

Subject: Ottawa Paramedic Service 2023 Annual Report

File Number: ACS2024-EPS-OPS-0002

**Report to Emergency Preparedness and Protective Services Committee on 17
June 2024**

and Council 26 June 2024

**Submitted on June 6, 2024 by Pierre Poirier, Paramedic Chief, Ottawa Paramedic
Service**

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Ward: Citywide

Objet : Rapport annuel 2023 du Service paramédic d'Ottawa

Numéro de dossier : ACS2024-EPS-OPS-0002

**Rapport présenté au Comité des services de protection et de préparation aux
situations d'urgence**

Rapport soumis le 17 juin 2024

et au Conseil le 26 juin 2024

Soumis le 6 juin 2024 par Pierre Poirier, chef du Service, paramédic d'Ottawa

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Quartier : À l'échelle de la ville

REPORT RECOMMENDATION(S)

That the Emergency Preparedness and Protective Services Committee recommend
Council receive this report for information.

RECOMMANDATION(S) DU RAPPORT

Que le Comité des services de protection et de préparation aux situations d'urgence recommande au Conseil de prendre connaissance de ce rapport.

EXECUTIVE SUMMARY

This report summarizes the Ottawa Paramedic Service's activities and service delivery in 2023, and highlights service demand and performance trends. As well, this report fulfills the requirement under the Emergency Preparedness and Protective Services Committee Terms of Reference for the Ottawa Paramedic Service to prepare an annual report.

The Ottawa Paramedic Service provides patient care and emergency medical coverage to more than one million residents of the nation's capital across 2,800 square kilometres while the Ottawa Central Ambulance Communications Centre receives emergency medical calls through 9-1-1 and dispatches paramedic resources across 10,000 square kilometres of eastern Ontario. The Ottawa Paramedic Service is a team of dedicated and qualified professionals who deliver high quality care and services to the individuals and communities they serve.

In 2023, the Ottawa Paramedic Service continued to experience challenges affecting overall service delivery to the community including increased response volume, increased hospital offload delay, and occurrences of level zero events, all of which pose a risk to public health and safety. As such, in 2023, the Ottawa Paramedic Service experienced difficulty achieving legislated response time performance standards and Council-approved targets.

In 2023, paramedic response volume increased by 4.9 per cent compared to 2022. Over the past 10 years, paramedic response volume has increased by an average of 5.2 per cent per year due to several factors including population growth, an aging patient demographic, complex medical conditions, and pre-existing issues affecting Ontario's healthcare system. In 2023, the Ottawa Central Ambulance Communications Centre also experienced an increase in calls to 9-1-1. This is consistent with an overall increase in the Service's response volume.

In 2023, the Ottawa Paramedic Service spent an exceptional amount of time in offload delay at Ottawa hospitals. The amount of time the Service expended in offload delay increased by 8.6 per cent over the previous year. Level zero occurred 1,672 times, a decrease of 7.7 per cent compared to 2022. The decrease in the number of level zero

events suggests that strategies the Service has implemented over the past three years to reduce occurrences of level zero are having a positive impact, however, even one occurrence of level zero can put patients at risk of poorer health outcomes. Level zero events and excessive offload delay puts the health and safety of the public at risk, and the impact on the community and staff of the Ottawa Paramedic Service is substantial.

In 2023, the Ottawa Paramedic Service did not meet the Council approved percentile rank for CTAS 1 (life threatening) or CTAS 2 (urgent) patients. Additionally, the Service did not meet the legislated response time for sudden cardiac arrest, however, response time performance for sudden cardiac arrest improved significantly in 2023 compared to 2022. The Ottawa Central Ambulance Communications Centre was also unsuccessful in meeting Ministry of Health established call processing times for CTAS 1, CTAS 2, and sudden cardiac arrest patients. This is consistent with performance outcomes from previous years and can be attributed to increases in response volume and the use of the Dispatch Priority Card Index, an outdated call triage tool developed in the 1980s, which will be replaced with the Medical Priority Dispatch System in April 2024. Steady increases in response volume and offload delay, combined with occurrences of level zero and pre-existing issues affecting Ontario's healthcare system continue to negatively impact the Service, its staff, and its patients.

As described throughout this report, in 2023, the Service continued to leverage patient models of care approved by the Ministry of Health aimed at diverting select patient populations away from emergency departments and enabling paramedics to provide safe and appropriate community-based care. The Service continued to respond and adapt to the local needs of its residents through the delivery of new and existing initiatives aimed at improving patient care and mitigating increases in response volume and offload delay, and occurrences of level zero. Ottawa City Council further supported these efforts by approving the Ottawa Paramedic Service 2024-2026 Investment Plan ([ACS2023-EPS-OPS-0002](#)), resulting in the hiring of 69 full-time equivalents between 2023 and 2026 to help mitigate staff workload due to increased service demand pressures.

In 2023, the Service demonstrated a commitment to improving workplace culture and advancing employee wellbeing. The Service continued to maintain and implement several initiatives to support the mental wellbeing of staff which were further supported by Council's approval of three full-time equivalents in the 2024 Budget for psychological supports to support employee wellness and reduce operational stress injuries.

RÉSUMÉ

Le présent rapport synthétise les activités et la prestation de services du Service paramédic d'Ottawa en 2023, et fait état de la demande de services et des tendances en matière de rendement. Ce rapport répond également à l'exigence établie dans le mandat du Comité des services de protection et de préparation aux situations d'urgence, à savoir l'obligation du Service paramédic d'Ottawa de préparer un rapport annuel.

Le Service paramédic d'Ottawa prodigue des soins aux patients et assure des services médicaux d'urgence à plus de 1 million de résidents de la capitale nationale sur un territoire de 2 800 kilomètres carrés, tandis que le Centre de répartition des paramédics d'Ottawa reçoit des appels d'urgence médicale passés au 9-1-1 et assure la répartition des paramédics dans l'est de l'Ontario, sur un territoire dont la superficie est de 10 000 kilomètres carrés. Le Service paramédic d'Ottawa consiste en une équipe de professionnels dévoués et qualifiés qui fournit des soins et des services de haute qualité aux personnes et aux communautés qu'elle sert.

En 2023, le Service paramédic d'Ottawa a continué de rencontrer des difficultés qui affectent la prestation globale de services à la population (augmentation du volume d'interventions, délais de prise en charge dans les hôpitaux et atteinte du « niveau zéro » à plusieurs reprises) et présentent un risque pour la santé et la sécurité publiques. Ainsi, en 2023, le Service paramédic d'Ottawa a eu de la difficulté à respecter les normes de rendement de la loi pour les délais d'intervention et les cibles approuvées par le Conseil municipal.

En 2023, le volume d'interventions du Service paramédic a augmenté de 4,9 % par rapport à 2022. Au cours des 10 dernières années, le nombre d'interventions du Service paramédic a connu une augmentation de 5,2 %, en moyenne, par année, en raison de plusieurs facteurs, y compris la croissance démographique, le vieillissement des patients, des problèmes médicaux complexes et des problèmes préexistants ayant une incidence sur le système de santé de l'Ontario. En 2023, le Centre de répartition des paramédics d'Ottawa a connu une augmentation du nombre d'appels passés au 9-1-1, ce qui correspond à l'augmentation globale du nombre d'interventions du Service.

En 2023, le Service paramédic d'Ottawa a consacré un nombre d'heures exceptionnel aux délais de débarquement dans les hôpitaux d'Ottawa. Le nombre d'heures que le Service a consacré au délai de déchargement a augmenté de 8,6 % par rapport à 2022.

Il y a eu 1 672 incidents de niveau zéro, ce qui représente une diminution de 7,7 % par rapport à 2022. La diminution du nombre d'incidents de niveau zéro porte à croire que les stratégies mises en œuvre par le Service au cours des trois dernières années en vue de réduire le nombre de ces incidents ont une incidence positive, toutefois, même un seul incident de niveau zéro peut avoir des répercussions négatives sur les résultats en matière de santé du patient. Les incidents de niveau zéro et les délais de déchargement excessifs posent un risque pour la santé des patients et la sécurité publique, et leurs conséquences sur la population et le personnel du Service paramédic d'Ottawa sont considérables.

En 2023, le Service paramédic d'Ottawa n'a pas atteint les normes de rendement approuvées par le Conseil pour les patients évalués au niveau 1 de l'Échelle de triage et de gravité ou ETG (réanimation) ou au niveau 2 de l'ETG (très urgent). De plus, le Service n'a pas respecté le délai d'intervention prescrit pour les arrêts cardiaques soudains, toutefois, le délai d'intervention pour les arrêts cardiaques soudains s'est considérablement amélioré en 2023 par rapport à 2022. Le Centre de répartition des paramédics d'Ottawa n'est pas parvenu à atteindre les cibles de délai de traitement des appels établies par le ministère de la Santé pour les patients évalués au niveau 1 de l'ETG et au niveau 2 de l'ETG et pour ceux victimes d'un arrêt cardiaque soudain. Cette situation cadre avec les résultats en matière de rendement observés au cours des années antérieures, et peut s'expliquer par l'utilisation du fichier des priorités en matière de répartition, un outil de triage d'appels désuet élaboré dans les années 1980, qui sera remplacé par le Système de répartition des priorités médicales en avril 2024. La hausse constante du nombre d'interventions et des délais de déchargement, jumelée au nombre d'incidents de niveau zéro et aux problèmes préexistants qui touchent le système de santé de l'Ontario, continue d'avoir des conséquences négatives sur le Service, son personnel et ses patients.

Comme décrit dans l'ensemble du présent rapport, en 2023, le Service a continué de tirer parti des modèles de soins aux patients approuvés par le ministère de la Santé qui visent à diriger certaines populations de patients en particulier ailleurs qu'aux urgences, et à permettre aux paramédics d'offrir des soins communautaires appropriés. Le Service a continué de répondre aux besoins locaux de ses résidents et de s'y adapter par la mise en œuvre d'initiatives nouvelles et existantes qui visent à améliorer les soins offerts aux patients et à atténuer les augmentations du volume d'interventions et du temps perdu en délai de déchargement, et le nombre d'incidents de niveau zéro. Le Conseil municipal d'Ottawa a appuyé davantage ces efforts en approuvant le Plan d'investissement 2024-2026 du Service Paramedic d'Ottawa ([ACS2023-EPS-OPS-0002](#)), autorisant l'embauche de 69 équivalents temps plein entre 2023 et 2026 pour aider à atténuer la charge de travail attribuable aux pressions liées à l'augmentation de la demande de service des employés.

En 2023, le Service a fait preuve d'engagement envers l'amélioration de la culture en milieu de travail et du bien-être des employés. Le Service a continué de maintenir et de mettre en œuvre des initiatives pour appuyer le bien-être mental du personnel, qui ont été appuyées davantage par l'approbation de trois nouveaux équivalents temps plein au budget de 2024, pour offrir un soutien psychologique aux employés, favoriser leur bien-être et réduire les blessures liées au stress opérationnel.

BACKGROUND

OVERVIEW OF THE OTTAWA PARAMEDIC SERVICE

The Ottawa Paramedic Service provides patient care and emergency medical coverage to more than one million residents of the nation's capital. The Ottawa Paramedic Service is a team of dedicated and qualified professionals who deliver high quality care and services to the individuals and communities they serve. This team includes paramedics, communications officers, equipment and supply technicians, educators, trainers, quality assurance staff, and support staff.

The Ottawa Paramedic Service also maintains four specialized teams: the Paramedic Marine Unit, the Paramedic Bike Unit, the Paramedic Support Unit, and the Paramedic Tactical Unit. Marine paramedics support water-based operations, while bike paramedics provide medical coverage during special events as it may be easier and quicker for a bicycle to move through pedestrian and vehicular congestion than an emergency response vehicle. Paramedics working in the Paramedic Support Unit and the Paramedic Tactical Unit support police operations and other high-risk events

including CBRNE/Hazmat, active threats, public order, missing person searches, and warrant executions. In addition to responding to medical emergencies, the Ottawa Paramedic Service provides home- and community-based health care through non-traditional alternate models of care including community paramedic programs. The Ottawa Paramedic Service is also responsible for delivering public education programs to City of Ottawa staff and partners, managing medical equipment purchases for the City, and overseeing the Public Access Defibrillator (PAD) Program, which places Automatic External Defibrillators (AEDs) in public and private buildings.

VISION, MISSION, AND STRATEGIC GOALS

The Ottawa Paramedic Service's vision and mission statements are described below.

Vision statement: A professional and sustainable paramedic service that supports our people and delivers high quality services in a socially and environmentally responsible manner.

Mission statement: To deliver high quality care that meets the diverse and changing needs of the individuals and communities we serve and improve the staff and paramedic experience.

The Service's strategic goals are:

- To deliver clinical excellence
- To enhance our safe workplace
- To improve operational efficiency
- To develop career paths in our Service

There are three cross-cutting themes that interact with each of these goals:

- Communication: Ensuring open and frequent communication throughout the Service.
- Technology: Leveraging information technology and the use of digital tools.
- Culture: Creating a positive workplace with shared values, beliefs and norms.

The Ottawa Paramedic Service's strategic goals align with the Quadruple Aim, an internationally recognized framework that aspires to deliver an effective health care system. The Quadruple Aim is the guiding framework for Ontario Health, an agency created by the Government of Ontario to connect, coordinate, and modernize the Province's health care system. The four objectives of the Quadruple Aim, a term coined by Thomas Bodenheimer, MD, in a 2014 [Annals of Family Medicine](#) paper, are:

- Enhancing patient experience
- Improving population health
- Reducing the per capita cost of health care
- Improving the work life of health care providers

Collectively, the Vision statement, Mission statement, and strategic goals provide the Ottawa Paramedic Service and its staff an overall sense of direction and assist the organization in establishing short- and long-term priorities.

STATUTORY REQUIREMENTS AND FUNDING

Ontario's Emergency Health Services Division of the Ministry of Health is responsible for emergency medical (paramedic) services. The Ambulance Act, its regulations and standards, form the legal framework for the Ottawa Paramedic Service and the Ottawa Central Ambulance Communications Centre. Together, the Ministry of Health and the City of Ottawa are responsible for delivering patient care.

The Ottawa Paramedic Service is a designated delivery agent for the provision of land ambulance services across Ottawa. The Ottawa Paramedic Service is singularly responsible for supervising staff, maintaining vehicles and equipment, and assuring the quality-of-service delivery. The Service has a shared funding model for the land ambulance service which is 50 per cent funded by the Ministry of Health.

All land ambulance services must be certified by the Ministry to operate in the province. Certified ambulance service operators must undergo a Ministry-led peer recertification process every three years. The certification process confirms that the operator meets compliance with legislated certification standards. In 2022, the Ottawa Paramedic Service successfully met the requirements for recertification as a land ambulance operator in the province of Ontario and will undergo recertification in the fall of 2025.

The Ottawa Central Ambulance Communications Centre receives emergency medical calls through 9-1-1 and dispatches paramedic resources across 10,000 square kilometres of eastern Ontario including Ottawa, the United Counties of Prescott and Russell, the United Counties of Stormont, Dundas, and Glengarry, and Cornwall. While the Ottawa Central Ambulance Communications Centre is 100 per cent funded by the Ministry of Health, the Ottawa Paramedic Service is responsible for the administration, staffing, reporting, and operational functions, including the provision of ambulance communications services across eastern Ontario. A Transfer Payment Agreement between the City of Ottawa and the Ministry of Health outlines these terms and conditions in detail and has been in place since December 2002.

Every three years, ambulance communications centres in Ontario must undergo a Quality Assurance Review to ensure they are complying with their performance agreements and legislation. A review of the Ottawa Central Ambulance Communications Centre was scheduled for November 2023, however, with the April 2024 implementation of a new call triage tool in April 2024, the Ministry of Health rescheduled the recertification process to October 2024.

PARAMEDICINE AND HEALTHCARE SYSTEM MODERNIZATION

Healthcare system pressures have been increasing for several years resulting in a need to reimagine the delivery of paramedicine in Ottawa. This need became more evident during the COVID-19 pandemic. The pressures continue to cause major disruptions in accessing health care, backlogs in non-emergent care, and shortages in human health resources.

A paramedic is the only health professional that bridges the gap between healthcare and public safety. Over the years, the paramedic role in the healthcare system has evolved to meet community needs and fill gaps in healthcare. The role has shifted from an exclusive emergency-based response to a more creative, proactive patient and community-centered approach. Additionally, paramedics work collaboratively with other emergency services including fire and police. For example, following a recommendation from the 2001 Coroner's Report – OC Transpo Inquest, the Paramedic Tactical Unit was established to provide medical care during a police tactical response.

In addition to fulfilling their regular emergency service responsibilities, paramedics have increased their clinical competencies to provide care in people's homes to reduce hospital and long-term care pressures, and to increase capacity in the healthcare system. The shortage of primary care physicians across Ontario is unprecedented.

Vulnerable populations including isolated seniors and those living in remote areas are disproportionately affected, and without paramedics and the delivery of home- and community-based health care, these individuals have limited or no access to primary care. Non-traditional alternate models of paramedic care can also mitigate the impacts of offload delay and reduce the occurrence of level zero events by reducing or eliminating the need for a patient to go to the hospital emergency department.

Over the past few years, the Ontario Government has taken steps to modernize the health system through the creation of Ontario Health Teams, the implementation of new patient models of care, and by funding community paramedic pilot projects. However, to fully integrate paramedics into the broader healthcare system, additional legislative and regulatory changes are needed, as well as base funding for all community paramedic programs. Today, paramedics are an integral part of health care and leveraging their full potential can alleviate pressure on the healthcare system, improve access to care and improve patient outcomes.

Ontario Health

In 2019, the Government of Ontario created the Crown agency Ontario Health to oversee health care delivery across the province and modernize Ontario's healthcare system. Ontario Health's mandate is to connect, coordinate and modernize the province's healthcare system to ensure that the people of Ontario receive the best patient-centered care possible. Ontario Health oversees health care planning and delivery across the province, which includes equipping frontline providers and other health professionals with the tools and information they need to deliver quality care in their communities.

Ontario Health is divided into six regions and supports 54 regional Ontario Health Teams. Within an Ontario Health Team, health care providers work collaboratively, no matter where they provide care, to provide individuals with seamless access to the right care, by the right provider, at the right time. The Ottawa Paramedic Service is an anchor partner and voting member of two Ontario Health Teams that cover residents in the Ottawa valley: Archipel and Ottawa West Four Rivers.

Ministry of Health models of care

In 2021, the Ministry of Health announced it was launching new patient care models to give paramedics more options for providing individuals with the right care in the right place while helping to protect hospital capacity. Initial patient care models included the Treat and Refer model and the Alternate Destination model, which focused on palliative

care patients and individuals experiencing mental health and addictions challenges. Under the Treat and Refer model, an eligible patient may be treated by paramedics on scene and referred for appropriate follow-up care by a healthcare provider. Under the Alternate Destination model, an eligible patient may choose to go to an alternate healthcare provider in the community for treatment and care that is not an emergency department or a hospital-based facility such as a mental health crisis centre, a hospice, family practice offices, or community-based family health teams. In 2023, patient care models expanded to include a Treat and Discharge model. Under the Treat and Discharge model, an eligible patient may be treated on-scene by paramedics and discharged with recommendations for follow-up care if needed by a primary care physician or home and community care provider.

These models of care permit a paramedic to work under an expanded scope of practice to help fill gaps in the healthcare system. Patient eligibility criteria varies from model-to-model and a paramedic service must be approved by the Ministry of Health to implement a patient care model. As described in this report, the Ottawa Paramedic Service continues to leverage Ministry of Health models of care with the goal of providing patients with alternate care options and pathways that are safe and best suited for meeting their individual health needs. Treating individuals in alternate care settings such as the community or their home can reduce hospital transports, which can reduce offload delay and level zero events. It can also reduce repeat calls to 9-1-1, increase the availability of paramedics in the community, and provide individuals with better, more appropriate care when and where they need it.

DISCUSSION

This report fulfills the requirement under the Emergency Preparedness and Protective Services Committee Terms of Reference for the Ottawa Paramedic Service to prepare an annual report detailing current levels of service and identify any need or method improvement to Council. The Service also reports annually to the Ministry of Health on response time performance through a separate reporting process. This report highlights service demand, performance trends, programs, and service delivery in 2023.

In 2023, the Ottawa Paramedic Service continued to experience challenges affecting overall service delivery to the community including increased response volume, increased hospital offload delay, and occurrences of level zero events, all of which pose a risk to public health and safety. Offload delay occurs when paramedics are not able to immediately transfer (offload) the care of a patient to hospital staff, and level zero occurs when there are no ambulances available to transport a patient to hospital.

While it has been four years since the onset of the COVID-19 pandemic, the virus is still having an impact on health care. The circulation of COVID-19 in the community, along with other respiratory illnesses including influenza (flu) and respiratory syncytial virus (RSV), makes cold and flu seasons, including that of 2023, more challenging for health care workers, including paramedics. Recognizing that COVID-19 may never be eliminated, the Ottawa Paramedic Service has integrated the management and care of COVID-19 and other respiratory illnesses into their everyday practices to keep staff and patients safe, and to maintain service delivery to the community.

PERFORMANCE TRENDS

The Ottawa Paramedic Service takes pride in providing high quality clinical care to residents of Ottawa. The Service regularly reviews and analyzes patient outcomes, response volumes, response times, and offload delay at local hospitals. The Service then adjusts service delivery to improve service to the community. The primary measures that determine service demand and associated resource requirements are:

- The total number of 9-1-1 calls received
- The total number of patients assessed, treated, and transported
- The total number of paramedic resources required to respond
- The total time on task per response
- The offload delay measurements
- A quality review of patient care documentation
- The number of successful resuscitations

Paramedic response volume

A paramedic response is generated when an emergency response vehicle is assigned to a call by the Ottawa Central Ambulance Communications Centre. Some calls require more than one response (vehicle) depending on the complexity of the situation and the number of patients. Paramedic response volume is a measure of how many paramedic responses (vehicles) are assigned to calls.

In 2023, the Ottawa Paramedic Service response volume was 193,127 representing a 4.9 per cent increase over 2022. Table 1 represents the response volume and the annual percentage growth over the last five years.

Table 1: Response volume and annual percentage growth from 2019 to 2023

Year	Responses	% Change
2019	146,621	1.6%
2020	132,631	-9.5%
2021	149,344	12.6%
2022	184,113	23.3%
2023	193,127	4.9%

As shown in Table 1, as well as previous annual reports, with the exception of 2020 (the onset of the COVID-19 pandemic), response volume continues to increase year-over-year, with the most significant increase taking place in 2022. Over the past 10 years, response volume has increased by an average of 5.2 per cent per year. Annual increases in response volume can be attributed to several factors including population growth, an aging patient demographic, increasingly complex patient clinical presentations, and pre-existing issues affecting Ontario's healthcare system which have been exacerbated by the COVID-19 pandemic. As such, in 2023, the Ottawa Paramedic Service experienced difficulty achieving legislated response time performance standards and Council-approved targets.

On June 28, 2023, after receiving the Ottawa Paramedic Service 2024-2026 Investment Plan ([ACS2023-EPS-OPS-0002](#)), Council approved the hiring of 23 full-time equivalents to help mitigate impacts associated with increased service demand. Of these, a total of 14 full-time equivalents were hired in 2023, with the remaining nine full-time equivalents approved through the 2024 Budget. All 23 staff will complete new hire orientation in April 2024 and be operational in June 2024.

Paramedic Response Time Performance Plan

The legislated Ottawa Paramedic Service response time performance plan reporting framework is defined as the elapsed time from when the first paramedic unit is notified of the call for service to the arrival of a paramedic resource on scene (ambulance or emergency response vehicle with a single paramedic). Response times across the province are measured and reported publicly on the Ministry of Health website.

Response time performance is based on the Canadian Triage Acuity Scale (CTAS), which sets a score for the patient acuity (severity of illness or injury). CTAS 1 is the highest acuity and CTAS 5 is the lowest. The Ministry of Health determines the response time for CTAS 1 patients while the response time target (percentile rank) is established by Ottawa City Council. The CTAS score can only be determined once a paramedic has arrived on scene and after an initial medical assessment has been performed. The percentages in Table 2 represent how often a paramedic has arrived on scene to provide service to patients within the established targeted response time for each CTAS category. Table 2 outlines the Ottawa Paramedic Service's response time performance over the last five years.

Table 2: Response Time Performance from 2019 to 2023

Category (Acuity)	Target Time (minutes)	Council Approved Percentile	2019	2020	2021	2022	2023
CTAS 1 (life threatening)	8:00 ¹	75%	75.1%	75.7%	66.8%	61.8%	68.0%
CTAS 2 (urgent)	10:00	75%	77.2%	76.6%	71.2%	63.2%	68.8%
CTAS 3	15:00	75%	88.9%	89.1%	85.9%	76.3%	79.3%
CTAS 4	20:00	75%	93.5%	94.4%	92.1%	83.4%	83.5%
CTAS 5	25:00	75%	96.5%	96.6%	94.7%	86.7%	86.8%

In 2023, the Ottawa Paramedic Service met the Council-approved percentile rank for CTAS 3, 4, and 5 categories, but did not meet the benchmarks for CTAS 1 (life threatening) or CTAS 2 (urgent) for the third consecutive year. This can be attributed to annual increases in overall service demand and the excessive amount of time paramedics continue to spend in offload delay at Ottawa hospitals which depletes the availability of paramedic resources in the community. While the Service did not meet the benchmarks for CTAS 1 and CTAS 2, response time performance improved slightly in 2023 compared to previous years. This can be attributed to several strategies the Service has implemented and matured over the past three years to mitigate impacts associated with increased response volume and offload delay, and to reduce occurrences of level zero.

¹ Mandated by Provincial regulation

City of Ottawa response time performance for sudden cardiac arrest

In cases of sudden cardiac arrest, response time is defined as the elapsed time from when the first paramedic unit is notified to the arrival of any person trained and equipped to provide defibrillation. The response time for sudden cardiac arrest is positively impacted if an Automated External Defibrillator (AED) is available at the scene or by the arrival of a police officer, firefighter, or OC Transpo Security, who are each equipped with an AED in their vehicle. Table 3 shows the City of Ottawa's performance against the legislated response time standard and Council-approved percentile for sudden cardiac arrest.

Table 3: Response Time Performance for Sudden Cardiac Arrest 2019 to 2023

Category	Target Time (minutes)	Council Approved Percentile	2019	2020	2021	2022	2023
Sudden Cardiac Arrest	6:00 ²	65%	76.1%	77.3%	63.8%	48.4%	64.8%

In 2023, the Ottawa Paramedic Service did not meet the legislated response time for sudden cardiac arrest. This can be attributed to the excessive amount of time the Ottawa Paramedic Service spent in offload delay at Ottawa hospitals and the 1,672 times the Service was at level zero. And while the Service did not meet the legislated response time for sudden cardiac arrest, response time performance improved significantly in 2023 compared to 2022. This can be attributed to several strategies the Service has implemented over the past three years to mitigate impacts associated with increased response volume and offload delay, and to reduce occurrences of level zero. Note that the number of individuals who suffered sudden cardiac arrest in 2023 accounted for less than one percent of all patients cared for by the Service.

Ottawa Central Ambulance Communications Centre Response Time Performance Plan

The Ottawa Central Ambulance Communications Centre receives and triages 9-1-1 calls and dispatches paramedic resources across 10,000 square kilometres of eastern Ontario.

² Mandated by Provincial regulation

In 2023, the Ottawa Central Ambulance Communications Centre answered 160,773 emergency calls which required 229,165 emergency vehicle responses, an increase of 7.2 per cent in over 2022. Note that some emergency calls require more than one resource depending on the complexity of the situation and the number of patients.

The Ministry of Health establishes response time standards (call processing times) for all ambulance communications centres in Ontario. The response time standards are a measure of the elapsed time from when an emergency call is received at the communications centre to when a paramedic has been notified of the call. Communications centres must report annually to the Ministry of Health on the percentage of time this process is completed within two minutes.

Table 4 demonstrates the Ottawa Central Ambulance Communications Centre call processing times for CTAS 1, CTAS 2, and sudden cardiac arrest patients over the last five years.

Table 4: Ottawa Central Ambulance Communications Centre Call Processing Times 2019 to 2023

Category	Target Time (minutes) ³	Percentile ⁴	2019	2020	2021	2022	2023
CTAS 1 (Life Threatening)	2:00	80%	82.5%	80.2%	74.0%	75.5%	74.0%
CTAS 2 (Urgent)	2:00	75%	63.2%	60.7%	52.5%	54.5%	51.2%
Sudden Cardiac Arrest	2:00	80%	86.3%	81.9%	77.1%	80.2%	73.4%

In 2023, the Ottawa Central Ambulance Communications Centre did not meet call processing times for CTAS 1, CTAS 2, or sudden cardiac arrest. This is consistent with performance outcomes for these categories from previous years and can be attributed to increases in response volume and the use of the Dispatch Priority Card Index (DPCI), an outdated call triage tool developed in the 1980s.

On April 12, 2023, the Province announced that the Ottawa Central Ambulance Communications Centre would transition to the Medical Priority Dispatch System (MPDS) in 2024. MPDS is a world-wide industry best practice used in over seventy countries for call assessment and prioritization. The MPDS algorithm provides greater precision, accuracy and efficiency in triaging calls compared to DPCI and is significantly

³ Mandated by Provincial regulation

⁴ Mandated by Provincial regulation

better at determining response requirements for all calls including the most severely ill or injured patients. The Ottawa Paramedic Service will transition to MPDS on April 11, 2024.

Call processing performance is benchmarked using the Canadian Triage Acuity Scale (CTAS). A CTAS score cannot be determined until after a paramedic has conducted a medical assessment of the patient at the scene. MPDS uses five, colour-based call priority levels which rank from highest acuity (purple) to lowest acuity (green). Call priority levels are determined by a patient's medical presentation during the 9-1-1 call. With MPDS and compared to DPCI, there is a better correlation between call priority and the CTAS score.

The Ottawa Paramedic Service will continue to monitor and evaluate the impact of MPDS on the Ottawa Central Ambulance Communications Centre response time performance and will revisit benchmarks with the Province.

Impact of hospital offload delay on the community

Offload delay occurs when a paramedic crew are not able to immediately transfer the care of a patient to hospital staff. Offload delay severely impacts the ability of the Ottawa Paramedic Service to respond to calls, as well as the Service's compliance with response time standards. Excessive offload delay is a patient health and public safety risk.

The industry accepted performance target for Transfer of Care is within 30 minutes at the 90th percentile. More specifically, nine times out of 10, the paramedic aim is to transfer the care of a patient to hospital staff within 30 minutes so they can return to the community for service. As reflected in Table 5, emergency departments at all Ottawa hospitals are not meeting this performance target.

Table 5: 90th Percentile offload delay at emergency departments in Ottawa Hospitals in 2022 and 2023

Facility	90 th Percentile Transfer of Care (minutes) 2022	90 th Percentile Transfer of Care (minutes) 2023
The Ottawa Hospital – General Campus	162.72	158.08
The Ottawa Hospital – Civic Campus	136.00	142.20
Montfort Hospital	224.18	234.40
Queensway Carleton Hospital	167.84	171.81
Children's Hospital of Eastern Ontario	39.10	39.46

In 2023, the Service expended 102,105 hours in offload delay in Ottawa hospitals, an increase of 8.6 per cent compared to 2022. This represents an average of over 559 hours of paramedic time that were lost per day in 2023 or the equivalent of 47 staff per day.

Offload delay is a complex, chronic, and systemic issue that has created challenges for paramedic services across Ontario and Canada for several years. The root causes are related to broader issues within the healthcare system such as patient volume, the availability of beds, alternate level of care patients that remain in the hospital, surgical backlogs, access to primary care, and human health resource (staffing) pressures. While these healthcare issues reside with the Province of Ontario and remain outside the control of the City of Ottawa to resolve, offload delay is a risk to health and public safety and impedes the Ottawa Paramedic Service's ability to meet legislative requirements and Council-approved performance targets. The Ottawa Paramedic Service continues to work collaboratively with local Ottawa hospitals to implement mitigation strategies that benefit patients and each organization.

Level zero

The Ottawa Paramedic Service is at level zero when there are no ambulances available to transport a patient to hospital (as all paramedic crews are either on a call or in offload delay and therefore unavailable to respond to the next call for service in the community). Offload delay at local hospitals continues to be a significant contributor to 'level zero' events in Ottawa in addition to increases in response volume.

Table 6 shows the number of times the Ottawa Paramedic Service was at level zero over the last five years.

Table 6: Level zero events and annual percentage growth 2019 to 2023

Year	Events	% Change	Duration (minutes)	% Change
2019	571	N/A	N/A	N/A
2020	435	-23.8%	12,447	N/A
2021	719	65.3%	24,310	95.3%
2022	1,806	151.2%	73,060	200.5%
2023	1,672	-7.7%	52,995	-27.5%

In 2023, the Ottawa Paramedic Service was at level zero 1,672 times for a total of 52,995 minutes. In 2022, there were 1,806 level zero events for a total of 73,060 minutes. The decrease in the number of events and duration in 2023 compared to the previous year suggests that strategies the Service has implemented and matured over the past three years to reduce occurrences of level zero are having a positive impact, however, even one occurrence of level zero can put patients at risk of poorer health outcomes. Level zero combined with excessive offload delays is a risk to public health and public safety, and the impact on the community and staff of the Ottawa Paramedic Service is substantial.

The Ottawa Paramedic Service continues to work with local hospitals and other partners to implement strategies to mitigate offload delay by reducing patient transports and diverting patients away from emergency departments, which can significantly reduce level zero events. Treating individuals in alternate care settings such as the community or their home can reduce visits to the emergency department, reduce repeat calls to 9-1-1, increase the availability of paramedics in the community, and provide individuals with better, more appropriate care. In 2023, the Service continued to mature existing offload delay and level zero mitigation strategies.

MITIGATION STRATEGIES – OFFLOAD DELAY AND LEVEL ZERO

Dedicated Offload Nurse Program

The Ottawa Paramedic Service continues to oversee the Dedicated Offload Nurse Program which is fully funded by the Province. The program was implemented in 2008 and is a partnership between the Ministry of Health, local hospitals, and the Ottawa Paramedic Service. This program permits paramedics to transfer patient care to a dedicated offload nurse or health professional within the hospital's emergency department. When the transfer of care process is expedited, a paramedic crew can

return to service in the community. In 2023, the Ministry of Health increased funding from \$1.5 million to \$2.5 million for the 2023-2024 fiscal year to support the Dedicated Offload Nurse Program. Despite annual investments from the Ministry, hospitals have had difficulty staffing the dedicated offload nurse positions.

On June 28, 2023, Council received the Ottawa Paramedic Service 2024-2026 Investment Plan. The report recommended that Council approve the addition of 17 full-time equivalents in each of the 2024, 2025, and 2026 Draft Budgets, subject to the confirmation of provincial and/or local hospital funding, to specifically help mitigate offload delay pressures and reduce the number of level zero events. In late summer and early fall 2023, the Paramedic Chief, staff in the Emergency and Protective Services Department, and the Mayor's Office met with the Ontario Minister of Health's Chief of Staff and The Ottawa Hospital Chief Executive Officer several times to identify solutions to reduce offload delay and level zero events. One solution included a request from The Ottawa Hospital to the Ministry of Health, submitted in the fall for \$4.5 million to hire more nurses and add more beds to enhance the Dedicated Offload Nurse Program. This funding would cover the costs to staff 12 new beds at the Civic Hospital, 12 at the General Hospital, eight at the Queensway Carleton Hospital and four at the Montfort Hospital. The Ottawa Hospital claimed that the \$4.5M would reduce offload delay and diminish the need for the Ottawa Paramedic Service's request for an additional 17 fulltime equivalents. The Ministry of Health did not respond to The Ottawa Hospital's request. In 2024, the Ottawa Paramedic Service has requested an additional \$5 million in Dedicated Offload Nurse Program funding, bringing the total funding request for the 2024-2025 fiscal year to \$7.4 million.

The Dedicated Offload Nurse Program can have a positive impact on offload delay if there are sufficient beds available and the dedicated offload nurse positions are adequately staffed. In 2023, the dedicated offload nurse position was not staffed sufficiently and as a result, the Ottawa Paramedic Service experienced more than 102,105 hours of offload delay, a nine per cent increase in the amount of time spent in the emergency department compared to the previous year. The Ottawa Paramedic Service is hopeful that an expansion of the program through additional Ministry of Health funding will reduce paramedic time spent in offload delay. Hospitals are reporting an improvement in staff recruitment, which should improve the staffing of dedicated offload nurse positions.

Resolving the offload delay issue in hospital emergency departments is critical to eliminating level zero events and improving service delivery, response times and patient outcomes. While the Province and local hospitals are responsible for developing

mitigation strategies to reduce offload delay, the Ottawa Paramedic Service continues to seek additional ways to improve the Dedicated Offload Nurse Program and maximize the availability of paramedics in the community.

Vertical Patient ('Fit 2 Sit') Program

The Vertical Patient Program was implemented in 2019 by the Ottawa Paramedic Service in partnership with The Ottawa Hospital and the Queensway Carleton Hospital. The program was held in abeyance during the COVID-19 pandemic. In late 2022, the program was expanded to include all adult hospitals in Ottawa. Through the Vertical Patient Program, paramedics use specific medical assessment criteria to determine when a low acuity patient can be safely offloaded to the emergency department waiting room. Upon agreement with the hospital triage nurse, the patient transfer of care often occurs quickly. Through this process, a paramedic crew may avoid excessive offload delay which allows them to return to service in the community faster.

In 2023, more than 2,726 patients met the 'Fit 2 Sit' criteria and were safely offloaded by paramedics to the emergency department waiting room, an increase of 117 per cent over the previous year. This increase can be attributed to collaboration between Ottawa hospitals and the Ottawa Paramedic Service to safely expand the Vertical Patient Program inclusion criteria.

Targeted Engagement Diversion Program

The Targeted Engagement Diversion Program is a successful partnership established in November 2011 between the Ottawa Paramedic Service, Ottawa Inner City Health, the Shepherds of Good Hope, The Ottawa Hospital, and the Ottawa Police Service. The Targeted Engagement Diversion program works to identify and assist vulnerable individuals experiencing homelessness who may suffer from a substance use disorder. Through the program, paramedics will transport an individual experiencing homelessness to a specialized medical clinic operated by Ottawa Inner City Health as an alternative to a hospital emergency department. Ottawa Inner City Health offers a Safer Supply program and provides primary care, mental health care and substance use treatment.

The Targeted Engagement Diversion program continues to be a successful initiative in reducing emergency department utilization for a vulnerable population. In 2023, 1,446 individuals were diverted away from the emergency department through the Targeted Engagement Diversion program, an increase of 93 per cent over the previous year.

Most Targeted Engagement Diversion patients are engaged in treatment and often move into a more stable housing situation. This unique initiative delivers an enhanced and specialized care while reducing the demand for the paramedic 9-1-1 service.

Mobile Logistics Support Unit

The Mobile Logistics Support Unit was implemented in 2022 to provide logistical support to paramedic crews in the field. Through this initiative, equipment and supply technicians are deployed to resolve vehicle and equipment issues, to inspect, resupply, and repair medical equipment, or to exchange contaminated equipment. Providing logistical support in the field can save a paramedic crew from having to return to Paramedic Headquarters for equipment or supply deficiencies, reducing the amount of time emergency response vehicles are out of service, maximizing paramedic availability in the community. In 2023, the Mobile Logistics Support Unit was deployed 922 times to assist a paramedic crew in the field. In more than 95 per cent of the deployments, equipment and supply technicians were able to remedy the crew's equipment, resource, or supply needs, allowing paramedics to resume service in the community in a timely manner, without having to return to Paramedic Headquarters for assistance.

Patient Priority System decision support tool

In November 2020, the Ottawa Paramedic Service, The Ottawa Hospital, the Queensway Carleton Hospital, and the Montfort Hospital revised the Patient Priority System, a decision support tool for patient distribution within Ottawa.

The goals of the Patient Priority System are:

- To ensure patients are transported to the most appropriate hospital emergency department based on health care need, specialty service, and shortest wait time
- To distribute patients based on the availability and capacity at local hospitals. Previously, most patients were distributed based on a simple allocation formula (two patients to either the Civic or General campus of The Ottawa Hospital for every one patient directed to the Queensway Carleton Hospital or Montfort Hospital)
- To minimize offload delay for a paramedic crew at hospital
- To improve communication and information sharing between the Ottawa Paramedic Service and local hospitals

In 2023, the Ottawa Paramedic Service enhanced the Patient Priority System decision support tool by incorporating hospital occupancy, hospital capacity, and patient medical acuity (severity of illness or injury) data. These additional data elements will help the Service further optimize patient allocation.

Patient Flow Paramedic

In December 2021, the Ottawa Paramedic Service, in partnership with the Queensway Carleton Hospital, implemented the Patient Flow Paramedic initiative, which was expanded to The Ottawa Hospital (Civic and General campuses) in 2022. Through this initiative, the Service can deploy a single paramedic (patient flow paramedic) to the emergency department to receive up to four patients arriving by ambulance so up to four paramedic crews can return to service in the community. The patient flow paramedic will monitor patients until transfer of care to hospital staff occurs. In 2023, patient flow paramedics cared for 1,098 patients for a duration of 2,499 hours. The patient flow paramedic remains an important initiative for returning paramedic crews to service in the community.

Emergency department paramedic

In June 2022, in partnership with the Montfort Hospital, the Ottawa Paramedic Service launched a pilot program that integrates a primary care paramedic into the Montfort's emergency department with the goal of reducing offload delay, reducing level zero events, increasing the availability of paramedic resources in the community, and improving patient flow within the hospital. The program includes a primary care paramedic who works a 12-hour shift in the emergency department of the Montfort Hospital. The paramedic works within their professional scope of practice under the medical direction of an emergency department physician. When an ambulance arrives, patient care may be transferred from the transporting paramedic crew to the paramedic working in the emergency department. The emergency department paramedic can monitor and care for up to four patients which returns up to four paramedic crews to service in the community.

In 2023, the emergency department paramedic cared for patients for a total of over 3,500 hours. In 2024, the Ottawa Paramedic Service and Montfort Hospital will continue to monitor and evaluate program success and make refinements.

Patient Ratio Protocol

In September 2022, the Ottawa Paramedic Service implemented the Patient Ratio Protocol. This protocol is activated when the Service is experiencing a level zero event or paramedic crew nearing end of shift is held in hospital offload delay. The Patient Ratio Protocol allows for another paramedic crew in offload delay at the same hospital to assume care for another patient, so the crew nearing end-of-shift can complete their shift on time. This initiative reduces the occurrence for end-of-shift overtime.

In 2023, there were approximately 103 instances where the Patient Ratio Protocol was employed. This initiative is having a positive impact on staff wellbeing, as it reduces shift overruns due to extensive hospital offload delay and level zero events.

Physician assessment on stretcher

In November 2022, the Ottawa Paramedic Service and the Regional Paramedic Program for Eastern Ontario collaborated to permit a physician to provide treatment to a patient during offload delay. Allowing a physician to assess a patient in offload delay can result in patient care being expedited and improve flow in the emergency department. In 2023, there were more than 3,100 instances where patients were assessed and/or treated by a physician while in the care of a paramedic crew during offload delay. Improved patient flow permits a paramedic crew to return to service in the community more quickly.

Paramedic treatment on offload delay

In November 2021, the Ottawa Paramedic Service implemented an initiative to permit a paramedic to administer clinical treatment while on offload delay at the hospital. Previously, a paramedic was only permitted to monitor the patient while in offload delay. Through this initiative, which continues today, a paramedic can consult with a Regional Paramedic Program for Eastern Ontario physician on patient care and provide ongoing treatment. Ongoing clinical treatment by a paramedic during offload delay expedites care and permits a paramedic crew to return to service in the community more quickly.

Paramedic Response Unit Program

The Paramedic Response Unit is an emergency response vehicle staffed with a single paramedic that is strategically deployed in the city to respond to emergency medical calls of the highest priority. Upon arrival, the paramedic will assess the patient, initiate care, and confirm the requirement for an ambulance. If transportation is not required, a

paramedic crew will be cancelled from the call and remain available to provide service in the community.

The Paramedic Response Unit model is an industry best practice that has been used in Ottawa for over 18 years. The Ottawa Paramedic Service deploys both primary care paramedics and advanced care paramedics in the Paramedic Response Unit Program.

Breakaway paramedic crew

At the start of a shift, all paramedic crews participate in a seven-minute briefing and a ten-minute vehicle check at Paramedic Headquarters. In November 2022, the Ottawa Paramedic Service revised its start-of-shift procedures to require that a breakaway crew be identified at the beginning of every shift. When the Service experiences a level zero event, a breakaway paramedic crew is deployed immediately (forgoing the briefing) to respond to a call waiting in queue. The immediate deployment of a paramedic crew mitigates the impact of level zero. In addition, it prevents paramedic crews who are near the end of their shift from being reassigned to a new call. In 2023, the Ottawa Paramedic Service deployed breakaway crews on almost a daily basis.

SERVICE IMPROVEMENT INITIATIVES

For several years, paramedic services across Ontario have been filling gaps in health and social services beyond their traditional mandate of emergency response. In 2023, the Ottawa Paramedic Service continued to respond and adapt to the local needs of its residents through the delivery of new and existing initiatives aimed at supporting emergency service delivery and improving health care service to the community.

Community paramedic programs

A community paramedic extends the paramedic practice beyond traditional emergency response. As populations grow and age, and as the prevalence of chronic disease rises, the need for innovative approaches to health care delivery has become more apparent. This globally evolving community paramedic model of care utilizes a specially trained paramedic who can provide community-based, preventative, and primary health care services to vulnerable populations, individuals living with chronic health conditions, and seniors at their home or residence.

Through regular home visits, health assessments and interventions, medication management, and patient education, a community paramedic can reduce emergency calls for service, paramedic transports to the hospital, and unnecessary hospital

admissions and readmissions, all of which improves the healthcare system sustainability. These programs are transformative in the delivery of health care.

Over the past four years, the Ottawa Paramedic Service has received ad-hoc grant funding separately from the Ministry of Health, and the Ministry of Long-Term Care for various community paramedic projects. In 2023, the Ministry of Health confirmed that the Ottawa Paramedic Service would begin receiving ongoing base funding to support community paramedic programs aimed at safely keeping patients waiting for long-term care beds at home. Separately, the Ministry of Long-Term Care confirmed funding for the Community Paramedicine for Long-Term Care program until 2026 to provide individuals on the waitlist for long-term care with access to non-emergency support through home visits and remote monitoring. In 2023, the Ottawa Paramedic Service implemented or maintained several community paramedic programs as follows.

Community Paramedicine for Long-Term Care program

The Community Paramedicine for Long-Term Care program was launched in 2020. The intent of the program is to support vulnerable individuals to stay safe and healthy in their homes for as long as possible while waiting for placement in a long-term care home. The program leverages the skills and expertise of paramedics outside of their traditional emergency medical roles to provide patient assessments, routine diagnostic procedures, at-home treatments, and remote monitoring to help meet the needs of eligible individuals in their residence. Through the Community Paramedicine for Long-Term Care program, a community paramedic will schedule patient visits, remotely monitor patient vital signs, provide acute episodic care, manage chronic conditions, and provide health education.

The Ministry of Long-Term Care has been collecting program data from paramedic services since April 2021. In September 2023, the Ministry shared the results of a multi-year program evaluation:

- Amongst clients who stayed in the program for six months or less, there was a 24 per cent reduction in emergency department utilization and a 19 per cent reduction in emergency department visits resulting in hospital admission.
- 9-1-1 calls decreased 30 per cent among all clients.
- 95 per cent of clients affirmed that care and services offered by the program helped maintain or improve their health and wellbeing.

- 83 per cent of clients were able to stay in their home longer.
- 64 per cent of clients delayed or eliminated the need to apply for a long-term care bed.
- 96 per cent of clients were satisfied or very satisfied with the support they received from community paramedics.
- Program costs are minimal; incredibly only \$8.40 per day, per client.

The Community Paramedicine for Long-Term Care program stabilizes individuals on the long-term waitlist, reduces 9-1-1 calls, emergency department visits and hospital admissions, while providing clients community support that is accessible and safe. The Ottawa Paramedic Service has received funding from the Ministry of Long-Term Care until 2026. In the meantime, the Service will continue to advocate for permanent base funding.

Remote Care Monitoring - Post Surgical Discharge Support

In 2022, the Ottawa Paramedic Service in partnership with the Montfort Hospital, implemented a remote care monitoring program. The program goal is to improve health system capacity, access, and flow. As part of this program, community paramedics follow clinical pathways developed in partnership with physicians. Community paramedics monitor post-surgical patients living in Ottawa for a defined time after their discharge from the hospital. They perform medical assessments and interventions to treat post-surgical complications and keep patients recovering safely at home. Hospitals routinely discharge post-surgical patients up to three days earlier as compared to patients without follow-up community paramedic care. The program has seen a dramatic reduction in patient bounce backs to the emergency department. In the case of prostate resection surgery, bounce back rates have dropped from 40 per cent to six per cent. This program supports the reduction of the provincial surgical backlog, frees up hospital beds, and reduces patient volume in the emergency department.

Neighborhood Integrated Care Model wellness clinics

In 2023, the Ottawa Paramedic Service, in partnership with Ottawa Community Housing, held several Neighborhood Integrated Care Model wellness clinics. The wellness clinics support seniors living in Ottawa Community Housing through health assessments and education, enrollment in ongoing community paramedic care, referrals to community health partners, and support for individuals who do not have

primary care providers. The program aims to improve overall health and reduce the need for emergency department visits and hospitalizations. Community paramedics refer over 50 per cent of their clients for follow-up care. In 2024, the Ottawa Paramedic Service will expand wellness clinic services to include mental health support and cancer screening.

Alternate care pathways

Palliative Care Program

The Ottawa Paramedic Service's Palliative Care Program operates under the Ministry of Health Treat and Refer model of care. Under the Treat and Refer model, paramedics receive additional training to treat palliative care patients in their home. Paramedics can administer specific medication for pain, dyspnea, hallucinations or agitation, and nausea or vomiting. Once the patient has been treated, a paramedic will coordinate follow-up care with the patient's primary palliative care team.

Mental Wellbeing Response Team

Launched in 2022, the Ottawa Paramedic Service Mental Wellbeing Response Team, in partnership with The Ottawa Hospital, provides individuals with mental health and substance use care in the community. Callers to 9-1-1 experiencing a mental health issue receive a medical assessment by a specially trained paramedic and a mental health assessment by a mental health professional who can also provide resource referrals, a care plan, and arrange for follow-up mental health care. The Mental Wellbeing Response Team operates as a Treat and Refer model of care.

In 2023, the Mental Wellbeing Response Team provided care to 561 individuals in the community. Of these, 70 per cent were diverted away from the emergency department, an increase of five percent over 2022. This represents approximately 1,600 hours of paramedic time that would have otherwise been spent in offload delay, and approximately 4,500 hours of time individuals seeking emergency mental health or substance use care would have spent waiting in the emergency department to see a physician.

In addition to reducing the number of transports to hospitals by treating and releasing individuals on scene, the Mental Wellbeing Response Team has improved the Ottawa Paramedic Service's overall service delivery to the community by:

- Reducing offload delay at hospitals (by decreasing the number of individuals transported to emergency departments)

- Reducing repetitive calls to 9-1-1
- Increasing access to and assisting with the navigation of community-based mental health services

In 2023, in collaboration with the Regional Paramedic Program for Eastern Ontario, the Ottawa Paramedic Service applied to the Ministry of Health for permission to administer Suboxone while responding to opioid-related 9-1-1 calls. Suboxone is a drug that eases the painful symptoms of overdose reversal and withdrawal. By relieving the withdrawal symptoms experienced after a reversed overdose, Suboxone enables individuals to focus on improving their health and taking next steps towards recovery. On February 8, 2024, the Ottawa Paramedic Service received approval from the Ministry of Health to proceed with this initiative making Ottawa the first urban centre in Canada to administer Suboxone as a treatment option when responding to calls of suspected overdose or withdrawal. Looking ahead, the Service aims to incrementally increase the hours of operation of the Mental Wellbeing Response Team to a 24/7 service.

Smart Transportation Program

In February 2023, the Ottawa Paramedic Service, in collaboration with the Regional Paramedic Program for Eastern Ontario, launched the Smart Transportation Program. The goal of the program is to reduce the unnecessary transportation of low acuity patients to the hospital emergency department. The Smart Transportation Program operates under the Ministry of Health Treat and Refer model of care. Through this program, paramedics assess and safely treat patients in their place of residence. A paramedic conducts an enhanced patient assessment, consults with a physician, provides care, and then may deem it safe for the patient to remain at home. Patients who remain at home receive a follow-up call from a paramedic within 24 hours of the visit.

In 2023, paramedics assessed 227 patients through the Smart Transportation Program. Over 200 (89 per cent) remained safely at home with a follow-up care plan. The impact of returning paramedic resources to the community rather than having them stuck in hospital offload delay is significant.

Naloxone Kit Expanded Access Program

The opioid crisis is a complex health and social issue that has been exacerbated by the increasingly toxic drug. Individuals with a substance use disorder often have increased

feelings of isolation, stress, and anxiety, as well as a limited accessibility to health care and community services.

Naloxone is a medication that can reverse the effects of an opioid overdose.

Paramedics in Ontario have been equipped with and trained to administer Naloxone since early 2016. In Ottawa, paramedic superintendents, paramedics working on the Paramedic Response Unit, and paramedics working on the Mental Wellbeing Response Team distribute Naloxone kits to the at-risk population with no questions asked to prevent overdoses in the community.

Heart Safe City

Ottawa is a ‘Heart Safe’ city. According to the Heart and Stroke Foundation of Canada, Cardiopulmonary Resuscitation (CPR) used in combination with an Automated External Defibrillation (AED) may increase the likelihood of survival by 75 per cent or more. In 2023, an AED was deployed to 447 sudden cardiac arrests in Ottawa.

In 2001, the Ottawa Paramedic Service implemented the Public Access Defibrillator (PAD) Program, which has placed more than 1,500 AEDs in public and private buildings; in Ottawa Police Service, Ottawa Fire Services, and OC Transpo vehicles; and all O-Train stations. In 2023, the Ottawa Paramedic Service Public Education Team implemented 50 new private oversight agreements for the placement of AEDs in churches, condominiums, government facilities, and schools.

In 2023, the Public Education Team delivered 633 First Aid, CPR, and AED courses to 6,739 individuals including the public, City of Ottawa employees, Ottawa Police Service members, and 150 students enrolled in the Youth Futures Program, an Ottawa-based program that supports equity deserving youth between the ages of 16 and 21 living in low-income and social housing communities.

Neonatal Transport Team Program

In 2020, the province provided the Ottawa Paramedic Service with over \$1 million to staff and operate a specially equipped ambulance for eastern Ontario newborns in need of specialized care. The Ottawa Paramedic Service works collaboratively with the Children’s Hospital of Eastern Ontario (CHEO) Neonatal Transport Team to deliver patient care to critically ill infants. In 2022, the Ottawa Paramedic Service expanded the Program to include critically ill pediatric patients.

In 2023, the Neonatal Transport Team responded to 654 calls resulting in over 1,400 hours of service. In November 2023, the Ministry of Health confirmed that the Ottawa

Paramedic Service would receive \$2.4 million to support the availability of a second ambulance.

The Ottawa Birth and Wellness Centre

For nine years, the Ottawa Paramedic Service has maintained a partnership with the midwife-led Ottawa Birth and Wellness Centre to improve the coordination of services to the community and provide seamless quality care for ill newborn patients. In 2023, the Ottawa Paramedic Service continued to respond to requests for service from the Ottawa Birth and Wellness Centre, transporting newborns and birthing parents requiring further medical care at a hospital.

EMPLOYEE WELLBEING AND WORKPLACE CULTURE

Mental health supports for staff

The very nature of the work of a communications officer or paramedic lends itself to exposure to potentially traumatic incidents on a regular basis which can impact an individual's mental health and wellness. In recent years, this has been compounded by the COVID-19 pandemic, capacity challenges in healthcare, an increasing response volume, and events triggering moral injury. According to The Royal, moral injury refers to the impact of challenging experiences that upset a person's value system or moral beliefs. The effects can be enduring, and result in long-lasting emotional and psychological damage.

The Ottawa Paramedic Service has continued to maintain and implement several initiatives to support the mental wellbeing of staff.

Peer Support Program

The Mental Health Commission of Canada defines peer support as “a supportive relationship between people who have a lived experience in common.” Peer supporters are not mental health professionals, rather, peer supporters are coworkers that support their peers by listening, empathizing, defusing, and providing resource information. Peer supporters are critical to the maintenance of a healthy workplace. Established in 2014, the Ottawa Paramedic Service Peer Support Program maintains a Peer Support Team comprised of approximately 50 peer supporters from various branches across the Service to provide staff with emotional support for work and life stressors 24/7. The Peer Support Program is supported by a City of Ottawa wellness consultant.

In May 2023, the Peer Support Team hosted an event for more than 300 family members and friends of staff. Families and friends play an important role in supporting the mental health of public safety personnel. The event included a tour of Paramedic Headquarters and equipment demonstrations with the goal of sharing information and resources, while providing an opportunity for staff, family, and friends to connect.

Each year, peer supporters complete hundreds of informal and formal check-ins and follow ups with employees who are of the workplace either on short- or long-term leaves of absence. In 2023, peer supporters had 415 interactions with 244 individuals.

The Ottawa Paramedic Service peer support coordinator is a member of the City of Ottawa Peer Support Network, a community of practice for peer support coordinators and clinical directors. In 2023, the Peer Support Network held its first peer supporter celebration in conjunction with Global Peer Support Celebration Day.

In 2023, the Ottawa Paramedic Service participated in PSP Connect, a network of Canadian public safety personnel who meet virtually and regularly throughout the year to share information, successes, and ideas on mental health programs and projects. The Service also participated in the Peer Support Community Network hosted by the Atlas Institute for Veterans and Families and the Canadian Institute for Public Safety Research and Treatment.

Paramedic psychologist

On June 28, 2023, after receiving the Ottawa Paramedic Service 2024-2026 Investment Plan (ACS2023-EPS-OPS-0002), Council approved the hiring of three full-time equivalents in the 2024 Budget for psychological supports to support employee wellness and reduce operational stress injuries. In March 2024, a paramedic psychologist joined the Ottawa Paramedic Service. In 2024, the psychologist will begin developing a comprehensive health and wellness strategy for the Service.

Before Operational Stress Program

In 2023, Ottawa Paramedic Service staff were provided access to the virtual Before Operational Stress program. Before Operational Stress is a free, virtual, self-directed, and resiliency-based program specifically designed for public safety personnel. The program was developed by leading mental health experts and psychologists of Wayfound Mental Health Group and is designed to provide practical tools for frontline workers to manage operational stress. The program not only equips participants with resources and skills to help people learn different ways to understand and react to

stress but there has also been emerging evidence to demonstrate the program's effectiveness in improving mental health outcomes.

PeerOnCall app

In 2023, the PeerOnCall app was launched as a part of a research trial by McMaster University for public safety personnel seeking mental health information and support. The app includes self-screening tools, tips to cope, and an opportunity to connect anonymously with a paramedic peer-support provider in Ottawa by phone or text.

Organizational culture assessment and strategic roadmap

Organizational culture is often referred to as the collection of the values, ethics, beliefs, norms, practices, and behaviors that contribute to the social and psychological environment of an organization. Culture is one of the most important factors in determining how well an organization executes on every aspect of their performance, including the ability to achieve their vision, mission, and strategic goals.

In September 2023, the Ottawa Paramedic Service engaged MNP, one of Canada's leading professional services firms, to understand the Ottawa Paramedic Service's current and desired organizational culture, and to develop a roadmap to help the Service achieve and maintain its future culture. The organizational culture assessment was completed in three phases. The objective of the first phase was to define the desired future state of the Ottawa Paramedic Service, while the current culture was assessed during phase two. Feedback was collected from approximately 400 staff through an anonymous online survey and approximately 150 staff that participated in focus groups and leadership workshops facilitated by MNP. In the third phase, MNP guided the Service through a gap analysis to identify gaps between the current and desired culture. In 2024, the Service will work with MNP to finalize a culture shift action plan to bridge the gap between the current and desired culture, as well as an evaluation plan for ongoing monitoring and improvement.

CONTINUING MEDICAL EDUCATION AND CLINICAL RESEARCH

Continuing medical education

The paramedic scope of practice has expanded to include comprehensive patient care in non-traditional environments including hospitals, long-term care facilities, individual's homes, and the community. Continuing medical education is essential for developing, maintaining, and increasing the knowledge, competence, and professional performance of paramedics. The Ottawa Paramedic Service is committed to providing staff with

opportunities for ongoing training and development. In 2023, some of the continuing education topics offered to staff include:

- Verbal do-not-resuscitate (DNR) orders
- Medication safety self-assessment for practicing paramedics
- High performance cardiac arrest management
- Transcutaneous pacing for heart rhythm irregularity
- Synchronized cardioversion for heart rhythms that are too fast and ineffective
- Left ventricular assist devices to support the improved mechanical functioning of the heart
- Biases in STEMI (ST-elevation myocardial infarction) treatment of a specific heart rhythm irregularity

Clinical research

In alignment with the Ottawa Paramedic Service's strategic goals and commitment to deliver clinical excellence, the Service continues to engage in research activities to support advancements in paramedicine and its integration with the healthcare system. The Service recognizes that pre-hospital research is essential for driving innovation and improving patient care in the community. Through research, the Service can better understand the needs of Ottawa's diverse population, identify best practices, and develop more effective treatments and care protocols.

Micro-research training

In collaboration with MicroResearch Nova Scotia, in 2023, 16 staff from across the Service participated in a two-week micro-research course. The goal of the course was to educate staff on essential research skills and to foster a culture of inquiry and problem-solving. Participants learned the foundational concepts of research, enabling them to initiate projects aimed at addressing everyday challenges within the Service. Based on their proposals, MicroResearch Nova Scotia invited two study teams to apply for grants to actualize their research. Set to commence in 2024, these projects epitomize the Ottawa Paramedic Service's commitment to expanding research capacity and promoting an interdisciplinary approach to innovation and improvement.

Spinal Motion Restriction Protocol

In 2023, the Ottawa Paramedic Service contributed to the research informing the Spinal Motion Restriction Protocol, a procedure that provides paramedics guidance regarding the assessment and care of patients who may have a spine injury. Participation in this research endeavor, which focused on enhancing patient comfort and safety, demonstrates the Service's ongoing dedication to improving paramedic care practices and service delivery through evidence-informed practices.

EpiDOSE clinical trial

Last year, the Ottawa Paramedic Service launched the EpiDOSE randomized controlled trial to assess the efficacy of administering a lower dose of epinephrine versus the conventional higher dose in adults experiencing out-of-hospital cardiac arrests. By investigating the impact on survival rates to hospital discharge, EpiDOSE aims to refine resuscitation practices and potentially set new standards for epinephrine usage, thereby enhancing patient survival outcomes and setting a new benchmark in paramedic care.

Presentations

The Ottawa Paramedic Service delivered presentations on research studies about spinal cord injuries and the impact of the COVID-19 pandemic on out-of-hospital cardiac arrest survival outcomes. Further, the Service contributed to several articles published in scientific journals covering topics such as mental health of first responders, treat and refer pathways for patients living in long-term care homes, and community paramedicine.

Canadian Association of Emergency Physicians Abstract Award

In 2023, the Service participated in The Ottawa Hospital's economic evaluation of the Canadian c-spine rule, which won a national award from the Canadian Association of Emergency Physicians. The Canadian C-Spine rule is a decision support protocol that allows paramedics to transport patients without spinal immobilization following a trauma event. When a paramedic applies the Canadian C-Spine rule, the result has been improved patient comfort and significantly reduced healthcare costs.

The Ottawa Paramedic Service contributes to the advancement of out-of-hospital care in the community and beyond. This commitment to research supports the Service vision and mission statements as well as its strategic goals and aligns with the Quadruple Aim framework. Through ongoing research efforts, the Service strives to enhance patient

experience, improve population health, reduce the cost of healthcare, and improve the work life experience of paramedics.

In 2024, the Ottawa Paramedic Service will expand research efforts by participating in several new studies aimed at improving patient outcomes. One study will employ machine learning, a subfield of artificial intelligence, to increase bystander CPR rates by enhancing the recognition of abnormal breathing (agonal respirations) by communications officers during 9-1-1 calls.

LOOKING AHEAD

After more than two decades of advocacy, on April 11, 2024, the Ottawa Paramedic Service will transition to a new call triage tool for dispatching emergency medical responses called the Medical Priority Dispatch System (MPDS). MPDS is approved by the Ontario Ministry of Health and globally recognized as an industry best practice for emergency call triage. The current triage tool, Dispatch Priority Card Index (DPCI) was developed in the 1980's and has been criticized for over-triaging 9-1-1 calls and depleting the availability of paramedic resources for the most severely ill or injured patients (CTAS 1, CTAS 2, and sudden cardiac arrest patients). This is a significant milestone that will benefit the Ottawa community by improving the Ottawa Paramedic Service's ability to meet response time targets for life-threatening calls.

The implementation of MPDS will have an impact on the Ottawa Paramedic Service's response time performance. After assessing the impacts of MPDS on response time performance, the Service will bring a report to the Emergency Preparedness and Protective Services Committee with recommendations to update the Ottawa Paramedic Service Response Time Performance Plan approved by Council in 2012 ([ACS2012-COS-EPS-0040](#)).

In July 2024, the Ottawa Central Ambulance Communications Centre will implement a new telephone system. The project is being led by the Ministry of Health and aims to prepare the Communications Centre for Next Generation 911 (NG911) telephony requirements. The new telephone system will make the call taking process more seamless for communications officers and callers to 9-1-1. A few months later, the Service will implement a new radio system as part of the province-wide upgrade the Public Safety Radio Network system. The new radio system will provide encryption capabilities, prevent service outages and improve connectivity overall.

The Ottawa Paramedic Service will continue to work on the West Deployment Facility project to address city-wide growth. Paramedic Service Headquarters, located at 2465

Don Reid Drive, was built in 2005 and in 2020 reached its maximum capacity for vehicle deployments, staffing, and service delivery. As such, a secondary facility is required.

The Ottawa Paramedic Service aims to bring forward a report to the Emergency Preparedness and Protective Services Committee and City Council with recommendations on the recommended funding model for the development and delivery of the West Deployment Facility project.

In June 2024, the Ottawa Paramedic Service hosted the first Canadian Tactical Paramedic Conference, CanTacMed. This event brought together paramedic leaders, tactical paramedics police, and public safety partners to share information, knowledge, best practices, and lessons learned. Leaders in paramedic care will update the Canadian Tactical Paramedic Training Competency Profile and Best Practices document.

The Ottawa Paramedic Service anticipates that its service delivery to the community will continue to be challenged in 2024 and beyond. In 2024, the Ottawa Paramedic Service will continue to apply creativity and innovation by refining existing and implementing new strategies aimed at reducing hospital offload delay, maximizing paramedic resources in the community, and providing individuals with the most appropriate care.

FINANCIAL IMPLICATIONS

There are no financial implications associated with this report.

LEGAL IMPLICATIONS

There are no legal impediments to receiving the information in this report.

CONSULTATION

Consultation activities were not required for this information report.

ACCESSIBILITY IMPACTS

The Ottawa Paramedic Service provides care for patients with disabilities in line with the obligations of the Accessibility for Ontarians with Disabilities Act, 2005 and the Integrated Accessibility Standards Regulation, 191/11. The Service ensures that patients with disabilities have continued access to their support persons and support animals during transport and arrange for temporary care of service animals, when it is not practicable to do so. The Ottawa Paramedic Service reports on its initiatives that

enhance service to older adults and people with disabilities through the City's Annual City of Ottawa Municipal Accessibility Plan annually.

DELEGATION OF AUTHORITY IMPLICATIONS

The Ottawa Paramedic Service reports annually to the Emergency Preparedness and Protective Services Committee on the use of delegated authority, as described in Section 17 of Schedule F of the [Delegation of Authority By-law \(2023-67\)](#). There are no new delegated authority requirements associated with this information report.

INDIGENOUS, GENDER, AND EQUITY IMPLICATIONS

Diversity Champion Program

Since 2010, the Ottawa Paramedic Service Diversity Champion Program has built relationships with diverse communities across the city to improve overall equity, diversity, and inclusion in the community.

Since the Diversity Champion Program was first established, members have participated in awareness, engagement, and educational events to promote the Ottawa Paramedic Service as an employer of choice to various diverse communities within Ottawa.

For the past 12 years, the Diversity Champion Program has hosted the Paramedic Awareness Week (PAW) Camp. PAW Camp is a free, one-week event for youths aged 13-17, with a goal of reducing barriers for youth from all communities, including First Nations, Métis, Inuit, Muslim, Asian, racialized and immigrant communities, as well as those who identify as LGBTQI2S. PAW camp participants are encouraged to learn about various careers with the Ottawa Paramedic Service. In 2023 PAW Camp hosted 20 youth paramedics-in-training who were provided a behind the scenes look at the Service. They completed their Standard First Aid and CPR – C level certification, were introduced the job of a communications officer, an equipment supply technician, and a Special Operations paramedic. Participants learned patient assessment and triage skills, and how to use an Automated External Defibrillator.

As part of the Service's commitments to the City's Diversity and Inclusion plan, the Ottawa Paramedic Service explored partnership opportunities with the Youth Futures Program. Youth Futures is an Ottawa-based program in partnership with the City of Ottawa, Ottawa Community Housing, Ottawa Police Service, Algonquin College, Carleton University, La Cité, Saint-Paul university, University of Ottawa and many community partners committed to creating post-secondary opportunities for low-income

secondary school students. In 2023, the Ottawa Paramedic Service joined its Emergency and Protective Services colleagues in hosting an education session for more than 80 students of the Youth Futures Program. The goal of the education session was to provide students with information about the Ottawa Paramedic Service, highlighting future education and employment opportunities.

RISK MANAGEMENT IMPLICATIONS

Risk implications and associated mitigation strategies are identified and explained in this report.

RURAL IMPLICATIONS

As per the [Ambulance Act](#), ambulance service in Ontario is seamless, meaning that the closest available ambulance is dispatched to respond to emergencies regardless of its municipal borders. The provision of seamless service requires neighbouring municipalities to provide care within the boundaries of the City of Ottawa. Similarly, the Ottawa Paramedic Service also provides care in bordering communities.

TERM OF COUNCIL PRIORITIES

Ottawa Paramedic Service programs and services align with the 2023-2026 Term of Council Priority ‘A city that has affordable housing and is more liveable for all’. Specifically:

- Strategic Priority 5: Promote and support proactive mental health supports, strategies, and community-led crisis mental health response models.
- Strategic Priority 7: Improve emergency response times.

DISPOSITION

The Ottawa Paramedic Service will action any direction received as part of consideration of this report.