

Hamilton Paramedic Service 2022 Annual Report





In 2022, HPS released a 10-year Master Plan that lays the groundwork for transformational change through technology advancements, innovation, resource allocation and optimization of operations.

The Master Plan addresses the growing and diverse needs of Hamilton’s communities, now and into the future.

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Message from the Chief



In 2022, the Hamilton Paramedic Service continued to experience an increase in the number of emergency calls amid a third year of the COVID-19 pandemic. Offload delays at our local hospitals were at a record high and code zero events increased by more than three times from the previous year. As health care services are being overwhelmed and people are unable to get the care they need in a timely manner, they turn to calling 911 and paramedics as their only option for immediate care.

Despite the pressures on the health care system that have significantly impacted paramedic services, our Hamilton paramedics continue to rise to the challenge. They are tired, they are concerned, and they have been unwell, but they have not stopped working diligently to provide quality care to the residents of this community. Staff in all areas of the service have had to work harder, work differently and work longer to ensure that every aspect of the service operated optimally from cleaning of equipment and vehicles, data reporting, scheduling of staff and enhanced efforts of our community paramedics as they supported mitigation activities of the COVID-19 crisis.

With all of the challenges in 2022, we were still able to achieve some key milestones. In May, we released our first-ever ten-year Master Plan that lays the groundwork to transform our service through technology advancements, innovation, modernization and the optimization of resources and processes. to better meet the needs of the community, now and into the future.

In 2022, we also underwent a comprehensive Ambulance Service Review by the province to renew our certification to deliver land ambulance services for the City of Hamilton. As well, we added an ambulance to our fleet, acquired and trained our medics on new equipment including stretchers and AutoPulse devices, launched a Harm Reduction campaign with Hamilton Public Health Services to promote safer drug use, conducted a city and province-wide survey on cultural competency in paramedicine, and received a Firehouse Subs Public Safety Foundation of Canada grant of over \$50,000 for the purchase of a medical response ATV.

Even in an unprecedented year with high call volumes and prolonged offload time at hospitals, our paramedics continued to undergo professional development as they learn new skills and enhance existing ones. They also led charitable events to collect food, toys, clothes, gifts for seniors and raise money for local community organizations and causes. Medics also participated in recognizing and celebrating the good work of their peers with the H.E.A.R.T. trophy awarded monthly to an outstanding medic. This 2022 Annual Report provides just a glimpse into some of these activities.

I want to thank the Mayor, members of Council, the Senior Leadership Team and General Manager Angela Burden for their unwavering support in ensuring effective operations of the service.

Above all, I want to express my sincere appreciation to all paramedic staff who inspire me each day with their dedication and compassion especially during these times of excessive hardships.

A handwritten signature in black ink, appearing to read "Michael Sanderson".

Michael Sanderson, Chief
Hamilton Paramedic Service

Service Overview

HPS Services



The Hamilton Paramedic Service (HPS) is the designated sole provider of paramedic services for the City of Hamilton serving over 569,000 residents in addition to those who come to Hamilton to work, play and learn.

Operating out of 18 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:

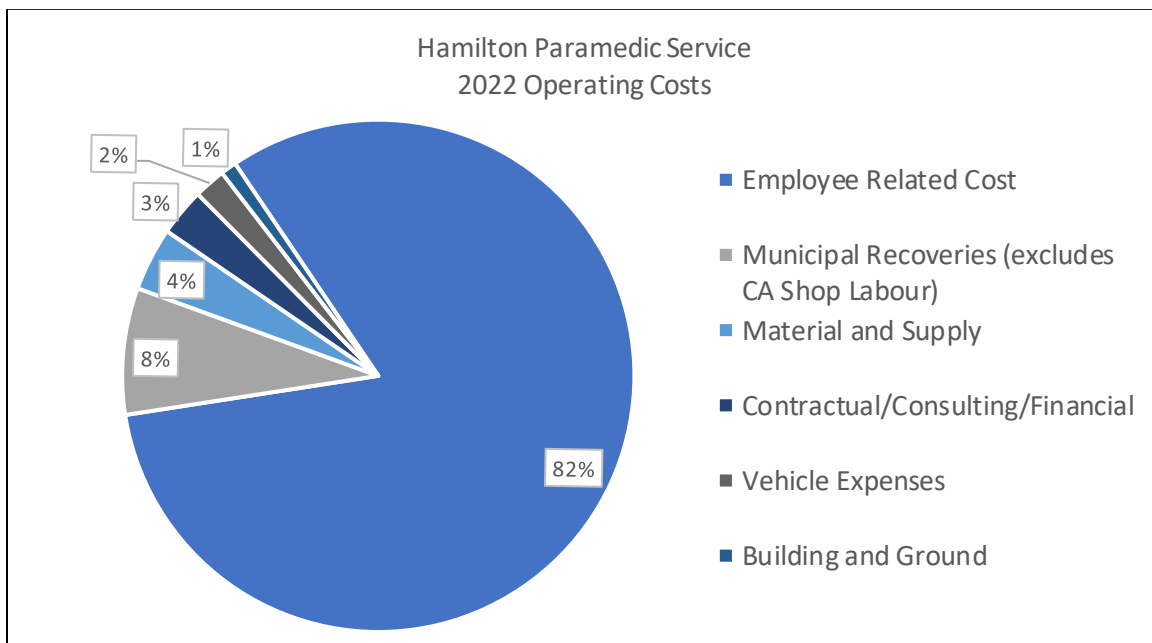
- Seniors Clinics
- Home Visits
- Flu Immunization Clinics
- Remote Patient Monitoring
- Social Navigator Program
- High Intensity Supports at Home
- Emergency Department Diversion Withdrawal Management Program
- Palliative Outreach Support
- Neonatal Intensive Care
- Public Access Defibrillators
- Community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

In 2022, HPS continued to carry out additional activities in response to the COVID-19 pandemic, including COVID-19 swabbing, vaccine administration for homebound residents, respirator fit-testing for City of Hamilton employees and extra measures to mitigate exposure and transmission of COVID-19.

HPS Finances

In 2022, HPS had an overall operating budget of \$67,603,630 however, 50% of direct land ambulance costs are funded by the province. The allocation of funds per each cost category and percentage of the overall budget is shown in the chart below. In addition, the province provides 100% of funding for community paramedics, dedicated offload nursing and the Neonatal Intensive Care Unit ambulance.

2022 Operating Budget		
Category	\$	%
Employee Related Cost	55,488,220	82
Municipal Recoveries (excludes CA Shop Labour)	5,327,452	8
Material and Supply	2,670,188	4
Contractual/Consulting/Financial	2,237,652	3
Vehicle Expenses	1,532,658	2
Building and Ground	347,460	1
Total	67,603,630	100



The following chart shows the cost of responding to emergency medical calls in 2022. HPS has a corporate fuel purchase arrangement and utilizes the Hamilton Fire Department vehicle maintenance services to realize cost efficiencies.

2022 Responses Costs	
Category	Total
Kilometres Travelled	2,144,717
Cost per Response	\$689.03
Cost of Materials & Supplies per Response	\$27.22
Vehicle Cost per kilometre	\$0.92

HPS Structure

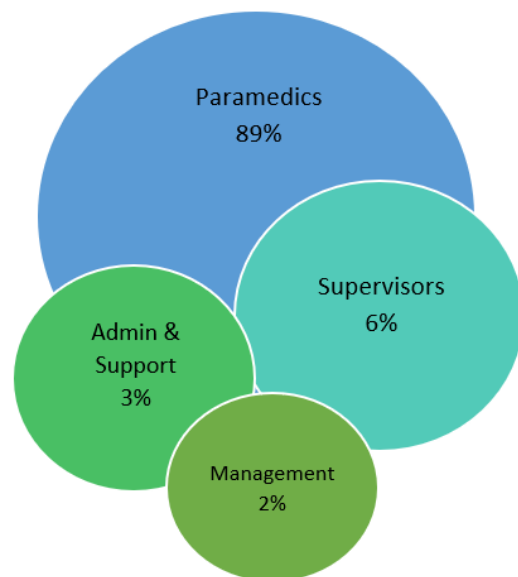
As an integral part of the health care system, HPS helps to promote the health and safety of Hamilton’s residents and visitors through prevention, response and follow-up activities. HPS achieves this best by being situated within the Healthy and Safe Communities Department which enables collaboration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

Reporting to the General Manager 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 368 full-time equivalent (FTE) positions made up the HPS workforce in 2022. Approximately 89% of staff are paramedics with 18% of those Advanced Care Paramedics. While paramedics provide direct frontline services to the community, supervisors, administration and support staff which includes logistics technicians and schedulers, and management provide a variety of supportive and regulatory functions to meet Ministry of Health (MOH) mandates. HPS’s workforce breaks down as follows:

Position	FTEs	
	Full-time	Part-time
Total Paramedics	303	25
Primary Care	244	24
Advanced Care	59	1
Supervisors	21	-
Administration & Support Staff	11	-
Management	8	-

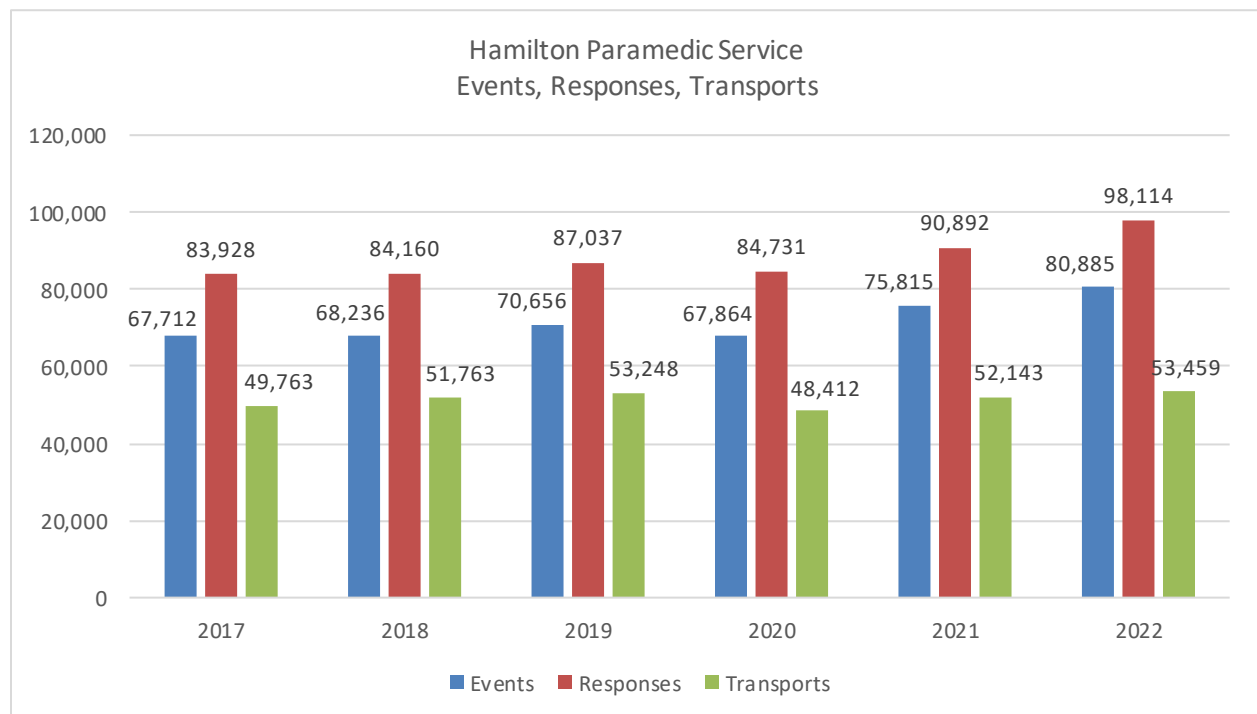


Performance Overview

At a Glance: Events, Responses, Transports

The following graph shows the total number of events, responses and transports respectively, each year from 2017 to 2022.

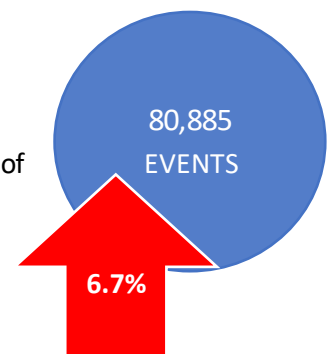
HPS experienced an increase in service demands each year prior to the onset of the global pandemic. While demand for service decreased slightly at the start of the pandemic in March 2020, it subsequently increased to levels significantly higher than 2019. In 2022, events increased by almost 15 percent and responses increased by approximately 13 percent from the 2019 call volume.

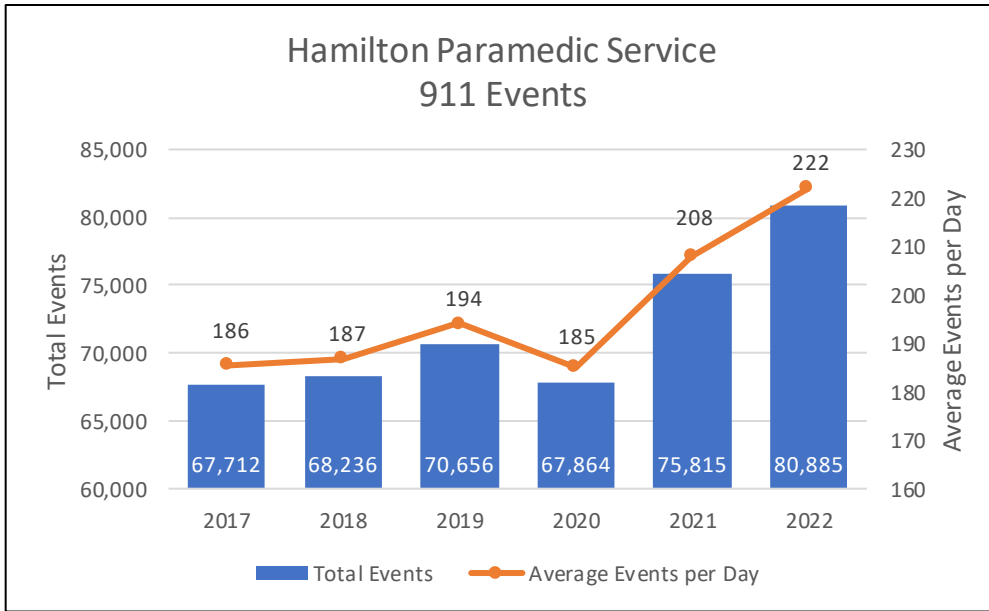


Events

An event is generated every time 911 is called for paramedic assistance through dispatch, the Central Ambulance Communications Centre (CACC).

In 2022, HPS experienced a larger number of 911 events than in previous years with 80,885 events, an average of 222 events per day and an increase of approximately 7 percent from 2021.

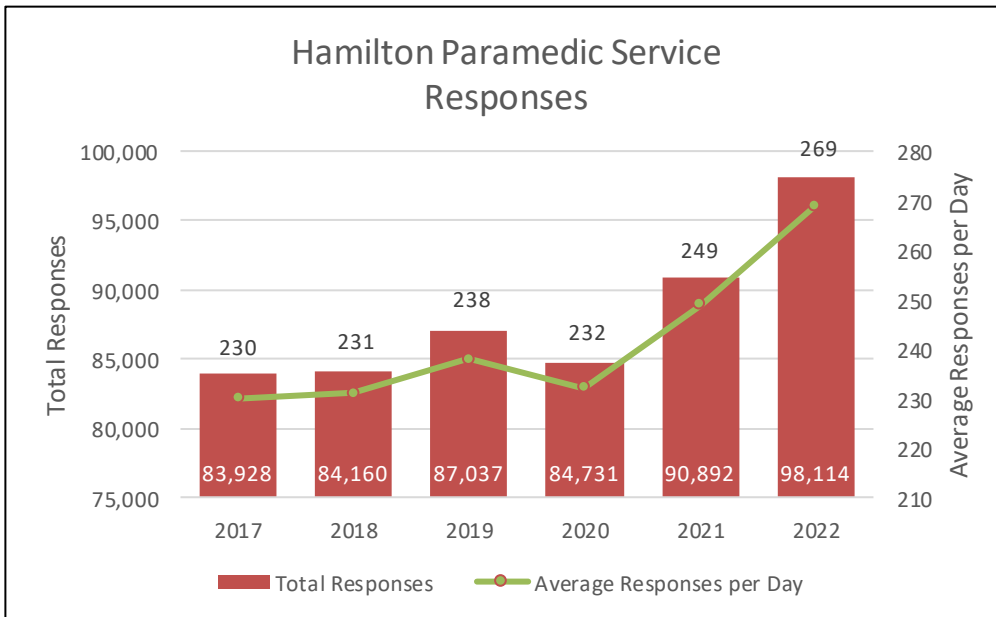
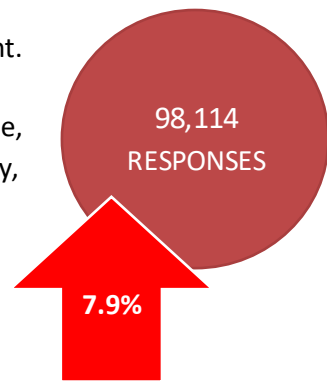




Responses

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

In 2022, HPS had a total of 98,114 responses with a daily average of 269 responses, an increase of almost 8 percent from the previous year and a level that has been unsurpassed in previous years.



Top 10 Patient Problems 2022	% of Call Responses
Dyspnea (shortness of breath)	14
Fall	13
Unknown	7
Unconscious	5
Abdominal/Pelvic/Perineal/Rectal Pain	5
Unwell	4
Ischemic (obstruction of blood flow)	3
Motor Vehicle Collision	3
Behaviour/Psychiatric	3
Chest Pain/Cardiac	3

Patient Problems

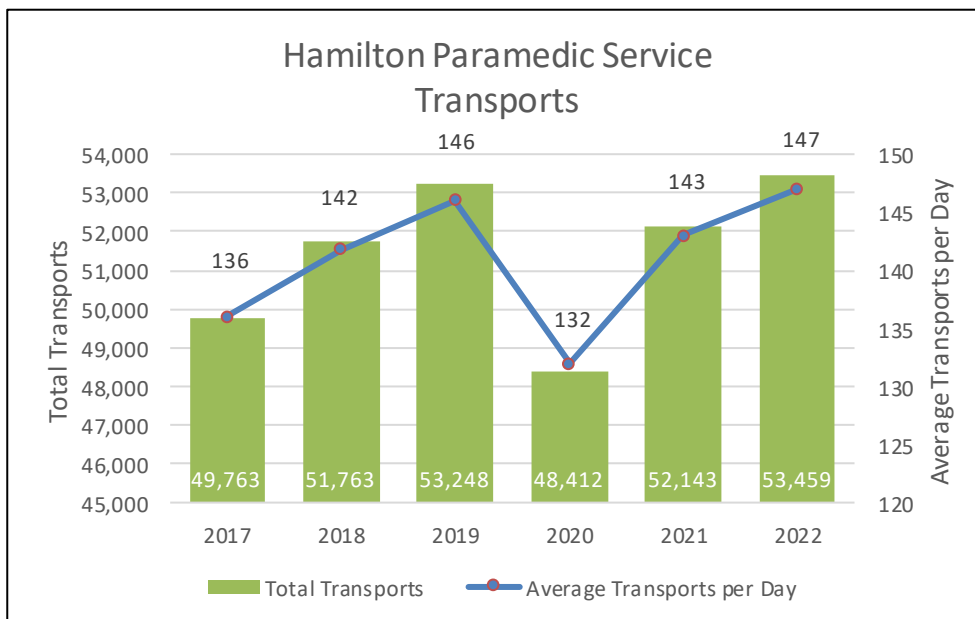
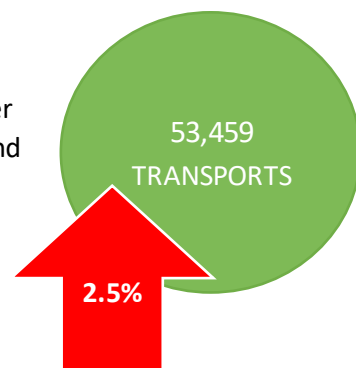
Listed here, are the top ten reasons an ambulance was dispatched for medical assistance in 2022.

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. For example, of the 7,534 patients assessed by paramedics as suspected COVID-19 positive in 2022, 19% were not transported to hospital following paramedic assessment.

The number of transports to hospitals in 2022 was well above the total number for 2020 due to the decline in demand for service during the beginning of the pandemic and increased by almost 3 percent from 2021.

HPS carried out a total of 53,459 transports in 2022, an average of 147 transports every day.



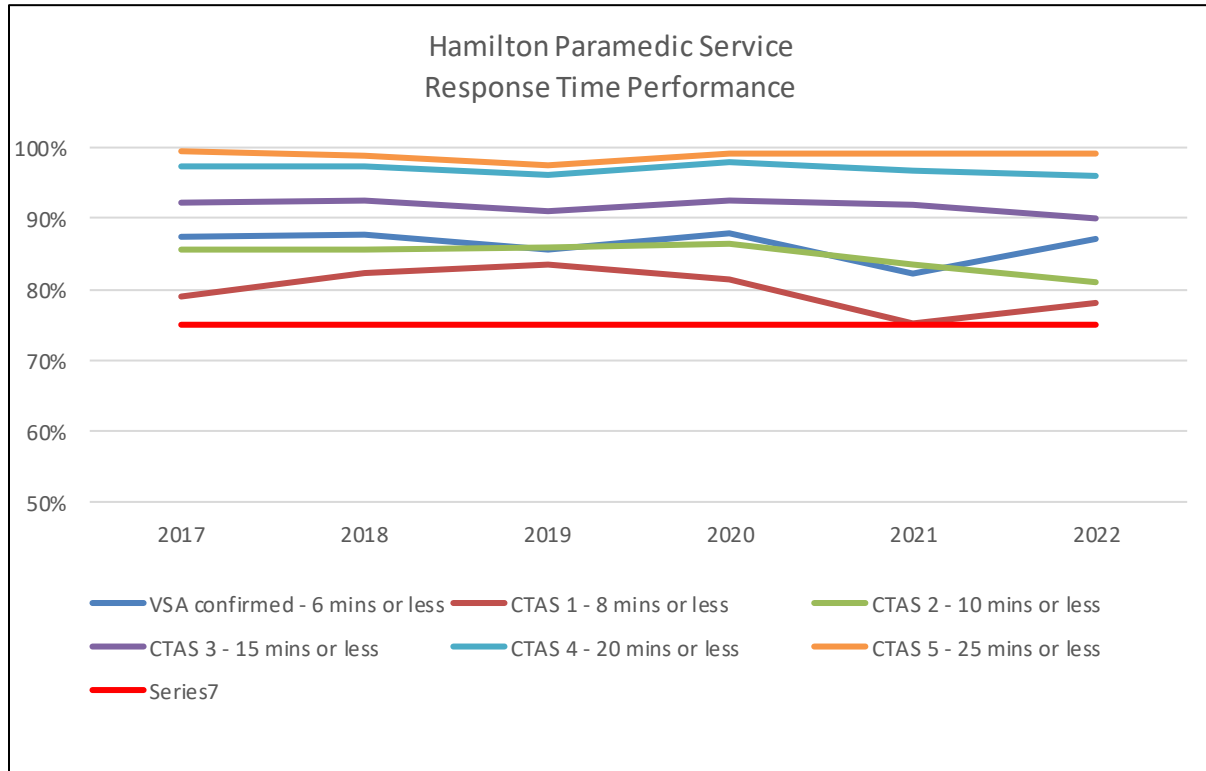
Response Time Compliance

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.

Despite the ongoing and significant increases in demand for service experienced in 2022, HPS met and surpassed the standard for achieving the target times for each CTAS category as shown below.

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	87
1	Resuscitation	8 minutes	75	78
2	Emergent	10 minutes	75	81
3	Urgent	15 minutes	75	90
4	Less Urgent	20 minutes	75	96
5	Non-Urgent	25 minutes	75	99

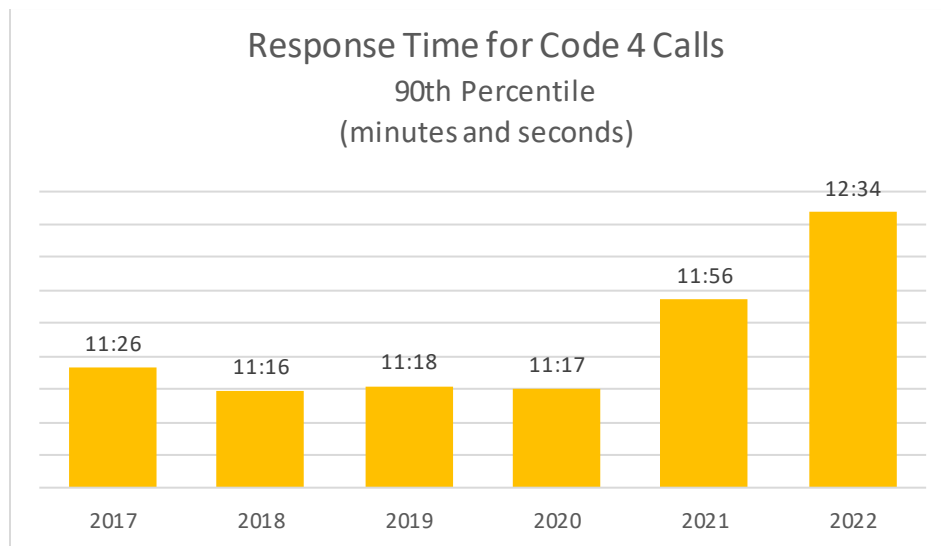
The graph below shows that as with previous years, HPS achieved and exceeded the response time standard of 75% (as indicated by the red line) in each CTAS category in 2022.



Emergency Response Time

Despite meeting the MOH reporting targets, actual response times lengthened again during 2022, failing to have an ambulance resource on the scene of calls dispatched as life threatening emergency within 10 minutes 90 percent of the time.

In 2022, HPS responded to calls dispatched as a life-threatening emergency (Code 4) in 12 minutes and 34 second at the 90th percentile. This represents the period from when dispatch assigns the call to paramedics until paramedics arrive on scene. This response time for 2022 is an increase of 40 seconds from 2021, and 1 minute and 17 seconds longer than the 2020 response time. The increase in response times as shown in the chart below, is reflective of many pressures placed on the emergency health care system such as increased demand for service and lack of adequate resources.



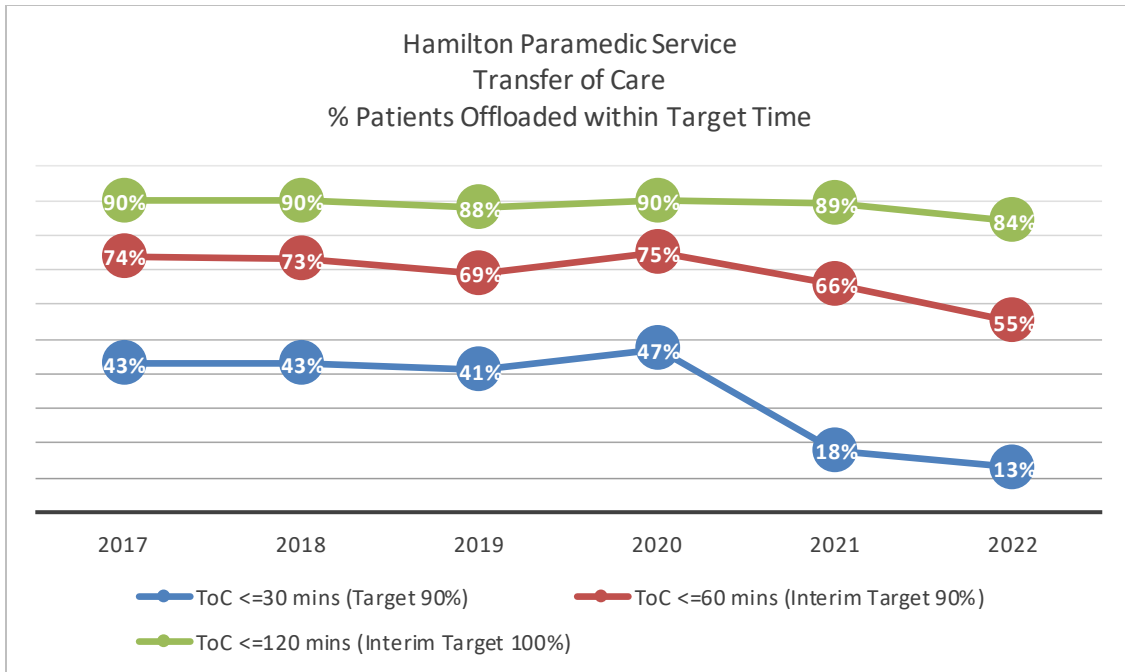
Offload Delay

An offload 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 provincial government standard is 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.

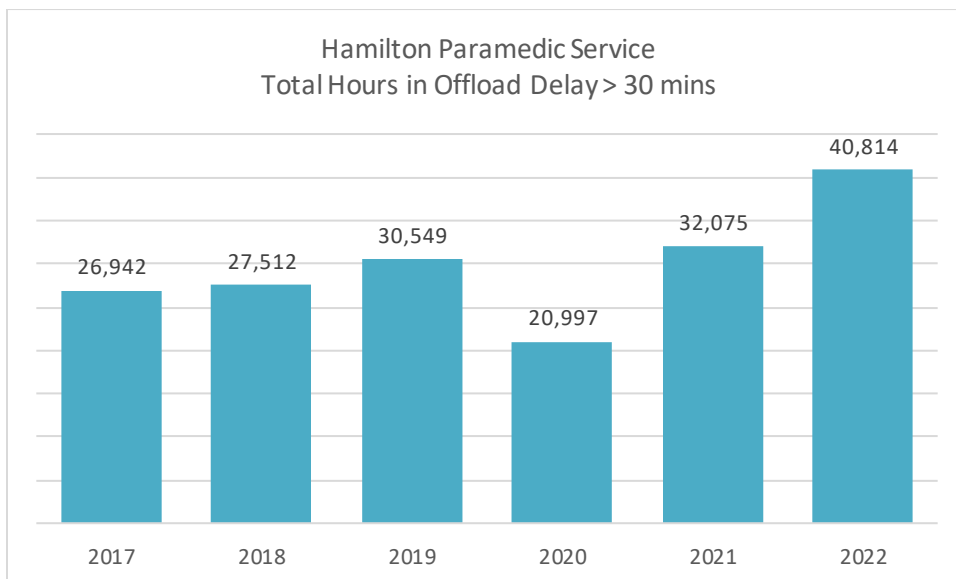
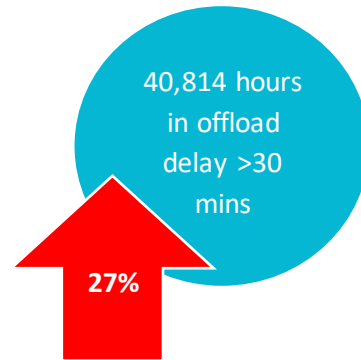
As a result of a variety of system pressures, hospitals in Hamilton have struggled to meet the target of accepting the patient within 30 minutes of paramedic arrival. Thus, the City of Hamilton and hospitals have implemented interim targets of transfer of care to hospital within 60 minutes 90% of the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

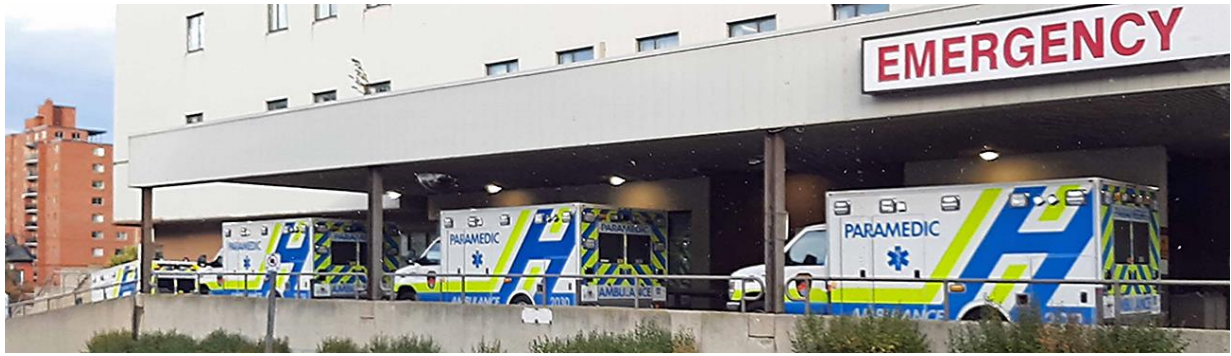
In 2022, just 13% of patients were transferred from paramedics to the hospital in 30 minutes or less, compared to 18% in 2021 and 47% in 2020. Transfer of care within 60 minutes occurred 55% of the time, falling short of the interim target of 90% of the time. Hospitals took over the care of patients from paramedics within 120 minutes 84% of the time, below the target of 100% of the time.

The graph below shows the percentage of time patients were transferred to the care of hospitals within 30, 60 and 120 minutes for each year since 2017, illustrating the continuing challenge in achieving target times.



In 2022, paramedics spent a total of 40,814 hours in excess of 30 minutes waiting in Emergency Departments to transfer care of their patients to the hospital. This represents a 23% increase from 2021. As illustrated in the graph below, this is also greater than the total hours in previous years including pre-pandemic total hours in 2019.





The frequency of offload delays longer than the interim target of 60 minutes 90% of the time also increased in 2021 to levels higher than before the pandemic as shown in the following chart.

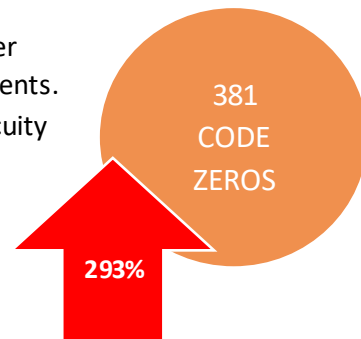
Frequency of Offload Delays						
Duration in Hours	2017	2018	2019	2020	2021	2022
1-2	11,888	12,127	12,782	9,135	12,105	14,290
2-3	2,778	3,018	3,590	2,120	3,584	4,210
3-4	1,049	1,058	1,308	772	1,530	2,006
4-5	379	328	429	205	645	952
5-6	132	103	146	63	223	378
6 +	45	46	54	25	126	313

There were 313 offload delays lasting more than 6 hours in 2022 which is almost two and a half times more than in 2021 and more than double the 2019 pre-pandemic amount. Similarly, the frequency of offload delays lasting between 3 to 4, 4 to 5, and 5 to 6 hours in 2021 surpassed the totals from previous years.

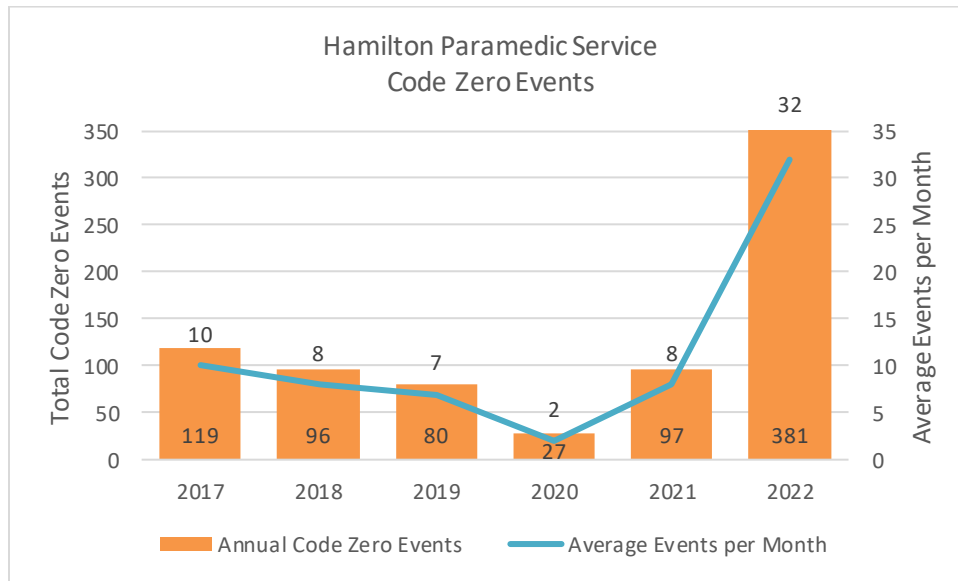
Code Zero Events

Long offload 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, lower acuity calls are queued, higher acuity calls have lengthened response times, and ambulances from neighbouring municipalities are assigned to respond to emergency calls in Hamilton.

In 2022, there were a total of 381 code zero events in Hamilton that lasted approximately 36 minutes on average with the longest lasting 6.5 hours. This is a significant increase from the previous year of 97 total code zero events.



The graph below shows the number of code zero events each year from 2017 to 2022 with the average number of code zero events per month for each year.



COVID-19 Response

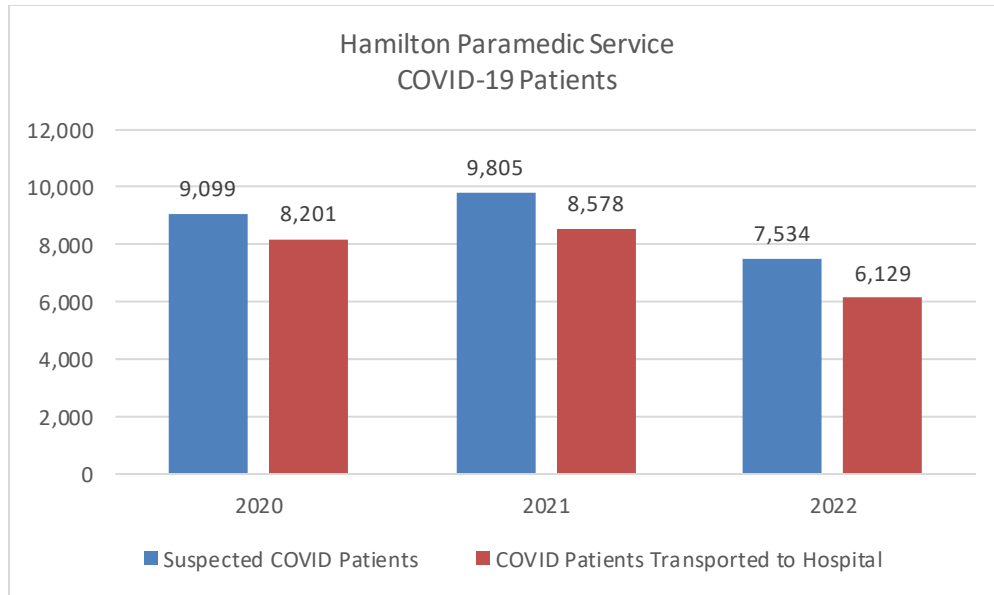
COVID-19 Patients

With the onset of the pandemic in 2020, the MOH provided paramedics and dispatchers assessment criteria to determine whether a patient who requires an ambulance should be treated as COVID-19 positive.

In 2022, Hamilton paramedics identified a total of 7,534 patients as suspected COVID-19 positive. Of these patients, 6,129 were transported to the hospital. During these calls, paramedics have to take undertake additional activities to mitigate the risk of exposure and transmission.

As the chart below illustrates, the number of COVID-19 suspected positive patients requiring an ambulance is fewer in 2022 than the two years prior.



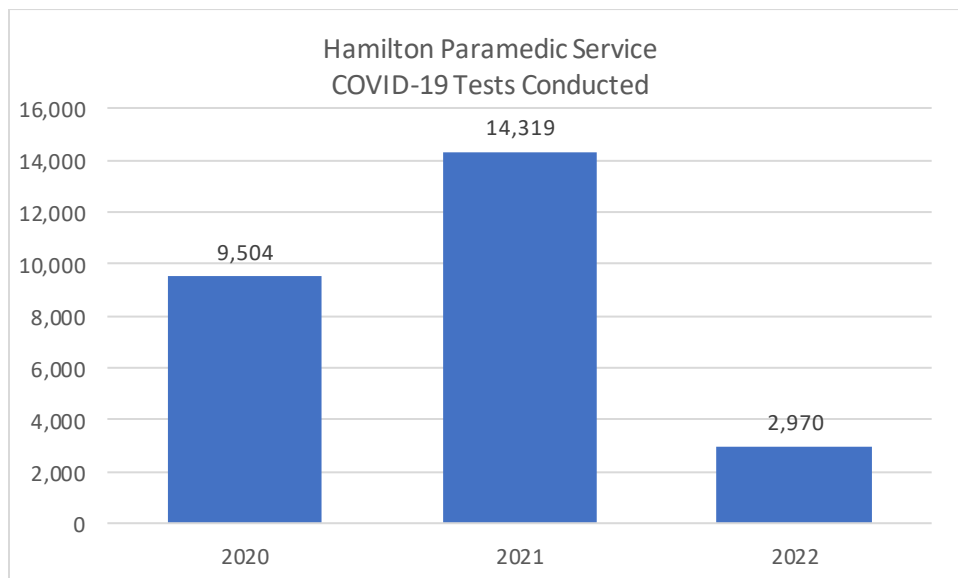


In total, since 2020, paramedics have interacted with 26,438 potentially positive COVID-19 patients and transported 22,908 of these patients to the emergency department.

COVID-19 Testing

In 2022, community paramedics continued to conduct COVID-19 swab testing in collaboration with Hamilton Public Health Services and regional base hospital. Testing took place within the community at congregate settings such as retirement homes, long term care residents, group homes, hospices and shelters.

In total, the COVID-19 Swabbing Team conducted 2,970 COVID-19 tests in 2022, a substantial decrease from over 14,000 tests that were carried out in 2021.



Since the beginning of the COVID-19 pandemic, Hamilton paramedics have conducted 26,793 swab tests.

COVID-19 Homebound Vaccinations

In partnership with Hamilton Public Health Services, paramedics continued to administer vaccinations to homebound residents in the community in 2022. Community Paramedics are well-equipped to travel to the homes of people who have health and mobility issues that prevent them from leaving their homes to be vaccinated at clinics or pharmacies.

Community Paramedics administered 1,191 COVID-19 vaccination to the most vulnerable and least visible populations in the city in 2022. Since the program began in April 2021, a total of 5,185 vaccinations have been provided by community paramedics to homebound residents.



COVID-19 Vaccination After Care

Paramedics also continued to support Hamilton Public Health Services in the first part of 2022 by providing aftercare at six vaccination clinics throughout the city. Paramedics stationed at clinics help to deliver a program of aftercare developed by HPS paramedics to ensure people who received COVID-19 vaccinations were monitored for any adverse effects and assisted when necessary.



Mobile Integrated Health

In addition to emergency response and pre-hospital care, HPS also provides comprehensive medical services directly to individuals in their homes and communities. The Mobile Integrated Health (MIH) Program utilizes specially trained paramedics who provide on-site advanced medical assessments, treatment, and coordination of care, addressing various health concerns. By offering proactive and preventive care, this program aims to improve health outcomes, reduce hospital readmissions, and enhance the overall well-being of residents in Hamilton.

In 2022, the program received 2,141 referrals from various sources in the community. This not only indicates the success of the program but also the increasing demand for the program's services.

The MIH Program includes the Community Paramedic Program, the Social Navigator Program, the Remote Patient Monitoring Program, CP@Clinic and the Mobile Immunization and Testing Team. Each of these are described in the following pages.

Social Navigator Program/Rapid Intervention and Support Team

The Social Navigator Program (SNP) is a collaboration with the Hamilton Police Service to support individuals through a referral process by engaging social and healthcare agencies in Hamilton. The goal is to reduce reliance on the judicial and healthcare systems by navigating clients toward the appropriate agency to improve all residents' health, safety and quality of life. The team is comprised of eight members, including the Social Navigator paramedics, Social Navigator police officers and a civilian Social Navigator Coordinator.



In 2022, the Rapid Intervention and Support Team (RIST), led by Hamilton Police Services, was piloted to compliment the work of the SNP. RIST is an extension of SNP and is a multi-disciplinary outreach team of experts from the community who work together daily in a team-led setting to provide resources and support to the most marginalized individuals in Hamilton. This team is focused on helping these individuals with complex and often concurrent issues navigate systems that are equally complex.

The SNP/RIST program received 400 new referrals and contacted 832 unique individuals in 2022, resulting in 10,052 services delivered to clients including wound care, Narcan kits, assistance with medications, transportation to appointments, and assistance with court matters. SNP/RIST also provided clothing, footwear and other basic necessities to those who required them. On average, the SNP team interacted with 215 clients per month in 2022.



SNP External Referrals

In 2022, the SNP made 457 service referrals to various agencies for their clients. The majority of referrals were for housing support (38.7%), shelter (17.1%), mental health (9.41%), addiction support (5.69%), income support (4.59%), identification (4.16%), food bank registration (1.97%), primary care or connection to the Shelter Health Network (1.53%). The remaining 16.9% captured other types of referrals such as brain injury services, women's counselling, youth programs, court support, peer support, outreach, veteran affairs, taxes and seniors supports.

SNP Annual Winter Coat Drive

The SNP Annual Coat Drive was an initiative born out of the team members' compassion toward clients they encountered in the winter months. Many clients did not have the proper winter attire. In 2014, officers and paramedics started collecting winter clothing items from their colleagues and families to distribute in the community.

The 2022 Winter Coat Drive took place over two nights in November at Philpott Church, where 578 winter coats were given to community members that needed them.

Numerous new Canadians were in attendance who had not yet experienced a Canadian winter. One family who attended came to Canada in September 2022 from West Africa. They did not have winter clothing and were very grateful to SNP for providing their children with appropriate winter clothing.

SNP Winter Coat Drive

Year	2022	2021	2020
Day 1	259	146	63
Day 2	297	135	123
Total	556	281	186
Additional coats given out prior to event	22	N/A	10
TOTAL COATS	578	281	196

CP@Clinic

The CP@Clinic is an innovative, evidence-based chronic disease prevention, management, and health promotion program that seeks to improve older adults' health and quality of life, reduce their social isolation, better connect older adults with primary care and community resources and reduce the economic burden of avoidable 911 calls by older adults.

After a pause in CP@Clinics due to the COVID-19 pandemic, MIH relaunched clinics in 12 CityHousing Hamilton locations. Community paramedics staffed monthly CP@Clinic sessions in these buildings. In 2022, the paramedic-led clinics assessed 400 participants in just over six months.



Mobile Immunization and Testing Team (MITT)

As noted earlier, Community Paramedics play a key role in the mitigation of COVID-19. In particular, in 2022, the MITT conducted 2,970 COVID-19 PCR tests and administered 1,191 COVID-19 vaccines to Hamilton's homebound population. In addition, the MITT provided 465 influenza vaccines to emergency responders and residents of Hamilton.

Community Paramedic Remote Patient Monitoring (CPRPM)

The CPRPM program offers proactive care and monitoring that prevents emergencies, leading to better management of health conditions and improved overall well-being. By bringing healthcare services directly to patients' homes, it overcomes barriers to access, particularly in underserved or rural areas. This reduces unnecessary emergency room visits and hospitalizations, resulting in cost savings for the healthcare system. Moreover, by redirecting non-emergency cases to community-based care, the program optimizes healthcare resources and improves efficiency.

The CPRPM program's value lies in its ability to deliver personalized care, prevent emergencies, enhance access, reduce costs, and streamline healthcare delivery. In 2022, there were 263 unique patients enrolled in the CPRPM program. Community Paramedics received 7,766 patient reading alerts from 223 different patients, resulting in 15,911 activations, 312 home visits, 2,931 phone calls and four urgent appointments with family doctors.



Clinical Excellence

Clinical excellence is achieved by Hamilton paramedics through a commitment to continued growth and development. In 2022, new procedures were added to the annual training paramedics undertake to refresh and expand their capabilities. In total, approximately 27,500 hours of training and continuing education was delivered to paramedics in 2022 to ensure they continue to provide excellent clinical care to patients.



Ambulance Service Review (ASR)

HPS is required to be certified by the MOH to operate land ambulance service. To maintain certification the service must demonstrate compliance to legislation and related standards through a comprehensive review conducted by the MOH every three years.

Preparation for the review begins well in advance of the review and is led by a paramedic supervisor who also manages the process.

The review evaluates vehicle, equipment maintenance and cleanliness, quality assurance programs, employee files and credentials, training records and patient care records. The MOH also conducts ride-outs with paramedics to assess patient care and other paramedic practices.

In May 2022, HPS underwent a complete ASR and was found to successfully meet the legislated requirements for the renewal of certification to operate land ambulance service. Furthermore, the Ministry commended HPS for its efforts in the areas of preparing for the certification inspection and having a robust quality assurance and continuous quality improvement program. HPS is currently beginning preparations for the 2025 ASR and is engaged in discussions with Accreditation Canada to pursue the health care accreditation of the service.





KinderMedic Training

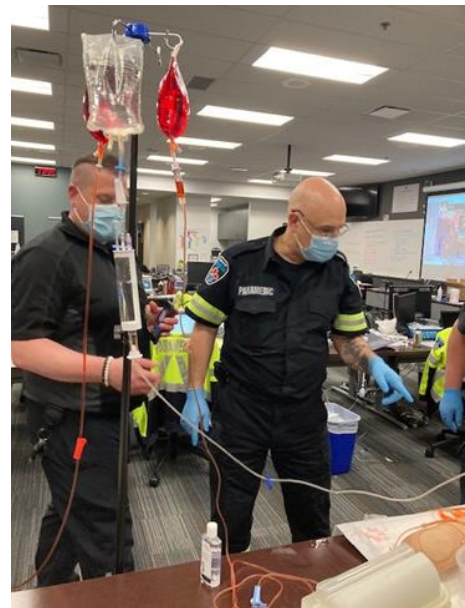
In April 2022, HPS provided Hamilton's Advanced Care Paramedics (ACPs) with training on prehospital pediatric critical care and transport. Instructors were brought in from KinderMedic who have specialized clinical experience in caring for children.

During this four-day course, ACPs honed their skills and knowledge in newborn resuscitation, vascular access, airway management, ventilation and oxygenation. They received education on best practices and newest innovations in medications and equipment for the youngest patients. Through scenario-based learning, ACPs were able to practice real-life situations in the classroom preparing them in the provision effective management and quality care of pediatric patients.

Primary Care Paramedics Autonomous Intravenous

For the second year, in 2022, HPS offered Autonomous Intravenous training to all Primary Care Paramedics (PCPs). The PCP AIV course expands the scope of practice of PCPs enabling them to assist with an increasing number of high acuity patients. Through this course, PCPs are trained to perform controlled medical acts that are performed by Advanced Care Paramedics. PCPs certified in PCP AIV can administer peripheral intravenous therapy and medications outside of the scope of regular practice of a PCP.

In 2022, 87 paramedics completed this course totaling 1,068 hours of in-class training in addition to clinical training at the hospital. HPS is closer to achieving the goal of having all PCPs trained and certified in PCP AIV. Since the onset of this training in the spring of 2021 to the end of 2022, a total of 187 PCPs have been PCP AIV trained.



Disengagement Training

Feeling safe on the job is key to psychological health and well-being. Paramedics can be subject to various forms of violence through their daily interactions with the public. Whether it is verbal or physical assault, intimidation or harassment, paramedics require the tools to help mitigate hostile situations to keep themselves and their patients safe.

All Hamilton paramedics participated in disengagement training in 2022 as part of their professional development. This training included ways to prevent violence and what equipment to use to better protect them and their patients.



2022 New Recruits

Like many other paramedic services, HPS experienced challenges in staffing in 2022. To address the need, the Performance and Development section of HPS were able to recruit and train 58 new paramedics. All new recruits undergo extensive training for several weeks at the Multi-Agency Training Centre. In 2022, over 11,000 hours of orientation training were delivered to new recruits. Once training is complete, they are assigned to a team of experienced paramedics and as the third person they are given the opportunity to drive the ambulance and get familiar with the radio in addition to acting in full capacity as a certified paramedic.

In 2022, HPS also introduced the first 'fast track' recruitment class. Unlike the traditional recruits who have recently completed a paramedic college program, this fast track group of recruits have had experience working as paramedics. As a result, their orientation training is condensed so they are able to serve the community in an expedited timeframe.



Bariatric orientation with new recruits

Automated Chest Compression Devices

In early 2022, all frontline ambulances were outfitted with automated chest compression devices and all paramedics received training on the use of the devices. These devices allow paramedics to continue providing chest compressions while simultaneously 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. These automated devices also help to eliminate paramedic fatigue and the need for assistance from additional first responders.



ACP Tuition Reimbursement Program

HPS places significance on learning and development, recognizing that continuing education contributes to service excellence as well as employee satisfaction. Through the City of Hamilton, HPS offers financial support for paramedics who are enrolled in or have been accepted to an Ontario Community College Advanced Care Paramedic (ACP) training program.

A paramedic must have a minimum of two years of experience in the paramedic field before qualifying for academic training at the ACP level. Advanced Care Paramedics have a broader scope of practice than Primary Care Paramedics (PCPs) and are authorized to perform procedures, controlled medical acts and administer medications to treat complex medical issues or traumatic injuries. ACPs can be identified by the two stripes on their shoulder epaulettes, while PCPs have one stripe.

Total reimbursement for ACP training is available for eligible paramedics annually. In 2022, 11 paramedics were successful in receiving tuition reimbursement for the ACP training program.



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. Some of the continuous improvement initiatives undertaken in 2022 are highlighted below.

The Hamilton Paramedic Master Plan (2022-2031)

In May 2022, Chief Sanderson presented the service’s first 10-year Master Plan to Hamilton City Council. The HPS Master Plan (2022-2031) provides direction for the service for the next 10 years. It is a Plan that is transformational. Through technology advancements, innovation, resource allocation and optimization of operations, the Master Plan lays the groundwork for transforming how HPS conducts its business. The type of work HPS performs and how the work is carried out must evolve to meet the growing and diverse needs of the community. The Master Plan sets the course for more integrated services delivered by paramedics equipped with progressive technology and expanded skills to ensure the best outcomes for all people who depend on HPS for their health and well-being.



The HPS Master Plan identifies five priorities and 29 distinct objectives with corresponding actions to ensure optimal paramedic services are delivered to Hamilton’s residents now and in the future. The objectives are organized into categories that align with each of the priorities.

Master Plan Priorities and Objectives

Operational Integration	Infrastructure Progression	Service Delivery Optimization	Positive Work Culture Elevation	Healthy & Safe Communities Protection and Promotion
Modernized Dispatch	Adequate Response Resources	Enhanced Deployment	Just and Safe Culture	Expanded, Centralized and Sustained MIH
Centralized Logistics	Enhanced Logistics	Reduced Offload Delays	People-Focused Culture	Broadened Scope of Practice
Integrated Patient Records	Sufficient Facilities	Increased Cultural Competency		Specialized Services
	Advanced IT	Increased Virtual Care		Contingency Response Preparedness
				Reduced Carbon Footprint

Once City Council approved the HPS Master Plan work began toward achieving objectives identified in the first year of the Plan. Some of the work initiated and/or accomplished in 2022 includes:

- ✓ Continue to implement and improve initiatives to reduce offload delay in collaboration with health care system partners **Objective 7**
- ✓ Supporting Primary Care Paramedics in becoming certified in Primary Care Paramedic Autonomous Intravenous (PCP AIV) **Objective 11a**
- ✓ Implemented a comprehensive asset management system to effectively manage inventory over the long term for HPS and City of Hamilton divisions where applicable **Objective 20**
- ✓ Developed a draft 'clean and green' plan to reduce the carbon footprint of HPS including examining the feasibility of acquiring hybrid or electric vehicles and implementing wireless charging stations **Objective 21**
- ✓ Building relationships with diverse communities to develop a program that expands HPS recruitment activities and promotes cultural competency to better serve diverse populations **Objective 29b**

A detailed description of the HPS Master Plan accomplishments in 2022 will be presented to City Council in June 2023.

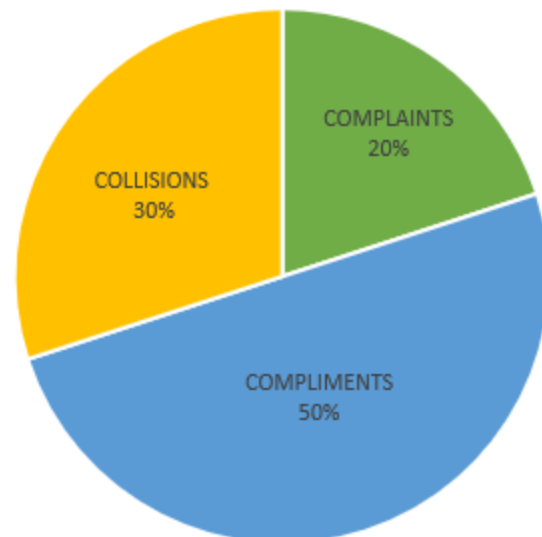
Quality Assurance

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 2022, 279 reviews were conducted to identify opportunities for improvement and employee recognition. Eighty-four were related to collisions, 54 were customer concerns about conduct and practice while 141 were compliments on paramedics' performance (not including social media posts).


In comparison to 2021, the number of complaints has decreased by 23%, while compliments have increased by 25%. Collisions have also increased from 2021 by 40.

The majority of collisions were related to clearance issues involving damage of under \$1,000. Most of the 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 the ones who care for them. These related to paramedics' performance including, compassion, kindness, caring, skillfulness, ability to calm, and professional and friendly nature.

The following excerpts are examples of the recognition Hamilton paramedics received in 2022 from the community they serve.



A big thank you to the medics that tended to my 2-year-old son this morning. They were so great with him and took excellent care getting him to McMaster Hospital.

My son is now driving his toy ambulance around saying "Weeeoooo weeeoooo get me!"




You don't realize how dedicated and compassionate paramedics are until you witness it first-hand.

Our 96-year-old neighbour fell when he was outside trimming his tree. I was there when they treated him with the utmost respect.

Here's the unbelievable and amazing act of kindness I witnessed:

As one paramedic treated our neighbour in the ambulance, the other paramedic swept up the leaves and put them into the compost bin!



My husband and I both got our booster shot by a paramedic. She was absolutely wonderful - what a nice lady! She was terrific, very polite, very nice, very personable. Thank you very much!

Treat and Release

In collaboration with Hamilton Health Sciences Centre for Paramedic Education and Research (CPE), HPS implemented a temporary medical directive to assist with the increasing added pressures the COVID-19 pandemic placed on hospital emergency departments.

The temporary medical directive enables paramedics to assess low acuity (stable) suspected COVID-19 patients and provide them guidance, resources and referrals to alternative means of care in the comfort of their home. Patients who can be safely and appropriately treated in the home, rather than being transported to the hospital are encouraged to access alternative community resources such as urgent care centres, COVID-19 assessment centres or walk-in clinics.

This measure was implemented in January 2022 during a rapid surge of cases related to the highly transmissible Omicron variant both locally and across the country. The goal is to alleviate pressures on

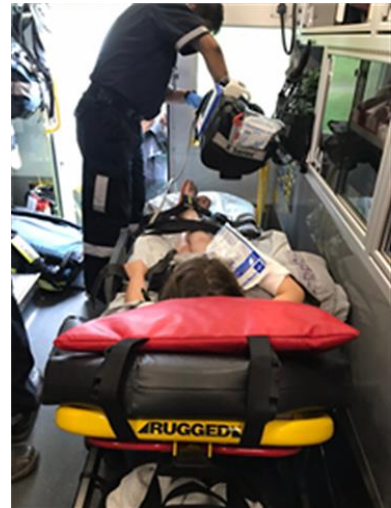
the healthcare system by reducing non-critical transports to emergency departments, enabling more resources to be available to treat and respond to life-threatening and critical emergencies.



Source: The Hamilton Spectator, John Rennison

Pediatric Intensive Care Transport Team

In January 2022, HPS and McMaster Children’s Hospital commenced a new initiative to transport pediatric patients requiring intensive care. The paramedic team was available to provide critical transport service for acutely ill infants, children and teenagers up to the age of 17 years, for 12 hours a day, seven days a week. This initiative is similar to the specialized neonatal intensive care transport that was launched in 2019 by HPS, McMaster Children’s Hospital and MOH but with the expanded capability to tend to children of all ages. The pediatric intensive care transport team will ensure that children receive the critical supports they require as they are quickly and safely transferred from the referring hospital to McMaster’s Pediatric Intensive Care Unit (PICU).



Updated Equipment

HPS takes pride in providing paramedics with the most up-to-date equipment to ensure they can carry out their duties safely and with optimal effectiveness. In 2022, HPS introduced and trained paramedics on state-of-the-art equipment. Some of the more substantial pieces include:

- Power Pro 2 Stretchers – a lighter and stronger stretcher with enhanced ergonomics, retractable sections to maneuver in tight spaces that is equipped lights and Smart technology
- Stair Chairs – light-weight chairs that are easier to maneuver when lifting patients down the stairs

- Advanced Series Defibrillator Monitors – defibrillators that ensure high quality manual ventilation is delivered with added technology such as real-time feedback, brain injury dashboard and the ability for clinicians to view the monitor’s data remotely



Information Technology

HPS relies heavily on information technology to aid in effective and efficient care of patients and monitor operational performance. This requires accurate information to be accessed in a timely manner using up-to-date equipment and processes.

To ensure HPS continues to operate optimally, it is crucial that information technology systems are continually updated and improved. In 2022, HPS made improvements to and developed a number of systems including the following.

Vehicle Modems

The modems in ambulances were replaced in 2022 with updated ones that send and receive data more quickly and reliably. Paramedics require fast and secure connectivity to transmit information such as emergency call information from dispatch, directions on the fastest route to an emergency destination and populating the electronic patient care records. The new modems will also improve connectivity of medical equipment such as defibrillator monitors.

MIH 911 Call Dashboard

The MIH section of HPS developed a new dashboard in 2022 that monitors activity of the home visit program including how many patients are enrolled in the program, what referrals were made for them, the level of their independence, health status, medical history 911 calls made by the clients of the home visit program. The dashboard updates daily and reports patients who have called 911 during the year. This allows Community Paramedics to follow up with patients who have called 911 but remained at home or to case manage those who were transported to the hospital. It identifies patients who require more support in their homes following a 911 event. The dashboard helps Community Paramedics ensure their clients gets the right care in the right place at the right time.



IT Reference Guide

In 2022, HPS’s Applications Analyst created a new and updated Information Technology (IT) Reference Guide. The Guide contains detailed steps to accessing information systems both at HPS and the City of Hamilton. The new guide presents a number of key IT communications from the organization into one organized document. It contains all recent updates to technology and is easy to read and follow.

The Guide is primarily meant to be used by paramedics and each new recruit receives the Guide during their orientation. In the Guide, paramedics are shown how to access a range of internal and external applications and systems such as connecting to Wi-Fi at the City, using Microsoft software, accessing HPS medical software and contact information for IT support.

Future versions of the Guide will be developed and adapted for use by Supervisors and management.

Peer Support Team



In 2022, the HPS Peer Support Team marked five years since the team was established in 2017. The team has worked to provide a variety of supports to Hamilton paramedics in the face of the multiple challenges they face on a daily basis. The Peer Support Team has created a number of resources and organized activities to raise awareness and promote health and wellness. In addition to newsletters, a resource guide and support list and resources for family members of paramedics, the team has also made available a mobile app so support is always available should paramedics require it.



Community Connections

Hamilton paramedics play an important role in the community not just by providing emergency response and care to people in their homes, but also by providing information and support to promote health and well-being in the community. Hamilton paramedics do this through attending events and participating in fundraisers and awareness-raising campaigns. Although in-person events were limited in 2022 due to the pandemic, HPS was still able to have a strong community presence to educate, support and give back to the community.

Media Presence

HPS continued to utilize media including local television, newspapers and radio, to share important information about key activities and informative messages.

Through the media, HPS is able to share health and safety related news, events and activities in the community and within HPS. HPS also uses social media to celebrate the contributions of paramedics and other healthcare providers and first responders.

2022 Twitter Activity
@HPS_Paramedics
213 Tweets
18,100 Followers
971 Retweets
5,420 Likes

Media also provided a key platform for HPS to disseminate important information related to COVID-19 to the community during the pandemic.

In 2022, the HPS Twitter account had over 18,000 followers with 213 posts, 971 reposts and over 5,000 likes.

HPS's Instagram followers increased by over 600 in 2022 to more than 1,400 followers with over 7,000 visits to 50 posts of pictures and videos and over 7,200 likes.

2022 Instagram Activity
hamilton.paramedic.service
50 Posts
1,470 Followers
7,200 Likes
7,253 Visits

In addition to a number of appearances on local radio, HPS was also featured monthly on the local television show, The Frontline, both virtually during the pandemic and in-person after restrictions were lifted.



Community Support

Hamilton paramedics give back to their community in more ways than providing pre-hospital care. They have organized various charities in which they are able to give back to the community in a number of ways.

Community Garden

Since 2014, Hamilton paramedics have been volunteering their time and green thumbs tending to the community garden. Paramedic use organic practices such as weeding by hand, no chemicals, rotating crops and fish mulch fertilizer to grow vegetables. In 2022, HPS donated 1,250 pounds of fresh produce from the garden to Neighbour to Neighbour Centre for those utilizing food banks.



Fortinos Food Drive

Once again in 2022, Hamilton paramedics held a food drive on location at Fortinos grocery stores in partnership with the Burlington Auxiliary O.P.P. This two-day event resulted in the collection of over 8,000 lbs of food and \$32,274.74 that was donated to the Neighbour to Neighbour Centre to provide essential food to families during the holidays.



CityKidz 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 for Christmas. In 2022, Hamilton paramedics helped to raise just under \$10,000 and over 1,100 toys for CityKidz.



Santa for Seniors

Hamilton paramedics started this initiative in 2020 because many seniors living in long-term care residents were unable to see their loved ones during the holiday season due to the pandemic. Due to the success of the initiative, it has become an annual event with gifts going to different residences each year. In 2022, Hamilton's Central Ambulance Communication Centre (CACC) partnered with Hamilton paramedics to deliver 120 gifts to residents of Hamilton Continuing Care and Parkview Nursing Centre.



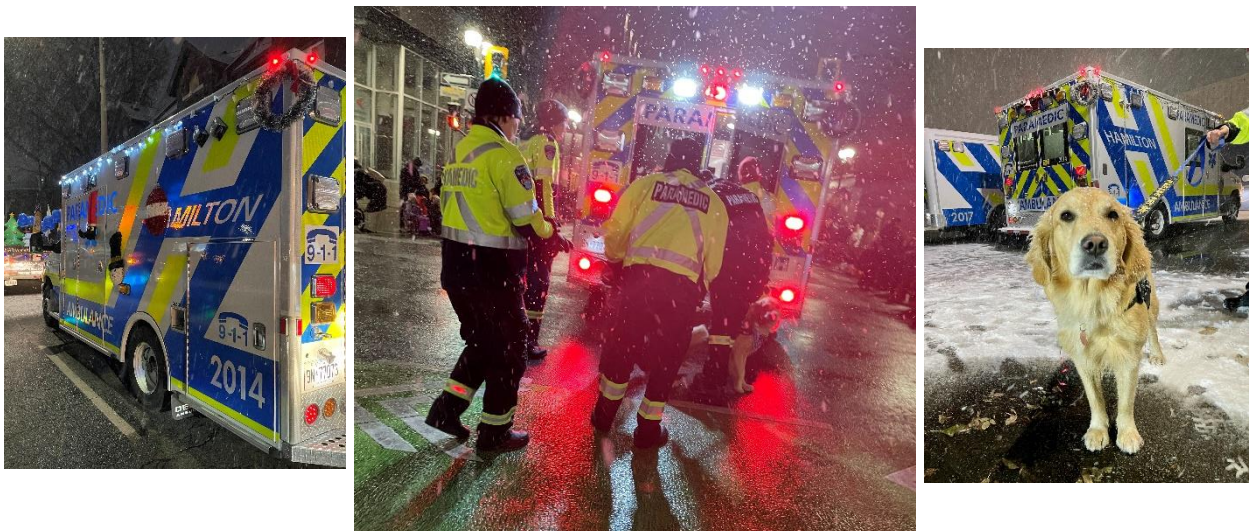
Toronto Pride Parade

For the first time HPS was invited by Toronto Pride organizers to participate in the Pride Parade 2022. This is an annual event that celebrates the diversity of the 2SLGBTQ+ community. It is one of the largest festivals of its kind in the world attracting hundreds of thousands of people. HPS was well-represented as a decorated ambulance and a group of paramedics vibrantly dressed in orange and purple marched through the streets of Toronto.



Santa Claus Parade

After a few years of being cancelled due to the pandemic, Hamilton's Santa Claus Parade returned to the downtown core in November 2022. HPS was sure to participate to help bring the holiday spirit and sense of community to the onlookers.



Recognitions

A number of employees of HPS were formally recognized in 2022 for their extraordinary achievements in serving the community and their peers.

Quality of Care Award

The Hamilton Health Sciences Centre for Paramedic Education and Research (CPER) Quality of Care Award recognizes paramedics for a variety of reasons including outstanding patient care and documentation, community involvement regarding clinical care, continued medical education or promoting the paramedic profession. Paramedics are nominated by their peers or CPER's program staff.



The recipients of the CPER Quality of Care Award for 2022 are:

- ❖ Katherine Tacchino, Primary Care Paramedic
- ❖ Steven Flokstra, Primary Care Paramedic

New President of Ontario Association of Paramedic Chiefs

In the fall of 2022, HPS Chief, Michael Sanderson, was voted in as the new President of the Ontario Association of Paramedic Chiefs (OAPC). The OAPC represents leadership in the provision of paramedic services. OAPC members oversee 8,500 paramedics across the province. The OAPC works to promote a culture of change to achieve best practices through evidence-based decision-making. Before taking the role of President, Chief Sanderson was the Association's treasurer.



HPS H.E.A.R.T. Award

In the latter part of 2021, HPS staff developed a program to recognize their colleagues who go above and beyond in performing their duties when serving the residents of Hamilton. This monthly award is peer-nominated and is based on excellent service that exemplifies Heart, Empathy, Accountability, Responsibility, Teamwork and Trustworthiness (H.E.A.R.T.). The following 2022 award recipients were presented with the H.E.A.R.T. Award trophy that was custom designed for HPS, a certificate and the Chief's Challenge Coin to represent caring, compassion, courage and competence.





January

Matthew Downs

Kind, understanding and supportive to patients and coworkers.



February

Allison Walker

Gives her whole heart to her patients to make sure their experience is as positive as possible.



March

Tonya Keane

Builds trust with patients and helps to ease their minds and keep them calm them during stressful situations.



April

Amarinder Grewal

Makes sure the patient and their family are looked after and carries supplies to hand out to vulnerable residents.



May

Simon Martin and Mary Heather Cochren

Dedicate their time and resources to ensure people are cared for, even beyond their medical needs.



June

Jeff Kemp

Has a calm and comforting energy and attends to the smallest detail to ensure patients are well looked after.



August

Jonathan Yao

Takes time to update and reassure families, checks in with patients and provides knowledge to colleagues.



September

Christina O'Donnell

Helped to save a child's life while off duty with her quick actions and skilled intervention.



October

Holly Kovac

An inspiration and source of positivity to all she encounters who works to improve the circumstances of others.



November

Lisa Heil

Gets patients the additional supports they need through the community paramedic program and volunteers to support children and the profession.



December

James and Anne Masterton

Jim is a retired paramedic who with his wife continue to be active in the service by volunteering their time for paramedic charity work and badging ceremonies. Jim also provides expert service to the HPS Honour Guard team. They are both mentors and inspirations to Hamilton paramedics.

Ria VanNoort

The July H.E.A.R.T. award was granted posthumously to Ria, a passionate paramedic with great integrity who was driven to help patients and coworkers. Her positive energy will be missed by her paramedic family but will never be forgotten.

