

Medical Tiered Response Update

Purpose

To update the Emergency Services Committee on matters related to the Medical Tiered Response Agreement within the Community Safety Department.

Background

The Medical Tiered Response (MTR) Agreement has a long historical standing within emergency response in the City of Greater Sudbury. The initiation of a formalized agreement began in the mid 1990's with the implementation of Advanced Care Paramedic training under the Ontario Pre-hospital Advanced Life Support (OPALS) study. Part of the OPALS study hinged upon the ability to apply a defibrillator within a set average timeframe. Due to limitations on ambulance resources at the time, Greater Sudbury Fire Service began training on Automated External Defibrillators (AEDs) to assist on response within the City core. The tiered response agreement outside the former City boundaries arose out of a different methodology. Prior to assumption by the City of Greater Sudbury (CGS) in 2000, the previous operator of land ambulance services, Sudbury & District Ambulance Services, had Emergency First Response agreements with the communities of Dowling, Levack and Capreol through their local Fire Departments. The goal was to provide lifesaving care as expeditiously as possible, understanding that these three communities were being serviced by ambulances located a distance away (Chelmsford and Val Therese).

The evolution to a formalized agreement within the Community Safety Department has occurred much as the Department itself has evolved. In the fall of 2010, following a detailed review of MTR activity in the community, the Emergency Services Department in co-operation with the Fire Services Division, Police Services, the Ministry of Health and Long Term Care – Central Ambulance Communication Centre, and the Greater Sudbury Fire Services Medical Director initiated a Committee to address the need to review and modify the existing MTR Agreement.

Following a comprehensive review, the June 2017 version 2.0 of the MTR Agreement reflects updates in clinical best practice and operational changes for optimal service delivery. High level changes include a Quality Assurance clause, and a dispute resolution clause in regards to Firefighter/Paramedic interaction. On a larger perspective, the MTR Agreement was updated to reflect expected level of service as detailed within the Establishing and Regulating By-law 2014-84. The Greater Sudbury Fire Services currently offers MTR at the Emergency First Responder (EFR) level. EFR is a 40

hour certified course delivered through the Canadian Red Cross. It is intended for professional first responders and teaches how to deal with medical emergencies using immediate life sustaining procedures intended to help until medical professional assistance arrives. High level topics of instruction include, but are not limited to:

- anatomy and physiology
- assessment
- respiratory emergencies
- airway and ventilation
- circulatory emergencies
- shock
- traumatic injuries
- medical emergencies
- sudden illnesses
- poisoning
- heat- and cold-related emergencies
- special populations and crisis intervention
- childbirth
- reaching and moving people
- multiple casualty incidents

The EFR course also includes CPR at the Health Care Provider level that includes: recognition of angina, heart attack and stroke, rescue breathing, AED training for adult, child and baby.

The above teaching allows trained Firefighters to provide intermediate first aid, cardiopulmonary resuscitation (CPR), and rapid application of AED when Paramedics are not immediately available and only until their arrival.

Fire Services offers this response as a support service to Greater Sudbury Paramedic Services, and it must be understood that Fire Services is not the primary agency for medical responses. This represents a depth of service for medical response by Fire Services in areas of the city where it is offered and is not a means to replace Paramedics.

As noted, MTR is currently provided by City core career stations, the Val Therese composite station, and the Capreol, Dowling and Levack volunteer stations. The remaining volunteer fire stations do not provide this type of response.

The following map indicates the response polygon for MTR as well as the location of vulnerable occupancies which often generate the highest call volume for urgent emergency response. The green polygons indicate a 5:20 minute or less response time, while the yellow polygons indicate a 5:21 – 9:00 minute response time from stations which have been trained for MTR.

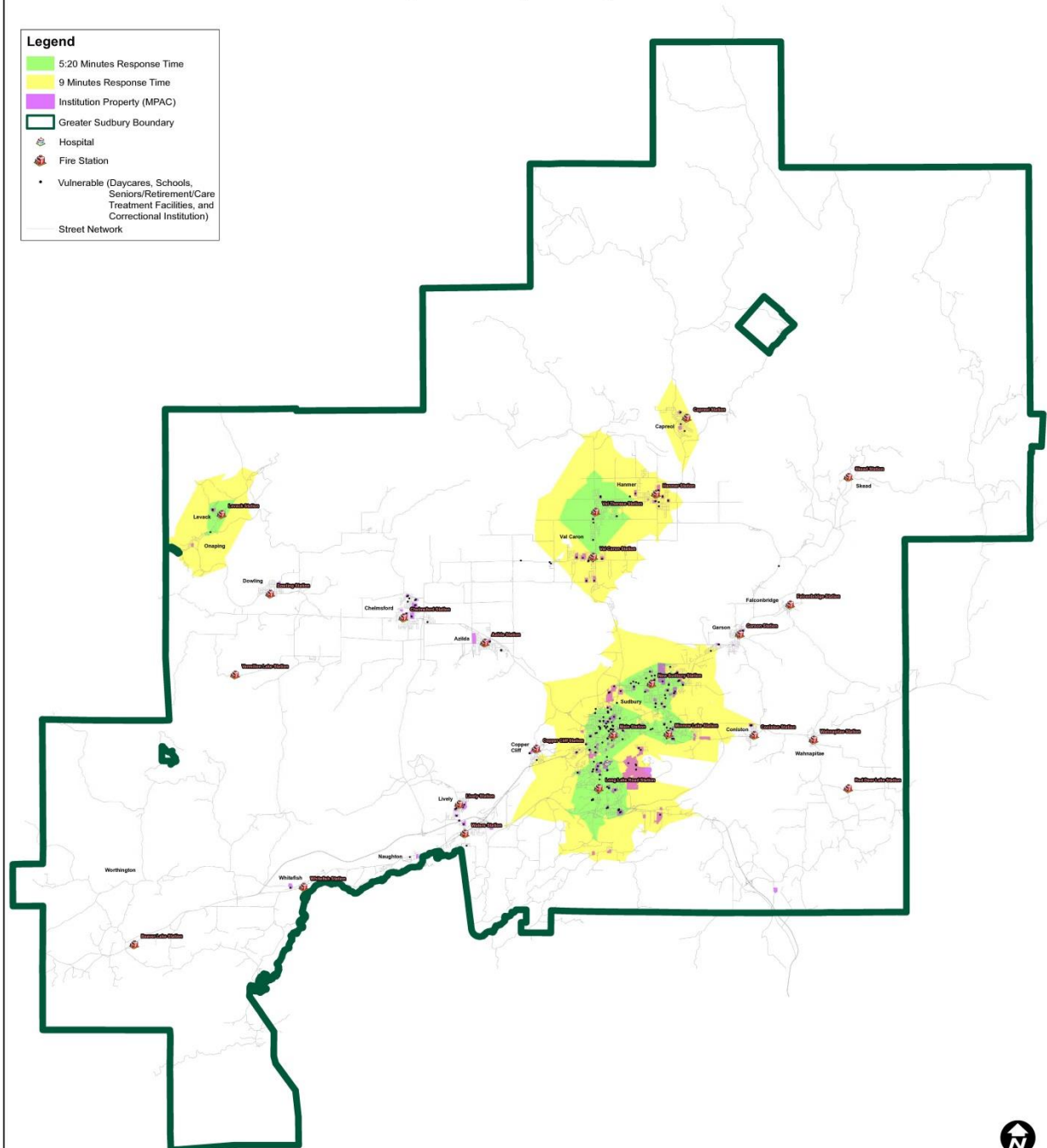
City of Greater Sudbury

Status Quo

Fire Medical Tiered Response (MTR)



- Legend**
- 5:20 Minutes Response Time
 - 9 Minutes Response Time
 - Institution Property (MPAC)
 - Greater Sudbury Boundary
 - Hospital
 - Fire Station
 - Vulnerable (Daycares, Schools, Seniors/Retirement/Care Treatment Facilities, and Correctional Institution)
 - Street Network



Date: January 23, 2017
Prepared by: GIS&M Section

0 2.5 5 10 Kilometers



Analysis

The current MTR Agreement is of great value to the citizens of Greater Sudbury. While the Agreement is currently and has historically been delivered in an inconsistent manner, efforts continue in making this program as consistent as possible.

Since 2015, Greater Sudbury Fire Services has responded to 1840 calls under the MTR protocol. Understanding that an MTR response is only initiated under critical situations, this is noteworthy work. The frequency of these types of incidents is significant, and the consequence is high as the MTR Agreement outlines that the Fire Services response is limited to incidents that are almost always life threatening, if not responded to immediately.

In an effort to further validate the efficacy of the MTR program, as noted earlier, an improved quality assurance process involving the Emergency Services Medical Director has been established in the new Agreement. Furthermore, internal efforts to enhance level of service accountability are being explored. Where inconsistency in the program occurs, is where it is delivered and to which level of trained response.

One limitation of the current system is the fact that an MTR response is only available in eight of the City's 24 fire stations. There is a large portion of the City not covered by this Agreement meaning there is a great opportunity to improve response. Of the eight stations participating in the agreement, four are staffed by career (full-time) Firefighters and one (Val Therese) is staffed utilizing a composite response (a mix of career and volunteer response). At the Val Therese station, career Firefighters respond under the MTR Agreement. In these stations, the response is almost immediate with an average chute time of 1:34 minutes. Chute time is the period between receipt of a page from dispatch to attend an emergency call and the time the fire truck leaves the station to respond.

In volunteer stations, the average chute time is 5:48 minutes. This delay is due to the inherent nature of a volunteer firefighting response which is approved through the E&R By-law. It has also been found that there is a varying participation rate in MTR within the volunteer stations. Because of that and in conjunction with the requirements to obtain and maintain EFR certification, only a core group of volunteers in the three volunteer stations are certified to respond under the MTR Agreement.

Within career and composite stations, Firefighters train continually while at work. A training concept entitled, "Medical Mondays" has been implemented whereby the topic of training every Monday revolves around medical skills. Each platoon has a trainer certified to deliver EFR and on Mondays each crew receives training covering a part of the EFR curriculum. Volunteer fire stations do not have a platoon trainer, but rather they receive their weekly training through a station captain or lieutenant. Due to

the demands of training on fire apparatus and firefighting techniques, there is no additional time within the allocation for Volunteer Firefighters that would allow for medical training under the existing system. Currently, there are five positions allocated for EFR trained volunteers in each of the three volunteer stations that provide MTR. Once every three years there is a requirement to recertify with either a 20-hour or 40-hour course (dependent on when the last full course was taken). In these cases those volunteers with the EFR training will need to devote the time to attend.

Retention within the Volunteer Firefighter complement also presents a challenge as there is nearly an 18% attrition rate within the Service. This retention rate, which is aligned with the provincial norm, has greatly affected the number of Volunteer Firefighters trained at the EFR level. In an attempt to maintain the obligations within the MTR Agreement, an interim measure of delivering First Aid, CPR, and oxygen therapy to the volunteers has been adopted. Currently, the Fire Services Training Division is comprised of three trainers. This number does not provide enough resourcing to ensure continual training opportunities for volunteer stations in a consistent manner. The lack of training opportunity has been noted by the City's Auditor General and solutions are being explored as per Audit Committee resolution AC2017-05:

WHEREAS the Auditor General's Office identified opportunities to improve value for money and the mitigation of significant risks within the Value for Money Audit of the Operations of Fire Services,

THEREFORE BE IT RESOLVED THAT the City of Greater Sudbury directs staff prepare 2018 business cases for:

d) two additional training officers to ensure all firefighters are trained and able to participate in a meaningful way that best serves the needs and circumstances of the community.

Conclusion/Next Steps

The MTR Agreement is a very helpful value-added program in the delivery of emergency medical services. When Paramedic Services is otherwise deployed, Fire Services can intercede to provide immediate lifesaving techniques until the Paramedics arrive on scene. While it is a beneficial program it does have its limitations, predominantly with inconsistencies of the communities where it is delivered and in the ability to train Volunteer Firefighters. The future of a more consistent MTR program relies highly on the addition of training officers. There can be no further enhancement in this program until the resourcing to train participants is improved. The effort to move this forward will be further explored in the business case being prepared to request additional Fire Services Training Officers as part of the 2018 budget process.