

Paramedic Services 2023 Response Times

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Committee

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Report Summary

This report provides an update on the City of Greater Sudbury Paramedic Services' Response Time Standard Plan.

Relationship to the Strategic Plan, Health Impact Assessment and Community Energy & Emissions Plan (CEEP)

This report refers to operational matters and has no direct connection to the Community Energy and Emissions Plan.

Financial Implications

There are no financial implications associated with this report.

Background

This report provides an update to the Community and Emergency Services Committee on the Paramedic Services Response Time actuals for 2023 that were submitted in March to the Ministry of Health and Long-Term Care, as per legislation. Our current Response Time Standard (RTS) plan was established in 2013 and approved by Council in accordance with the Ambulance Act of Ontario, Standard 257/00. The RTS plan provides the level of service by establishing and maintaining performance targets in a manner that best meets the needs of the community. The RTS plan has not changed since 2013.

Response Time Standard Framework

City Council is responsible to establish response time targets for our municipality and report annually to the Ministry of Health and Long-Term Care (MOHLTC) on our compliance with the established response time plan as set out in Regulation 257/00 under the Ambulance Act. This Regulation allows for municipal input when creating the response standards and permits for medically relevant differences among call types.

Key aspects of the regulations include:

- Multiple response time targets based on medically relevant categories
- Variable percentile performances

- Targets of time and percentile performance that can be maintained or changed at the discretion of Council

Reportable Call Criteria

The response time framework is based on the following:

1. The percentage of times that a person equipped to provide any type of defibrillation has arrived on-scene to provide defibrillation to sudden cardiac arrest patients within six minutes of the time notice is received (a bystander, emergency responder, or paramedic with a defibrillator will stop the clock).
2. The percentage of times that an ambulance crew has arrived on-scene to provide ambulance services to sudden cardiac arrest patients or other patients categorized as CTAS 1 within eight minutes of the time notice is received respecting such services.
3. The percentage of times that an ambulance crew has arrived on-scene to provide ambulance services to patients categorized as CTAS 2, 3, 4 and 5 within the response time targets set by the upper-tier municipality or delivery agent under its response time plan.

Canadian Triage Acuity Scale (CTAS)

The response time standards utilize the Canadian Triage Acuity Scale (CTAS) as shown in Figure 1. CTAS is a medically proven triage tool currently utilized by all hospitals and paramedics in Ontario. CTAS is based on a five-level scale with Level 1 (resuscitation) representing the most critically ill patients and Level 5 (non-urgent) representing the least ill group of patients. CTAS scores are based on an assessment of the patient's condition by the paramedic after arrival at the scene.

Patient Severity Categories

Level of Acuity	Type of Call
Sudden Cardiac Arrest (SCA)	Patient has no vital signs
CTAS 1	Critically ill or have potential for rapid deterioration
CTAS 2	Potential to life, limb, or function, requiring rapid medical intervention, controlled acts
CTAS 3	May progress to serious problem. Associated with significant discomfort or affecting ability to function
CTAS 4	Conditions that would benefit from intervention or reassurance
CTAS 5	Non urgent, chronic, without evidence of deterioration

Figure 1

Timelines for submission and reporting:

- October 31st of each year, report to the MOHLTC the response time standards, as approved by Council, for the upcoming year.
- By March 31st of each year, file the previous year's response time actuals with the MOHLTC.
- Between April and June of each reporting year, the municipal response time plan and results achieved will be posted on the MOHLTC website for public viewing.

Response Times Targets

The response time standards for sudden cardiac arrest and CTAS 1 calls have a fixed time set by the Province of six and eight minutes respectively. These fixed times are based on the most current medical evidence for these calls. The City is to determine and report on only the percentile of time either a defibrillator (EMS, Fire, or public access defibrillator) for sudden cardiac arrest calls or a paramedic for all CTAS 1 calls has arrived at the patient for each of these categories.

For CTAS 2 to CTAS 5 patients, the City is to set both the response time target and the percentile in which these response time targets are to be met. Paramedic Services submitted the following response time targets in October 2023 (Figure 2), for 2024. Paramedic Services has not changed the RTS plan since the MOHLTC implemented legislative changes in 2013.

Level of Acuity	Time	Percentage
Sudden Cardiac Arrest	6 minutes (set by MOHLTC)	70%
CTAS 1	8 minutes (set by MOHLTC)	80%
CTAS 2	10 minutes (set by CGS)	85%
CTAS 3	15 minutes (set by CGS)	85%
CTAS 4	15 minutes (set by CGS)	85%
CTAS 5	15 minutes (set by CGS)	85%

Figure 2

Evaluating Response Times

A top priority for the Paramedic Service is to provide the best prehospital clinical care to the residents and visitors of the City of Greater Sudbury in the most effective and efficient methods possible.

Paramedic Services continues to evaluate response times, these include:

- Continue to review performance and opportunities to improve RTS for all SCAs and CTAS calls
- Review call volume trends
- Review adjustments to deployment strategies to meet evolving demands
- Evaluate current staffing patterns and staffing levels
- Evaluate the number of EMS resources
- Continue to review medical tiered response protocol with Fire Services
- Non-Urgent Transportation

Analysis

Call Volume:

In 2023, there were 32,423 calls for service, this represents a 3.0% decrease from 2022. The Community Paramedic (CP) program identified that they assisted with reducing approximately 2,200 or (7%), 911 and avoidable ED visits, contributing to the decrease in the number of calls for service.

Performance:

In 2023, 154 calls or 0.5 percent of the 32,423 calls were for SCAs. A defibrillator was on scene 93 times

within six minutes. To achieve the seventieth percentile target for SCA RTS in 2023, we needed to arrive 108 times. Factors that contributed to meeting our SCA RTS target included areas that were geographically unattainable, lack of paramedic resource availability. The SCAs are a small number of calls in this response category, but a minimal number of calls over 6 minutes has a significant impact on the final result.

In 2023 there 597 CTAS 1 calls, and to achieve our 80% RTS plan, we needed to arrive 478 times within 8 minutes. This RTS target was missed by 36 calls, achieving 74%. For CTAS 2 there were 4,743 calls. To achieve our 85% RTS plan we needed to arrive 4,032 times within 10 minutes. We missed our RTS target by 179 calls, achieving 82%. It was identified that call location, increase call volume and lack of paramedic resource availability were the contributing challenges to achieve these RTS percentages, but CTAS 3, 4 and 5 RTS were achieved.

As per legislation, Paramedic Services submitted RTS 2023 actuals in March 2024. Comparison of RTS actuals from previous years are identified in Figure 3.

Level of Acuity	Types of Call	Approved RTS%	% RTS 2019	% RTS 2020	% RTS 2021	% RTS 2022	%RTS 2023
Sudden Cardiac Arrest	Patient has no vital signs	70%	58%	60%	63%	60%	60%
CTAS 1	Critically ill or have potential for rapid deterioration	80%	76%	80%	81%	76%	74%
CTAS 2	Potential to life, limb, or function, requiring rapid medical intervention, controlled acts	85%	88%	86%	85%	82%	82%
CTAS 3	May progress to serious problem. Associated with significant discomfort or affecting ability to function	85%	97%	96%	96%	95%	95%
CTAS 4	Conditions that would benefit from intervention or reassurance	85%	97%	97%	97%	95%	95%
CTAS 5	Non urgent, chronic, without evidence of deterioration	85%	98%	97%	98%	96%	94%

Figure 3

Evolving Demands:

Paramedic Services data indicates that in 2023 Sudbury Paramedic Services spent approximately 5,560 hours at the hospital on Ambulance Offload Delays (AODs). This equates to 15 hours every single day of the year of lost time for emergency resources. During times when we are experiencing resource depletion and high call volume, it impacts Balanced Emergency Coverage (BEC), contributing to our challenge to meet our RTS percentage targets. To help mitigate AOD's, the Province's Ministry of Health and Long Term Care (MOHLTC) has provided 100% grant funding (\$550,000 in 2023/2024) to the Designated Offload Nurse Program (DOLNP). This program is dedicated to caring for patients coming to the hospital by ambulance that otherwise would be on an AOD. The current staffing model consist of both an offload nurse and two paramedics, seven days a week over a 24 hour period. The DOLNP continues to be evaluated to identify opportunities to improve the program.

Medical Tiered Response:

A Medical Tiered Response protocol is currently in place with Fire Services for Sudden Cardiac Arrest and some CTAS 1 and 2 type calls. In 2023, there were 154 SCAs achieving 60% of the SCAs. Paramedic Services arrived 80 times on scene within six minutes and Fire Services arrived 10 times on scene within six minutes. In three occurrences an Automatic External Defibrillator/ Public Access Defibrillator (AED/PAD) arrived on scene three times within six minutes.

Non-Urgent Transportation:

The transport of non-urgent medically stable patients is usually, between hospitals and other health care facilities or a patient's residence, or from the airport to Health Sciences North (HSN) and they generally do not require an ambulance fully staffed by paramedics. Sudbury Paramedic resources when used for non-urgent transportation, impact ambulance availability. In 2023 non-urgent activity accounted for 2,403 calls or 7.4% of our total call volume. To alleviate the pressure of non-urgent activity, in 2021 Paramedic Services submitted a proposal to the Ministry of Health to fund 100% for a dedicated non-urgent ambulance. We anticipate the new transfer vehicle will go live by mid-April 2024. In December 2023 the Ministry confirmed \$978,000 one-time funding for the period 2024 to 2026 to implement a non-urgent transportation unit.

Service Levels:

Staffing levels were increased on July 1, 2023, as Council approved the addition of 10 full-time paramedics to staff two 12-hour ambulances seven days a week. The two additional ambulances helped to manage pressures on our Service caused by increasing AODs, as well as helping to maintain sufficient available ambulances. Call location and multiple calls for service at the same time continue to have an impact on RTS performance.

Future of Dispatching:

The Ministry operated Central Ambulance Communication Centre (CACC) - Sudbury is currently using 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, Code 4 being the most urgent life-threatening emergency requiring the fastest 'lights and sirens' response.

In 2027, Central Ambulance Communication Centre - Sudbury is scheduled to implement a new system called the Medical Priority Dispatch System (MPDS). This system is an internationally used patient triage system. It will change how calls are prioritized based on their urgency, provide better information to responding paramedics, and improve response for true emergencies. The MPDS is anticipated to have a substantially positive impact on response time performance and will ensure patients receive a paramedic response based on their condition. With the implementation of MPDS in the near future, there is no plan to change the RTS percentages for 2024.

Conclusion

The implementation of the two 12-hour ambulances in July of 2023 and the non-urgent transfer vehicle in April of 2024 will contribute to achieving the current RTS plan, address increasing AODs and the emergency resource depletion.

Sudbury Paramedic Services remains committed to the continual analysis of the RTS performance and continues to seek opportunities to meet our response time performance in all categories within our plan.

Our current RTS plan was established in 2013 and approved by Council in accordance with the Ambulance Act of Ontario, Standard 257/00. The RTS plan has not changed since 2013 and will continue to be followed in 2025.