Priority Dispatch System is already being used in the City of Ottawa, City of Toronto and the Region of Niagara. It is anticipated that the new dispatch system will be implemented at the Mississauga Central Ambulance Communication Centre (the dispatch centre for Peel and Halton Regions) in fall 2021 and in January 2022 for the Georgian Central Ambulance Communications Centre. Once implementation is complete, response times and performance targets may be revisited and potential improvements to the response time framework would be brought to Council for consideration and approval. Further details on the status of the new dispatch technology are noted later in this report.

The Region reports response time performance to the Province each year

Regulation 257/00 requires the Region to report the following performance measures to the Ministry of Health annually:

- The percentage of times that anyone equipped to provide defibrillation to sudden cardiac arrest patients arrived on scene within six minutes

- The percentage of times that an ambulance crew arrived on scene for CTAS 1 patients within eight minutes
- The percentage of times that an ambulance crew arrived on scene for CTAS 2, 3, 4 and 5 patients within the response time targets set by the Region

Response Time Performance results are posted on the Ministry of Health’s public website and reported to Council. York Region Paramedic Services has met or exceeded its response time targets every year since 2013.

Reporting on 2019 performance measures was delayed due to the COVID-19 Pandemic

Due to the pressures and demands of providing an effective and timely response to COVID-19 pandemic, reporting on 2019 performance measures to Council was postponed. As a result, this year’s report includes Paramedic Response Time Performance Plan Final Results for both 2019 and 2020.

4. Analysis

York Region Paramedic Services met or exceeded response time targets in 2019 and 2020

All targets for 2019 and 2020 were met or exceeded, despite increasing demand in 2019 and the ongoing COVID-19 pandemic response in 2020. Table 1 provides the 2019 and 2020 response time targets and actual performance for sudden cardiac arrests and each CTAS level. The table lists the response time set for each level, the targeted percentage of responses for achieving response times and the Region’s actual performance in 2019 and 2020.

Some trends were observed:

- 2019: Paramedic Services met its targets for 2019 despite ongoing challenges maintaining balanced emergency coverage in both urban and rural areas relative to demand.
- 2020: Response time performance for CTAS level 2 decreased slightly in 2020 compared to 2019. This decrease could be attributed to changes brought about by the COVID-19 pandemic, such as the increased time required to follow procedures for personal protective equipment (e.g. changing out of gear more often, increased cleaning measures) and implementation of new on-scene precautions when treating patients. Due to increased staff isolations, illness and injury during the pandemic, the Service has seen reduced staffing in some ambulances which has had an impact on response times and paramedic workload. Despite these challenges, all targets were met.

Table 1
2019 and 2020 Response Time Performance

Category and Examples	Target response time from Dispatch to arrival on scene	Targeted percentage to meet response times (%)	Performance (%)	
			2019	2020
Sudden Cardiac Arrest Absence of breathing, pulse	Community Target: Arrival of any person equipped with an AED within 6 minutes Set by the Ministry	60	66	66
CTAS* 1 - Includes sudden cardiac arrest or other major trauma	8 minutes Set by the Ministry	75	76	76
CTAS 2 - Chest pain, stroke, overdose	10 minutes Set by York Region	80	83	82
CTAS 3 - Moderate pain or trauma	15 minutes Set by York Region	90	90	90
CTAS 4 – Minor trauma, general pain	20 minutes Set by York Region	90	93	94
CTAS 5 – Minor ailments, repeat visits	25 minutes Set by York Region	90	95	96

*CTAS refers to the Canadian Triage Acuity Scale, a five-level tool used to assess the severity of a patient's condition and the need for timely care. CTAS level 1 is the most severe (resuscitation) and CTAS level 5 is the least severe (non-urgent).

Local municipal fire services continue to help Paramedic Services exceed target response times for sudden cardiac arrest

Under Regulation 257/00, the response time to sudden cardiac arrests is measured based on the arrival on scene of any person equipped to provide any type of defibrillation or the arrival on-scene of a paramedic crew. This includes assistance provided by fire services or a member of the public using automated external defibrillators. This allows response times for local municipal fire services, as well as any member of the public, arriving at sudden cardiac arrests with defibrillation equipment to be factored in the overall performance result. Municipal fire services receive funding to assist with sudden cardiac arrest response and this collaboration is invaluable to helping to meet response time targets for sudden cardiac arrests.

To better understand the roles between fire and paramedics, local fire services offer timely cardiopulmonary resuscitation and defibrillation to improve patient survival from sudden cardiac arrest, and paramedics provide specialized medical treatment and higher levels of patient care. For example, if a person experiences sudden cardiac arrest, Paramedics can offer medical interventions that help to reduce or reverse the outcomes that might otherwise occur. Paramedics can bring the emergency room to the patient by providing intubation (advanced airway), intravenous fluid therapy, medication therapy and post cardiac arrest care interventions to prepare patients going directly to cardiac care surgery at the hospital.

Provincial implementation of the new Medical Priority Dispatch System would improve the way calls are triaged, and may result in improved response times

In [2017](#), the Ministry of Health committed to implementing changes to dispatch across Ontario by June 2019. The current triage tool is not granular enough to assess calls sufficiently and safely to recommend the appropriate response; meaning that for many cases, the level of response may be beyond what the emergency warrants and results in an inefficient use of resources.

Delays in implementation of new dispatch technologies continue to produce over triage (more acute than required) to 9-1-1 responses creating increases in vehicle use and urgency of response. Implementation of the new dispatch system at Georgian Central Ambulance Communication Centre has been further delayed due to the COVID-19 pandemic, however implementation is expected in January 2022.

Paramedic Services is addressing strategies to decrease response times for sudden cardiac arrest and CTAS 1 and 2

Paramedic Services continues to explore strategies to further improve response times for the most severe emergencies including sudden cardiac arrests, and CTAS 1 and 2 by:

- Increasing access to public access defibrillators in the community to ensure timely response and improve the chance of survival from sudden cardiac arrest
- Establishing a working group with regional fire and police services and volunteer agencies to further develop a Public Campaign on Cardiac Arrest

- Advocating to the Ministry of Health for dispatch modernization that will more closely align response priority with CTAS levels
- Exploring strategies such as co-located stations with local fire services that will help to increase capacity and emergency coverage, thereby improving response times and cost efficiencies
- Maximizing resources through master planning to enhance future capacity needs (e.g. analyzing demand on rural and urban areas to adequately address resource needs)

Once the above-noted strategies to improve response time performance are in place, Paramedic Services will be able to provide more timely emergency response. This will allow us to review and adjust response time targets.

Continued development of the Paramedic Services Master Plan is vital for future growth planning and improving response time performance

In [September 2012](#), Council approved the York Region Emergency Medical Services 10-Year Resources and Facilities Master Plan. The plan was updated in 2016 and extended to 2026 to ensure accurate long-term planning informed business and capital plans. In [November 2020](#), the Phase 1 update to the 10-Year Paramedic Services Resources and Facilities Master Plan was reviewed and received by Council.

Staff continue to work on updating the Master Plan which will extend to 2031 and identify future station locations and infrastructure required by 2031 to meet legislated and Council approved response times and ensure each local municipality has appropriate ambulance coverage over the next 10 years to meet the needs of the Region's growing population.

Phase 2 update of the Master Plan development will be addressed in a future report to Council in November 2021.

Demand for the Region's Paramedic Services has changed between 2018 and 2021

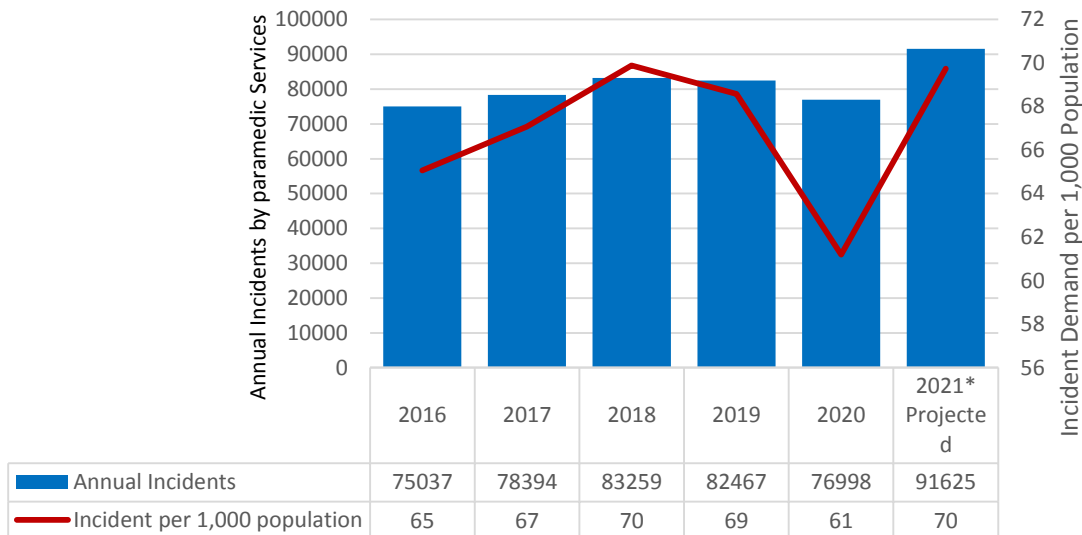
As shown in Figure 1 below, incident demand on Paramedic Services was 70 incidents per 1,000 residents in 2018, 69 incidents per 1,000 residents in 2019 and 61 incidents per 1,000 residents in 2020. Demand is projected to increase to 70 incidents per 1,000 residents in 2021.

In 2019, call volumes returned to their average yearly levels following a vigorous influenza season in 2018 that had increased incident demand. However, in 2020, there was a decrease in incident demand due to the COVID-19 pandemic (as reported to Council in the Social Service Response report and memos in [April 2020](#), [May 2020](#), [June 2020](#), [July 2020](#), [September 2020](#) and [November 2020](#)) as more residents staying at home resulted in fewer vehicle collisions, industrial accidents and other common incidents related to public events that would have previously contributed to greater call demand. Although incident demand in 2020 declined, response time performance was impacted by additional procedural measures needed to adequately respond to the COVID-19 pandemic (e.g. increased time required for COVID-19 screening by dispatch, enhanced cleaning measures, and new procedures for

personal protective equipment) and reduced staffing in some ambulances due to staff isolations, illness and injury.

Figure 1 provides actual annual incidents from 2016 to 2020 and projected incidents for 2021. An incident refers to a single event that paramedics respond to. The projected 2021 estimate of 91,625 annual incidents is based on modeling projections, however, the projections do not account for increased call volumes due to the COVID-19 pandemic.

Figure 1
Paramedic Incident Demand per 1,000 Residents, 2016 to 2021



Source: York Region Paramedic Services Ambulance Dispatch Reporting System

*Note: 2021 figures are projections based on data provided by Operational Research in Health Limited.

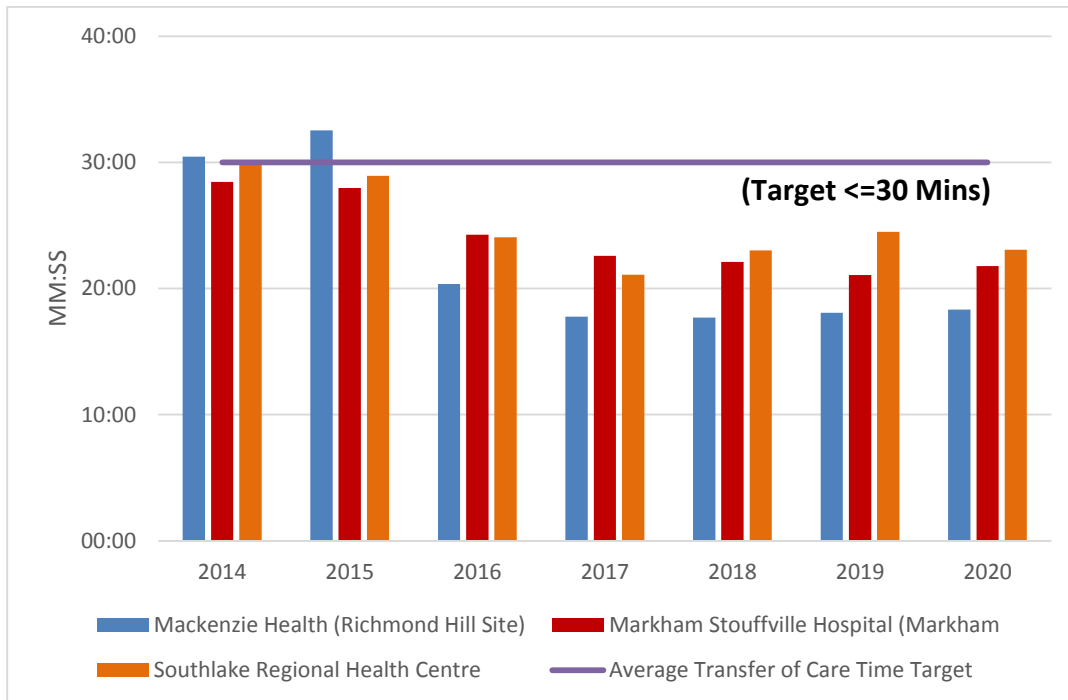
Hospital transfer of care times remained below the 30-minute target

Hospital transfer of care time refers to the time between when paramedics arrive at a hospital and when a patient is transferred from the paramedics' care to the hospital's care. York Region's [Hospital Memorandum of Understanding Update 2014](#) helped to bring poor transfer of care performance under control and has improved off-load delays, resulting in a decrease in the average transfer time. As displayed in Figure 2 below, the average time to transfer patients to hospitals has dropped below the Region's target of 30 minutes since 2014.

Paramedic Services continues to track off-load times and regularly meets with local hospitals to ensure transfer of care times continue to be met. Shorter transfer times help get ambulances back in service faster, enabling paramedics to manage call volumes and meet response time targets.

In 2019, the average transfer of care times were 18 minutes for Mackenzie Health, 21 minutes for Markham-Stouffville Hospital and 24 for Southlake Regional Health Centre. In 2020, the average transfer of care times were 18 minutes for Mackenzie Health, 22 minutes for Markham-Stouffville Hospital and 23 minutes for Southlake Regional Health Centre.

Figure 2
Average Transfer of Care Time by York Region Hospital



Source: York Region Paramedic Services Ambulance Dispatch Reporting System

Partnerships with local organizations continue to be explored to support vulnerable community members and mitigate frequent 9-1-1 callers with high acuity needs

Through ongoing partnerships with community organizations, York Region Paramedic Services is working to improve coordination and innovations to address the complex needs of the community, including vulnerable seniors. Examples include:

- Working together with the Ministry of Long-Term Care to implement the fully funded Community Paramedicine for Long-Term Care initiative that will build on the Region’s existing community paramedicine program. York Region is eligible to receive up to \$8,085,000 between 2020 and 2024 to fund the pilot program that allows paramedics to support the medical needs of seniors and their families through home visits, thus filling a gap in the type of care required while older residents wait for long-term care. Expanding community paramedicine helps to reduce the pressures on long-term care homes, free up much needed hospital beds, and allow hospitals to focus on medical emergencies, and care for COVID-19 patients. It is estimated that approximately 800 residents could benefit from this program on a quarterly basis. Details of the program were previously reported to Council in [November 2020](#).
- Working with Canadian Partnership Against Cancer and Healthcare Excellence Canada which provided funding to deliver the Ministry of Health approved one-year pilot for the Paramedics Providing Palliative Care at Home Program. The Program permits paramedics to assess patients on the scene of a 9-1-1 response and make a

decision on whether the patient could be treated on scene or referred to another health care resource for ongoing care, rather than having to transport the patient to the emergency department. The program is tentatively scheduled to begin September 2021.

- Partnerships with Ontario Health Teams in York Region, as previously reported to Council in [September 2019](#), to improve out-of-hospital care, strengthen the coordination of care, reduce 9-1-1 calls and integrate paramedics into the broader health care system — a key objective of the consultation on [Emergency Health Services Modernization](#) conducted by the Ministry of Health in November 2019. To date, Paramedic Services has been a member of various planning tables such as integrated models of care, digital health and working groups focused on priorities related to mental health and seniors initiatives. This collaboration is helping to improve data sharing between local service providers to inform service delivery and make changes to benefit the patient experience, as well as deliver key elements of the COVID-19 response, such as at-home medical assistance and immunization for homebound residents in order to keep them safe in their homes and avoid unnecessary emergency department visits.
- Partnership with Social Services at the York Region Transitional Shelter to provide COVID-19 testing and enhanced medical supports with primary care and addictions medicine physicians. Community Paramedics provide assessments and treatment to clients with the support and medical delegation of physicians.
- Partnership with Community and Home Assistance to Seniors on Expanding Social Engagement for Seniors – a new program launched in January 2021 to provide activity kits (includes books, recipes, resources, medical information, etc.) to older residents to help them stay connected and keep mentally active. Paramedics distribute activity kits to isolated and homebound seniors in the community.
- Collaborating with partners such as York Region Public Health and Southlake Regional Health Centre to conduct COVID-19 immunization for health care workers, residents within long-term care facilities, retirement residences, and congregate settings such as housing shelters, and vulnerable individuals within the community.

5. Financial

York Region Paramedic Services were managed within the Council approved budgets of \$83.7 million gross and \$39.6 million net tax levy for 2019, and \$88.1 million gross and \$43.5 million net tax levy for 2020, excluding corporate and departmental support costs. In response to COVID-19 efforts, Paramedic Services received the following funding from provincial and other sources in 2020:

- \$3.8 million from the Ministry of Health (not including the Community Paramedicine Program)
- \$0.1 million from the Central Local Health Integration Network for one-time expansion of the Community Paramedicine Program

Additional funding is expected for 2021 for the above programs and other COVID-19 related programs.

6. Local Impact

All local municipalities continue to receive reliable and responsive Paramedic Services. Paramedic Services will continue to work with municipal fire services to respond to emergencies to provide the best possible response to patient care as well as other municipal partners to optimize the use of resources.

7. Conclusion

In 2019 and 2020, York Region Paramedic Services exceeded all response time targets. This success was achieved through ongoing partnership with local municipal fire services to maintain response times and collaboration with local hospitals to maintain transfer of care times below 30 minutes. While the COVID-19 pandemic resulted in a moderate decrease to call volumes, the Region's growing and diversifying population will continue to impact the types of calls and complexity of demand on emergency response services.

To continue meeting response time targets and respond to the changing needs of the Region's communities depends on two key factors:

- Implementation of new provincial dispatch technology for the Georgian Central Ambulance Communication Centre
- Effective planning and implementation of the Paramedic Services 10-year Master Plan. Council will receive an update on the Master Plan implementation in November 2021

For more information on this report, please contact Lisa Gonsalves, General Manager at 1-877-464-9675 ext. 72090. Accessible formats or communication supports are available upon request.



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