

# Greater Sudbury Paramedic Services Update Report

Presented to: Emergency Services Committee on April 17, 2019



This report aims to provide the City of Greater Sudbury Emergency Services Committee with an update on good news stories and relevant statistics as well as recent business activities 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 pre-hospital emergency medical care and transportation to 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.

## Good News Stories

### Bell Let's Talk Day

Dedicated to moving mental health forward in Canada, Bell Let's Talk promotes awareness and action with a strategy built on four key pillars: fighting the stigma, improving access to care, supporting world-class research and leading by example in workplace mental health. One of the biggest hurdles for anyone suffering mental illness is overcoming the stigma attached to it. The annual Bell Let's Talk Awareness Campaign is driving the national conversation to help reduce the stigma and promote awareness and understanding with talking being an important first step toward lasting change.

This year, representatives from Paramedic and Fire Services participated in the Bell Let's Talk Day proclamation hosted by Mayor Brian Biggar. This event highlighted the initiatives in the Paramedic Services PTSD Prevention Plan and our efforts in supporting the mental health of our first responder and their families.



**Join the conversation on January 30.**

Talk, text and share on social media to raise funds and awareness for mental health.





### Walden Winter Carnival



Paramedic Services participated at the Walden Winter Carnival on Saturday, February 9<sup>th</sup> and Sunday, February 10<sup>th</sup>. Paramedics interacted with attendees as they demonstrated some of their latest equipment and answered questions. The carnival provided an excellent opportunity to engage with the public.

### Greater Sudbury Paramedic Honour Guard Training

Greater Sudbury Paramedic Services, along with many Paramedic Services across the globe, embraces the value of having an honour guard and appreciate the pride and professionalism that they bring to their service. In March, four members of the Greater Sudbury Paramedic Honour Guard attended the Alliance of Canadian Paramedic Honour Guard, Drill Instructor and Senior Leader training session hosted at Lionel E. Lalonde Centre in Azilda.

Approximately 25 members from other Paramedic Honour Guards from other provinces including Ontario, Quebec and Alberta attended the training.

This was the third time that the Drill Instructor course was offered to Paramedic honour guards in Canada with both previous sessions (2012 & 2014) being held at the RCMP depot in Regina, Saskatchewan. It wasn't until 2012 that the RCMP broke with tradition and allowed non-police attendees to attend their Drill Instructor training. Seven Paramedic Honour Guards graduated from the first session in 2012 with 14 graduating from the subsequent session in 2014.



Many services do not have personnel with the military background or training required to teach and lead their team in these areas. The provision of these two courses aims to rectify that. The Drill Instructors course provided the knowledge and skills required to teach Canadian foot drills to



members of their team. The Senior Leadership course provides guard members the knowledge, skills, and abilities to lead their team in drill, formal parades, ceremonies and funerals.

The week-long training was a great success, providing opportunities in the future to host the same training sessions at Lionel E. Lalonde Centre in Azilda.

### Polar Plunge

Staff from Greater Sudbury Paramedics Services participated in the 6<sup>th</sup> Annual Polar Plunge in support of Special Olympics Ontario. The Polar Plunge is a provincial incentive for law enforcement to raise money for Special Olympics. Paramedic staff raised approximately \$950 this year.



# Greater Sudbury Paramedic Services Statistics Q1 2019



as of March 24, 2019

6400

EMS Calls for Service

7495

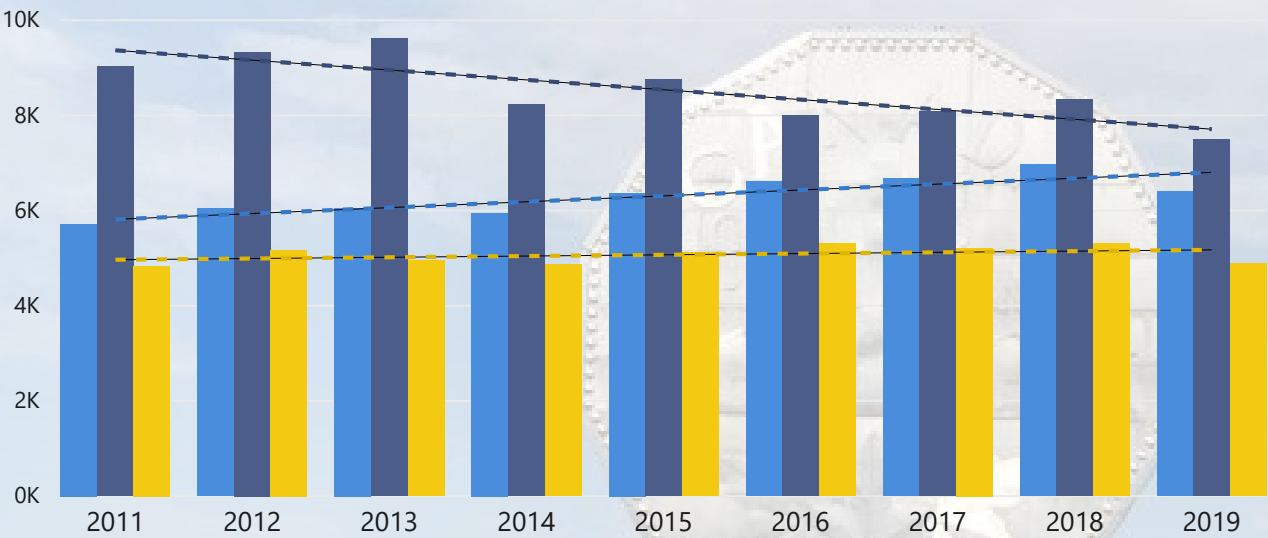
EMS Unit Responses

4884

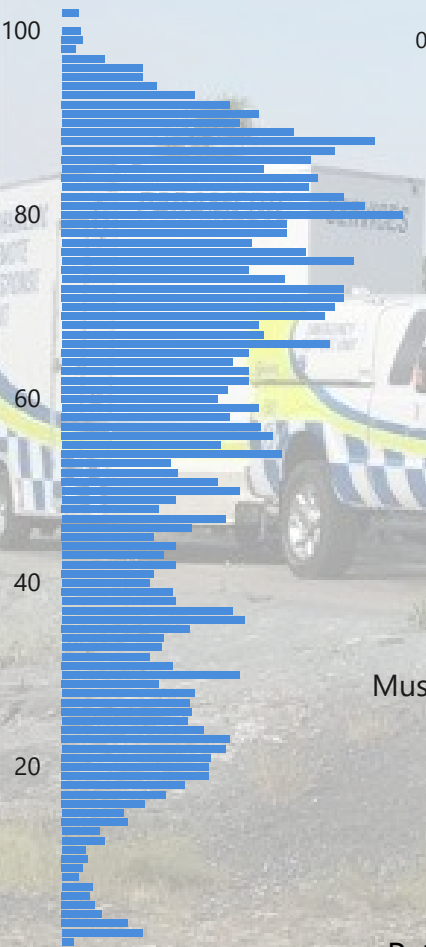
EMS Patients Transported

Calls for Service / Unit Responses / Patients Transported by Year

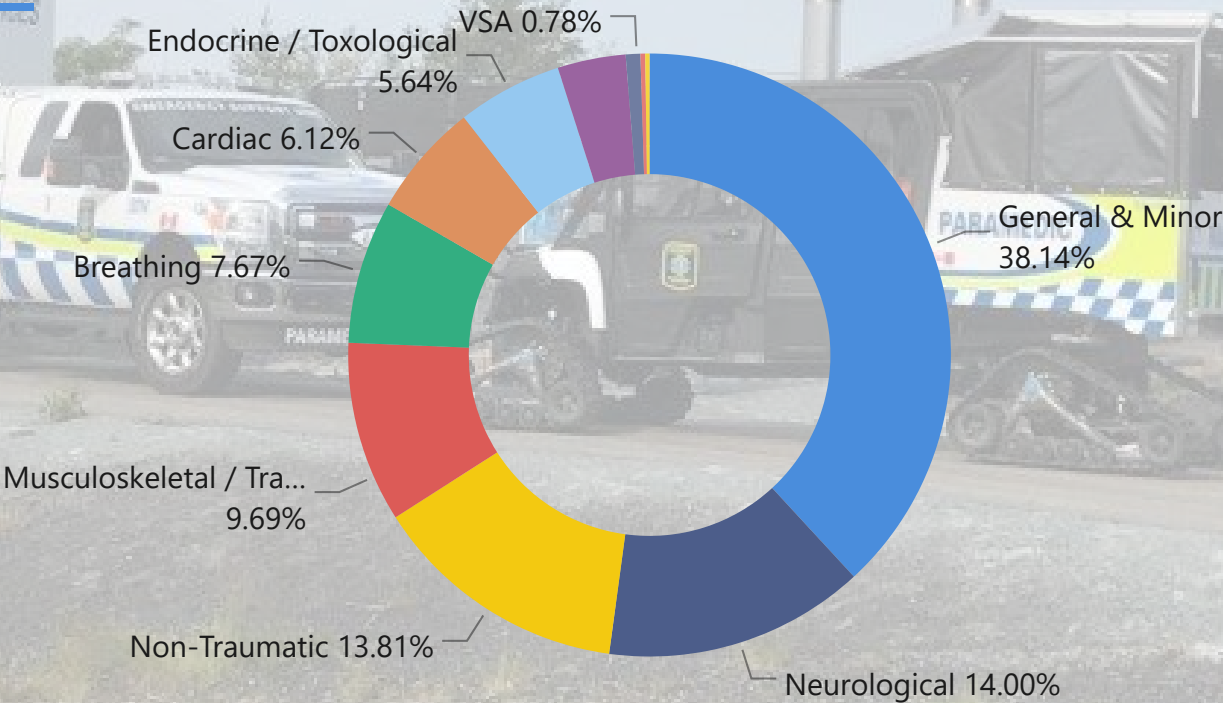
● EMS Calls for Service ● EMS Unit Responses ● EMS Patients Transported



No. of Calls by Age

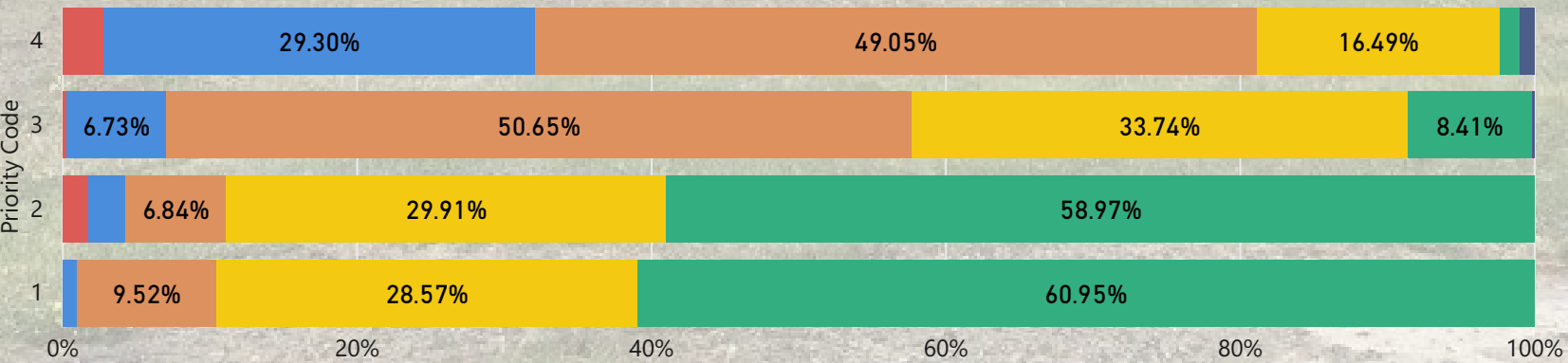


Calls by Problem Group



Patients Transported by Dispatch Priority vs. CTAS on Contact

CTAS on Contact ● 1 ● 2 ● 3 ● 4 ● 5 ● SCA







## Paramedic Services Statistics Defined

### Paramedic Calls for Service

A measure of calls **received** by Greater Sudbury Paramedic Service 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 the 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 Superintendent units.

### Paramedic Patients Transported

A measure of patients being transported on both an emergency and non-emergency basis.

### Calls for Service/Unit Response/Patients Transported by Year

A comparative chart detailing, since 2011, the three measures together.

### 2018 Number of Calls by Age

A clustered bar chart detailing the age of each patient encountered. The purpose of this chart is to detail the effects of the aging population in comparison to call volumes.

### 2018 Calls by Problem Group

A pie chart detailing the categorized primary problem of each patient who was transported. Paramedics detail in great granularity the primary problem as assessed and treated where possible. These primary problem codes have been rolled up into primary categories as detailed on the Patient Care Record and displayed here.

### 2018 Patients Transported by Dispatch Priority vs. CTAS on Contact

A metric consisting of a 100% stacked bar chart that measures the urgency at which paramedics are dispatched by the CACC against the actual patient acuity at patient contact.

Ambulance Communications Officers (ACOs) at the CACC currently use a system called the Dispatch Priority Card Index (DPCI) when determining a patient priority. This system automatically generates a priority based on the series of questions answered by the caller of the emergency. Then, once on scene, paramedics assign a detailed Canadian Triage Acuity Scale (CTAS) rating based on the patient's presenting condition.

Paramedics are generally dispatched patient calls on four different "Priority" codes.



- **Code 1** “Deferrable” (no time factor) – e.g. a non-scheduled transfer with no definitive time factor, a minor injury
- **Code 2** “Scheduled” (time is a factor) – e.g. inter-hospital transfers for scheduled diagnostic tests, a scheduled meet with an air ambulance, patient transferred for a scheduled appointment.
- **Code 3** “Prompt” – transport without delay (serious injury or illness e.g. stable fracture)
- **Code 4** “Urgent” – where the patients “life or limb” is at risk (e.g. Vital Signs Absent patient; unconscious).

CTAS is a widely recognized rating scale used across within Canadian healthcare institutions. There are five different CTAS ratings.

- **CTAS 1:** Severely ill, requires RESUSCITATION
  - Requires resuscitation and includes conditions that are threats to life or imminent risk of deterioration, requiring immediate aggressive interventions (for example, arrest, and major trauma or shock states).
- **CTAS 2:** Requires EMERGENT care and rapid medical intervention
  - Requires emergent care and includes conditions that are a potential threat to life or limb function, requiring rapid medical intervention or delegated acts (for example, head injury, chest pain or internal bleeding).
- **CTAS 3:** Requires URGENT care
  - Requires urgent care and includes conditions that could potentially progress to a serious problem requiring emergency intervention, such as mild to moderate asthma, moderate trauma or vomiting and diarrhea in patients younger than two years.
- **CTAS 4:** Requires LESS-URGENT care
  - Requires less-urgent care and includes conditions related to patient age, distress or potential for deterioration or complications that would benefit from intervention, such as urinary symptoms, mild abdominal pain or earache.
- **CTAS 5:** Requires NON-URGENT care
  - Requires non-urgent care and includes conditions in which investigations or interventions could be delayed or referred to other areas of the hospital or health care system, such as sore throat, menses, conditions related to chronic problems or psychiatric complaints with no suicidal ideation or attempts.



### Paramedic Operations

The Operations Section provides provincially mandated pre-hospital emergency medical care and transportation as well as non-urgent transportation between health-care facilities, the airport and residences, to over 21,000 patients. In the delivery of approximately 114,000 hours of ambulance services, 83% of the Division's resources are utilized. Responding to over 27,000 calls for service, Paramedic Operations maintains a response time for the most serious patient acuity (CTAS 1) within eight minutes, 80% of the time.

#### Response Time Standards Reporting:

Paramedic Services is required by Regulation 257/00 under the Ambulance Act, to submit the results of the established Response Time Standards (RTS) plan, no later than March 31 for the previous year. Paramedic Services has submitted their compliance for 2018 to the Ministry of Health and Long Term Care (MOHLTC).

There are three different reportable call criteria based on the following framework:

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.
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.**

The RTS for sudden cardiac arrest and CTAS 1 calls (criteria #1 and #2 above) 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 types of calls. The City determines the percentile of time that 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 patients categorized as CTAS 2 to CTAS 5 (criteria #3 above), the City determines both the response time target and the percentile these response times are achieved. Greater Sudbury Paramedic Services submitted the following response time targets in October 2017, for 2018:



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

Greater Sudbury Paramedic Services is currently conducting a System Status Plan (SSP) review to evaluate the resource deployment to meet or exceed the RTS approved by Council. The SSP review includes analyses of Paramedic Service call volume trends, response times and evaluating the deployment of paramedic resources, to service its community.

Below is a year-on-year comparison of Greater Sudbury Paramedic Services RTS compliance provided yearly to the MOHLTC.

Level of Acuity	Example of Call	Approved RTS%	2015 RTS%	2016 RTS%	2017 RTS%	2018 RTS%
<b>Sudden Cardiac Arrest</b>	Patient has no vital signs	70%	73%	70%	73%	70%
<b>CTAS 1</b>	Critically ill or have potential for rapid deterioration	80%	81%	78%	80%	79%
<b>CTAS 2</b>	Potential to life, limb or function, requiring rapid medical intervention, controlled acts	85%	86%	85%	88%	86%
<b>CTAS 3</b>	May progress to serious problem. Associated with significant discomfort or affecting ability to function.	85%	97%	97%	97%	96%
<b>CTAS 4</b>	Conditions that would benefit from intervention or reassurance	85%	98%	98%	97%	97%
<b>CTAS 5</b>	Non-urgent, chronic, without evidence of deterioration	85%	97%	98%	97%	98%

## Employee Engagement Sessions for CGS Survey

Every two years, CGS conducts employee surveys to identify opportunities to improve employee engagement within the organization. In 2018, a survey tool from TalentMap was used to identify engagement drivers. Out of this survey arose a training session on how to use the results to create meaningful action plans and measurable results for the organization.

Within the month of February, Paramedic Services conducted two separate sessions with employees, focusing on the three drivers identified from the employee survey to best improve employee engagement. The three drivers were Organizational Leadership, Professional Growth and Innovation.





Staff provided great ideas and management staff are currently in the process of ranking the responses along with opportunities to implement them. Throughout the implementation stage, employees will be updated on the progress of this initiative

### Professional Standards

Using 5% of the Division's resources, the Professional Standards Section is responsible for the delivery of continuous quality improvement programming ensuring that legislatively mandated responsibilities of the Division are upheld. This Section also manages the electronic patient care record system in accordance with various legislative and regulatory requirements.

### Clinical Audits

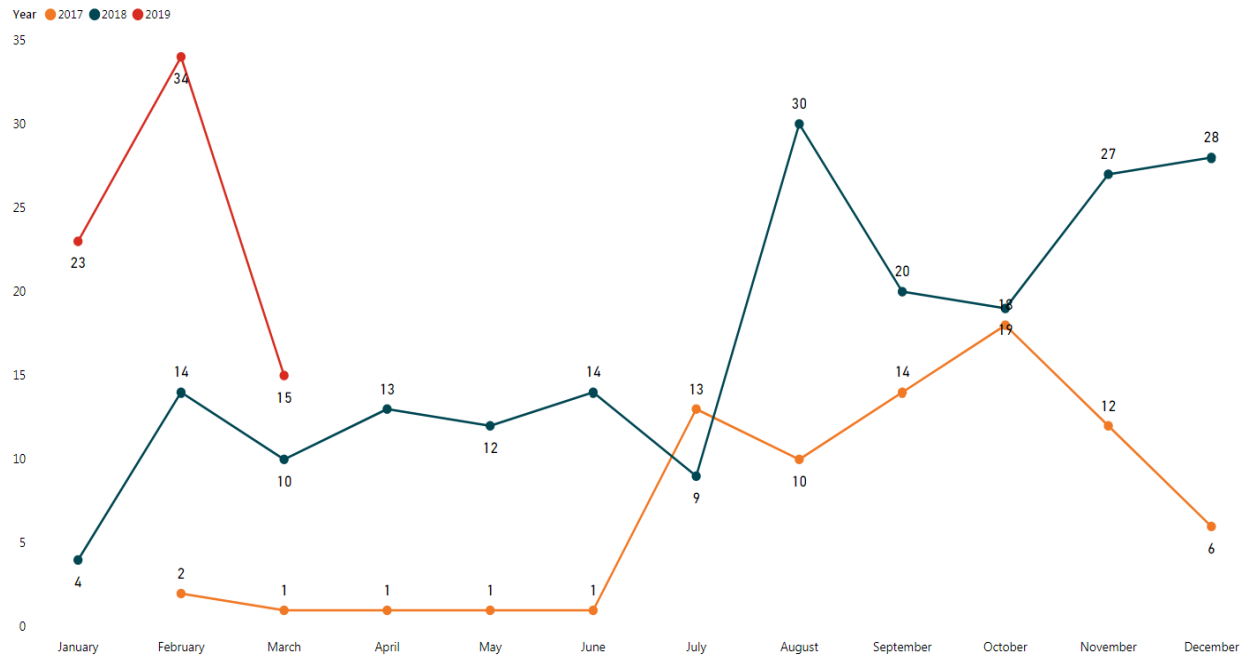
By conducting approximately 1,600 clinical audits of paramedic documentation, this Section endeavours to achieve the goal of improving safety and high-quality clinical care. Conducting approximately 1,400 event analysis/reviews in relation to patient care and operational investigations this Section assists in preparation for related legal proceedings. Lastly, this Section provides approximately 500 hours of stakeholder/community relations to ensure integration into the health-care framework.

### Opioid Surveillance and Information

Greater Sudbury Paramedic Services is part of the Community Drug Strategy (CDS) Steering Committee and part of the Reporting and Surveillance sub-group. As such, data is provided from opioid related incidents to community stakeholders within the CDS to support the early warning and opioid surge detection system. Paramedic Services plays a major role in this sub-group in that they are often the first health care providers to note an increase in specific community health related emergencies. The ability for this group to utilize Paramedic Services enhanced monitoring of opioid emergencies as an alert for our community allows community service agencies and opioid users to be informed, prepared and empowered with real time knowledge of local opioid misuse trends.

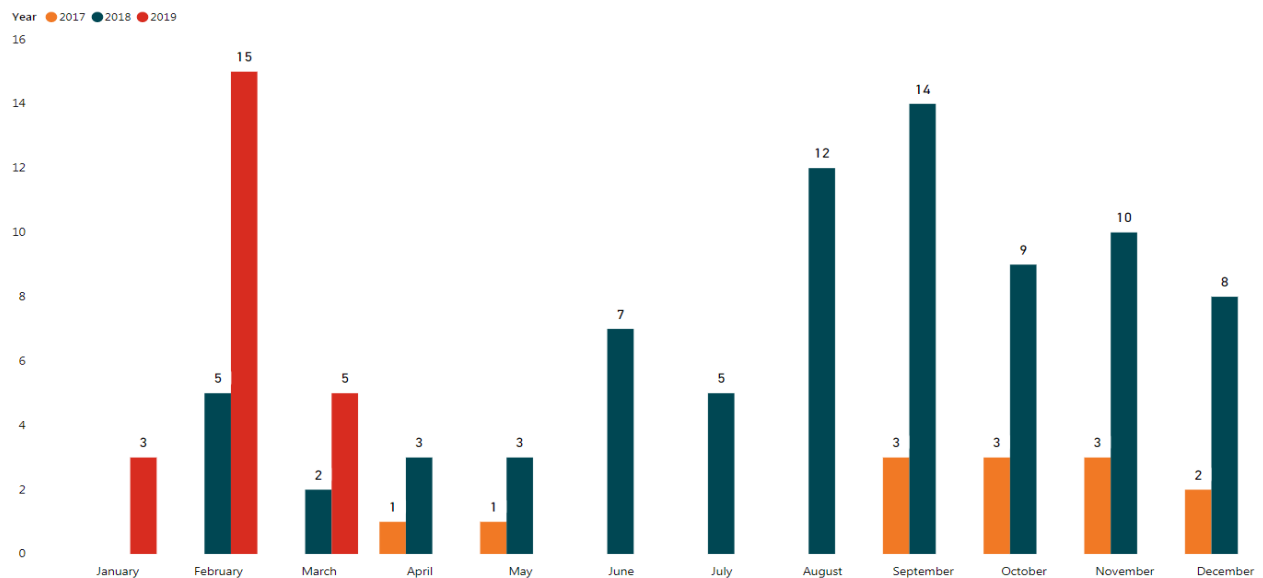
The following data displays the number of opioid overdose occurrences and naloxone usage tracked by Paramedic Services that is now being made available to Public Health Sudbury and Districts for the purposes of the development of an early warning system. Public naloxone administration is increasing, and paramedic administered naloxone numbers are decreasing as access to naloxone becomes more readily available to the public.

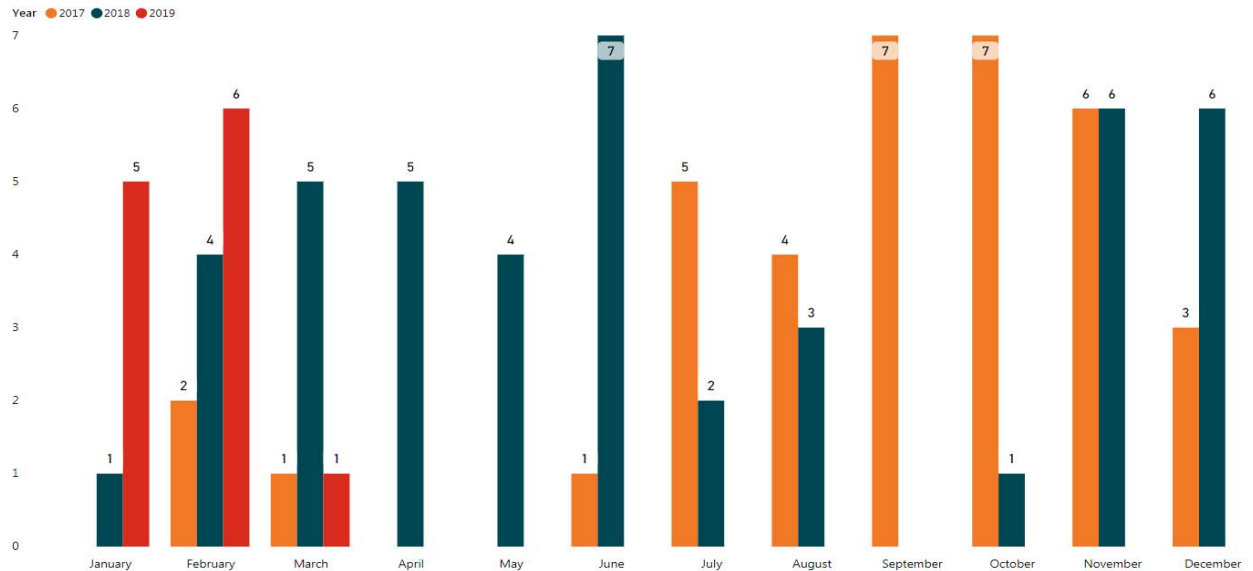
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### Paramedic Services - Suspected Opioid Overdoses

### Naloxone Administration by non-Paramedic Services





## Naloxone Administration by Paramedic Services

### Emergency Department Diversion Pilot Programs – Withdrawal Management and Crisis Intervention Services

Within the protocols of a pilot program with Health Sciences North Centre for Prehospital Care, Greater Sudbury Paramedics are able to offer an option of transport destination to appropriate 911 patients diverting them from the Emergency Department (ED). This diversion strategy will assist our health care system by ensuring the patient receives the right care at the right time. The options of destination include; the normal protocol to the ED, Withdrawal Management Services or Crisis Intervention Services. Additionally, when appropriate, there is the possibility to have the Mobile Crisis Intervention Team respond directly to the patient's home.

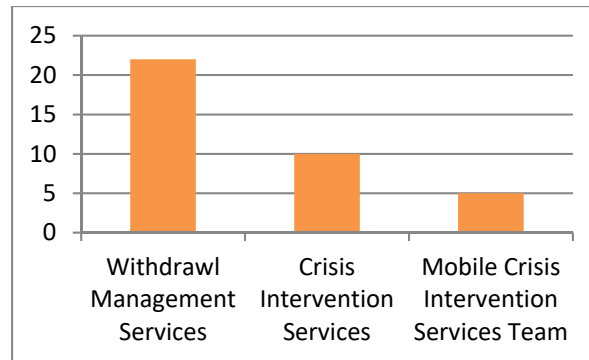
Being the first in the province of Ontario to initiate an alternate destination diversion pilot program, Greater Sudbury Paramedic Services has been recognized by their peers around the province for their innovation. Municipalities such as Sault Ste. Marie, Hamilton and London have followed our lead commencing their own diversion programs following our framework to enjoy similar benefits of this ED Diversion strategy.

In conjunction with the service's Medical Director the Service has conducted a review of our Diversion Medical Directive this quarter. This work is being done to improve directive ease of use and improve compliance through our continuous quality improvement process. With the reevaluation of the Ambulance Act and the potential for more destination options, Paramedic Services is currently looking into collaborations with other community care providers such as Primary Care Physician



Offices and those that provide cultural consideration as part of their care in an effort to expand the diversion pilot. They also intend to expand diversion of our “walking-well patients” to the soon to open 200 Larch Street Place; a Nurse Practitioner lead clinic where marginalized and at-risk people can easily access health care and connect with community-based services.

The following is the number of patients diverted from the Emergency Department of the hospital from January 1 to March 12 2019:



This triaging and diverting of patients by paramedics over the first two and a half months of 2019 led to a total of **37** patients transported to appropriate community services, rather than unnecessary visits to the ED.

Diversion to appropriate community care programs align with the Ontario governments’ 1<sup>st</sup> interim report from Premier’s Council on improving health care and ending hallway medicine titled, **“Hallway Health Care: A system under strain”**. Diversion also aligns with **Municipal Priorities** set out in the City of Greater Sudbury’s Corporate Strategic Plan, specifically the Quality of Life and Place key pillar, in creation of programs that are designed to improve the health of all citizens.

## Logistics

Encompassing 7% of the Division’s resources, the Logistics Section provides asset management and supply maintenance services for paramedics and vehicles. Processing approximately 5,400 paramedic vehicles each year meeting the processing standard 93% of the time, ensures both vehicle and equipment are sanitized, stocked and operationally ready for service, in accordance with all legislative requirements and industry best practices. Inventory control is managed through the purchasing and deployment of materials within a centralized model with delivery to five satellite stations on a regular basis. This Section also maintains operational oversight of two specialized response units; the Mobile Command Unit and remote response Gator unit, as well as maintenance oversight of the City emergency helipads. Ensuring the reliability of paramedic vehicles according to manufacturer’s recommendations, logistics personnel monitor and deliver paramedic vehicles to the maintenance depot on average over 780 times per year.



### Medical Supply Ordering and Processing

Logistics continues to improve their station stock ordering system. Recently, paramedics have been able to order station and ambulance stock electronically. With that system now fully in place they can link station orders to their warehouse system and monitor stock levels through regular reporting, resulting in improved warehouse management.

### Training

Training utilizes 5% of the Division's resources to orient new staff, sustain legislatively mandated training requirements for staff, and support reorientation of staff returning to work after a medical leave. Service level training is delivered annually to 165 staff on initiatives that include continuing medical education and remedial education to address identified gaps in knowledge, skill or critical decision-making. Additionally, the Training Section devotes an average of 28 days of orientation support for newly hired paramedics. Coordinating with educational institutions, this Section assists with the clinical placement of paramedic students, and educational observer shifts for other allied agencies. Lastly, Training participates in national and international clinical research initiatives aimed at improving pre-hospital clinical care.

### City Services Fair

The Paramedic Training Section attended the City Services Fair at the New Sudbury Shopping Centre. This was a great opportunity to allow citizens of the City of Greater Sudbury to view and ask questions regarding expected emergency service delivery. Being on hand, they were able to facilitate conversations with the public regarding the service, equipment and scope of practice. The event provided an opportunity for citizens to view the power stretcher, power stair chair and other specialized equipment used when paramedics attend calls for help.

### Snowmobile Safety – Sled Days

Training Section staff provided a presentation to Rainbow District School Board's Lively Secondary School grade 10 students highlighting snowmobile safety perspectives with key First Aid tips. Each learning concept was reinforced with interactive scenario presentations. A demonstration was also provided of the Sudbury Paramedic Remote Response Unit and its use in the City of Sudbury's Emergency Response Plan.