Request for Decision

New Provincial Emergency Response Time Standard for Emergency Medical Services

Presented To:	Community Services Committee
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Recommendation

THAT the Community Services Committee endorse and recommend to City Council the response time targets as recommended in this report by the Chief of Emergency Services be approved and submitted to the Ministry of Health and Long-Term Care (MOHLTC) on or before October 1, 2012;

AND THAT the Chief of Emergency Services report back annually to the Community Services Committee on the Services' performance in achieving the established targets and make any recommendations for changes for the following year.

Signed By

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BACKGROUND

1996 Response Time Standard

The current legislated response time standard for all land ambulance services in Ontario is based on the 90th percentile response time for Code 4 (life threatening) emergency calls from 1996. In other words, 90 per cent of the time the service shall meet or be below the time standard. This standard was adopted by the Ministry of Health and Long-Term Care (MOHLTC) to measure response times of the designated delivery agent for land ambulance services for each upper or single tier municipality.

The response time established in 1996 for Greater Sudbury Emergency Medical Services (EMS) was set at 12 minutes and 12 seconds or less 90, percent of the time.

Since municipalities were legislated to provide land ambulance services, it was apparent amongst the industry that there were several issues with this methodology of target-setting, including:

- the assumption that the 1996 standard was providing sufficient service to the community, but no evaluation was completed;
- there was no municipal input in developing the standard;
- that the standard and dispatch methods technology would change over the years in light of significant industry advancements in medicine and technology;
- the standard was not evidenced-based, yet failure to achieve the response time standard carried with it the potential for loss of Provincial Certification; and
- the standard was based on Code 4 (life threatening) dispatched calls only, despite the fact that many of these calls turn out to be non-urgent.

New Response Time Framework

Under the new regulation which comes into effect on October 1, 2012, City Council is responsible to establish response time targets for our municipality and report annually to the MOHLTC on our compliance with the established response time plan as set out in *Regulation 257/00* under the *Ambulance Act*.

The new Regulation is an improvement to the previous 1996 Response Time Standard as it provides municipal input into the response standards and permits for medically relevant differences among call types. Under the new regulation Council is given the authority to establish response time targets for the municipality and report annually to the MOHLTC on their compliance for the six (6) new call severity categories.

Key aspects of the new regulations include:

- Multiple response time targets based on medically relevant categories;
- Allows for variable percentile performances (allows for reporting on something other than the 90th percentile); and
- The targets of time and percentile performance can be maintained or modified annually by the municipality.

The timelines for submission and reporting are:

- October 1 of each year report to the MOHLTC the response time standards, as approved by Council, for the upcoming year;
- By March 31 of each year, commencing in 2014, 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.

Reportable Call Criteria

The new 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 new response time standards utilize the Canadian Triage Acuity Scale (CTAS) as shown in (Fig. 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 "sickest" 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	Call Volume by Acuity 2011
Sudden Cardiac Arrest	Patient has no vital signs	156*
CTAS 1	Critically ill or have potential for rapid deterioration	374
CTAS 2	Potential to life, limb or function, requiring rapid medical intervention, controlled acts	3356
CTAS 3	May progress to serious problem. Associated with significant discomfort or affecting ability to function.	7916
CTAS 4	Conditions that would benefit from intervention or reassurance	5066
CTAS 5	Non urgent, chronic, without evidence of deterioration	3227

*SCA calls are a subset of CTAS 1calls therefore, already counted in the CTAS 1 category
Data Source - iMedic (with lower tier data pulled from ADDAS)
Note – 1,658 calls excluded due to missing CTAS on contact, incorrectly entered or missing call dates/times, obviously deceased, or calls outside CGS.

Fig. 1

Improving Response Times

Emergency Services is actively engaged on several initiatives that have the potential to improve response times moving forward, these include:

- New Fire Medical Tiered Response Protocol – consolidation of several old protocols into one for Greater Sudbury Fire Services who respond to Sudden Cardiac Arrests and Unconscious calls;
- Public Access Defibrillator Program – continue to expand the number of public access defibrillator units in the City from the current 109;
- EMS - System Status Plan Review – assess deployment and resource utilization with an aim to improve response times within Greater Sudbury;
- Comprehensive Fire Service Review – undertake a comprehensive review of the City's Fire Services including needs specific to operational performance, including station locations and utilization of resources; options for improving operational effectiveness, including potential to rationalize infrastructure (Stations), resources and operating protocols;
- 2012 Feasibility Study for (911) Integrated Emergency Communications System – investigate feasibility to integrate EMS dispatch with the City's current dispatch system for 9-1-1, Police, and Fire. This may result in the City's assumption of operational governance for ambulance dispatch services;
- Ambulance Off Load Delay (AOD) Nurse Program – the reduction of Ambulance delays can free up available EMS resources resulting in improved response times; and,
- NE-LHIN Non-Urgent Patient Transfers Study – the North East Local Health Integration Network is undertaking a study to develop a model that meets the needs for timely, safe and cost-effective non-urgent patient transfers into and out of hospital centres in North East Ontario. A new model has

the potential to reduce the non-urgent call volumes in the City, thus freeing up ambulance resources for higher acuity calls.

2011 Response Times Based on Acuity

In determining the recommended response times for 2013, the Service reviewed historical response time performance (2011). The chart below (Fig. 2) details each CTAS category and the actual times achieved in 2011 by lower tier and Greater Sudbury globally.

2011 Response Times in Greater Sudbury

	SCA < 6 min.	CTAS 1 < 8 min.	CTAS 2 < 10 min.	CTAS 3 < 15 min	CTAS 4 < 15 min.	CTAS 5 < 15 min.
Onaping Falls	22%	46%	63%	83%	85%	64%
Rayside- Balfour	51%	73%	81%	92%	91%	87%
Valley East	41%	57%	86%	96%	91%	85%
Capreol	18%	38%	85%	90%	82%	77%
Walden	0%	30%	65%	82%	79%	79%
Nickel Centre	51%	38%	46%	61%	55%	43%
Sudbury	78%	98%	93%	97%	94%	89%
Greater Sudbury	**66%**	**77%**	**85%**	**93%**	**90%**	**85%**

Data Source - iMedic (with lower tier data pulled from ADDAS)
Note – 1,658 calls excluded due to missing CTAS on contact, incorrectly entered or missing call dates/times, obviously deceased, or calls outside CGS.

Fig. 2

Urban Centers vs. Rural/Remote

The MOHLTC Regulation allows for the implementation of more than one Response Time Performance Plan in order to address the unique geographic and population density response issues faced when delivering local ambulance services.

As outlined in this report, the City's 2011 EMS response time performance varies across the various population areas within the City. Given the City's vast geography; the Service's response time performance is impacted by the location of an emergency call, such as, urban, rural, and remote areas within the community.

Given the lack of clear definitions of urban, rural, and remote, ambulance response within a community, the majority of ambulance services providers are recommending to Councils one global response time performance plan for their communities. Further, given the error rate of the records obtained for the 2011 EMS Response Time Data, the City's Emergency Services Department is recommending a single global Response Time Plan for year 2013.

The Ontario Association of Paramedic Chiefs standing committee on Performance Measures and Standards will be undertaking a review of a multiple-plan model associated with establishing definitions and methods for obtaining the data for urban, rural, and remote call areas which may then be recommended in the future.

Recommended 2013 Response Time Standards

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 these response times are achieved.

Sudbury EMS recommends the following global response time targets be adopted for 2013 (Fig.3).

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

Data Source - iMedic (with lower tier data pulled from ADDAS)

Fig. 3

These recommended response time targets for 2013 have been determined by the following:

- Retrospective review of Sudbury's 2011 response time performance for Sudden Cardiac Arrest and CTAS 1 to CTAS 5.
- Consultation with and review of response time performance data and recommended targets from other land ambulance services in Ontario.
- Through consultation with Dr. Jason Prpic, Medical Director Northeastern Ontario Pre-Hospital Care Program.

The Emergency Services Department recommends that the Community Services Committee endorse and recommend to City Council the proposed response time standards as they are based on the best available call information and evidence-based medical practices currently experienced in Sudbury. This plan is considered both achievable and builds on the current performance of Sudbury EMS through its tiered response protocol with Fire Services and the local public access defibrillation program.