

# Hamilton Paramedic Service 2020 Annual Report





The Hamilton Paramedic Service is an integral part of the healthcare system and a key partner of Public Health Services. Throughout the pandemic we have relied on them to assist us with COVID assessment and vaccine deployment. They have proven time and time again to be responsive, skilled and compassionate professionals. I am confident that with paramedics as our allied partner, we will continue providing the best care possible to our community during the COVID-19 pandemic and beyond.



Dr. Elizabeth Richardson  
Medical Officer of Health  
City of Hamilton

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## Message from the General Manager

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2020 has been a year like no other. As the General Manager of the Healthy and Safe Communities Department, I have also taken on the role of Director of the Emergency Operations Centre during this public health emergency. Helping to lead the pandemic response has given me a firsthand look at the heroic efforts put forth by many individuals on the frontline; our paramedics are at the forefront helping to lead the charge.

In normal times, I know that the work of our paramedics goes beyond emergency response and pre-hospital care. They provide education to the public and our community partners, organize charitable and informative events, provide in-home care to people in need, all while still finding time to participate in volunteer activities that support Hamiltonians in need.

While all these activities still continued in 2020, albeit in different ways, paramedics took on additional responsibilities to help the fight against COVID-19. They were instrumental in supporting our Public Health Services (PHS) in fixed and mobile testing and vaccination sites and conducted mass evacuations at congregate settings experiencing outbreaks, risking their own health and that of their family on a daily basis to care for patients who were suspected to be COVID-19 positive.

Even with everything going on, the Hamilton Paramedic Service met and exceeded the performance targets set by the province and the City of Hamilton again this year. In addition, the Community Paramedicine Program was expanded to Mobile Integrated Health, capable of reaching and caring for even more vulnerable individuals in our community. I would like to congratulate Chief Sanderson and all those in the service whose dedication resulted in these achievements.

In the pages that follow, you will get a glimpse of what 2020 was like for the Hamilton Paramedic Service. You will see some of the challenges they faced, but also of the many achievements they have made. You will see how our city’s paramedics are unrelenting in their efforts to ensure every resident who needs it receives the highest quality of care.

I am thankful to our Mayor, City Council and City Manager for their ongoing support and investment in this essential community service, now more than ever. I would also like to thank Chief Sanderson, the leadership of OPSEU and CUPE and all of the staff for their excellence in service.

A special thank you to the frontline paramedics. I have the utmost admiration for all you have done and continue to do in helping our residents stay healthy and safe during these most trying times. You certainly are Hamilton’s heroes.

A handwritten signature in black ink, appearing to read 'P. Johnson', written in a cursive style.

Paul Johnson, General Manager  
Healthy and Safe Community Services Department

## Message from the Chief

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In the best of times, paramedics face compelling challenges but with the onset of the pandemic in 2020 they experienced unprecedented demands. Yet, true to the nature of our paramedics, they put their own safety at risk to provide care to people in the medical emergencies.

In addition, our Community Paramedics took on an integral role in the united fight against COVID-19 led by Hamilton’s Public Health Services (PHS). From conducting tests, to providing aftercare at vaccination clinics and more recently administering vaccines to the most vulnerable residents in the city, Community Paramedics are on the frontline helping to mitigate this health crisis.

Staff in all areas of the Hamilton Paramedic Service had to overcome difficulties brought about by the pandemic. Schedulers had to ensure ambulances were fully staffed when resources were limited due to COVID-19 protocols; logistics technicians had to secure adequate supplies of PPE and deep clean equipment and vehicles; supervisors have been called on more than ever to support paramedics with their duties and well-being; managers have been navigating an influx of changing information to ensure appropriate actions were carried out; and support staff had to be equally reliable and available as their work spaces moved into their homes where they also dealt with personal responsibilities.

In 2020, more than ever, we worked with, relied on and supported other healthcare professionals in the community to provide the best care possible during the pandemic while also working tirelessly to combat the virus. I want to thank all our partners, particularly PHS for their dedication, collaboration and leadership.

At the start of the pandemic in March 2020 we saw demand for our service decline, however, by late May 2020 it began to increase and by the end of the year we were at levels higher than 2019. While we had a decrease in code zero events in 2020, offload delays continued to be a challenge in the latter part of the year. In addition, the extra work to don appropriate PPE and deep clean equipment increased time spent on each call. Even so, we still met and exceeded response time targets.

In 2020, we received additional funds to expand our Community Paramedicine Program, now called Mobile Integrated Health, add an ambulance to our fleet and increase resources to better equip us to provide care during the pandemic and protect the community against the virus.

I want to thank Mayor Eisenberger, members of Council and the Senior Leadership Team for their unwavering support. I am also grateful to General Manager Paul Johnson and Medical Officer of Health Dr. Elizabeth Richardson for their leadership and guidance as we navigate these unprecedented times.

GM Johnson described our paramedics’ performance over the last year as unrelenting and heroic. I would like to add resilient, perseverant, adaptable and courageous. I know they have endured excessive hardships throughout the pandemic, yet they answer the call to action with determination and compassion and for that I am immensely grateful and extremely proud.

A handwritten signature in black ink, appearing to read "Michael Sanderson". The signature is fluid and cursive, written over a white background.

Michael Sanderson, Chief  
Hamilton Paramedic Service

## Service Overview

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### HPS Services

The Hamilton Paramedic Service (HPS) is the designated sole provider of paramedic services for the City of Hamilton serving over 536,000 residents in addition to those who come to Hamilton to work, play and learn.

Operating out of 20 stations in urban and rural areas of the city, HPS provides pre-hospital advanced medical care, trauma care and the transport of patients from emergency incidents to health care facilities.



In addition, HPS provides a range of programs and services to promote the health of the community and proactively mitigate the demand on ambulance transports to hospitals. These include:

- Seniors Clinics
- Home Visits
- Flu Immunization Clinics
- Remote Patient Monitoring
- Social Navigator Program
- Flu Response for Emergency Department Diversion
- High Intensity Supports at Home
- Emergency Department Diversion Withdrawal Management Program
- Palliative Outreach Support
- Neonatal Intensive Care
- Public Access Defibrillators
- Community and Stakeholder Engagement
- Public Education
- Continuing Education Classes for Hamilton Paramedics
- Media and Awareness campaigns
- Fundraising to Support Local Charities

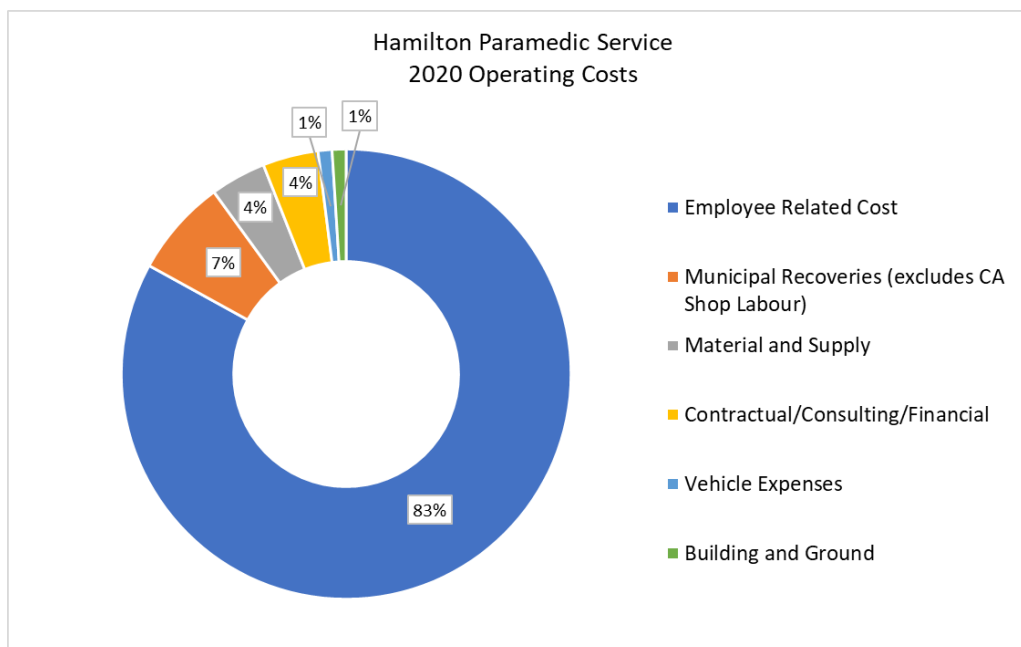
During 2020, HPS carried out additional activities in response to the COVID-19 pandemic, including:

- COVID-19 Swabbing
- Established an Infectious Disease Paramedic Team
- Evacuation of Congregate Residences in Outbreak
- Vaccination Clinic Aftercare
- Vaccine Administration

### HPS Finances

In 2020, HPS had an overall operating budget of \$58,353,463; however, 50% of the costs were covered by funding from the province. The allocation of funds per each cost category and percentage of the overall budget is as follows:

Cost Category 2020	\$	%
Employee Related Cost	48,466,399	83
Municipal Recoveries (excludes CA Shop Labour)	4,097,641	7
Material and Supply	2,402,890	4
Contractual/Consulting/Financial	2,241,117	4
Vehicle Expenses	847,643	1
Building and Ground	297,773	1
<b>Total</b>	<b>58,353,463</b>	<b>100</b>



HPS achieves cost effectiveness in operating vehicles through partnerships within the City of Hamilton. With corporate fuel purchasing arrangements and utilizing the Hamilton Fire Department vehicle maintenance services, HPS realizes cost efficiencies without jeopardizing quality service.

The response costs breakdown for 2020 is as follows:

Response Category 2020	Total
Kilometres Travelled	1,887,557
Cost per Response	\$688.69
Cost of Materials & Supplies per Response	\$28.36
Vehicle Cost per kilometre	\$.66

## HPS Structure

As an integral part of the health care system, HPS helps to promote the health and safety of Hamilton’s residents and visitors through prevention, response and follow-up activities. HPS achieves this best through being situated within the Healthy and Safe Communities Department which enables collaboration with other divisions focused on similar outcomes for the community such as PHS, the Hamilton Fire Department and Long-Term Care facilities.

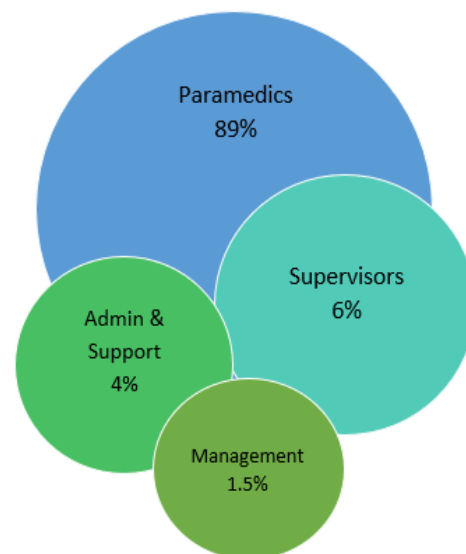
Reporting to the General Manger of the Healthy and Safe Communities Department, the Paramedic Chief is responsible to lead the planning and operationalization of HPS which is comprised of four sections:

- Office of the Chief
  - Responsible for strategic vision, direction, and planning
- Operations Section
  - Responsible for providing oversight of deployment and resource utilization
- Logistics Section
  - Responsible for providing support to all sections through procurement and asset management
- Performance and Development Section
  - Responsible for ensuring regulatory compliance, quality improvement, continuing education and training

A total of 402 staff including full and part time personnel made up the workforce of HPS in 2020. Approximately 89% of staff are paramedics with about 18% of those Advanced Care Paramedics. While paramedics provide direct frontline services to the community, supervisors, administration and support staff and management provide a variety of supportive and regulatory functions to meet Ministry of Health (MOH) mandates. HPS workforce breaks down as follows:

Position	Full-time	Part-time
Paramedics	267	90
Supervisors	17	6
Administration & Support Staff	16	-
Management	6	-

Position	Full-time	Part-time
Primary Care Paramedics	213	80
Advanced Care Paramedics	54	10





## Performance Overview

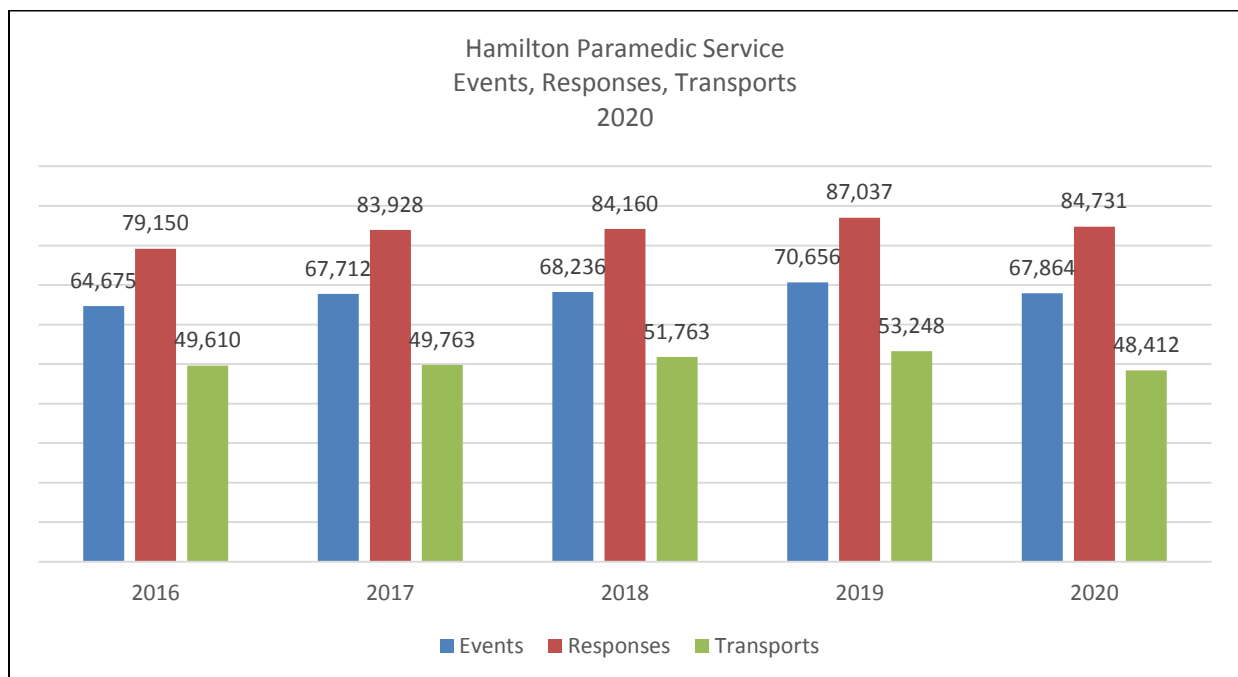
### At a Glance: Events, Responses, Transports

2020 was a unique year for HPS service demands due to COVID-19. It is the first time in many years HPS saw demand for service decrease, albeit marginally. However, since May 2020, there has been a steady significant increase and HPS is on track for an overall increase of 4% annually as forecasted in 2018.

The table below shows the decline in the daily averages of events, responses and transports for the first three months of the pandemic as compared to 2019 averages. Following the easing of restrictions in the latter part of May 2020, the number of events, responses and transports increased with events and responses surpassing the daily averages for 2019.

Activity	Early COVID-19 (March 12 – May 22, 2020)	Economy Reopening (Post May 22, 2020)
911 Events	176 ↓ 9% Below Average	222 ↑ 14% Above Average
Responses	211 ↓ 11% Below Average	261 ↑ 10% Above Average
Transports	105 ↓ 20% Below Average	134 ↓ 8% Below Average

The following chart shows the total number of events, responses and transports respectively, each year from 2016 to 2020. Despite the decline in demand during the onset of the pandemic, 2020 totals are only slightly below 2019.



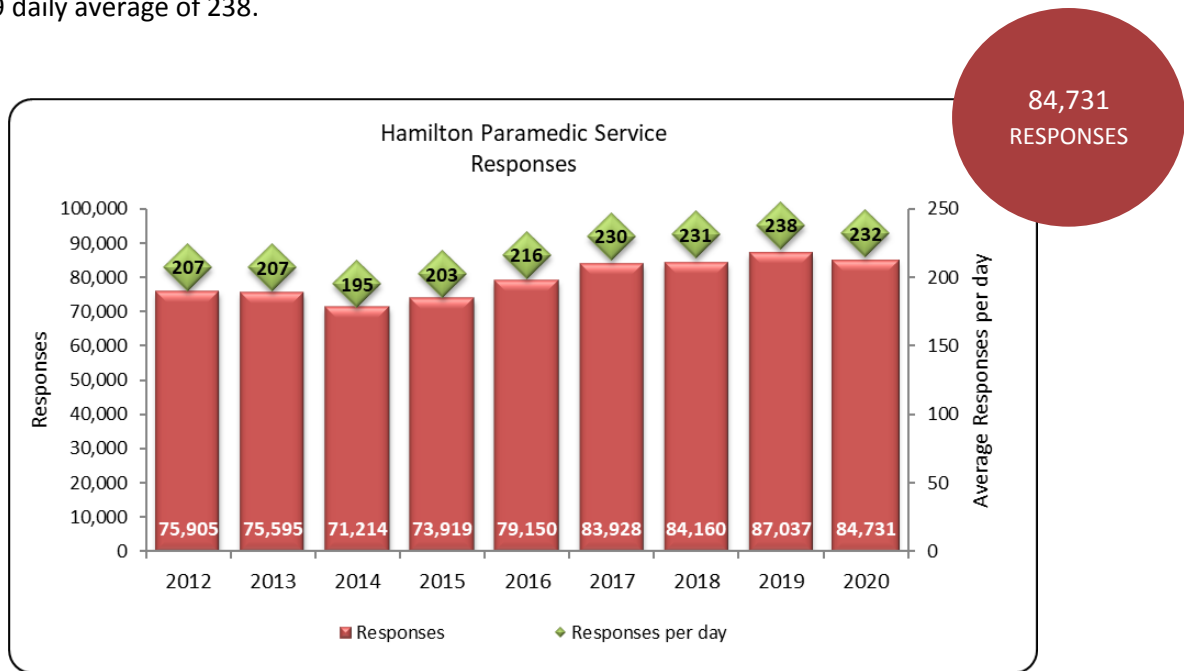


## Responses

Responses are the number of paramedic vehicles that are sent to an event. This number is usually higher than the number of events as there is usually more than one vehicle required to manage an emergency incident. For example, in the event of a motor vehicle collisions or a complex medical/traumatic emergency, multiple paramedic vehicles may be assigned to respond.

Coinciding with a decline of 911 events at the beginning of the pandemic was a decline in responses in 2020. Responses decreased by 11% during the period of mid-March through May but rose to an average of 10% above the 2019 average in the latter part of the year.

In 2020, HPS dealt with a total of 84,731 responses with a daily average of 232 responses, slightly below the 2019 daily average of 238.



Top 10 Patient Problems 2020	% of Responses
Dyspnea (shortness of breath)	14
Fall	13
Unknown	7
Abdominal/Pelvic/Perineal/Rectal Pain	6
Ischemic	6
Unwell	6
Unconscious	5
Behaviour/Psychiatric	3
Active Seizure	3
Cardiac/Medical Arrest	3

## Patient Problems

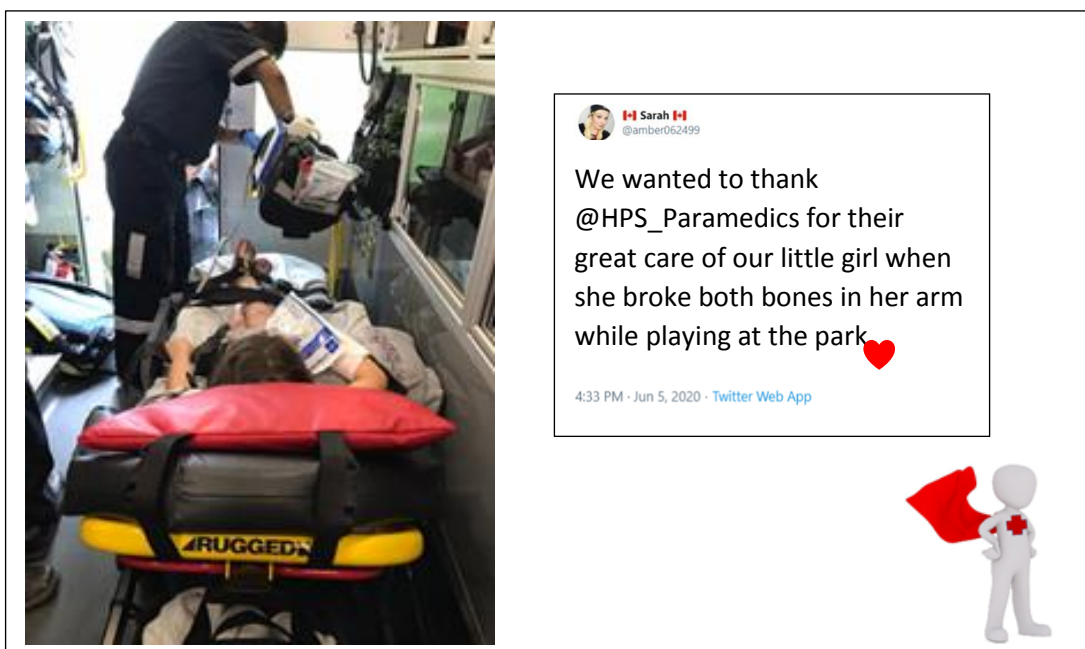
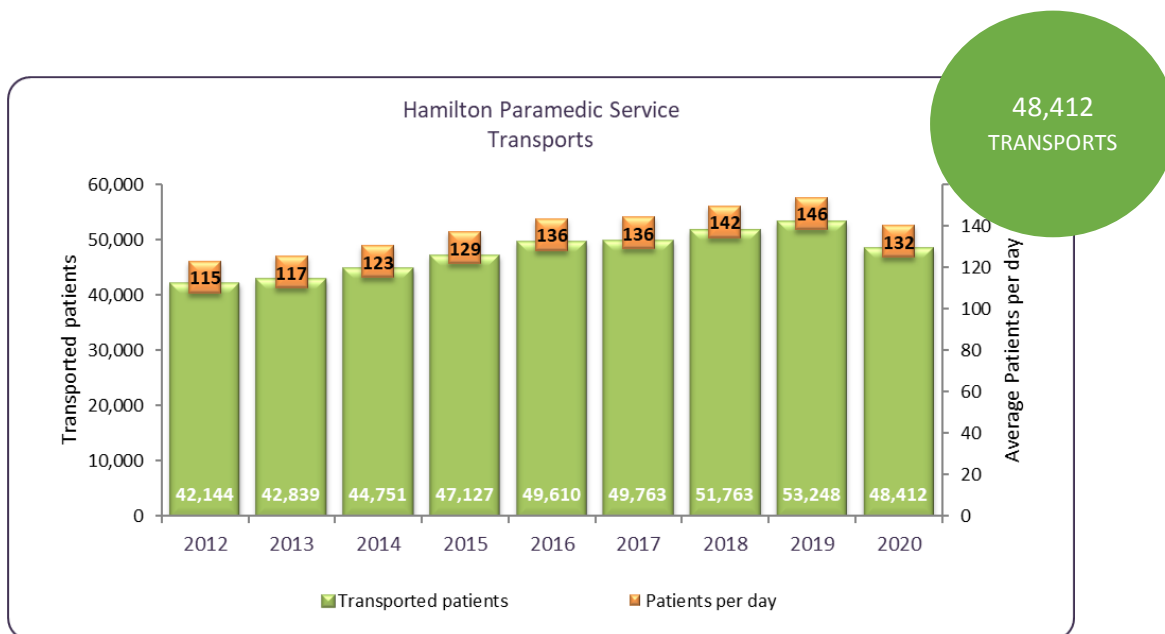
The table to the left shows the top ten reasons patients called HPS for medical assistance in 2020.

## Transports

Transports refers to the number of times patients are transported to hospitals by ambulance. This number is typically lower than the number of events, as some patients decline transport to the hospital or are found not to require hospital services as determined through an assessment conducted by the paramedics.

Not surprisingly, the average number of transports to hospitals dipped to 20% below the 2019 average in the first three months of the pandemic. At the end of May 2020 when restrictions were relaxed, the number of transports increased but still remained below the 2019 average by 8%.

The HPS carried out a total of 48,412 transports in 2020, with a daily average of 132 transports.



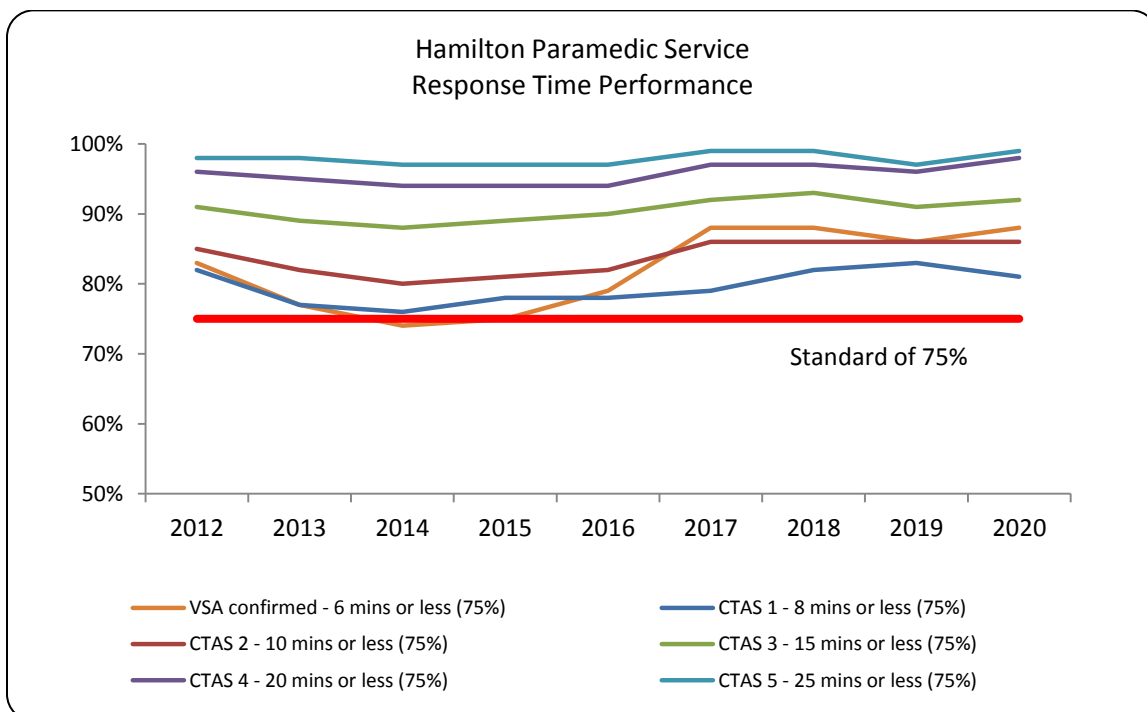
### Response Time Compliance

The *Ambulance Act of Ontario* requires that every paramedic operator in Ontario is responsible to establish and publicly report on response time performance. The City of Hamilton and the MOH approved target response times based on the Canadian Triage and Acuity Scale (CTAS). CTAS is a triage system that prioritizes patient care by severity of the injury or illness. HPS is expected to achieve the target times in each CTAS category at least 75% of the time.

In 2020, HPS again surpassed the standard for achieving the target times for each CTAS category.

CTAS Category	Acuity Level	Target Time	Standard % of Time Target Time to be Achieved	% of Time HPS Achieved Target Time
Vital Signs Absent	VSA Confirmed	6 minutes	75	88
1	Resuscitation	8 minutes	75	81
2	Emergent	10 minutes	75	86
3	Urgent	15 minutes	75	92
4	Less Urgent	20 minutes	75	98
5	Non-Urgent	25 minutes	75	99

The graph below shows that as with previous years HPS met and exceeded the response time standard, as indicated by the red line, in each CTAS category again in 2020.



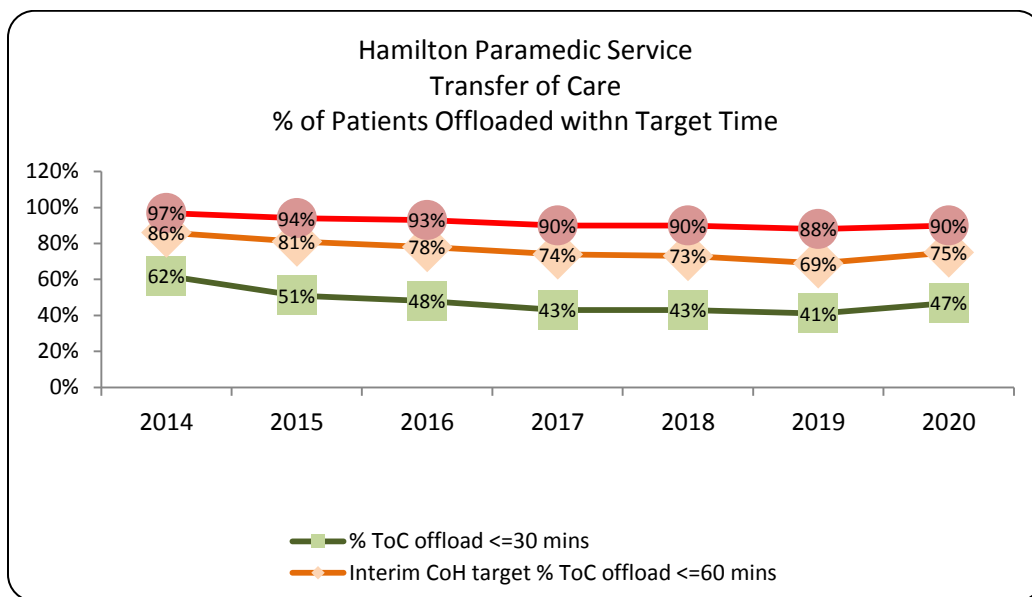
In 2020, the response time to calls dispatched as a life-threatening (Code 4) emergency at the 90th percentile was 11 minutes and 17 seconds. This reflects the time period from when dispatch assigns the call to paramedics until paramedics arrive on scene.

### Off-Load Delay

An off-load delay occurs when the hospital does not accept responsibility for the care of the patient from paramedics within 30 minutes of their arrival to the Emergency Department. The MOH recommends that transfer of care (TOC) of patients occurs within 30 minutes 90% of the time. Paramedics are required to remain with and care for the patient until the hospital is ready to accept the responsibility.

As a result of a variety of system pressures, hospitals in Hamilton continue to struggle to meet the target of accepting the patient within 30 minutes of paramedic arrival. Thus, the City of Hamilton and hospitals have implemented interim targets of transfer of care to hospital within 60 minutes 90% of the time and within 120 minutes 100% of the time.

In 2020, delays in offloading patients improved slightly from 2019, likely due to the decline in service demand at the onset of the pandemic. Forty-seven percent of patients were transferred from paramedics to the hospital in 30 minutes or less. Transfer of care within 60 minutes occurred 75% of the time, falling short of the interim target of 90% of the time. Hospitals took over the care of patients from paramedics within 120 minutes 90% of the time, short of the target of 100% of the time. The chart below shows the percentage of time patients were transferred to the care of hospitals within 30, 60 and 120 minutes for each year since 2014.



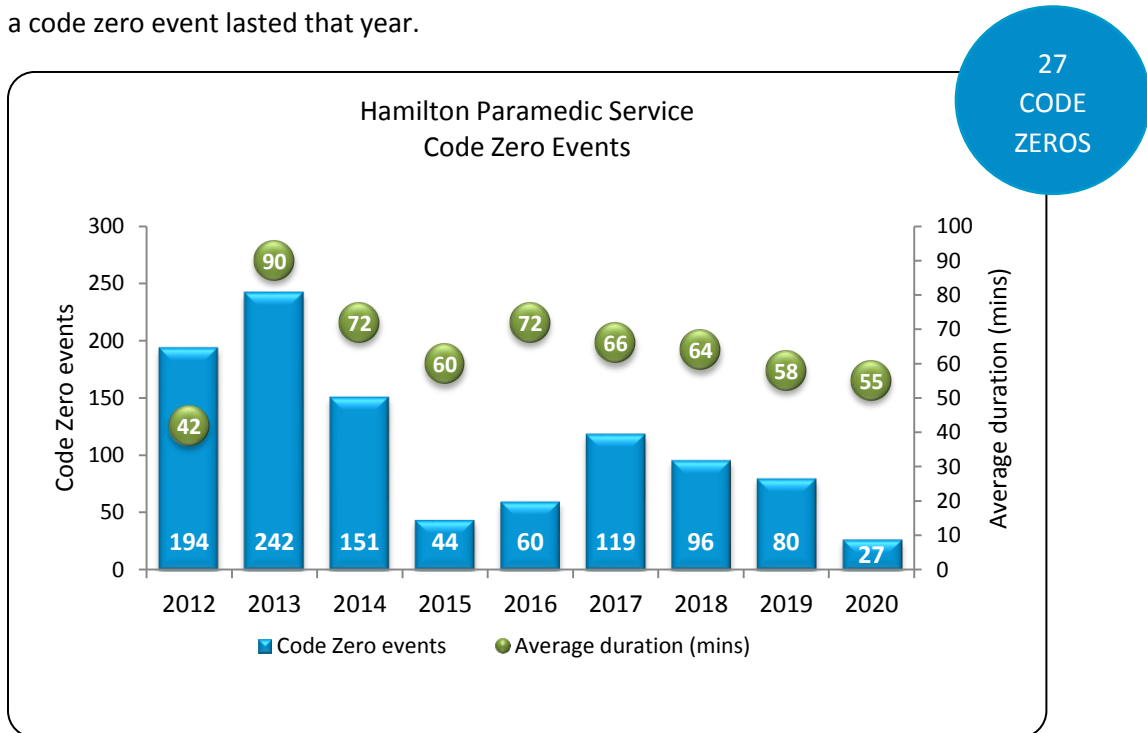
In 2020, paramedics spent **20,997** hours in excess of 30 minutes waiting in Emergency Departments to transfer care of their patient to the hospital



## Code Zero Events

Long off-load delays, particularly when there are 10 or more delays longer than 2 hours in one day, continue to be the major cause of code zero events. When a code zero event occurs, ambulances from neighboring municipalities are assigned to respond to emergency calls in Hamilton.

In 2020, there were a total of 27 code zero events that lasted almost an hour on average. The graph below shows the number of code zero events from 2012 to 2020 and the average length of time in minutes a code zero event lasted that year.



“I fell off my bicycle and was injured. One of the first people on scene happened to be an off-duty paramedic who took control of the situation. She called 911, stabilized and reassured me while we waited for the ambulance.

The paramedics arrived and were equally as great, beyond competent, compassionate, authentic and reassuring.

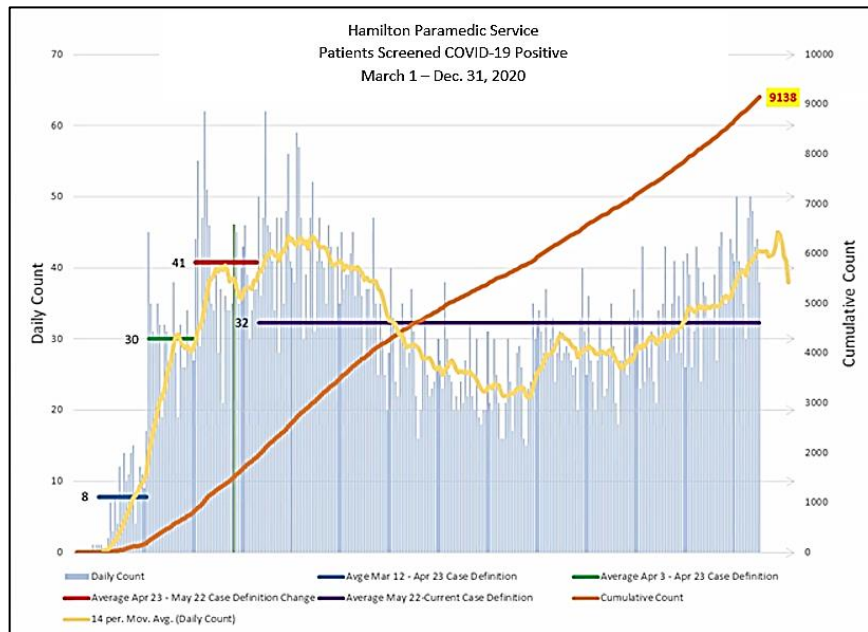
Later that evening at the hospital, the paramedic came back to check on my status. Both paramedics demonstrated great professional competency, but beyond that related to me human-to-human in a way that made a huge difference to how I felt about my situation.”



## COVID-19 Response

### COVID-19 Patients

With the onset of the pandemic, the MOH provided paramedics and dispatchers assessment criteria to determine whether a patient who requires an ambulance should be treated as COVID-19 positive. Since early March, dispatchers have utilized a COVID-19 screening tool and communicated results to the responding paramedics. Paramedics also perform an evaluation once on scene and if there is a suspected case of COVID-19 additional precautions are taken, and the receiving hospital is notified in advance of arrival.



From March 1 to the end of 2020, Hamilton paramedics identified 9,138 patients as suspected COVID-19 positive. While these patients may not have actually had the virus, which is confirmed through laboratory testing, paramedics take extra measures to mitigate the risk of exposure and transmission. These additional activities add to the complexity of the call and increase the time it takes to complete the call. This added time on a call can affect the number of ambulances available during peak periods.

### Employee Self-Isolation

In March 2020, the direction from the province and the local health unit was that paramedics who had unprotected contact with a suspected or confirmed COVID-19 positive patient, tested positive themselves or had a history of recent out-of-country travel were required to quarantine for a two-week period. From March 12 to the end of 2020, 187 staff self-isolated. This made it challenging to fully staff all ambulances and Emergency Response Vehicles (ERVs) required during peak times. However, the scheduling staff along with paramedics who cancelled or deferred their time off meant that almost every shift throughout the pandemic was fully staffed.



### Mass Evacuations

In collaboration with hospitals, paramedics conducted mass evacuations at two congregate settings in 2020 that were experiencing COVID-19 outbreaks. In total, paramedics transported nearly 100 residents to hospitals.

Photo Source: John Rennison, The Hamilton Spectator



## Community Paramedicine

In addition to emergency response and pre-hospital care, HPS also provides a range of initiatives to care for clients with complex and chronic conditions where they live. The Community Paramedicine program began in 2014 with the goal of meeting patients’ needs in the comfort of their own homes thereby increasing their quality of life and reducing hospital Emergency Department visits.

In 2020, the program expanded to become Mobile Integrated Health (MIH) with an increased capacity to reach more people in the community and added initiatives for pandemic response. Although the program has been renamed, its guiding principles remain the same:

**NAVIGATE** connecting clients to the resources they need

**ADVOCATE** ensuring clients have access to the resources they need

**COLLABORATE** working with community partners to ensure clients’ needs are met

### Home Visits

When someone has been identified as using 911 services regularly, a specially trained Community Paramedic is notified who visits the client in their home and conducts an in-depth assessment. As part of a network of service providers the paramedic can quickly connect the client to the resources they require. In 2020, 621 clients were enrolled in the Home Visit Program with Community Paramedics making 716 home visits and 641 referrals to other service providers. These efforts resulting in a 31% reduction in calling an ambulance among these clients. Home visits in 2020 were more complex due to the COVID-19 virus as Community Paramedics also screened each client for the virus and took extra safety precautions while in their homes. Community Paramedics also stay connected with their clients via telephone if visiting in person was not necessary.

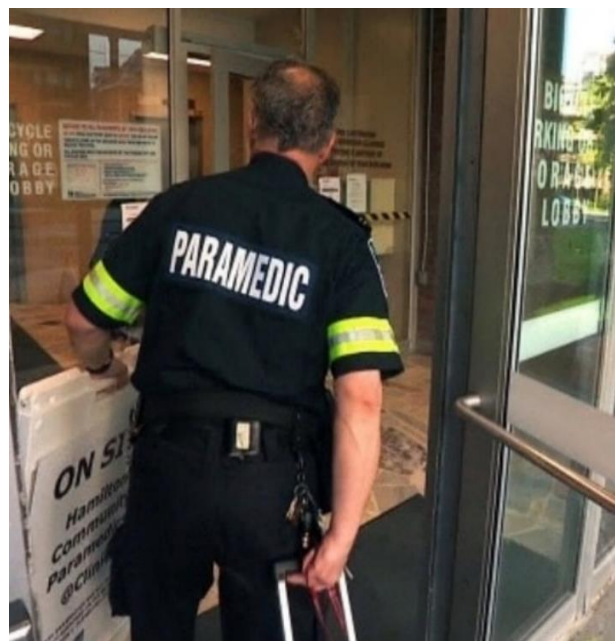
### Clinics

Clinics are set up in selected buildings where vulnerable seniors reside. Community Paramedics’ interventions are focused on health promotion and the prevention and monitoring of high blood pressure, diabetes, cardiovascular disease and social isolation.

In 2020, the Clinics operated in nine CityHousing Hamilton buildings. A total of 60 sessions were held in 2020 with 472 visits by residents. Due to the pandemic the clinics were shuttered for periods of time so Community Paramedics made an additional 170 telephone calls to check on the health and well-being of residents.

### Flu Clinics

The Clinics also provide residents of the seniors’ buildings with the influenza shot during flu season.





With the existence of the COVID-19 virus it was more important than ever to be inoculated in 2020. In response, the Flu Clinic program expanded to also include influenza immunization clinics outside of the nine seniors’ buildings to reach more vulnerable populations. Mobile Flu Clinics occurred at Central Library, shelters, residential care facilities, retirement homes, long-term care facilities and the Neighbour-to-Neighbour Centre. In addition, Community Paramedics administered flu shots to clients of MIH programs as well as first responders and City of Hamilton staff. In total, 1,840 flu shots were administered between October 19 and December 16, 2020.

### **Remote Patient Monitoring**

The Remote Patient Monitoring (RPM) Program leverages technology to allow patients to stay in their homes while their health is being monitored by Community Paramedics. Information about the patient’s chronic condition is transmitted from a variety of devices to a database monitored by a Community Paramedic. If a predetermined threshold is exceeded, a Community Paramedic promptly contacts the patient to determine the best way to mitigate the condition. In 2020, there were 115 patients enrolled in the program with 3,473 alerts yet only four transports to hospitals. The RPM Program was expanded in 2020 with the addition of a thermometer channel and provision of remote technology to higher complexity COVID-19 positive patients.



### **Paramedic Palliative Outreach Support Team**

The PPOST Program involves a specially trained team of Community Paramedics who are contacted when a patient’s palliative care team is unavailable. Community Paramedics support the patient through a palliative crisis in their home where they are most comfortable and avoid a transport to the Emergency Department. In 2020, the team supported eight patients avoiding transports to hospitals. In April 2021, the Paramedics Providing Palliative Care or 3PC project will be launched enabling all paramedics to provide palliative care to registered patients.

### **Flu Response for Emergency Department Diversion**

The FREDD Program provides a mobile response unit to influenza-like illness calls at long-term care homes during the flu season. Paramedics treat long-term care residents, particularly with intravenous initiation, in the home thereby decreasing the need to go to the hospital. During the time the program was operational, from January 22 to March 31, 2020, 61 patients were treated by paramedics thereby preventing the need for visits to hospital.

### **Emergency Department Diversion to Withdrawal Management**

The EDWIN Program enables paramedics to transport men with addiction-related issues to the Men’s Addiction Service Hamilton (MASH) rather than to hospital Emergency Departments. In late 2020, the program was expanded to include women who are transported directly to Womankind Addiction Services. A total of 19 clients were supported through this program with only one requiring transport to hospital.

### Public Access Defibrillation



MIH is responsible for the maintenance and tracking of Automated External Defibrillators (AEDs) throughout the city and advocate to increase in the number of AEDs in the community. Medical evidence shows that when an AED and CPR are administered immediately, often by a bystander, the chance of survival from sudden cardiac arrest is substantially improved by up to 75%.

In 2020, there were 443 AEDs in the city with two uses. AEDs are located throughout the city in public buildings, such as City of Hamilton office buildings, schools, libraries, local event arenas, fitness centres, recreational facilities, hockey arenas and seniors’ centres. In 2020, AEDs were also installed at Tim Hortons Field.

### Social Navigator Program

The Social Navigator Program (SNP) is a collaboration with the Hamilton Police Service to support at-risk individuals and those with repeat police interactions by connecting them to the health and social services they require. In 2020, support was provided both in-person and through virtual visits utilizing Ontario Telemedicine Network. There were 77 intensive case management clients in the SNP in 2020, although 479 people were referred to the program. Also, assistance was provided to an additional 512 individuals in need. Social Navigators made 334 referrals to services for support for their clients with housing/shelter, addiction, mental health, income, primary care and developmental supports.



Social Navigator Team

In 2020, more than any other year, the SNP also provided basic necessities such as meals, food packs, water, clothing and shoes. As a result of the pandemic there has been an increased need for support. In December 2020, the SNP secured funding to expand the capacity of the program with two additional paramedics enabling service availability seven days a week until the end of March 2021.

The SNP has been successful in decreasing negative police interactions among SNP clients after three months in the program by 55%.

“I work at the Schizophrenia Outpatient Clinic and after years in the field engaged with numerous partners, I am constantly amazed at the consistent level of commitment and efforts made by the Social Navigator Program’s team to collaborate with my clients. Many of my colleagues are also familiar with SNP and have had nothing but positive experiences with them.”



### COVID-19 Swabbing

In response to the pandemic and in collaboration with PHS, MIH established a COVID-19 Swabbing Team. In total, the team conducted 9,504 tests in 2020. These included tests conducted at congregate settings such as long-term care facilities and retirement homes, social housing, hospices and patients who are homebound waiting to be placed in a hospice or long-term care. In addition, paramedics provided swabbing for first responders and employees of the City's two long-term care homes.



### COVID-19 Vaccination

By the end of 2020, PHS began inoculating seniors living in congregate settings in Hamilton. Paramedics supported this effort by designing and providing aftercare to ensure those who received the shot were monitored for any adverse effects.

The involvement of paramedics in supporting the vaccine deployment plan will intensify in 2021. As such, in late 2020 paramedics began training in COVID-19 vaccine administration and began preparing for the establishment mobile vaccination clinics to be operational in the spring of 2021 which will require paramedic involvement.

### High Intensity Supports at Home

In late 2020, Community Paramedics became involved in a program to help provide care to high risk people waiting to be placed in long-term care homes. Hospitals report a significant number of alternative level of care patients awaiting long term care placement as one of the factors contributing to bed shortages. Through this program, Community Paramedics are able to support patients in their home both in person and virtually helping to avoid Emergency Department visits and easing the burden on hospitals especially during the pandemic. Plans are underway to expand the capacity and duration of this program commencing in the spring of 2021.

 **Susan Clairmont**  @susanclairmont · May 4

So @HPS\_Paramedics came to care for my elderly neighbour. They geared up in #COVID19 gowns/gloves and rather scary looking masks. I was struck by how much kindness and warmth they were still able to show my neighbour from underneath all that equipment. Thank you. #HamOnt



## Clinical Excellence

Clinical excellence is demonstrated by Hamilton paramedics through a commitment to continued growth and development. In 2020, a number of new procedures related to the COVID-19 response were added to the annual training paramedics undertake to refresh and expand their capabilities. Over 10,000 hours of continuing education were delivered to paramedics in 2020 to ensure they can provide excellent clinical care to patients.

### Infectious Disease Paramedic Team

At the onset of the pandemic, HPS began preparing for the establishment of an infectious disease team and by April 19, 2020 the team was operational. Specially trained paramedics are equipped with powered air purifying respirators that include full face masks connected to a breathing hose that purifies the air they breathe. The team’s 24-hour a day, seven days a week availability has helped to support the work of paramedics in responding to patients who have screened positive for the virus particularly with respect to transferring these patients between facilities.



### Automated Chest Compression Devices

In 2020, paramedics participated in a three-month trial of automated chest compression devices. This equipment allows paramedics to continue providing chest compressions while moving the patient. The device delivers automated CPR to sudden cardiac arrest patients without interruption. It also reduces the need for close contact required with traditional CPR. As a result of positive feedback from paramedics in addition to favourable clinical studies, HPS will work to equip all ambulances with this device in 2021.



### COVID-19 Simulation

Just weeks after the first case of COVID-19 was identified in Hamilton, paramedics collaborated in a simulation event organized by St. Joseph’s Healthcare to test the preparedness of response to the growing health crisis. The simulation focused on transferring a COVID-19 positive ‘patient’ from the Urgent Care Centre to the hospital’s Emergency Department. Paramedics worked with a team of emergency physicians, nurses and respiratory therapists to finetune how best to care for these patients in the safest manner possible for all people involved.



### Virtual Emergency Department

In 2020, HPS partnered with St. Joseph’s Healthcare Hamilton for Community Paramedics to access Emergency Department physicians virtually. This enables Community Paramedics to consult with doctors while they are on scene or in the homes of their clients. This permanent program ensures that clients have prompt access to the resources they require without having to be transported to the hospital.



### Connected Health Hamilton

In collaboration with Hamilton Health Sciences and St. Joseph’s Healthcare this program expanded in 2020 to leverage new and existing solutions to remotely monitor COVID-19 positive and vulnerable patients. While Community Paramedics already utilize technology for the Remote Patient Monitoring program this expansion enables them to assess, monitor and support COVID-19 patients and post-discharge acute care patients virtually.

### Computerized Asset Management

To manage critical medical supply inventory and equipment more efficiently the Logistics Section of HPS began the process of transitioning to a computerized system in 2020. This modernized system will track real-time supply levels and accurately forecast supplies required to ensure vital stock is readily available and up-to-date. It is more important than ever to proactively manage assets in an evolving health crisis when resources can become scarce.



## Continuous Improvement

HPS is constantly looking for ways to improve processes, programs and services through innovation and best practices to ensure the delivery of optimal care to the community. In 2020, such initiatives also included ways to effectively respond to the pandemic. Some of the continuous improvement initiatives undertaken in 2020 are highlighted below.

### Paramedic Bike Unit

In December of 2020, HPS was successful in receiving a grant award for just over \$20,000 from Firehouse Subs Public Safety Foundation of Canada. These grant funds will contribute to the establishment of a Paramedic Bike Unit in 2021. A Paramedic Bike Unit will be able to provide care to a number of planned mass gathering events across the city such as SuperCrawl, Festival of Friends and the Around the Bay Road Race. Events with a large amount of people are difficult for ambulances to promptly access should there



be a medical emergency. Bike medics can navigate a dense crowd more quickly than a full-size rescue vehicle and begin delivering potentially life-saving treatment.



### COVID-19 Screening Tool

All paramedics are required to screen for COVID-19 prior to the start of their shift. To assist with ease of screening, staff developed an online application that can be accessed by their phones using a QR Code or connecting to a link on their laptops. This app and its procedures are consistent with both provincial and local direction. The information is stored electronically, and tracing records are maintained.

### Modified Training and Recruitment

In 2020, the Performance and Development Section of HPS had to rework the way training was delivered to paramedics due to COVID-19 protocols. Instead of providing mandatory professional development in the HPS training classroom, training took place virtually as well as at the Municipal Service Centre in Stoney Creek which was spacious enough for paramedics to stay physically distanced. In addition, plans were developed in 2020 for an online platform for exams and interviews to be carried out virtually for the 2021 recruitment process.



### Addition of Resources

#### Ambulance

HPS increased its fleet by one ambulance in April 2020. This additional ambulance is operational 24 hours a day, seven days a week. This truck is required to catch up with the growing demand in service that has been intensified by the COVID-19 health crisis.



#### Staffing

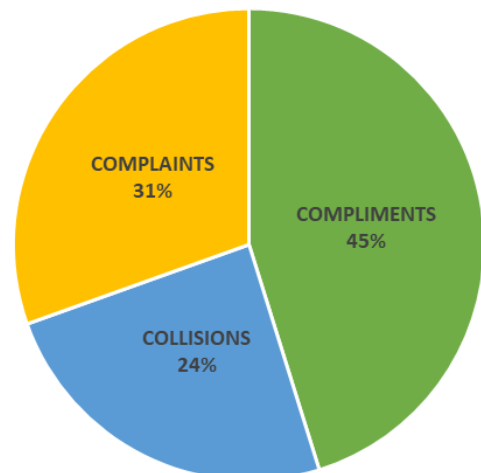
Thirty-seven part-time paramedics joined the service during the spring and early summer months in 2020. The Performance and Development provided modified orientation due to COVID-19 restrictions. Several of these new recruits have already moved into full-time positions with many more in temporary full-time positions. These newly hired paramedics have helped to keep ambulances and Emergency Response Vehicles fully staff throughout the pandemic.



### Quality Assurance

HPS has a robust quality assurance program that, among other activities, reviews and responds to feedback from customers. Follow-up with paramedics is an integral part of the program to ensure the continuous improvement of HPS service delivery.

In 2020, 197 reviews were conducted to identify opportunities for improvement and employee recognition. Forty-eight were related to collisions, 60 were customer concerns about conduct and practice while 89 were compliments on paramedics' performance (not including social media posts).



The majority of collisions were related to clearance issues involving damage of under \$1,000 and most complaints were related to professional conduct. Such incidents are thoroughly investigated and may result in coaching or additional training of paramedics.





A wide range of compliments were received from people who have used HPS services or their family members. These related to a wide range of paramedics' performance including skillfulness, compassionate, calm, caring, kind, professional and friendly.

### Project CO

In an effort to reduce carbon emissions, in 2020 HPS replaced two old decommissioned ambulances with new hybrid ones. This hybrid technology not only reduces gas emissions, it also requires less fuel and therefore saves on the cost of fuel while increasing mileage. It is estimated that this technology will be able to successfully reduce greenhouse gas emissions by 10.7 tonnes per vehicle each year.



Chief Sanderson and GM Paul Johnson, February 2020



### Automated COVID-19 Testing

Community Paramedics have been supporting PHS in conducting COVID-19 assessments in the community. In November 2020, paramedics moved to an automated testing system. This technology enables the use of barcode scanning to generate swabbing requisitions and prints labels which can be submitted electronically. This results in more timely registration and test submissions.

### PPE and Disinfection

With the onset of the pandemic the Logistics Section of HPS had to pivot their activities related to personal protective equipment (PPE) and cleaning procedures. Logistics secured a PPE monitoring and distribution system to effectively and efficiently manage the inventory of PPE which was in limited supply during the first few months of the pandemic. They also developed and implemented an enhanced cleaning program for all response vehicles in the HPS fleet. In addition, HPS's logistics personnel designed a program that enabled isolation gowns to be reused which was implemented for all medical staff in the City of Hamilton.



## Community Connections

Hamilton paramedics have always played an important role in the community not just because they provide quality programs and emergency response but also because they provide information and support to the community. In past years, HPS achieved this through attending events such as festivals, fairs and through participating in fundraisers and awareness-raising campaigns. In 2020, due to the pandemic, in-person events were restricted; however, HPS was able to still carry out some charitable work. In addition, an increased media presence enabled the continued flow of important and educative information to the community.

### Media Presence

HPS had a strong media presence in 2020. With spots in local television, newspapers and radio HPS shares important information relating to their work, raising awareness of key community issues and supporting community health, safety and well-being. In 2020, HPS was featured on six shows of *The Pulse* a local Cable 14 show from the *Frontline* series. Topics covered included: Back to school safety during the pandemic, Mobile Integrated Health activities including COVID-19 swabbing, heart health, winter safety, mental health, response statistics and paramedics’ annual Toy Drive.



2020 Twitter Activity
<a href="#">@HPS_Paramedics</a>
220 Tweets
14,000 Followers
1,703 Retweets
9,592 Likes
1.3 million Impressions

As well, through the HPS Twitter account, HPS was able to share timely news about emergency incidents, promote community events and charitable work, provide education in the area of health and safety and celebrate the dedication of paramedics and other first responders. In 2020, social media also provided a key platform to disseminate information related to COVID-19 including how to protect against contracting and spreading the virus, where to go for assessments and the activities of HPS in responding to and combating the virus. In 2020, the HPS Twitter account had over 14,000 followers with a reach of over 1.3 million impressions or the number of times an HPS tweet appeared on users’ timelines impressions. HPS will launch an Instagram account in January 2021 so even more people will receive key information about staying safe and healthy.

“My mother fell and got stuck. I live an hour and a half away. I wanted to thank the paramedic personally for going into a window to rescue my mom! I really do appreciate that!”



## Charity Support

Despite the restrictions due to COVID-19 that prevented paramedics from participating in community fundraisers such as Tim Hortons Camp and McHappy Day, paramedics still found ways to give back to the community in 2020.

### Summer Food Drives

Paramedics were touched by the outpouring of gratitude and support from the community for their work on the frontline of the pandemic. In response, instead of waiting for the annual winter food drive, paramedics organized an additional food drive in June 2020. Paramedics raised \$3,500 and collected almost 1,000 pounds of food to donate to the Neighbour-to-Neighbour Foodbank.



In addition to the paramedic food drive in June, HPS partnered with GlobalMedic in August 2020 to deliver over 3,000 pounds of food to Neighbour-to-Neighbour Centre generously donated by GlobalMedic.



### Community Garden

The garden began seven years ago by paramedics who continue to volunteer their time to tend the garden located at the ambulance base. In 2020, the Community Garden yielded 1,450 pounds of produce that was donated to the Neighbour-to-Neighbour Centre.



### The Paramedic Ride 2020

In 2020, the annual Paramedic Ride to Ottawa did not take place due to the pandemic. This annual event helps to raise funds in support of the Canadian Paramedic Memorial Foundation and for the construction of a monument in Ottawa honouring paramedics who have lost their lives in the line of duty. For five years, Hamilton paramedics have been involved in the ride and have raised over \$20,000.

In 2020, Hamilton, along with other services that participate in the Paramedic Ride, hosted a local ride and ceremony featuring the Paramedic Memorial Bell which was touring across Canada. During the ceremony the names of fallen paramedics were read aloud as the bell tolled for each person.



### Holiday Food Drive

The pandemic posed challenges in carrying out the annual Christmas food drive in 2020 which is usually held at a grocery store. However, GlobalMedic stepped in with a contribution of over 4,600 pounds of food. In addition, a local business, Vertical Staffing Resources, donated \$1,500. Through the efforts of Hamilton paramedics all of the donations went to the Neighbour-to-Neighbour Centre to provide essential food for families in need during the holidays.



“Our dad had a cardiac arrest. Paramedics performed CPR and took him to the hospital. We want to thank them with all our hearts for how much they helped dad but also the support they provided our mother to help her deal with the situation. Thank you for saving our dad’s life.”

### Santa to Seniors

Because of the pandemic many people were unable to see their loved ones during the holiday season. This can be particularly difficult for seniors living in long-term care residences. So Hamilton paramedics started an initiative in 2020 to sponsor a senior. Fifty paramedics bought gifts for one or more seniors which then were delivered by a group of paramedics to residents of the City's two Long Term Care Homes. The Santa to Seniors initiative let the residents know that they were not alone even though they were unable to be with their families.



### Toy Drive

The annual Paramedic Toy Drive for CityKidz ensures that children in Hamilton who experience the challenges of poverty receive a personalized and meaningful gift at Christmas. In 2020, this need was greater; however, with pandemic restrictions the physical toy drive had to be cancelled. Moreover, paramedic Doug Mason who not only ran the Paramedic Toy Drive for 17 years but also dressed up as Santa for the kids sadly passed away in November 2020. In honour of Doug who was passionate about giving back, a virtual toy drive and fundraiser took place. Numerous toys were donated and a record \$11,720 was raised for CityKidz. Doug would be pleased.



**Doug Mason**

April 8, 1965 - November 5, 2020

### Community Appreciation

2020 was a challenging year for everyone, most particularly frontline workers including paramedics who are at the centre of the battle against COVID-19. The community has recognized their work with an overwhelming display of appreciation that took many different forms in 2020. HPS values every expression of gratitude from the community, no matter how big or small. From cards, letters, signs and sidewalk chalk drawings to donations of sanitizer, PPE, food and coffee, paramedics have been touched by the outpouring of generosity of the community. The following pictures are just some examples of how the community thanked paramedics for their service during the pandemic.



## Recognitions

A number of employees of HPS were formally recognized in 2020 for their extraordinary achievements in serving the community and their peers.



### CPER Quality of Care Award

Primary Care Paramedic Mark Nichols accepted the Chief’s Challenge Coin in acknowledgement of Mark receiving the Hamilton Health Sciences Centre for Paramedic Education and Research (CPER) Quality of Care Award. This is a peer-nominated award for excellence in a variety of areas including patient care, community involvement regarding clinical care or promoting emergency medical services and patient care.

The other winners of the CPER Quality of Care Award 2020 include:

- ❖ Heidi Bergeron, Primary Care Paramedic
- ❖ Dave Dean, Advanced Care Paramedic
- ❖ David Egier, Advanced Care Paramedic
- ❖ Hugh Hart, retired November 2020 after 44 years of service



### City Manager’s Award

Joe Pedulla, Advanced Care Paramedic and Acting Commander of Mobile Integrated Health along with Wesley Loy, Data and Records Coordinator received the City Manager’s Award for Continuous Improvement in January 2020 for their work in collaboration with PHS’ Epidemiology and Evaluation Unit on several key initiatives aimed at achieving better health outcomes for the community.



Joe Pedulla and City Manager Jeanette Smith  
January 2020



Wesley Loy and City Manager Jeanette Smith  
January 2020

### Governor General of Canada Emergency Medical Services Exemplary Service Medal

The Emergency Medical Services Exemplary Service Medal awarded by the Governor General of Canada recognizes professionals who provide pre-hospital emergency medical services to the public in an exemplary manner, characterized by good conduct, industry and efficiency. Recipients must have completed 20 years of exemplary service with at least 10 years performing duties that involve potential risk.

The recipients of the 2020 Emergency Medical Services Exemplary Service Medal for HPS are as follows:



- ❖ Sarah Brennan, Advanced Care Paramedic
- ❖ Daryl Cheney, Advanced Care Paramedic
- ❖ Jeff Chmiel, Primary Care Paramedic
- ❖ Derek Dawson, Advanced Care Paramedic
- ❖ Dan Groeger, Primary Care Paramedic
- ❖ Randy Jones, Advanced Care Paramedic
- ❖ Gord Mooney, Primary Care Paramedic

In addition, the following former recipients of the Medal received the 30 Year Bar:

- ❖ Anthony Caravaggio, Primary Care Paramedic
- ❖ Chris Bayards, Advanced Care Paramedic
- ❖ Santo Pasqua, Primary Care Paramedic

### Survivor Reunions

The role of paramedics is to provide quality care to residents and visitors to Hamilton. Sometimes this means performing live-saving critical medical interventions. While the act of saving a life is more than enough gratification for paramedics, there are times when survivors request to meet with the paramedics to express their gratitude in person.

On July 20, 2020 Primary Care Paramedics Michael Agresta and David Wharrie responded to a call for a patient in medical distress. The patient was a three-week old baby. Dave and Mike provided the immediate and skillful care the infant required. As a result of, they baby was able to recover from the incident and is doing well.

Following the incident, Dave and Mike had the privilege of being reunited with the baby and family. The parents wanted to express their deepest appreciation to Dave and Mike with a thoughtful gift. The parents also extended their thanks to all paramedics calling them "real-life heroes who come to save the day!"





Every fall many people spend time outdoors raking the up leaves on their properties. The fall of 2020 was no different for one homeowner. However, after cleaning up his property then working in his wood shop, this homeowner experienced a twinge in his chest. When the twinge persisted and he began to sweat profusely, his wife called 911.

Just as Primary Care Paramedics Nadine Valdez and Matthew Downs arrived at the home, the patient lost consciousness and vital signs. Paramedics Nadine and Matthew went to work quickly and skillfully to resuscitate the patient. On their ride to the hospital the paramedics called ahead to ensure the hospital was prepared to receive the patient. They were also joined by Advanced Care Paramedic Don Dunster who assisted with patient care.

By mid-November, the patient had fully recovered and invited the paramedics back to his home so he and his family could thank the paramedics in person for saving his life. Chief Sanderson and CPER Medical Director Dr. Paul Miller also attended to share in the moving and joyful moment.



Left: Nadine Valdez, Matthew Downs, the patient  
Above: Matthew, Nadine, Dr. Paul Miller

My father-in-law lost his ability to speak as a result from a stroke he had 10 years ago. He was walking one day and fell and hurt himself. The paramedics who responded found his address and stopped by my mother-in-law's home to let her know what had happened. Our family worries about him when he is out but these wonderful paramedics' actions give us comfort knowing there are people like them who are so kind to understand and help him, and us!

