

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 Services 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

Paramedic Services staffing levels have been minimally impacted by either emergency childcare issues or other COVID-19 related challenges. Deployment of staff for emergency response 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 returned to levels as seen in previous years. On January 14, 2021, a province wide stay-at-home order was implemented for 28 days. The stay-at-home order has required reevaluation of staff still performing work in the office and support transition to now conduct their work from home. At this, those who can work from home, are working from home including managers and support staff.

COVID-19 Mobile Community Testing

Paramedic Services continues to provide support to the community to address the changing demands created by this pandemic. Paramedics continue to support the Health Sciences North COVID-19 Assessment Centre by conducting mobile in home COVID-19 testing for select individuals unable to attend the Assessment Centre in person for testing either due to limited mobility or transportation challenges. Currently, Community Paramedics have assessed and tested over 4,500 symptomatic residents in the community allowing equitable access to COVID-19 testing.

Paramedic Operations

COVID-19 Employer Rapid Antigen Screening Pilot Program

Greater Sudbury Paramedic Services has been accepted to participate in phase one of the employer voluntary antigen screening pilot led by the Ministry of Health, Public Health Ontario, and Ontario Health. The objective of the pilot is to assess the value of the Panbio brand antigen test as a screening tool to support employee safety and business continuity in a variety of workplaces. Results of this pilot will support an increased understanding of how rapid antigen testing could be deployed more broadly to support provincial COVID-19 response activities. In this pilot we will see Paramedic staff tested by Paramedic Services Training Staff and Community Paramedics for COVID-19 prior to shift commencement up to three times per week. Results of the antigen test are provided within ten minutes following test completion. Panbio antigen tests are less sensitive than the PCR test. It is a test that has a 93.3% sensitivity and 99.4% specificity, whereas other studies have shown sensitivity results ranging from 72.1%-

86.5%, which means testing could yield negative results in those who are infected 30% of the time. Paramedics Services will be conducting an eight-week pilot to be completed by March 31, 2021.

Screening for COVID

The Ministry of Health (MOH) and Emergency Health Services Branch (EHSB) 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 EHSB has been updating COVID-19 Screening Tools for paramedics and Ambulance Communication Officers (ACO) as new knowledge is discovered about COVID-19. The ACO performs the initial COVID-19 screening of all 911 calls. Paramedics are advised of the outcome from the ACO screening, and with this information paramedics then don the necessary Personal Protective Equipment (PPE) required to protect themselves. Additional measures have been put in place to protect responding paramedics. These include instructions the ACO provides to the callers to not approach the paramedics when they arrive, instructions for all those present to wear a mask, and to follow responding paramedic's instructions to maintain distancing. On arrival, paramedics also complete a second screening. The outcome of this screening again further supports the decision of which level of PPE is to be used for patient care.

Mental Health Support

Paramedic Services recognizes the impact to all front-line workers during the 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.

Hiring

During the early stages of the pandemic college programs were impacted due to restrictions imposed by Public Health 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, which addressed the potential challenges that were anticipated by Paramedic Services.

Paramedic Services reviewed current staffing levels, and as a result, conducted a regular part-time Paramedic job recruitment. Paramedic Services received over fifty-six applications. At the completion of the competition process, Paramedic Services hired fourteen part-time Paramedics to ensure staffing levels are maintained to support frontline operations. During the hiring, orientation, and base hospital certification, Paramedic Services amended the processes to allow for physical distancing.

Paramedic Palliative Care Program

The Paramedic Palliative Care Program is a quality improvement initiative. Working alongside palliative care partners from the North East LHIN and Home and Community Care, Paramedics will be treating 911 patients under this new alternate model of care, referring patients to their palliative care teams, and delivering symptom management in the home. This new model of care supports palliative care patients and providers in achieving their end of life goals. This new pilot is currently awaiting Ministry of Health approval for an alternate model of care proposal and will be evaluated closely for quality and patient safety by the Data and Quality Subcommittee of the Ontario Base Hospital Group Medical Advisory Committee.

Greater Sudbury Paramedic Services will be the first service to commence the palliative care pilot program within the northeast region of Ontario. The palliative care program is set to go live at the end of January 2021 once approved.

Universal Influenza Immunization Program

In line with the provincial government's COVID-19 fall preparedness plan, Community Paramedicine participated in the Universal Influenza Immunization Program. This important initiative will assist the local health system during the second wave of COVID-19 by helping prevent a twindemic of influenza through vaccination. As of December 3, 2020, Community Paramedics were able to vaccinate 720 individuals. Included in this number were 42 Greater Sudbury Police staff, 81 Paramedic staff, 31 members of allied agencies, 62 individuals in the vulnerable sector, 20 Community Paramedic Care Transitions registered clients and 484 members of the public who attended clinics that we staffed to support Public Health Sudbury and Districts public clinics.

Expanded Ontario Naloxone Program

In December 2020, Sudbury Paramedic Services commenced participation in the Ontario Naloxone Program in collaboration with Public Health Sudbury and Districts. This program has Paramedics not only administering Naloxone as part of their standard Paramedic care, but also distributing naloxone kits to identified individuals where appropriate in the course of their duties or when requested from the public. This program permits 24/7 access to Naloxone in Sudbury, which was not previously available. This important initiative allows paramedics to promote harm reduction for those who misuse drugs with a goal of improving positive health outcomes in the community.

Since the implementation of this program on December 12, 2020, Paramedics have distributed 26 Naloxone kits and continue to support those in need.

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	25,761
EMS Unit Response	31,072
EMS Patients Transported	17,985

Table 1. Greater Sudbury Paramedic Services Statistics January 1-November 30, 2020

Logistics

Personal Protective Equipment

During the COVID-19 pandemic, inventory levels of Personal Protective Equipment (PPE) are being monitored to ensure all staff have the proper equipment to work safely. 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.

Paramedic Services have recently purchased powered air purifying respirators (PAPR's) for the Community Paramedics who are conducting community COVID-19 testing on individuals who are symptomatic. The purpose of purchasing this equipment is to reduce the risk of exposure and provide comfort when wearing the PPE for extended periods of time. When the Community Paramedics are conducting surveillance or outbreak testing for COVID-19 they are required to wear enhanced PPE over extended periods. Having to constantly change PPE has a financial impact but also increases the risk of exposure when doffing. The powered air purifying respirators are equipped with blowers to draw air through the air-purifying elements of the respirator (e.g., filters, cartridges), allowing the paramedic to breathe more naturally while feeling a constant airflow. There is also a reduced chance of face shields fogging up while working in extreme temperatures over extended periods in PPE. In addition to the increased safety and comfort, the consistent positive air pressure flow means fit testing to an individual's face is not required, reducing pressures on our training resources.

Enhanced Equipment Disinfection

The City of Greater Sudbury Emergency Services Paramedic Services is actively working to control and prevent the spread of disease pathogens to employees, patients, and the community. In healthcare settings, there are many opportunities for cross-contamination to occur, including Paramedic Services, where equipment moves on a regular basis, creating a higher risk of exposure to pathogens. For this reason, it is essential for all paramedic

equipment to be completely cleaned, sanitized, and sometimes disinfected. Paramedic Services recently purchased a Sani Defenx sanitization system as an enhancement to the process of cleaning ambulance equipment and supplies.

The Sani Defenx system uses UV light to produce ozone. Ozone is used as a cleaning and sanitizing agent. Ozone, also known as O₃, is the free-radical form of oxygen used extensively for safely sanitizing and cleaning a wide variety of products on a commercial and industrial basis. O₃ exists in the gas state and is used as a cleaning agent in a wide variety of critical and sensitive applications, such as the purification of water, as well as the cleaning of medical devices and delicate microelectronics. Since ozone is a free radical form of oxygen, it is a powerful oxidant. As a cleaning agent, O₃ is up to 3,000 times faster acting and up to 150 times more powerful than chlorine bleach. As a result, O₃ rapidly kills bacteria, fungus, and other pathogens. In combination with its proven ability to destroy bacteria, the waterless ozone cleaning and sanitizing process takes about 12 minutes only. The Sani Defenx dry is a dry O₃ cleaning system that has been shown to provide about 99% reduction in antimicrobial pathogens as reported by laboratory testing consisting of some 15 different infectious bacteria species. All medical equipment, electronics including items with leather or metal fasteners, can be placed into the Sani Defenx system.

The Sani Defenx Disinfection System has been validated and approved by Health Canada. Procedures have been reviewed and approved by City of Greater Sudbury Health & Safety as well as our Joint Health & Safety Committee. This system will be used now and into the future as the “new norm” in ambulance sanitization.

Binder Lift Device

In an effort to decrease workplace repetitive strain and sprain injuries, a review was conducted of different portable patients lifting devices.

The Binder Lift device is a well-known and trusted lifting device used in the paramedic service industry. The Binder Lift is designed to wrap around any patient, providing different grip options to lift a patient found lying on the floor/ground or in an awkward position that impedes the paramedic to maintain proper body mechanics. The device can also be used to extricate or transfer bariatric patients, which often result in paramedic injury. Our paramedics conducted a trial with the Binder Lift device and the feedback was very positive. They indicated that it was very quick and easy to apply and the multiple grip options were predicted to help prevent injury as they could follow safe lifting practices in multiple situations. The patients also reported that they felt secure when being lifted. The Binder Lift device has been purchased and will be placed into every ambulance following service training in early 2021.

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 also manages the 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 – November 30, 2020

Cardiac	Number of calls with at least 1, 12 Lead Acquired	3,391
	Total Cardiac Ischemia related	1,110
	Number of STEMI	92
	A STEMI is a specific type of heart attack, which can be diagnosed by Paramedics in the pre-hospital setting.	

Neurological	Total Neuro-related	1,868
	Number of Acute Stroke (FAST positive, timeline criteria met)	177
	Average Age in Years	72
	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	151
	Average age in years	72
	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	390
	Total Treated Cardiac Arrest Medical and Traumatic	182
	Number of Medical Arrest with Return of Spontaneous Circulation at any time while in Paramedic Care.	48

Continuous Quality Improvement - Patient Care Record System Enhancement

In December 2020, Paramedic Services implemented the new CADLink Interdev dispatch interface system. CADLink is a mobile data terminal and data integration tool that instantly provides paramedics with call information from the dispatch center. Benefits of the this program include but are not limited to a reduced "time on task" for paramedics to complete a call, increased quality assurance in patient care records, improved data reliability by diminishing human error due to a direct data feed and a further reduction in talk time between paramedics and dispatchers

Training

Enhanced Training Sessions

During the pandemic, Paramedic Training Officers' schedules have been adjusted to provide additional training time with staff. Training staff address training needs 16 hours a day, Monday-Friday and deliver real time training and support to staff where needed with a specific 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. The training officers continue to review COVID-19 safe work practices with all staff.

Frontline operational fall training sessions began on November 3, 2020, with the final session on December 11, 2020. During each of the twelve scheduled training sessions, topics covered included: Neonatal Resuscitation Certification, CPR Certification, Palliative Care Program Training, COVID-19 operational updates, introduction to the Universal Influenza Program, introduction of the new iGel airway adjunct, introduction to the Expanded Ontario Naloxone Program, the Trillium Gift of Life organ donation referral program and an introduction to the new Tactical Paramedic Program.

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. There are two distinct programs, the Care Transitions Community Paramedicine Program, and the Health Promotion 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.

The programs goal is 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 October 28, 2020, there were 286 active patients enrolled within the program and only 6 patients reported the need to utilize our 911 service for the treatment of their chronic health condition. There were 53 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 continued to be conducted to those that were 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.

CTCPs will also be providing additional support to this population through the administration of influenza vaccines. This initiative allows these patients to isolate in their homes and still receive their flu shot. This year Public Health is encouraging all eligible citizens to be vaccinated. This initiative by CTCP's is a part of our effort to provide equitable health care for all citizens.

Visits completed / JIT	1248/197
Working Days	295
Active Patients	286
911 Calls Related to CTCP	6

Reporting date range is from January 1, 2020 – October 28, 2020

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 has 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.

- HSN COVID-19 Assessment Centre is screening phone calls from citizens to evaluate if COVID testing should be conducted, scheduling in-home testing by the Community Paramedic Mobile Testing service 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.
- We have established a priority referral process to HPCP from North East Local Health Integration Network / Maison McCulloch Hospice for those in the community who require COVID-19 testing for admission to either a long-term care facility or hospice.
- A group of Primary Care Physicians may be utilized by phone to function as CP medical oversight physicians to offer guidance / follow-up if required for those patients the CPs test and assess and who are deemed to require further intervention.
- Sudbury and District Nurse Practitioner Clinic (SDNPC) with Dr. Alex Anawati and Canadian Mental Health Association (CMHA) have collaborated with HPCP to provide on demand COVID-19 testing every morning at the Withdrawal Management at 336 Pine Street.

Our current direction for our HPCPs is to support our community through COVID-19 related testing. We have continued with our paramedic referral programs and Community Mobilization Sudbury-Rapid Mobilization Table.

We are looking at a gradual re-entry into CP clinics, utilizing virtual technology and less in-person contact. This program is another McMaster development, which will roll out as our demand for COVID-19 swabbing, allows.

New Community Paramedicine Programs

Ontario Health North Remote Clinical Monitoring Pilot

Greater Sudbury Paramedic Services has been awarded \$142,000 in funding that the Ministry of Health has approved in dedicated short-term allotments to support provincial and regional initiatives that provide COVID-19 patients with remote clinical care and monitoring in the community. The objective of this funding is to ensure COVID-19 patients and other vulnerable patients receive appropriate clinical care and monitoring in the community, including escalation to a medical assessment or acute care where necessary. By supporting remote clinical care models, this funding is also intended to reduce the risk of infection among health care workers. Paramedic Services has collaborated with three other Paramedic Services and health care agencies in the northeast and designed a program, which will be delivered as a regional model. Paramedic Services commenced a five-month pilot program, staffed with one Community Paramedic 12 hours per day in December. This initiative has enrolled 26 COVID positive patients in the remote patient monitoring service in our community to date.

Ministry of Health - Home and Community Care High Intensity Supports Program and Community Paramedic Expansion

Greater Sudbury Paramedic Services has been awarded \$189,000 through the Ministry of Health's initiatives to expand Home and Community Care and Community Paramedicine for the purpose of providing support to regional health partners to implement, plan, and execute the High Intensity Supports at Home Program and expand Community Paramedicine to support the health system response to the COVID-19 pandemic and seasonal influenza. Home and community care can help address reduced bed capacity by assuming care responsibility for hospital Alternate Level of Care (ALC) patients with a long-term care (LTC) destination and other patients with similar needs on LTC waitlists. This will ensure high needs patients continue to receive care when beds are in short supply. Paramedicine can be leveraged as 'capacity enhancers' to work alongside home and community care and other services. Target populations are clients requiring supplemental Community Paramedic services, beyond home and community care or seniors with similar needs in the community at high risk of hospital admission and becoming designated ALC (i.e. those with frequent hospital readmissions, Emergency Department visits, and those recently discharged at high risk of hospital readmission).

Community Paramedicine - Long Term Care

Greater Sudbury has submitted a proposal for \$2 million per year for the next three years to the Ministry of Long Term Care for participation in the Community Paramedicine Long Term Care Program. The Ministry of Long-Term Care is funding a Community Paramedicine program to provide services to individuals who are waiting for placement in a long-term care home or who are soon to be eligible for long-term care. This initiative is part of the province's modernization plan to address systemic barriers in long-term care bed development and the growing demand for long-term care.

The purpose of the program is to keep individuals who are on the long-term care wait list, or who are soon to be eligible for long-term care, stabilized in their illness trajectory, and in their own home for as long as possible. The program will do this through preventive and responsive care, such as home visits and remote patient monitoring.

Our proposal could see four additional Community Paramedics per day in the community providing 24/7 access to Community Paramedicine services for defined non-emergency procedures in resident's own homes, addressing urgent, episodic care needs.