

EXECUTIVE SUMMARY

This report aims to provide the City of Greater Sudbury Emergency Services Committee with an update on activities, relevant statistics, and recent performance measures within the Paramedic Service Division of the Community Safety Department.

Greater Sudbury Paramedic Services is responsible for the delivery of a performance-based paramedic service that complies with legislative and regulatory requirements, ensuring safe and quality pre-hospital emergency medical care and transportation for those individuals suffering injury or illness. A performance-based paramedic service focuses on clinical excellence, response time performance, patient outcomes, patient satisfaction, continuous quality improvement, and a healthy work environment conducive to professional growth.

COVID-19

During the COVID-19 pandemic, Paramedic Services continues to deliver emergency services in the same quality and form as outlined in our 2020 work plan.

Paramedic Services staffing levels have been minimally impacted and the deployment of emergency resources to service our community has not changed. During the early stages of the pandemic, call volume had decreased by approximately 20%, however, call volume has slowly returned to normal volumes.

Paramedic Services continues to provide additional support to external stakeholders to address the changing demands created by this pandemic.

At the start of the pandemic, Health Sciences North (HSN) prepared to open a COVID-19 Assessment Centre. On March 9, 2020, Paramedic Services met with the North East Local Health Integration Network (NELHIN) and HSN representatives to evaluate the opportunity for Community Paramedicine to work with HSN to operationalize a team to complete mobile in home COVID-19 testing for select individuals unable to make it to the Assessment Centre for testing as part of their application. With the support of the CAO and the General Manager of Community Safety, Community Paramedics assisted with the opening of the HSN Assessment Centre and on March 15, the first in home COVID-19 test was performed by a Community Paramedic. Since early March, we have staffed a team of two specially trained Paramedics 12 hours a day, 7 days a week to test residents in their home. Over the past five months, larger teams of Paramedics completed surveillance COVID-19 testing in Long-Term Care (LTC) facilities, retirement homes, Emergency Child Care Centres, Correctional facilities, First Nations communities, and in the City supported isolation center. Currently, Paramedic staff have tested over 2400 members within our community and continue to operate the CGS Paramedic Services mobile COVID-19 Assessment Centre.

Paramedic Operations

Screening for COVID

The Ministry of Health (MOH), Emergency Health Services (EHS), is responsible under the Ambulance Act for publishing standards for patient care, documentation, safety, equipment requirements and transportation. These requirements are outlined in various paramedic practice documents: Standards, Training Bulletins, Manuals and Guides. During this pandemic, the EHS has been updating COVID-19 Screening Tools for Paramedics and Ambulance Communication Officers (ACO). The ACO performs the initial COVID-19 screening of all 911 calls. Paramedics are advised of the outcome from the ACO screening, which dictates the level of Personal Protective Equipment (PPE) to be used. The ACO advises the callers not to approach the Paramedics when they arrive and to follow their directions to maintain distancing. On arrival,

Paramedics complete an additional screening. The outcome again further supports the decision of which level of PPE to be used for patient care.

Mental Health Support

Paramedic Services recognizes the impact to all front-line workers during COVID-19 pandemic. Support mechanisms, such as information and strategies on managing their mental wellness have been and will continue to be provided. Staff are routinely reminded to reach out to any member of the Peer Support Network (PSN) if they need additional supports. Our PSN team continues to participate in professional development sessions with a local clinical psychologist. These sessions are instrumental in advancing the development of our PSN team, ensuring they are well prepared to assist their colleagues in times of need. The latest session covered how COVID-19 affects first responders.

In May, a Psychology First Aid Toolkit for Frontline Providers was released to all Paramedic Services staff. This resource was developed by a Clinical and Health Psychologist and is specific for frontline responders. The tool kit contained many mental health techniques and resources for staff and served as a one-stop shop to access more comprehensive resources if needed. Our goal has remained to keep our frontline providers safe mentally and physically throughout the pandemic.

Hiring

Paramedic Services have reviewed staffing levels, and as a result, have commenced a part time job competition. This hire is to ensure staffing levels are maintained to support frontline operations.

During the pandemic, College programs were impacted and many Paramedic Services across the province anticipated potential staffing challenges. To help mitigate this issue, the Ministry of Health Emergency Health Regulatory and Accountability Branch (MOH-EHRAB) amended the regulations to allow the hiring of Emergency Medical Attendants. The MOH-EHRAB has postponed the Advanced Emergency Medical Care Assistant (A-EMCA) examination for recent College graduates and will be posting dates for the exam in the near future. The A-EMCA is a requirement for Primary Care Paramedics to practice in Ontario.

In the meantime, Sudbury Paramedic Services conducted the hiring of qualified part-time staff as outlined by the MOH-EHRAB, but amended the orientation and base hospital certification to allow for physical distancing.

Paramedic Services Performance Measures Defined

Paramedic Calls for Service

A measure of calls **received** by Greater Sudbury Paramedic Services by the Central Ambulance Communications Centre (CACC) to respond to emergencies. In simpler terms, the number of calls to 911 for Paramedic Services that resulted in Paramedics being dispatched.

Paramedic Unit Responses

A measure of units **dispatched** by the CACC to Paramedics to service emergencies. This number will typically be higher than calls for service as some calls necessitate the use of multiple ambulances, Paramedic Response Units, or Platoon Superintendent Units.

Paramedic Patients Transported

A measure of patients being transported on both an emergency and non-emergency basis (Table 1).

EMS Calls for Service	15,275
EMS Unit Response	18,235
EMS Patients Transported	10,685

Table 1 - Greater Sudbury Paramedic Services Statistics Jan1-July 27, 2020

Logistics

Personal Protective Equipment

During the pandemic, inventory levels of Personal Protective Equipment (PPE) are being monitored to ensure all staff have the proper equipment to work safely. The availability on specific types of PPE have been challenging and the Logistics staff continue to coordinate the procurement of supplies to ensure PPE levels are maintained and available to meet current and potential increased demands.

Donning the proper PPE for the call type is important to manage PPE levels. We continue to communicate with staff, providing the most current information regarding the proper selection of PPE based on circumstances and most current available information from Public Health Sudbury and Districts.

Hybrid Vehicles

Paramedic Services have purchased three new ambulances outfitted with hybrid electric drive systems. These systems work seamlessly in the background to save fuel and reduce greenhouse gas emissions through a process called regenerative braking. Regenerative braking uses an electric motor to aid in slowing the vehicle down during braking to charge a hybrid battery. Then when the driver accelerates, the hybrid battery releases the stored energy to the electric motor to propel the vehicle. Hybrid electric up fit is reported to improve fuel efficiency by 25% and significantly decreases CO2 emissions. This initiative should reduce greenhouse gas emissions from fuel consumption and lessens our impact on climate change.

Paramedic Services investment in hybrid was to work towards the City's goal of achieving a net-zero emissions target by the year 2050 as outlined in the Council approved Community Energy and Emissions Plan (CEEP). Our goal is to present a report to the Emergency Services Committee in 2021 presenting the results of how the hybrid ambulances are performing and the analysis of fuel costs savings the impact hybrid has in reducing our greenhouse gas emissions.

Enhanced Ambulance cleaning with fogging

The Service is actively working to control and prevent the spread of disease pathogens to employees, patients and the community. We have purchased a disinfection system specifically for vehicle cleaning to help maintain a high level of infection prevention and control for staff and patients.

The Nocospray System disinfection system is a patented dispersion technology that disinfects all hard surfaces. A combination of a portable, propulsion machine (fogger) and the hydrogen peroxide-based disinfectant created to act synergistically with it disinfects all hard surfaces in an enclosed area. Nocospray assists with our normal cleaning processes to clean those hard to reach spots consistently and completely. This system works automatically by itself within the sealed interior of an ambulance. Nocospray's efficacy and practicality has been demonstrated in Canadian hospitals. The Nocospray Disinfection System has been validated and approved by Health Canada. Procedures have been reviewed and approved by CGS Health & Safety and our Joint Health & Safety Committee. This system has been permanently integrated into our regular deep clean process.

Professional Standards

Professional Standards is responsible for the delivery of quality assurance programming consisting of clinical and service delivery auditing to improve patient safety and ensure high-quality clinical care, thereby reducing risks. Professional Standards manages our electronic patient care record system, including quality assurance oversight. Clinical events are monitored and evaluated to identify training and education opportunities for the Paramedics.

Reported number of clinical events: Date range is January 1 – July 31, 2020

Cardiac	Number of calls with at least 1, 12 Lead Acquired	2,018
	Total Cardiac Ischemia related	681
	Number of STEMI	62
	A STEMI is a specific type of heart attack, which can be diagnosed by Paramedics in the pre-hospital setting.	

Neurological	Total Neuro-related	1,130
	Number of Acute Stroke (FAST positive, timeline criteria met)	98
	Average Age in years	71
	An Acute Stroke patient qualifies for specific time-sensitive treatments from the hospital to reduce and reverse damage caused by stroke.	

Sepsis	Number of identified Sepsis cases	86
	Average age in years	70
	A suspected Sepsis patient meets a specific criteria (qSOFA) used to identify patients at risk of death due to systemic infection.	

Cardiac Arrest Medical and Trauma	Total Cardiac Arrest, Medical and Traumatic	246
	Total treated Cardiac Arrest Medical and Traumatic	116
	Number of Medical Arrest with Return of Spontaneous Circulation at any time while in Paramedic Care.	33

Training

Enhanced Training Sessions

During the pandemic, Paramedic Training Officers schedules have been adjusted to provide additional training time with staff. Training staff addresses training needs 16 hours a day, Monday to Friday, to help deliver real time training and support to staff where needed and with a focus on infection prevention and control. Paramedic Training Officers modified the delivery of training by conducting one-on-one sessions with Paramedics. Topics of training included mask fit testing and reviewing all COVID-19 related practices and processes. Throughout the summer, the training officers have continued to review COVID-19 safe work practices with all staff.

Throughout the pandemic, training officers continuously collaborated with HSN and developed new procedures and training material for staff as the pandemic evolved to ensure seamless prehospital care and patient transfer. This collaboration ensured both hospital staff and Paramedics followed same practices as it related to patients who were suspected of having COVID-19.

Community Paramedicine

The Community Paramedicine Section utilizes Paramedics in non-traditional roles providing home visits, clinical interventions, and preventative health initiatives to reduce demand for Emergency Department visits, hospital admissions and to keep our at-risk aged population healthy and at home. We attempt to aid our vulnerable populations by directing them to suitable community resources. Paramedic Services operates a Health Promotion and a Care Transitions Community Paramedic program.

Care Transitions Community Paramedicine Program (CTCP)

The Care Transitions Community Paramedicine Program partners with Health Sciences North to utilize trained Community Paramedics to provide home visits and approved interventions under medical oversight to complex, high-risk patients to assist them in transitioning from acute care to community and/or self-supported in-home care.

Goal: To decrease Emergency Department visits and readmissions for identified high-risk patients with chronic disease (CHF, COPD, and diabetes) compared to their past utilization. Paramedics assigned to the CTCP continue to deliver services as outlined in the 2020 work plan during the pandemic.

From January 1, 2020 until June 30, 2020, there were 266 active patients enrolled within the program and only three patients reported the need to utilize our 911 service for the treatment of their chronic health condition. There were 29 referrals to either primary care and/or community service, thus improving the quality of life for these patients.

In an effort to reduce in person contacts during COVID-19, the CTCP increased the number of patient contacts over the phone. Home visits continue to be conducted to those that are deemed necessary or Just in Time (JIT). These JIT visits are for those situations of chronic illness

exacerbation to allow CTCP Paramedics to intervene prior to activation of 911 or an Emergency Department visit.

Visits completed / JIT	311 / 120
Working Days	161
Active Patients	266
911 Calls Related to CTCP	3

Health Promotion Community Paramedicine (HPCP)

The objective of this program is to maintain and expand health promotion, education and injury prevention. This program will also assist citizens in chronic disease recognition and prevention, injury awareness/prevention strategies, referrals and health system navigation assistance. The primary goals of this program are to mitigate emergency calls and hospital visits, keep our “at-risk” aged population healthy and at home. This is an attempt to aid our vulnerable populations and redirect them to more suitable community resources other than the Emergency Department.

During the pandemic, the HPCP program collaborated with various community agencies in our provision of COVID-19 mobile testing to ensure our patients are tested and may remain safely in their place of residence. These include:

- Assisting HSN COVID-19 Assessment Centre in screening phone calls from citizens to evaluate if COVID testing should be conducted, scheduling in-home testing by the Community Paramedic Mobile Testing Group for those in our community who are unable to physically attend the HSN COVID-19 Assessment Centre, and are members of the mobile testing group who provide the in-home COVID-19 testing.
- Establishing a priority referral process to HPCP from NELHIN / Maison McCulloch Hospice for those who are in the community who require COVID-19 testing for admission to either facility.
- When our CPs provide COVID-19 testing for an older adult, the North East Specialized Geriatric Centre can be utilized where CPs may video conference with a Geriatrician MD and the older adult during the CP physical assessment portion of the COVID test. The Geriatrician will work with the CP with the patient to offer enhanced patient assessments and follow-up.
- A group of Primary Care Physicians may be reached by phone to function as CP medical oversight physicians. They have the ability to offer guidance / follow-up to patients seen by the CP if required.
- Sudbury and District Nurse Practitioner Clinic (SDNPC) with Dr. Alex Anawati and Canadian Mental Health Association (CMHA) have collaborated with the Health Promotion Community Paramedic Program which sees CP's providing on demand COVID-19 testing every morning at the established Temporary Emergency Shelter (TES) at 1500 Regent Street and Withdrawal Management at 336 Pine St. Health Promotion Community Paramedics are providing clinics to the homeless population to meet low acuity health needs and provide referrals.

Our Community Paramedics are supporting our community by providing community COVID-19 testing. We have completed over 2,500 community swabs to date. We have resumed our Paramedic referral and Community Mobilization Sudbury-Rapid Mobilization Table (CMS-RMT) work and will soon be re-establishing our CP@Clinic Programs utilizing some virtual technology and remote patient monitoring.