

Purpose

The purpose of this report is to update the Emergency Services Committee on Paramedic Services Response Time actuals for 2019 that were submitted in March of 2020 to the Ministry of Health and Long Term Care, as per legislation. Our current Response Time Standards (RTS) plan was established in 2013 and approved by Council as required under the Ontario Ambulance Act. The RTS plan provides the Level of Service by establishing and maintaining response time performance targets to meet the needs of the community.

Background

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;
- Allows for variable percentile performances; and,
- The targets of time and percentile performance 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 (SCA) 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 1st 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; and,
- 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 responsible to set both the response time target and the percentile these response times are achieved. Paramedic Services has not changed the RTS plan since the MOHLTC implemented legislative changes in 2013. It is important to note Sudbury has one of the more aggressive RTS plans within the Province compared to other comparable services RTS plan (Figure 1). Paramedic Services continuously seeks opportunities to improve response time performance.

CGS Paramedic Services RTS Comparison to Other Services

Level of Acuity	Type of Call	Sudbury Approved RTS	Ottawa Approved RTS (2019)	York Approved RTS (2019)	Waterloo Approved RTS (2019)
Sudden Cardiac Arrest (SCA)	Patient has no vital signs (6 minutes)	70%	65%	60%	50%
CTAS 1	Critically ill or have potential for rapid deterioration (8 minutes)	80%	75%	75%	70%
CTAS 2	Potential to life, limb or function, requiring rapid medical intervention, controlled acts (10 minutes)	85%	75%	80%	80%
CTAS 3	May progress to serious problem. Associated with significant discomfort or affecting ability to function	85% 15 minutes	75% 15 minutes	90% 15 minutes	80% 11 minutes
CTAS 4	Conditions that would benefit from intervention or reassurance	85% 15 minutes	75% 20 minutes	90% 20 minutes	80% 12 minutes
CTAS 5	Non urgent, chronic, without evidence of deterioration	85% 15 minutes	75% 25 minutes	90% 25 minutes	80% 12 minutes

Figure 2

In March of 2020, the RTS actuals for 2019 were submitted to the MOHLTC, these are found below, (Figure 3). A comparison of RTS actuals from previous years are identified, (Figure 3). Paramedic Services analyses call volume trends, response times and the deployment of paramedic resources to achieve our council approved response time performance plan.

Level of Acuity	Type of Call	Approved RTS %	RTS% (2017)	RTS% (2018)	RTS% (2019)
Sudden Cardiac Arrest (SCA)	Patient has no vital signs (6 minutes)	70%	73%	70%	61%
CTAS 1	Critically ill or have potential for rapid deterioration (8 minutes)	80%	80%	79%	81%
CTAS 2	Potential to life, limb or function, requiring rapid medical intervention, controlled acts (10 minutes)	85%	88%	86%	88%

CTAS 3	May progress to serious problem. Associated with significant discomfort or affecting ability to function (15 minutes)	85%	97%	97%	97%
CTAS 4	Conditions that would benefit from intervention or reassurance (15 minutes)	85%	98%	98%	97%
CTAS 5	Non urgent, chronic, without evidence of deterioration (15 minutes)	85%	97%	98%	98%

Figure 3

Analysis

During 2019, Paramedic Services did not make our response time target for Sudden Cardiac Arrest (SCA). To meet the SCA Response Time Standard (RTS) of 70%, a defibrillator had to arrive on scene within 6 minutes for 102 of the 145 SCA's. A defibrillator arrived on scene for 88 of the 145 SCA's missing the target by 14 calls for a RTS of 61%.

Of the 57 calls where a defibrillator did not arrive on scene within 6 minutes, 20 calls, or 34%, were geographically located beyond the total response time of 6 minutes. In addition, it is worth noting, of the 57 calls that did not achieve the target, 17 missed by sixty seconds or less.

Many aspects of service delivery, including response times, have been impacted due to COVID. Some of the factors include the decrease in ambulance availability due to extended time to transfer patients to hospital staff, enhanced cleaning of ambulances and delays in initial patient contact due to enhanced personal protective equipment for the delivery of clinical care. Based on the continued impacts of COVID we will not be making any recommendations to Emergency Services Committee to alter the current plan until the operational environment has normalized.

Evaluating Response Times

A top priority of Paramedic Services is to provide the best possible prehospital clinical care to the residents and visitors of City of Greater Sudbury in the most effective and efficient method possible. Paramedic Services continues to evaluate items that effect response times, these include:

- Reviewing call volume trends.
- Reviewing and making adjustments to deployment strategies to meet evolving demands.
- Reviewing medical tiered response protocol with Fire Services.
- Evaluating the local public access defibrillation program.
- Reviewing CACC's performance and ensure they are utilizing the most appropriate resource.
- Reviewing paramedic response performance.

Sudbury Paramedic Services remains committed to the continual analysis of performance and seeks system improvement opportunities.

Conclusion

Paramedic Services submitted our RTS 2019 actuals in March 2020, as per legislation. Due to the current environment surrounding COVID, Paramedic Services does not recommend changes to the RTS Plan for 2021. However, in 2021, a RTS update will be provided to the Emergency Services Committee along with any recommended changes needed to ensure the delivery of services meets the needs of the community.