

Paramedic Services 2022 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 2022 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 (6) and eight (8) 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 2022 (Figure 2), for 2023. 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 Services 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 2022, there were 33,401 calls for service, this represents a 4.4% increase from 2021.

Performance: In 2022, 144 calls, or 0.4 percent of the 33,401 calls were for SCAs. This means a defibrillator was on scene 86 times within six minutes. To achieve the seventieth percentile target for SCA RTS in 2022, we needed to arrive 101 times. Factors that contributed to meeting our SCA RTS target include six occurrences that were geographically unattainable, an increase in call volume and a lack of paramedic resource availability. The SCAs is 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 2022 there were 551 CTAS1 calls and to achieve our 80% RTS plan, we needed to arrive 441 times within 8 minutes. This RTS target was missed by 22 calls, achieving 76%. For CTAS2 there were 4,126 calls and to achieve our 85% RTS plan we needed to arrive 3,508 times within 10 minutes. We missed our RTS target by 124 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 2022 actuals in March 2023. Comparison of RTS actuals from previous years are identified in Figure 3.

Level of Acuity	Types of Call	Approved RTS%	% RTS 2018	% RTS 2019	% RTS 2020	% RTS 2021	% RTS 2022
Sudden Cardiac Arrest	Patient has no vital signs	70%	70%	58%	60%	63%	60%
CTAS 1	Critically ill or have potential for rapid deterioration	80%	79%	76%	80%	81%	76%
CTAS 2	Potential to life, limb, or function, requiring rapid medical intervention, controlled acts	85%	86%	88%	86%	85%	82%
CTAS 3	May progress to serious problem. Associated with significant discomfort or affecting ability to function.	85%	96%	97%	96%	96%	95%
CTAS 4	Conditions that would benefit from intervention or reassurance	85%	97%	97%	97%	97%	95%
CTAS 5	Non urgent, chronic, without evidence of deterioration	85%	98%	98%	97%	98%	96%

Figure 3

Evolving Demands:

Paramedic Services data indicates that in 2022 Sudbury Paramedic Services spent approximately 4,411 hours at the hospital on Ambulance Offload Delays (AODs). This is equivalent to removing one ambulance from service for 12 hours every single day of the year. Currently in 2023, the number of hours spent by Paramedic Services on AODs is trending the same as seen in 2022. During times when we are experiencing resource depletion and high call volume, neighbouring paramedic services have been requested to assist in servicing calls within our community. Depletion of resource availability impacts Balanced Emergency Coverage (BEC), contribute to our challenge to meet our RTS percentage targets.

Medical Tiered Response:

A Medical Tiered Response agreement is currently in place with Fire Services for Sudden Cardiac Arrest and some CTAS 1 and 2 type calls. In 2022, there were 144 SCAs achieving 60% of the SCAs. Paramedic Services arrived 78 times on scene within six minutes and Fire Services arrived eight times on scene within six minutes.

Non-Urgent

Transportation:

The transport of non-urgent medically stable patients is usually between hospitals, or between hospitals and nursing homes, or from the airport to Health Sciences North (HSN) and they generally do not require an ambulance fully staffed by paramedics. Sudbury Paramedic 911 resources are being used for non-urgent transportation, impacting Balanced Emergency Coverage. In 2022 non-urgent activity accounted for 1,454 or 4.3% 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 for non-urgent transportation. The proposal was denied, but we continue to discuss with the Ministry to consider other solutions. In addition, ORNGE (formerly Ontario Air Ambulance Corporation and Ontario Air Ambulance Service), recently introduced a Non-Urgent Transportation service to address non-urgent transportation from the airport to HSN.

Enhanced Service

Levels: Staffing levels have been increased effective July 1, 2023. Council approved the addition of 10 full-time paramedics to staff two 12-hour ambulances seven days a week. The two additional ambulances will help to manage pressures on our service caused by increasing call volume and increasing AODs, as well as helping to maintain sufficient available ambulances. We believe that the increased staffing levels will improve our RTS performance. With the addition of these resources Paramedic Services will review the impact to the RTS over a six month period and report back to the Community and Emergency Services Committee in first quarter of 2024. At this time there is no plan to change the RTS percentages for 2024.

Conclusion

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

With the addition of the two 12-hour ambulances starting on July 1, 2023, we believe it will assist in meeting the current RTS plan and address the increasing call volume, increasing AODs and emergency resource depletion we have been experiencing in recent years. A review will be conducted after six months to evaluate the impact of these additional resources to the RTS.

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 has not changed since 2013 and will continue to be followed in 2024.