



EMS VISION – ONTARIO 2050

From 2019 to 2050

RECOMMENDATIONS FOR EMS

IN AN EVOLVING HEALTH CARE ENVIRONMENT

- **Delivering savings in EMS and health system costs**
- **preparing for the future - EMS VISION – ONTARIO 2050**
 - **optimizing ambulance and paramedic services**
 - **integration of health care services**
- **reducing “hospital hallway healthcare” and associated pressures**



EMS VISION – ONTARIO 2050

In 1968, the government of Ontario reacted to the urging of ambulance service providers to help respond to the patient-focused needs of providing better vehicles and training standards.

In the ensuing fifty years, the province's ambulance services have witnessed wholesale change in training and skill levels, equipment and vehicles, funding and delivery models.

The one constant throughout all of the changes in this fifty year history is the expansion of the size and influence of government involvement, especially over the last twenty years. Local, independent operators are gone while bureaucracies at the provincial level and the 53 upper tier municipal governments now carry out every aspect of the provision of EMS including legislation, regulation, funding, administration and operation.

Despite dramatic increases in funding during that time period, it is fair to say that Ontario lags behind world leaders in delivering EMS as measured by best practices and science-based procedures. Ontario has a cumbersome regulatory system. It does not foster or fund EMS research and its technologies are not capable of the compilation of useful research data. Ontario is too slow to adopt available technologies and it spends too much on administration. This state of affairs causes the system to be unable to innovate or to adopt best practice medical modalities to improve care and at the same time save money. Unfortunately, these same faults can be found across the broader health care sector.

As we look ahead to 2050, it is important to acknowledge the work that has been done by EMS leaders and the EMS community. However, we cannot rest there. It is increasingly important to reduce regulation and the idea of centralized control to allow for more local determination of the services to be delivered by the EMS system in concert local health authorities.

At this point in time, we need to refocus and to adopt a patient-centered agenda for reform. We need to realize that Ontario is made up of local communities with unique demographics and health care needs. We need to make it possible for more local determination of what EMS should be. One size does not fit all.

We also need to look into the future and to anticipate the opportunities that changing health care practices and technologies will bring. It is these influences that will guide the evolution in the delivery of EMS in Ontario. We need to adopt a pro-active, forward-looking, innovative attitudes towards the development of world-class EMS systems for all communities.

This document, "EMS VISION – ONTARIO 2019 - 2050" is the result of an evolving process that we began over two years ago. The foundational work was penned following the completion of



the PC Party – Policy Advisory Committee work in 2017.

Our first document entitled “**optimizing ambulance and paramedic services to reduce hospital hallway healthcare and associated pressures while decreasing health system costs and preparing for the future**” offered realistic, achievable plan. It provided a road map for change that will transition the oversight, administration and provision of EMS in Ontario to a streamlined operation that is patient-focused and adaptable to local community needs. Additionally, the plan will produce savings of an estimated two hundred million dollars in EMS expenditures alone, in the short term. This will be accomplished without involuntary job loss while increasing economic and operational efficiencies via a process of consolidation and integration of EMS resources, promotion of research and collaboration with health care partners.

It became apparent that besides saving significant taxpayer dollars in EMS operations, reforming the role of EMS could contribute to vast dollar savings across the broader health care spectrum.

For instance paramedics providing out-of-hospital care in the homes of chronically ill patients has demonstrated significant benefits in other out of province jurisdictions as well as here in Ontario. An Ontario-based study has demonstrated a six-month savings of \$4.7 million to the health care system based on a study population of only 650 patients ¹.

Additionally, health partner areas such as Public Health will benefit if EMS assets of workforce and technology are leveraged to assist in the delivery of programs to the public.

Ontario’s EMS and health care leaders need to look into the future in order to ensure that the path forward will be nimble enough to adapt to new realities as technologies and health care practices are applied to meet changing needs in every Ontario community.

We are pleased to present our plan – a plan that will provide the nimble, affordable, adaptable, forward-looking platform on which to build the next thirty years in the delivery of paramedic services.

We hope that you like what you see through the lens of **EMS VISION – ONTARIO 2050**.

Credits for EMS VISION – ONTARIO 2050: This document utilizes many of the concepts expressed in the report “EMS Agenda 2050 – Envision the Future. Which was published May 18,2018 and is the culmination of more than two years of input in the United States from the public and the EMS community, through the National EMS Advisory Council, a Federal Request for Information (RFI), public meetings, conference sessions, website submissions and more. We are indebted to the authors and contributors of the report for their diligence, insight, collaboration and vision.



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The Vision

A People-centered EMS System includes processes, protocols, technology, policies and practices designed to provide the best possible outcome for individuals and communities—every day and during major disasters. EMS is a versatile and mobile community healthcare resource, integral to regional systems of care that prevent and treat acute illness and injury, as well as chronic illness.

Why People-Centered?

- People will receive comprehensive care in the place that is most convenient and comfortable for them.
- Because while caring for patients is our top priority of clinical care will be driven by methodologically sound research, with patients receiving interventions that are proven to produce the outcomes they desire.
- We must strive to meet the needs of patients' loved ones and communities, as well as the practitioners who provide care
- Customer Service and Satisfaction must become central to our purpose If people would benefit from being transported, they will be moved efficiently and safely using technology that minimizes the risk of injury to both patients and providers. The ambulance will not require lights and sirens, but will take advantage of other advances that expedite transit and prevent collisions.
- Effecting this change will require deliberateness; a conscious, collective and courageous effort to design
- EMS systems focused on the needs of all persons: patients, families, caregivers and the broader community.
- People will not only receive lifesaving and disease-treating care, they will also receive care that reduces physical, emotional and physiological suffering; care providers will be given the education and training that adequately prepares them to meet the needs of the people they are called to help.
- EMS providers will have access to, and contribute to, a person's comprehensive medical record; the same one that is used by all other aspects of the healthcare system.
- Diagnosis and treatment will be supported by comprehensive expert systems that are continuously updated in real-time as new scientific advancements emerge.



A Typical EMS Paramedic Response - 2019

It is Sunday, August 19, 2018 and nine-year-old Dana Ingram is in the backyard of her Grandma Mary's house, pulling weeds in the garden. As she kneels to begin pulling weeds, she feels a sharp pain in her leg and reflexively swings for the bug that might be biting her. A minute later, she suddenly feels lightheaded and sick to her stomach. The wooziness scares her, and the panic is evident in her voice when she calls out to her grandmother for help. Dana's grandmother Mary hurries outside and finds her granddaughter lying on the grass, pale and gasping for air.

Mary moves quickly back to the house and dials 911. The 911 Call Receiver answers and asks if she wants police, fire or ambulance. Mary is flustered and can't answer immediately but then says "Ambulance – please hurry my granddaughter is having trouble breathing. The communicator transfers the call to the Central Ambulance Communications Centre. The Emergency Medical Services Communicator provides the necessary information and assures Mary that she is responding an ambulance and the nearest Fire Department and asks Mary to stay on the line. Momentarily, the EMS Communicator is back and provides first aid instruction for airway maintenance.

Mary hurries back to the garden, worried about Dana. As she nears her side, she can hear sirens in the distance. She gathers Dana up in her arms and can see that she is dazed and she can hear wheezing. Dana's breathing is laboured.

Soon, four Fire Fighters rush into the backyard with bags of gear. One Firefighter pulls Mary aside and assures her that it will be alright. Another Firefighter, identifies himself to Dana as Bill as he removes his fire hat. Bill asks her some questions and tries to calm her but she is scared. Bill places an oxygen mask over her mouth and nose and he tells her that he will take her pulse as he touches her wrist.

Another siren approaches and soon another person with bags comes into the backyard. The Firefighters know her. Her name is Kelly and she is a Paramedic. Kelly is working on the Emergency Response Unit. She was posted several minutes away but was the closest EMS resource to the scene.

It is an unusually busy day for EMS. Two multiple car collisions have overwhelmed the local hospital Emergency Ward which is normally stressed on Sundays because all of the doctors' offices are closed. Sixty percent of the ER beds are occupied by admitted patients waiting for beds upstairs. The wards are full. Many of the ward patients require ongoing care in nursing homes but there are no available nursing home beds. The overworked Emergency Ward are doing their best to cope. People on stretchers fill the hallways and there are four ambulances parked on the apron that have been waiting for as much as ninety minutes to offload their patients. The municipal ambulance fleet is even further depleted because two ambulances are transferring severely injured patients from the car accidents to Trauma Centres. Of the ten staffed ambulances on shift, only four remain available plus the two one-person Emergency Response Units. The available resources have been moved to posts that will provide the best possible response times under the circumstances.



Kelly can see that Dana is in distress but she is an experienced Advanced Level Paramedic. Kelly receives a brief report from the firefighters on scene and within seconds administers an epi-pen injection. Kelly then proceeds to complete a more detailed primary assessment. An incident history is determined and Kelly attempts to obtain medical history and list of medications; unfortunately Mary is rightfully shook up from the event and is less than clear in providing the details that Kelly needs.

Kelly is still able to review Dana's vital signs and check the cardiac monitor, oxygen saturation, as well as listening to Dana's lungs for air restriction. Kelly can see that the epinephrine is starting to have the proper impact. Dana is breathing better and is now able to answer questions with one word. Seeing some minor improvement Kelly determines that she will hold off starting an I.V. at this time but will continue to monitor and if required she can quickly start one for access.

Kelly continues her treatment protocol and administers a bronchial-dilator via an inhaler using an aero chamber to allow for easier breathing. Kelly knows that this will further help Dana breath and decrease signs of respiratory distress.

Dana is already positioned for transport when the transport ambulance arrives. Kelly prepares for transport as she understands that Dana needs to be monitored. One of the side effects of the epinephrine administered is an irregular heart rhythm. Kelly can't help but wonder if her radio patch to the hospital will be working today as it has been unreliable this week, she may need to use a cellular telephone to relay Dana's information to the emergency department. Dana is now able to speak in full sentences and her respiratory distress is greatly improved.

Kelly knows that Dana would be better to stay with her Grandma and have a follow-up visit with her doctor, but regulations and technology have not changed yet and require that Dana has to be taken to hospital.

Soon the transport ambulance arrives and Dana gets to ride on the stretcher with her Grandma at her side. As Dana is being put into the ambulance by the paramedics, her Grandma called Dana's Mom to meet them at the hospital, where on arrival, they spend the next forty-five minutes waiting in the ambulance before entering the Emergency Ward.

Once in Emergency and another wait, Dana is seen by the doctor and very shortly discharged to go home.



Why 2050?

While it is not likely that folks in 1968 were looking far into the future, but rather acting more on immediate needs, in today's economic climate and with rapid technology advances driving changes in medicine, we need to focus on the future.

To some readers, 2050 sounds like some futuristic time, a date we associate with the science fiction books and movies of our youth. Just consider the change that has taken place in just the last three decades,

In the early 1980's we saw the first mobile phones introduced to the market. The cost was around \$4000 each, an equivalent to about \$10,000 in 2018. Approximately 10% of households owned a personal computer. Cable television was in its infancy.

What did EMS look like then? In some ways it was very similar to where we are now. People called for help, and ambulances responded. There were two people trained as Emergency Medical Care Attendants (EMCA) or paramedics. They communicated with dispatchers and the hospital using radios and took most of their patients to hospital emergency rooms. Many of the basics of clinical care looked the same as well. More recent advancements included defibrillation for cardiac arrests, to epinephrine for anaphylaxis.

We now not only take trauma patients to specialty centers, but regularly bypass hospitals to get stroke and STEMI patients the care they need.

Technology has changed, with automated external defibrillators (AED) bringing defibrillation first to basic life support (BLS) providers, and then to the public. Almost every ambulance has at least one computer, if not two or more, displaying critical information and allowing for real-time data entry and transfer.

Clinical care has evolved based on research and evidence, with many once-heralded treatments now known to be ineffective or even harmful. And EMS is now recognized as a physician medical subspecialty.

History shows us that while change can occur rapidly, many systemic and cultural shifts take a generation. EMS Vision 2050 looks to create a vision for what EMS should become, free from many of the constraints of today. Trying to think that far ahead is a challenge, but we must realize that some of the ideas presented here will be feasible immediately, while others may take decades to achieve. Many aspects of society, including healthcare, technology and politics, will evolve between now and 2050 in ways that we cannot imagine. But no matter what the future brings us, the principles described in EMS Vision 2050 are intended to serve as a guide to help us create systems that truly allow EMS to fulfill its mission.



A Glimpse of a Future EMS Paramedic Response

It is thirty years in the future Sunday, August 21, 2050, and nine-year-old Carla walks into the backyard, taking care not to step on the tomato plants just beginning to grow. As she kneels to begin pulling weeds, she feels a sharp pain in her leg and reflexively swings for the bug that might be biting her. A minute later, she suddenly feels lightheaded and sick to her stomach. The wooziness scares her, and the panic is evident in her voice when she calls out to her grandmother for help.

Carla's grandmother hurries outside and finds her granddaughter lying on the grass, pale and gasping for air. Carla's earring beeps—wearable devices come in almost any shape nowadays—and then a recorded voice speaks: "Carla, we have detected some abnormalities in your health monitoring. We are notifying the Medical Communication System. Please stand-by." "Carla, Hi, it's Abdi, a Telemedic with emergency services. We received an alert that there might be a problem with your heart rate and other vital signs. Are you feeling okay?"

Pressing a button on her mobile device, Carla's grandmother activates the emergency program and Abdi's face appears on her screen. "I see her eyes are open," Abdi says. "Is she responding to you?" "No, and her breathing doesn't sound good either. Please help! I don't know what to do."

Abdi continues to speak to Carla's grandmother while monitoring the young girl's vital signs. Soon, a familiar voice calls out that he's here to help, and Carla's grandmother recognizes one of her neighbours as he walks around the corner of the house to the backyard. A retired respiratory therapist, he is a registered community medical volunteer and received a notification at home that a serious medical emergency was occurring nearby. Carla's grandmother waves him over, just as an emergency medical kit drone lands safely a few yards away. She feels her heart pounding in her chest as she watches her neighbour talk to Abdi and quickly access the medication administrator from the drone. He programs the device to epinephrine and sticks it on Carla's arm. It quickly reassesses her vital signs, weight and other parameters and administers the calculated appropriate dose.

Jana Nguyen sits in the back of an ambulance watching live video of the stroke specialists treating the patient she brought to the neurology clinic just 15 minutes earlier. Before reaching the station, a voice interrupts as the dispatch system notifies Jana and her partner, Steve, that they are responding to a call for a sick child. Another voice requests that they secure themselves in their seats. They hear the quiet hum as the engine starts, the restraint systems click in, and the screen on the wall displays information about their new patient. Jana begins



reading about Carla’s medical history—other than being born 6 weeks premature, she’s been healthy—and sees her current vital signs. Based on information collected on the scene, the AIM—artificial intelligence medic—states that there is an 82% probability the patient is having an allergic reaction.

The ambulance accelerates onto the Parkway and a few miles later exits onto Regional Road 23. Traffic is light in this semi-rural community, and a few self-driving vehicles automatically get out of the way. Jana finishes reviewing the most recent allergic reaction evidence-based update, looks at Carla’s latest vital signs and steps out of the ambulance.

A quick respiratory and cardiac scan with a monitor confirms that Carla has some constriction in her airways. Her perfusion levels have improved, though, and she’s beginning to regain color in her skin. “How are you feeling?” Jana asks, putting her hand on Carla’s shoulder. Still groggy, Carla says she’s starting to feel better. Over the next several minutes, Jana explains to her what has happened, while also continually assessing her comfort.

After a few minutes, Jana contacts Abdi again, and asks him for a connection to the EMS physician on call. The physician talks to Carla and her grandmother, reviews the assessment findings, and asks the paramedics what they think. They discuss their findings and agree that leaving Carla at home with her grandmother is the best plan. Carla breathes a sigh of relief and smiles, squeezing her grandmother’s hand.

“If it’s okay with you, our telemedics will be monitoring your granddaughter and will call to check in shortly,” Jana says. “You should get a notification later today about scheduling a visit with an allergist, and the complete report will be available in just a few minutes in Carla’s health portal.”

The paramedics help Carla inside and make sure she and her grandmother are comfortable with the plan. They quickly do a home health assessment before heading outside to the ambulance. Heading back to the station, Jana reviews the information in her report, which was created based on voice recordings and data transmitted from the Telemedic Center and the medics’ diagnostic equipment.

Meanwhile, Carla rests at home but soon feels better. Her grandmother is too nervous to let her play outside, but they find an old movie to watch—an old 2D classic that she remembers from her childhood in the 1990s. The next day, Carla follows up with an allergy specialist who is able to identify what she reacted to and prescribe a vaccine to prevent future reactions.



What's in a Name?

On a broad basis, there is continued debate on how well the term “emergency medical services” describes the full scope of services provided by EMS organizations and the EMS

workforce. We choose to use “EMS,” since there is not yet any agreement on another way to refer to the many important services it provides to communities, or the individuals who deliver those services.

Six Guiding Principles

To achieve this vision, we must begin to design the EMS systems around six guiding principles. These principles provide a framework for addressing the most critical aspects of developing a people-centered EMS system. By considering the future of EMS through the lens of these principles, the EMS profession can imagine how the individual attributes of an EMS system—from education to medical oversight, clinical care to quality improvement and much more—fit together to create a people-centered system.





Inherently Safe and Effective

The Vision: *The entire EMS system, from how care is accessed, to how it is delivered, is designed to be inherently safe and minimize exposure of people to injury, infections, illness, or stress. Decisions are made with the safety of patients, bystanders, the public, and practitioners as a priority, from how people are moved to hygiene practices in the field and in the ambulance. Clinical care, operations and other aspects of the system are based on the best evidence in order to deliver the most effective service, with a focus on outcomes determined not only by the EMS service but by the entire community and the individuals receiving care.*

Getting from here to there: The field of EMS in 2018 has made long strides since 1968. With a growing research base and more attention being paid to evidence and outcomes, Ontario's EMS providers are now using clinical care guidelines rooted in science, but much work remains.

Despite the improvements, EMS operations across the province, both large and small, rural and urban, sometimes fall short of providing safe and effective care. Best practices, based on evidence and patient-centered outcomes, frequently take years, or decades, to become broadly implemented. Organizations lack the resources needed to implement meaningful performance measurement and quality improvement systems, leaving them in the dark as to whether the care they are providing is truly safe or effective.

Local EMS systems must adopt a culture of safety that retains existing initiatives to improve driving and patient lifting techniques and also addresses other areas of patient, public and provider safety, including diagnostic and treatment errors, hygiene practices, and much more.

A people-centered approach to a safe and effective EMS system will focus on interventions that have demonstrated benefit and prevent further injury and illness, while avoiding those that are ineffective or harmful.

What 2050 looks like: EMS care and operations focus on practices that yield good outcomes and reduce harm. EMS medical care in every community is based on the best available evidence and best practices, with a focus on outcomes determined by the community and the patients, including patient-reported outcome measures. These outcomes, as well as the evidence-based processes involved in achieving them, are measured and publicly reported.

EMS physicians, leaders and field providers take ownership and responsibility for ensuring the care delivered by EMS providers in the system adheres to evidence based practices.



Community and regional quality improvement systems measure, analyze and work to improve outcomes for patients, providers and members of the broader community. These systems cut across organizational boundaries and include input from across the care continuum, including, but not limited to, first responders and EMS providers, hospitals and medical specialists, and patients.

EMS systems at local, regional and provincial levels embrace a culture of safety.

Education and training for the EMS workforce covers all aspects of provider and patient safety with a focus on evidence-based methods of harm reduction.

EMS systems across the province use a standardized method of collecting and reporting data on medical errors, injuries to patients, provider injuries and illnesses, near-hits, and other safety issues in order to evaluate improvement efforts, facilitate research and develop evidence-based safety training and procedures.

Funding and regulatory mechanisms promote safe and evidence-based practices, with a focus on improving outcomes and reducing harm rather than rewarding specific procedures or services.

Integrated technology and artificial intelligence provide situational awareness and decision support. Real-time and predictive information is delivered to emergency medical communicators and first responders prior to their arrival on the scene, including video and sensor data provided by patients, bystanders or even devices such as drones.

With this information, responders are better able to assess the safety of a scene and determine what resources might be needed early in the response.

Wearable devices alert providers to any potential safety hazard, from threats including nuclear, chemical or biological contamination to personal health issues that might impede their performance, such as heat exhaustion or excessive fatigue.

Real-time, automated artificial intelligence supports provider decision-making by analyzing information instantaneously, including data from patient records, diagnostic equipment and other inputs.

EMS systems prioritize technology, equipment and policies that use proven methods to limit the safety risk to providers and patients. EMS professionals only lift and move patients in extremely rare circumstances, instead using technologies and mechanized equipment, avoiding injuries to both providers and patients.



Responders no longer use lights and sirens to race to a scene or transport patients to a hospital. Instead, bystanders or EMS providers on the scene deliver time-sensitive interventions, taking advantage of telemedicine technologies when consultation with other providers is beneficial to patients. In rare situations when rapid movement is required, urban planning and integrated technologies allow for more efficient and safer response and transportation of patients.

Medication delivery systems use real-time and historical data from health records to deliver appropriate and correctly-dosed medications specific to each patient. Providers never calculate or measure out a drug dose, eliminating medication dosing errors completely. Instead, providers can focus on clinical decision-making and compassionately communicating with patients about their condition.

Evidence-based methods prevent EMS personnel fatigue from impacting the safety of the workforce, their patients or the public. These methods may include policy and/or regulations to limit the number of consecutive hours worked by EMS personnel; adequate breaks and rest during shifts; sufficient pay and staffing to avoid the need for extensive overtime; physiological or other types of testing to objectively measure an EMS worker's level of fatigue before, during and after shifts.

EMS data systems securely protect patient information and privacy. Patient health information is owned by patients, but relevant information is readily accessed by EMS providers and other personnel, as appropriate. EMS systems invest in the equipment and expertise necessary to maintain and adequately secure data systems, which use the most advanced methods of protecting patient privacy.

An Inherently Safe and Effective future: Although the last several decades have seen improvements, EMS systems may still rely on unproven processes, outdated medical interventions and outcomes determined by the organizations and providers. Operational and clinical practices often continue for far too long despite evidence suggesting they lack effectiveness or even cause harm. A people-centered EMS system must be based on a foundation of people-centered goals, focused on achieving patient- and community-determined outcomes.



Integrated and Seamless

The Vision: Healthcare systems, including EMS, are fully integrated with each other and with the communities in which they operate. Additionally, local EMS providers collaborate frequently with their community partners, including public safety agencies, social services and public works. Communication and coordination between different parts of the care continuum are seamless, leaving people with a feeling that one system, comprised of many integrated parts, is caring for them and their families.

Getting from here to there: EMS cannot adequately serve members of the community without being better integrated with its partners. While the healthcare industry has made some progress breaking down barriers and removing silos, much work remains—and EMS has often struggled to find a “seat at the table.”

And it’s not just healthcare—EMS must also collaborate closely with public safety and emergency communications systems, as well as public health, mental health and social service resources, and many other public and private organizations. At any given time, EMS providers may need to integrate with these agencies while responding to a major disaster, work with them to create an individual care plan for a patient, or share data in order to plan for future events.

The potential to improve information sharing already exists, but has yet to be realized. Technology has made it possible for EMS to provide and receive real-time data that can help with decision-making, from patient’s health records to safety information about a response location. Despite the technological advancements, the Ontario government control, regulation and funding of the EMS system has not put processes in place to utilize the technology. This failure to integrate data and technology must be corrected at a high level.

EMS systems must work with healthcare and hospital systems to share data. The Ontario government must make a concerted effort for the integration of information, communication and care in order to foster improved outcomes and to bring EMS and its partners in health care closer together.

Integrated and seamless goes well beyond technology platforms. In a seamless system, jurisdictional borders matter less than getting the right care to the right patient; and the entire team—first responders, healthcare providers, social services, and many more—share unified goals and objectives. Technology can serve to facilitate the system, but education, communication and collaboration will serve as its foundation.



What 2050 looks like: EMS personnel have immediate access to any resources they need for their patients, including other healthcare providers, social services and community resources.

EMS providers know what resources are available and are able to connect patients to the appropriate organization or person who will provide the care or service they need.

Information and communication systems are connected and continuously updated and improved to ensure immediate access to the right resource for the right patient.

Medical communication centers, integrated with public safety answering points, serve as hubs for acute and non-acute unscheduled healthcare, using evidence-based methods to triage potential patients and provide the appropriate resource or referral, including telemedicine care.

EMS and its partners coordinate to provide the most appropriate care to the patient, with transport to a healthcare facility being just one option.

Hospitals, skilled care facilities, medical offices and EMS communicate and collaborate to ensure smooth transitions of care for patients and their families.

All EMS assets in a region, including air medical resources, public and private systems, response agencies and inter-facility transport agencies, are part of a regional system of care that takes advantage of each partner's strengths to deliver the optimal, efficient and effective services needed at any moment.

As EMS becomes more integrated into the broader healthcare delivery model, the need for collaboration and stakeholder engagement is going to be vital.

EMS personnel can access and contribute to a fully integrated, patient-centered medical record that is owned by the patient.

A real-time healthcare data system that can be accessed remotely by both patients and providers through a safe and secure authentication process delivers pertinent patient health information to EMS personnel in the field. The information is easily digestible and relevant to the care and treatment decisions being made in the field.

EMS professionals are part of the patient's medical team, with access to their care plans and providers. Patient medical information is updated in near real-time, so the entire care team is aware of what other providers are doing as they are doing it.



Rapid feedback is delivered to EMS providers, including patient outcome information and other patient data from the healthcare continuum, in order to improve performance measurement, quality improvement and education.

EMS data inform decisions made not only in EMS, but also in other areas of the community and to support population health and preparedness.

EMS data systems deliver real-time knowledge about patterns of disease, injury and access to care. Information collected and shared in these systems informs decisions made related to healthcare operations, public health and interventions related to social determinants of health.

EMS and public health data are integrated in ways that help identify emerging outbreaks or demographic trends in injury and illness patterns.

The education of EMS and other healthcare professionals promotes and supports an integrated system of care.

Inter-professional and interdisciplinary education systems prepare EMS providers and their healthcare colleagues to work collaboratively together. Students learn early on in their education about the roles and responsibilities of other providers on the healthcare team and also spend time with those providers in both the clinical and educational environments.

Education of advanced EMS providers includes a comprehensive orientation to public health, social services, mental health and social determinants of health in a way that truly empowers them to provide integrated care. Curricula also ensure that EMS providers are prepared to collect, share, analyze and use the data available to them.

EMS physicians provide medical oversight and direction for a system that also draws on other providers' expertise, when needed.

EMS physicians' education and training prepares them to be leaders and patient advocates who lead the medical oversight of regional systems for acute and non-acute unscheduled healthcare, with expertise in the clinical aspects of care, as well as disaster management, telemedicine, care coordination, patient navigation and the social determinants of health.

EMS medical oversight for specific patients and/or populations includes close collaboration with the physician(s) who make up the patients' medical home. Care plans are developed in conjunction with EMS physicians to ensure the most appropriate use of EMS resources to care for the patient.



Input from other specialists, including but not limited to, paediatricians, oncologists, psychiatrists and other behavioural health experts, pain specialists, cardiologists, neurologists and pharmacists, is a key part of EMS care—from overall system development to real-time decisions for individual patients.

Technology connects EMS providers with EMS physicians, patients' physicians or specialists when direct consultation adds value and improves outcomes.

EMS and its public safety partners learn together, train together and prepare together in order to respond as a unified team.

EMS systems incorporate public safety to provide first response when evidence shows it will improve outcomes. This includes the delivery of life-saving interventions and sharing of important information to improve situational awareness for other responders.

EMS education systems include public safety partners to ensure every member of the team is aware of each other's roles and limitations and works together to coordinate operations and patient care.

Interoperability of communications and data systems ensures that organizational and jurisdictional differences do not inhibit sharing of critical information before, during or after any incident.

An Integrated and Seamless future: A truly integrated system will go beyond sharing data and communicating during or after a specific incident or episode of patient care. To create a seamless system, EMS professionals and their community partners must commit to the same shared objectives and find ways to achieve them together. A people-centered EMS system takes advantages of the strengths and resources brought by each organization and provider to protect the health and wellness of individuals and communities.



Reliable and Prepared

The Vision: *In 2050, patients receive reliable EMS care that is consistently compassionate, and guided by evidence—no matter when or where they need help or who the agency or individual provider is. EMS systems are prepared for anything by being scalable and able to respond to fluctuations in day-to-day demand, as well as major events, both planned and unplanned.*

Getting from here to there: Since the birth of modern EMS, the profession has transformed from a patchwork of responders, who may or may not have shown up on the scene of an emergency, to a system that most Ontarians can rely on to respond, provide medical care and take them to the hospital. With the possible exception of some extreme frontier environments, the public generally expects that when they call 911 for a medical emergency, someone will come—day or night, rain or shine, for an individual or a mass casualty incident.

Yet in many ways, EMS systems still struggle to be reliable and prepared. Inconsistencies abound, with levels of service varying based on location, time of day or other factors. In many urban settings, EMS systems find it difficult to keep up with increasing demand. In rural communities, a lack of personnel and other critical EMS resources compounds the overall crumbling healthcare infrastructure. Across the province, those responsible for training and education of EMS providers at all levels are challenged to keep up with changing needs of the workforce and the evolution of the practice of out-of-hospital medicine.

System threats such as delayed offload or the more ominous like domestic terrorism to natural disasters strain the capabilities and capacity of local systems, which have to plan for worst-case scenarios while continuing to respond to daily events and remaining fiscally responsible and efficient. At the same time practices can sometimes lag significantly behind best practices and evidence-based medicine.

The future will hold an abundance of promise. In some jurisdictions, innovative organizations have used EMS to fill healthcare gaps, recognizing the potential of a mobile, highly trained and organized workforce. Technology is making it possible for healthcare providers to interact with patients in new ways, bridging divides created by geography and cost. Many barriers to providing unscheduled healthcare today will likely no longer exist in 2050.

What 2050 looks like: Adequate staffing for EMS exists across the province. Communities are served by fully-staffed EMS systems that provide reliable and consistent service. Local authorities prioritize the provision of out-of-hospital, unscheduled care by ensuring the availability of safe, educated and highly capable field providers, supervisors and EMS physicians.



The use of first responders and community volunteers in EMS systems is critical to quickly treating time-sensitive emergencies, scalability and mitigating large-scale events and disasters. Community volunteers play significant new roles in EMS systems, including:

- Primary and secondary education programs train civilian bystanders to recognize and react to emergency situations. As they respond, they are augmented by real-time decision-support and training technologies that assist in their response.
- Response systems activate community volunteers to respond to nearby medical incidents when their assistance would improve outcomes.
- Programs ensure EMS coverage in rural communities and for underserved populations, such as tuition reimbursement for working in these areas.
- Career opportunities encourage members of the EMS workforce to pursue further education while remaining clinical providers, through the creation of EMS subspecialty and leadership education programs, as well as the further integration of EMS with other healthcare professions.
- Expanded bridge programs take advantage of and supplement veterans' military medical training and experience, ensuring that veterans are adequately prepared to work in non-military EMS environments.

Care delivered in communities is consistent with best practices, flexible to meet specific needs of the communities, and continuously innovative to foster improvement.

EMS practitioners at all levels deliver care guided by best practices and evidence as established through peer-reviewed research led by trained investigators. A minimum standard establishes a baseline for care throughout the province.

Variations from the standard are made only to improve outcomes, including the patient experience, or to reduce costs without negatively impacting outcomes, based on the specific characteristics of the community and under the oversight of credentialed EMS physicians.

Licensed EMS practitioners are granted the privilege to practice across the province, with all providers able to practice at the level that their education prepares them for.

The education of EMS providers reflects practice in the field and prepares them to take care of patients in any environment.

The education of all EMS professionals occurs in an academic setting, with a focus on clinical and operational problem-solving and decision-making. EMS educational programs are led by qualified teams of EMS physicians and educators who themselves have been carefully selected,



groomed and educated to prepare future EMS providers to deliver people-centered care. These teams include experts in the design and delivery of educational programs.

Clinical education includes realistic simulation and time in patient-care settings, with opportunities to perform hands-on assessments and technical procedures and develop critical communication skills while under the supervision of trained clinical educators.

Provincial Standards and certification ensures consistent baseline education and competency of all EMS personnel, assuring communities, employers and the public that every certified EMS provider is qualified and capable.

Continuing education is tailored to the needs of patients, communities and EMS providers, taking advantage of technology and data to deliver education that fills gaps and supplements previous education to ensure continued competency and further growth of providers. Technology facilitates “just-in-time” asynchronous training focused on the current and emerging health needs of the community.

Opportunities exist for EMS providers of all levels to receive specialty education and certifications. These specialists provide education in their areas of expertise and are also used when their services are needed in the field. Personnel information systems maintain accurate records of providers’ specialty training to ensure the right resources can be utilized at the right time based on the needs of patients and communities.

EMS systems prioritize leadership development and succession planning, supported by EMS higher education programs.

Educational programs prepare all EMS providers to take on leadership roles, helping EMS systems develop leaders who can fill roles ranging from field supervisors to executives.

The delivery of high-quality EMS is a multi-disciplinary endeavour that includes well trained and educated paramedics, nurses, advanced practice providers and physicians. Aspiring EMS leaders are recognized and encouraged early in their careers through proven methods of identifying those with the potential and desire to lead. They are given opportunities to take on new challenges that broaden and deepen their experiences and provide them a pathway to take on more responsibility and leadership throughout their careers.

Regional systems of disaster medical care ensure appropriate resource allocation and organization of resources during a major incident.

Regional Communication Centers ensure that every Ontarian has immediate access to a trained professional via voice, video, text or other means of communication.



Whether during an average day or a surge in demand or a major disaster, these centers use the combination of technology and educated personnel to quickly determine the resources needed and how to either deliver those resources to the patient, or the patient to those resources.

Allowing flexibility in the practice settings of healthcare providers, especially during disasters and other major events, strengthens the resilience and preparedness of the overall healthcare system. For example, hospital-based providers receive training and are credentialed to practice in out-of-hospital settings when disasters are declared, and field EMS personnel are utilized in hospitals or other facilities when large numbers of sick or injured people exceed their capabilities.

With fewer patients receiving in-hospital care, EMS providers are trained and fully prepared to treat, evacuate and care for “hospital at home” patients and other residents of the community with special needs during a disaster.

Real-time and historic data are used to predict or immediately respond to emergencies from cardiac arrest to mass casualty incidents.

Healthcare and other information systems are used to help identify members of the community in need of special assistance before, during and after disasters.

Community disaster planning takes this information into account, with EMS at the table serving as a critical leader and collaborative partner.

A Reliable and Prepared future: From managing large incidents with only a small number of personnel to improvising equipment, members of the EMS profession have long taken pride in their ability to overcome challenges related to inadequate staffing, resources and preparation. A people-centered EMS system is prepared to reliably provide the right care at the right time for the right patients—through planning, education, leadership and communication that ensure the entire province is protected.

The EMS Provider of the Future: EMS providers of the future will likely differ significantly than today’s emergency medical responders, paramedics and other professionals. Already in 2018, some have developed certifications or credentials for critical care, community or advanced practice paramedics, whose training and sometimes scope of practice extend beyond the traditional paramedic’s.

Other areas of health care have given roles to behavioural health specialists, physician assistants, nurses and nurse practitioners, among others. In addition, the critical role of EMS physicians has evolved from one who establishes protocols to an integral part of the leadership



team, often not only overseeing clinical care, education and other aspects of EMS delivery, but also playing a proactive role in direct patient care, whether through telemedicine or in person.

A future EMS system will rely on a strong backbone of responders with training to provide immediate life-saving care. These caregivers may include bystanders, trained volunteers, and first responders. Supplementing and overseeing that level of response will be a highly educated EMS professional providing more advanced care. The deployment of all of these providers will be based on providing the best care, with the best outcomes, in the most efficient way possible, while providing joy in work for the practitioners and garnering patient satisfaction.

In today's terms, one might see this as a large network of trained emergency medical responders and emergency medical technicians, with the basic tools and training to stabilize an incident, supported by a much smaller group of paramedics, with more extensive education allowing them to be true medical providers in the field and work hand-in-hand with other medical professionals, including EMS physicians.

Whether these future EMS providers evolve from today's paramedics, with additional clinical and public health education, or from offering specific education and residency programs in out-of-hospital care to physician assistant or nurse practitioners—or some blending of those and other paths—depends on many factors. No matter how exactly their education is delivered, or what the patch on their shoulders might say, these providers must be prepared to play a much larger role in managing the health of the patient and the community.



Socially Equitable

The Vision: *In a socially equitable system, access to care, quality of care, and outcomes will not be determined by age, socioeconomic status, gender, ethnicity, whether they live in a rural or urban community, or other social determinants. In every community, EMS systems will be able to provide any resident or visitor the best possible care and services, in order to maintain the health of individuals and populations. Caregivers will feel confident and prepared when caring for children, people who speak different languages, persons with disabilities, or other populations that they may not interact with frequently.*

Getting from here to there: For several decades, EMS has considered itself part of the “safety net” of the healthcare system. In Ontario, if you call 911, someone will respond, no matter who you are. EMS professionals often take pride in responding to, treating and transporting anyone who needs help, regardless of socioeconomic or insurance status, race or ethnicity or any other factors.

However, disparities in service can exist in rural and remote communities or where complex issues such as inadequate funding or a lack of language or cultural competencies exists. EMS professionals must recognize that these problems exist and seek to measure them and improve.

Socially equitable care in a people-centered EMS system does not mean every patient receives the exact same care—but it does mean differences in care are based on evidence and the desires of patients and their families. Some reasons for inequity in healthcare may seem beyond the scope of EMS. Those inequities likely will remain in 2050, including disparities in income and language.

There are ways EMS can help address even these larger socioeconomic disparities, such as offering patients more appropriate options for care and taking advantage of technology to bring resources to communities that may not have them.

When people suffer a medical emergency, the emergency communicators and EMS professionals who care for them are often some of their greatest advocates. On the phone and in the ambulance, those caregivers usually have only one patient, and they focus all of their energies on that person regardless of who he is, where he was picked up. The EMS profession has a great opportunity to build on that one-to-one relationship during the time of care and become a strong advocate for reducing disparities and ensuring that everyone gets exceptional care.

What 2050 looks like: The setting where a person receives care, whether urban, rural, or in between, has little impact on the quality of care they receive or patient outcomes.



Every community has access to EMS technologies and treatments that have been shown to have a significant positive impact on outcomes. Using virtual technologies and telemedicine, rural communities have access to specialty care and resources, avoiding the need to transport patients long distances and separate them from their homes and families. Incentives, including subsidized education, encourage EMS providers to work in underserved communities.

People of all ages, including paediatric and geriatric patients, receive consistent, high-quality care.

EMS initial and continuing education, as well as access to specialists and other resources, ensure that providers are comfortable treating populations they encounter less frequently in the field, including infants and children.

EMS systems have access to equipment that allows them to safely and effectively care for patients of all ages; equipment and medical devices are designed to easily adapt to patients of different sizes and ages without compromising patient safety. EMS research includes investigations into the safety and effectiveness of interventions on patients of all ages.

The most effective and efficient care is available to individuals regardless of their health status, race, ethnicity, gender, socioeconomic status or other social factors.

EMS providers receive education on how implicit bias impacts patient care and methods to recognize and overcome their own biases. EMS education for all providers includes extensive discussions of behavioural health issues, making providers capable of and comfortable treating people who suffer from both acute behavioural health episodes and chronic mental illness.

Compensation for the EMS workforce enables EMS providers to live in the communities they serve, and local EMS leadership, educators and field providers reflect the diversity of their communities.

Technology has eliminated the impact of language barriers on EMS care. EMS providers are well educated about end-of-life care and have immediate access to advanced directives and other ways of ensuring that patients' and their families' wishes are known and met.

A Socially Equitable future: An EMS system can only be socially equitable if EMS providers recognize the potential and actual disparities and embrace methods of eliminating them. In a people-centered system, potential disparities are measured at local, regional, and provincial levels, and performance improvement efforts are undertaken to address them through education, technology and other methods.



Sustainable and Efficient

The Vision: EMS systems across the country have the resources they require to provide care in a fiscally responsible, sustainable framework that compensates caregivers with a living wage and allows them to find joy in their work. Efficient EMS systems provide value to the community, minimize waste and operate with transparency and accountability.

Getting from here to there: One of the biggest challenges for health care and EMS will continue to be access to sustainable and efficient funding. The systems struggle with the inability to pay for research into advancing technologies, infrastructure, education and other necessary investments for the future. Innovative funding programs will be answered by new models for procurement of equipment, technology and infrastructure.

Current funding, decision-making and oversight of EMS varies from municipality to municipality. Some communities do not adequately fund high-quality EMS services, sometimes because of insufficient tax base and occasionally because other local issues have greater political support.

The key to sustaining a people-centered EMS system will be partnerships between providers and funders, community health authorities and government entities and more. Providers need to find ways to measure, calculate and share the value of the services they provide to communities. As some communities are demonstrating that when EMS systems can improve health and lower costs, payers will fund their efforts. While many of these projects have been limited to programs aimed at reducing hospital admissions, EMS will need to take these same concepts and demonstrate value to every service it provides: from the response to mass casualty incidents to acute cardiac problems.

A key to sustainable EMS will be achieving the other guiding principles laid out in this vision. Systems that remain siloed and not integrated, ineffective, unsafe, unreliable and stagnant will struggle to sustain themselves, as patients and communities look for ways to do better. In the past the Ontario EMS system could rely on funding first, and then worry about performance. In 2050, sustainability will be achieved by EMS systems with leaders and providers who dedicate themselves to finding effective and efficient ways to deliver people-centered services.

What 2050 looks like: Regional Medical Communication Systems, in collaboration with emergency communication centers and hospital command centres, triage, assess and allocate resources based on patient need and desire.

Medical Communication Systems are staffed with medical telecommunicators trained to triage medical emergencies and provide emergent and non-emergent care instructions, taking advantage of artificial intelligence technology and evidence-based protocols to assist them in



making accurate and appropriate decisions. They quickly send any resources, including bystanders, equipment, the appropriate responders or transportation services to any patient requiring immediate, lifesaving care. For non-emergent patients, the telecommunicators connect them to the most appropriate resources, including immediate teleconsults, referrals to other healthcare or social service providers, or delayed EMS responses.

Medical telecommunicators inform patients about the reasons they are receiving the response that has been determined for them. Decisions are made in coordination with the patient and their families.

The education of EMS physicians prepares them to provide indirect and direct medical oversight of these Medical Communication Systems, including communication with patients and field providers when physician consultation adds value and improves outcomes.

System design, equipment needs and treatment protocols provide value to the community by focusing on improving patient outcomes for the lowest cost.

Funding and payment models are in alignment with the delivery of the most effective and safest care, from the moment an individual accesses the EMS system, including decisions about which resources to send, or not send, in response. Funding policies are designed to incentivize EMS providers to provide the most appropriate, safest and cost-effective care.

Clinical, operational and financial outcomes are measured and reported publicly at the local, regional, and provincial, ensuring transparency and allowing communities and policymakers to make informed decisions.

EMS systems have the ability to take a long-term approach to planning and budgeting, making it easy to invest in technologies, people and other resources that add value down the road.

Transport decisions, including the mode and destination, are made judiciously. Patients and their families are included in the decision-making process and are informed about the benefits and risks of treatment and transport decisions.

EMS is supported as an essential service in communities across the province.

Community leaders, elected officials and other key stakeholders understand how EMS systems operate and the value they bring to communities. EMS systems actively and honestly engage with their communities to educate the public about what EMS providers do and how it improves the population's health on a day-to-day basis and during disasters and major events.



Innovators, manufacturers and EMS systems work together to ensure critical, lifesaving equipment and medications are available and affordable for EMS organizations without stifling innovation and entrepreneurship.

Funding supports the education and development of a highly professional, capable workforce.

EMS systems and payers collaborate and communicate frequently in order to partner in ways that benefit communities and patients.

Payers of healthcare services understand the unique value that EMS systems bring to communities and partner with them to practice out-of-hospital medicine in ways that take advantage of EMS providers knowledge and skills in order to best serve patients. EMS leaders are educated in healthcare finance and maintain relationships with peers at payer organizations.

The EMS system funder understands the capabilities of EMS providers and how they can improve the health of their members while also reducing the need for more expensive services.

A Sustainable and Efficient Future

Healthcare financing in 2050 likely will be no simpler than it is in 2018. But whether funding for EMS is coming from provincial or municipal budgets, health insurers, or other organizations yet to be developed, it must align with the most appropriate, safe and effective patient care. In addition, payers and EMS systems must collaborate to incorporate

EMS professionals' unique knowledge and skills and the role they can play in reducing illness and injury and associated costs.



Adaptable and Innovative

The Vision: Adaptable EMS systems quickly and effectively meet the evolving needs of the population. EMS continuously and methodically evaluates new technologies, system designs, educational programs and other aspects of the system in order to best meet the needs and desires of the people and communities it serves. Innovative individuals and organizations are encouraged to test new ideas in a safe and systematic way and implement effective new programs.

Getting from here to there: Perhaps the most important principle of an EMS system is that it be innovative—able to adapt and adjust to new evidence, technologies, political structures and community and individual needs and desires. EMS has often been forced to evolve, but struggles to do so rapidly and effectively. In some areas, the systems remain designed to treat every incident as a life-threatening emergency, despite the majority of 911 medical responses not requiring immediate intervention. Incorporating new best practices often takes years, if not decades, even in the face of overwhelming evidence supporting change, or a complete lack of evidence for current practice.

It is not just EMS system design or medical care that evolves at a languid pace. EMS regulations and policies also frequently reflect a lack of adaptability. Some provincial operational policies date to a time when EMS “scooped and ran” and local and organizational policies sometimes force innovators to conform, rather than encouraging the development and testing of new ideas.

In order to successfully innovate without endangering the people they serve, EMS professionals must adopt a culture of science and improvement, and not be afraid to challenge themselves and the status quo—especially when the status quo benefits EMS providers and organizations, but not the people they serve. Through quality improvement, rapid program evaluation, and research, EMS systems can learn what works, and what doesn’t. Just as critical will be the sharing of that information, through both formal and informal collaborative networks.

In order to stay true to the other guiding principles outlined in EMS Vision 2050, EMS professionals cannot fear or impede change—as long as that changed is based on evidence and doing what is best for patients and communities. Only through innovation and adaptability can the profession become and remain safe and effective, integrated and seamless, reliable and prepared, socially equitable and sustainable and efficient.

What 2050 looks like: EMS education provides a solid foundation of medical, operational and other knowledge, but focuses on critical thinking and the ability to incorporate new science and tools into one’s practice. EMS professionals at every level learn how research and evidence can impact the standard of care and do not associate their profession with specific skills or



medications that may or may not continue to be a part of their practice as the evidence base evolves. Innovation techniques, including performance improvement, prototyping and rapid implementation, testing and evaluation, are taught in initial and continuing education.

Leadership development in EMS includes learning and practicing methods of fostering innovation in organizations.

Education and experience prepares EMS leaders to lead high-reliability organizations that are always seeking ways to improve, with a focus on safely innovating to enhance outcomes for patients. Leadership development that emphasizes these qualities is ingrained in the culture of every EMS organization.

The EMS profession looks to other industries not only for ideas and best practices, but also for talented individuals who can provide leadership and facilitate innovation. Whether as CEOs, consultants or in other roles, these people bring a new, fresh perspective to EMS systems and help spur creativity and originality.

EMS organizations engage in rapid and safe innovation cycles and share their findings in order to encourage replication and improvement nationwide.

Leaders in EMS at all levels, from the Head Office to field supervisors, promote “psychological safety”—an environment where providers can question current practices and take risks without fear of punishment or criticism. EMS professionals are encouraged to collaborate to develop new solutions to old and new problems, and to test, measure and evaluate their ideas.

National, Provincial and Local organizations, including military and other EMS organizations, maintain systems for promoting the rapid testing and evaluation of processes, training and equipment and for disseminating the results widely throughout the profession and beyond. Collaborative learning networks allow local systems to learn what has worked and what hasn't worked in other systems.

Governmental and non-governmental entities support innovative pilot projects with the potential to improve outcomes, using rigorous measurement and evaluation protocols. Regulations allow provincial officials more flexibility in supporting innovation while also protecting the public's safety.

EMS Research Funding is prioritized for the promotion of more effective and safer patient care.

EMS researchers partner with colleagues in other fields, such as other medical specialties, social services and public health to conduct scientifically rigorous clinical and operational research to validate and advance EMS practice.



Education of EMS providers at all levels prepares them to understand and evaluate research and also to participate in research projects at the local level. EMS organizations prioritize providing access to relevant published research to EMS professionals. Specialty training is available for providers who wish to become research scientists. These providers are encouraged, supported and actively recruited to this role.

Regulations to protect patients' health and privacy do not inhibit the conduction of clinical research and trials in EMS but still protect patients, taking into account the difficulties of getting informed consent in emergency situations. Rigorous oversight and transparency in the community maintain patient safety during these studies.



SUMMARY

Without innovation, none of this vision is possible. While we often associate innovation with technology or clinical care, it can occur in any area of EMS: in how we educate, how we lead, how we communicate. In order to adapt, members of the EMS profession must be willing to leave behind ideas and concepts that are no longer supported by evidence or the needs of patients and communities. The pace of change in society continues to accelerate, and EMS professionals at all levels must take deliberate steps to facilitate, encourage and support innovation.



OPTIMIZING AMBULANCE AND PARAMEDIC SERVICES

Success story - Nova Scotia:

- ✓ 74% reduction in ED visits for nursing home patients who were treated in the home rather hospital
- ✓ 22% reduction in ED visits by using community paramedicine and community nursing
- ✓ 50% reduction in ED visits through community paramedics monitoring complex patients in their homes
- ✓ 35% reduction in ambulance transports of palliative care patients treated by advanced paramedics at home

Opportunities for Ontario:

- ✓ Control of paramedic workforce
- ✓ Significant EMS funding savings of projected \$200million dollars annually
- ✓ Significant increases in Hospital operational efficiency, saving money
- ✓ Significant reduction in “Hospital Hallway Healthcare”
- ✓ Reduction in ED visits for nursing home patients
- ✓ Reduction in ED visits by using community paramedicine and community nursing
- ✓ Reduction in ED visits through community paramedics monitoring complex patients in their homes
- ✓ Reduction in ambulance transports of palliative care patients treated by advanced paramedics at home
- ✓ Major Financial Savings for Ontario health care as estimated by the Community Paramedicine Remote Patient Monitoring Program¹ producing \$4.7 million in savings over 6 months on just 650 patients
- ✓ Economically sustainable, Patient-Centered, Integrated EMS (EPIC community paramedicine program – Katie N. Dainty, Ph.D.²)

¹ CPRPM – Benefits Evaluation & Lessons Learned April 2018

² EPIC – Home-Visit Based Community Paramedicine and Its Potential Role in Improving Patient-Centered Primary Care: A Grounded Theory Study and Framework



CURRENT PROBLEMS IN ONTARIO AMBULANCE SERVICES

- Municipalities operate paramedic services though they don't manage the health budget
- Province does not control a workforce that can be used to LOWER hospital visits
- Offloading patients has become a crisis, paramedics waiting at hospitals and ambulances tied up that should be available
- Paramedic pay increases since 2004 have fallen behind police and fire. Major paramedic labour action can be expected in the not to distant future as municipalities stall off contract negotiations because they cannot afford pay increases
- Striking paramedics in Stormont, Dundas, Glengary put the public at risk, increased pressures on hospitals and underlined the need to include paramedics in essential Service legislation
- EMS budgets are rising faster than any other municipal departments, producing constant tension over scarce dollars
- System is not efficient with 53 municipal EMS bureaucracies and 22 communications centres
- Inter-facility transfers are at a crisis point and contribute to further backlogs within hospitals and institutions causing longer patient hospital stays
- Northern municipalities do not want to be in the health care business any longer – the province cannot use these resources to help take pressure off hospitals. These municipalities have asked to be divested of ambulance responsibilities. This issue was raised at FONOM Federation of Northern Ontario Municipalities



BENEFITS OF COMMISSION MODEL – THIS PLAN WILL:

- Produce savings for provincial and municipal government and taxpayers:
 - ✓ Consolidate the 53 separate ambulance bureaucracies into 10 “operations districts” (cut out redundancy)
 - ✓ Consolidate the 22 separate ambulance dispatch centres to the 10 operations districts
 - ✓ Merge management functions of service operations and dispatch centres into each of the 10 operations districts
 - ✓ Enable controlled competitive bidding for Management Contracts of District Operations to qualified EMS providers

- Reduce hallway healthcare:
 - ✓ Reduce pressure and problems with non-urgent transfers
 - ✓ Reduce unnecessary hospital ER visits
 - ✓ Reduce offload delays
 - ✓ Improve ambulance response times
 - ✓ Improve hospital ability to transfer patients to other care centres or home

- Create CONSISTENCY across Ontario for EMS paramedic services
- Increase ACCOUNTABILITY & TRANSPARENCY with reporting residing at one level not multiple levels and cities
- Streamline ambulance services province-wide: create a network for better fleet management
- REALLOCATE cost savings to front-line care
- Adopt “international best practices” across Ontario
- Reduce costs to taxpayers by enabling municipalities to save dollars that can be used for fire, infrastructure etc.



MAP- 10 Districts – Consolidating CACCs & Operations

Volumes of Calls Received by CACC in 2016*

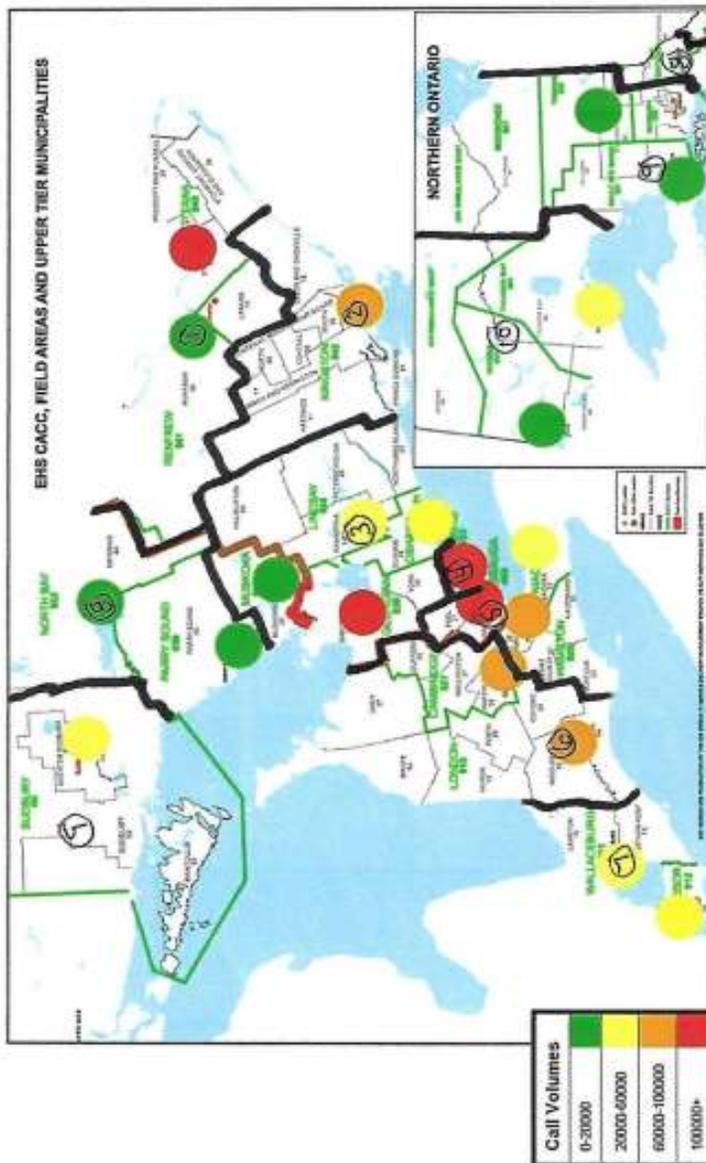
- Volumes of calls received by CACC ranged from 3,400 – 287,000 calls
- The Toronto, Mississauga, Ottawa and Georgian CACCs received the highest volumes of calls in Ontario
- 7/22 CACCs received call volumes <20,000

Planning for 10 Districts

Based on Established functioning CACC areas and Patient Flow patterns to Trauma Centres & University Medical Centres

Districts:

- 1 – Capital
- 2 – Kingston
- 3 – GTA Northeast
- 4 – Toronto
- 5 – GTA South West & Niagara
- 6 – London & Central South
- 7 – Southwest
- 8 – North Bay & Parry Sound
- 9 – Sudbury & Sault Ste. Marie
- 10 – Thunder Bay & Kenora North West





EXECUTIVE SUMMARY:

The recommendations provided herein are consistent with Conservative values of “world-class integrated health care”, value for money, smaller government, contracting out, accountability, transparency and protecting taxpayers.

This document lays out a pathway for the restoration of and re-integration of ambulance and paramedic services into the Ontario Health Care System for the benefit of the people of Ontario using an efficient, cost-effective, patient-focused system design.

Since the 1999, the funding for ambulance services has been split 50-50 between the province and the municipalities. Under Premier Mike Harris, the Province provided ambulance services through a combination of independent operators (municipal, private, hospital) and direct Ministry operated services. Municipalities were required to contribute to the funding. However, by 2003 the operation and staffing of the ambulance services had been almost completely taken over by the municipalities, with the exception of the District Service Ambulance Program which is still run by the province and is in remote areas not covered by municipalities.

The municipalities soon discovered that this required a great deal of infrastructure and complexity that was beyond their capabilities in some instances. What has developed is a patchwork of 53 separate administrations and as many different approaches to service provision. Alarming, the system is becoming progressively less integrated in the rest of the Ontario Health Care Sphere and evolving towards the municipal emergency service model consistent with fire service provision. The effect of this is to remove a valuable human services resource from health care, and accordingly, its interest and cooperation in helping to reduce hospital pressures, a previously key money saving component of provincial ambulance service resources.

The province discovered that while it is responsible for the provision of health care including managing wait times and hospital budgets, it no longer has any ability to leverage a workforce that was trained to provide urgent care services. In other jurisdictions, advanced, geriatric and other types of paramedics have been involved in innovative community care activities to provide services that bolster care outside of hospital and that are fully integrated with nurses and doctors to take pressure off hospitals.

In Atlantic Canada a call to 911 does NOT automatically mean a trip to the ER for certain complaints as it does in Ontario. There are many cases where deploying paramedics and nurses can resolve urgent issues but not ones requiring hospital care, like stitches or displaced catheters and other issues that are well defined.



The Wynne government attempted to utilize paramedics differently to relieve ‘front end’ pressures to hospitals. However, from a practical perspective, it could not command a workforce that is under the direction of another level of government.

At the same time, municipalities are not accountable for the provincial health care budgets and are solely focussed on ensuring ambulance response times are kept within targets. There has been a practice by the province of changing definitions for response time performance, to help municipalities appear to meet those targets. Unfortunately, they are not able to meet the targets in reality.

Many operational and financial efficiencies can be gained by the province restoring its control over ambulance and paramedic services. First, the province will be able to more effectively manage the system by integrating and consolidating the functions of the existing Ministry EMS Directors and their departments. Additional steps to consolidate and integrate the 22 communications centres plus the flourishing bureaucracies of the 53 municipal EMS providers into one agency will save money and increase efficiency and performance while providing opportunities to better serve communities and hospitals. These steps will produce significant financial savings which can be used to hold the line on increasing cost drivers while allowing for investments to improve response times and front-line care including the coordinated development of pro-active programs like community paramedicine. Community paramedicine has been proven to positively impact patient welfare and reduce hospital stresses like Hallway Medicine and associated costs.

The investment of savings made possible through regaining oversight and control of the administration of ambulance services will pave the way for the implementation of broad-based community paramedic programs. Such programs provide better management of high risk patients in the community and they will produce significant advantages for hospitals across the province by reducing Emergency Department visits. Improved coordination and provision of non-emergency patient transfers will see fewer people awaiting transfers out of hospitals and making more beds available for Emergency Department admissions. The results of similar programs internationally but also in Nova Scotia and New Brunswick demonstrate the significant impact that can be achieved.

The proposal below provides for a model that will replace much of the current MOHLTC – Emergency Health Services Branch including all of its subordinate programs, 22 Communications Centres and 53 municipal administrations with one provincial program.

A newly created public corporation will become responsible for the provision of all ambulance and paramedical services in Ontario. The corporation will transition the provincial ambulance services into a cohesive unit focused on delivering “Patient First” exemplary care for the people



of Ontario. It will achieve this through the creation of ten operational districts which will be based on the geographical influence of medical referral patterns. It will utilize existing paramedics and ambulance service resources under a gold standard management that is more responsive and more able to efficiently manage fleet and human resources. It will at all times focus on assisting hospitals and other associated agencies to better manage expensive health care resources. Over time, it will transition its operations to enable contracting out the management of the ambulance/paramedic services to the best ambulance management organizations in the world.

The plan will continue to see municipalities contribute to funding. However, since there will be significant cost savings using this central administration model, municipalities will benefit from those savings. We recommend freezing the municipal financial contribution to 50% of the 2018 budget submission for each municipality.

The new corporate model will enable the replication of advantages that have been achieved by progressive jurisdictions around the globe as it integrates the paramedic workforce (primary care paramedics, advanced care paramedics, critical care paramedics, geriatric paramedics, emergency medical dispatchers, etc.) into a more comprehensive community care service model.

A NEW PARADIGM – THE PARAMEDIC COMMISSION

The Ontario Government's responsibility for ambulance services will be best served by the creation of a new public corporation, the "Ontario EMS Commission Inc." under the Ambulance Act. The corporation will be the Provincial Authority. It will function independently of the Ministry of Health bureaucracy with its own Corporate Board of Directors. The Directors will be appointed by the Minister of Health.

The Corporation will report to the Minister and it will be directly responsible for the daily oversight and ongoing quality of the ambulance services on land, sea or air. It will have legal and regulatory authority over all ambulance and paramedic services, medical transportation, ambulance dispatch centres and Base Hospitals.

The Corporation will create stability in the EMS sector and any future government will find it difficult to repeal or replace it or alter the system.

The Commission will establish a high-performing system delivering world class value for money services and provide opportunities for continued and improved integration within the health care system.



CORPORATE STRUCTURE

Oversight of the Corporation will be provided by the Minister and an appointed Board of Directors. The President of the Corporation will be the Commissioner. The Commissioner will direct the actions of the Authority and oversee the timely, integrated and efficient provision of paramedic and medical transport services for land, sea and air to the people of Ontario. The Commissioner will work to ensure that the Ontario system is viewed as the best in the world and will employ measureable performance criteria, integral to the “paramedic culture”. The Commissioner and his/her team of Deputy Commissioners will provide diligent oversight of the system, engage the paramedics, and act with uncompromised transparency and integrity to achieve the highest level of recognition.

There will be four Deputy Commissioners, each of whom will be charged with responsibilities to oversee and manage specific program components

The Commission will work with government to continually develop the legislation and regulations to ensure that required flexibility and safeguards are in place for the effective operation of the system.

The Commissioner will establish two Advisory Councils to provide advice and counsel regarding policy and operational issues.

The Paramedic Council will be comprised of paramedics and emergency medical dispatchers.

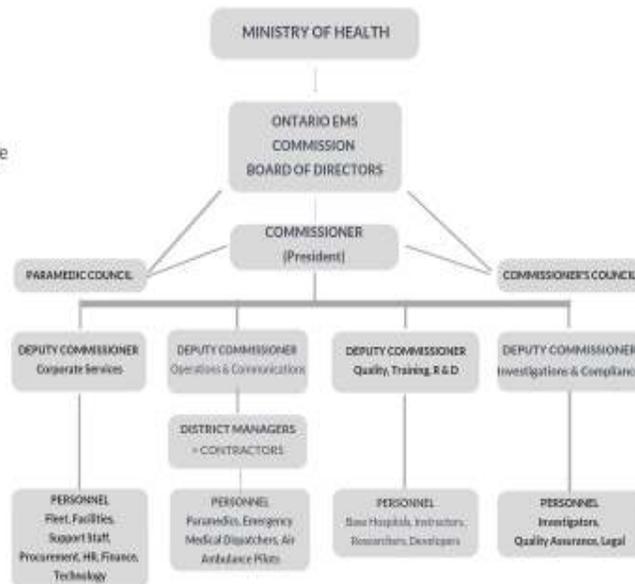
The Commissioner’s Council will be comprised of business and government experts.

Please refer to the proposed organizational chart below

ONTARIO EMS

Proposed Organizational Structure for Patient First delivery of Ambulance and Paramedic Services

The Minister of Health will create the "ONTARIO EMS COMMISSION Inc." as a publicly owned corporation under the AMBULANCE ACT. The Corporation's Board of Directors will consist of members appointed by the Minister. The "Commissioner" is the President of the Corporation. The Corporation will be responsible for the provision of all ambulance and paramedic services in Ontario. The Corporation will have the authority to consolidate and integrate ambulance and paramedic services. The Corporation will have the authority to contract with qualified organizations for the provision of services.





TRANSFER AND “UPLOADING” OF RESPONSIBILITIES

The aim of the Commission will be to ensure that a smooth transition of service provision is achieved.

The Commission must assume all responsibilities for the functions and staff of MOHLTC-Emergency Health Services, including the dispatch centres and Base Hospitals with the exception of regulatory oversight that will reside with the province. The employees will become employees of the Commission.

The Commission must also relieve municipalities from the burden of operational and financial control of the ambulance services. The Commission will upload those responsibilities and it will assume direct control of the operation of the ambulance services and employment of the paramedics and staff. (*with exceptions at the discretion of the Minister*)

These measures will empower the Commission to achieve improvements in many measurable areas including:

- ambulance response times
- provision of integrated community services
- reduction of transports to hospital
- inter-hospital and inter health facility medical transports
- reducing hospital crowding and relief of “hall-way medicine”
- costly patient offload delays
- expansion of community based paramedic programs
- ensuring science-based medical practise

These improvements can be implemented without labour unrest or service disruption.

Financial and Operational efficiencies will be realized through consolidation of the twenty-two dispatch centres and the 53 ambulance service operations under a lean and efficient management and control system.

Further efficiencies will be achieved in part through the consolidation and sharing of existing assets and resources without regard to municipal boundaries and partly by the consolidation of redundant “silos” of responsibilities that exist within each of the 53 municipalities into one lean and streamlined administrative organization. Transition agreements will be put in place with



each of the current municipalities and other delivery agencies including Ornge. These agreements will acknowledge the inventory of assets, facility leasing arrangements, operational benchmarks and other cost drivers as necessary.

In terms of overall manpower, the Commission will develop strategies so as to protect the employment of all current staff. Where reductions in staff are determined to be necessary, redeployment and transfer options as well as attrition will be utilized to ensure continued employment and prevent displacement wherever possible.

The transfer and uploading of responsibilities will be supported and guided by the Commission legal counsel and financial accountants. In addition, the Commissioner will consult with the appropriate Ministries and the Labour Unions to ensure that a well-planned, seamless transfer of responsibilities is carried out.

PROVINCIAL/MUNICIPAL FUNDING

The shared funding responsibilities that exist between the province and municipalities, with each contributing 50% of operational costs will remain in effect.

However, the “Municipal Grant System” will end and each municipality will pay the agreed 50% portion to the Commission.

Costs for service provision have been rising at an average of 12% to 15% per annum. It is our suggestion that the municipal funding requirement be “frozen” based on the 2018 budget submissions received from the municipalities. The effect of the freeze will provide a compounding benefit to municipalities over time. At the same time the consolidation of administration and the efficiencies brought in by world-class ambulance management companies will reduce costs for municipalities.

OPERATIONAL AND COST EFFICIENCY BENEFIT FOR HOSPITALS

Hospitals will benefit from the new system because the ambulance services and communications centres will focus on collaborating with health system partners in order to eliminate the stresses which add to Hallway Medicine and to redirect care away from Hospital Emergency Wards whenever appropriate.

The implementation of broad-based Community Paramedicine Programs will reduce the number of patients being delivered by ambulance to hospital emergency wards and



significantly impact the numbers of people otherwise arriving at hospitals. Such programs offer a variety of services to patients in the home which result in people staying at home or being redirected to alternative care in clinics, etc.

The ambulance services and the Communications Centres will focus on providing on-time patient transfers to aid hospitals in discharging and transferring out patients in order to make beds available to patients waiting in Emergency Wards and hallways.

With the ambulance service acting in the capacity of a fully integrated health care partner and resource, hospitals will be better able to manage valuable shared resources such as scanners, x-ray, labs and other in-hospital departments that require on-time appointments to operate efficiently.

AMBULANCE SERVICE CO-PAYMENT BILLING & REVENUE

Hospitals are currently responsible for billing the co-payment of \$45 per ambulance call. This responsibility should be that of the Commission and the revenues used to offset operational costs. The Commission will ensure the transparent accounting and reporting of the co-payment revenues and how the funds are utilized to defray operational costs.

NON-EMERGENCY MEDICAL TRANSPORT REGULATION & FUNDING

Emergency Health Services Branch together with the municipalities have time and again engineered various plans to deal with failing Response Time Performance within the system since 2003. One of the most disastrous of these, because of its effect on the public health care system, was the complete devolution of any continued responsibility for the provision of non-emergency ambulance services. This was carried out by way of a massive policy and legislative shift.

Non-Emergency Medical Transportation had historically been the responsibility of the Ministry of Health since the beginning when ambulance services were brought under the control of its predecessor, the "Ontario Hospital Services Commission".

The function was carried out as an integral part of the delivery of ambulance services and provided considerable benefits for Ontario's health care institutions and for individual patients as part of their personal OHIP coverage. The \$45 co-payment (above) was instituted in order to prevent abuse of the system.

The responsibility for Inter-facility transport (non-emergency medical transportation) should be restored to the Commission. This component is essential to ensure a smooth flow of patients



between hospitals or other facilities. This enables facilities to share expensive diagnostic services and to run them on time and efficiently and to move patients as required.

Since transferring the operation of ambulance services to the municipalities, this is no longer the case in Ontario and these system benefits no longer exist.

The loss of the non-emergency transport provision to the ambulance system has compromised the readiness for and ability to adequately respond to major emergencies and disasters. Non-emergency calls are often not time critical and can be 'deferred' in order to respond to a major emergency. The ability of the province to defer such calls allows for substantial flexibility and the best use of the ambulance resources at times of high emergency call volumes. It also provides for better provision of balanced emergency coverage and it gives the needed operational strength and resilience with which to respond to major emergency and disaster situations.

A vacuum has been left in the Ontario health care system as a result of municipalities vacating the provision of non-emergency transport. This action has resulted in the introduction of non-regulated private transfer companies. The costs for these services are paid for by the hospital and not the municipality.

These changes placed the full impact for funding onto already strained hospital budgets and those of other health care institutions. It also pushed an increased requirement for decision making onto local doctors and hospital administrators whereby, they are expected to determine which transport costs are deemed "medically necessary" and will be therefore covered by the hospital versus those that will be paid for by the patient.

One Georgian Bay area hospital reports paying \$300,000 annually from within its programs budgets to fund non-emergency transports. This funding requirement has not been acknowledged as a cost of ambulance provision and should be recognized as such.

Obviously, the funding structure has led to rationing public funding of these services and where hospitals are strapped for cash, the definition of medically necessary has narrowed.

These additional costs have negatively affected hospitals, nursing homes, other health care agencies as well as the public. Private citizens now find themselves incurring significant transport costs for what had previously been OHIP covered ambulance services. The majority of these patients are elderly and vulnerable.

From a financial standpoint, the patient/ taxpayer no longer benefits from an integrated dispatch approach between non-urgent and emergency coverage. The separation of emergency ambulance services and non-urgent transport services under two different oversight bodies



(municipalities and health facilities) the province has left the non-emergency transport sector completely unregulated and therefore patients are unprotected. Hospitals & Health Care Partners.

The Minister together with the Commission must provide a remedy in the short term for these two issues of funding and regulation and also formulate a plan for the long term. With respect to funding, the Minister should cause any and all funding designated for non-emergency medical transportation which is currently provided to health care agencies to be re-directed to the Commission. In addition, the health care agencies should be required to arrange transport through the Ambulance Communications Centres and for the providers to bill the Commission for services. This will allow for data tracking and transparency of costs.

Additionally, all non-emergency providers should be brought under regulation to protect patients and to ensure provision of proper and adequate personnel and equipment standards.

Municipalities have adopted the “Community Emergency Responder” model which is roughly based on that of Fire Departments. This model utilizes all resources for emergency responses and it was adopted in an attempt to lower response times. However, it has failed to be successful and it has left a huge gap in the ability to balance emergency coverage and a glaring inability to respond to major emergencies.

LABOUR RELATIONS, CENTRAL BARGAINING & ESSENTIAL SERVICES

A high-performing system will depend on a healthy labour/management environment. It is necessary for the Ontario Government to balance the labour relations environment in the Province. In the current legal environment, employers are hand cuffed in their ability to lead or make operational changes by the sheer volume of grievances submitted by the unions.

The grievance process needs to be reviewed and modified as it is now being used as a tool to limit progress or delay operational change. This was never the intended purpose. Work must be done to ensure that labour laws are balanced. The law should provide protection for all employees, and not discourage business and organizations from progress.

The Commission will work with the Minister of Health and the Minister of Labour to establish a balanced method of dispute resolution that is cost effective and time limited to ensure efficiency. In the interest of taxpayers, it is essential that the Commission and its contracted service providers are not hand-cuffed in their ability to lead or make operational changes by the weight and cost of labour/management issues.



A Central Bargaining Agreement (CBA) will be established to ensure fairness and consistency in wages and benefits across the Province regardless of the provider. Paramedic services must come under the Essential Services designation and binding arbitration must be available for dispute resolution to prevent the withholding or compromise of services.

Labour relations professionals should mediate and arbitrate operational grievances thereby leaving only the most difficult and challenging of cases to the lawyers. Binding Arbitration should be law of paramedics.

A solution to this issue may be found within the police services. The Police Services Act provides for the Ontario “Police Services Arbitration Commission”. That body handles collective bargaining issues and reports directly to the Minister of Social and Correctional Services.

Employee Portability will be established within the framework of the Collective Agreements to ensure that all current and future paramedic employees enjoy portability of credentials and seniority.

CONTRACTING FOR SERVICE PROVISION

Subject to Ministerial direction, the ultimate goal for the Commission will be to prepare for the contracting of service provider organizations for the management of delivering ambulance and paramedic services within the Service Districts.

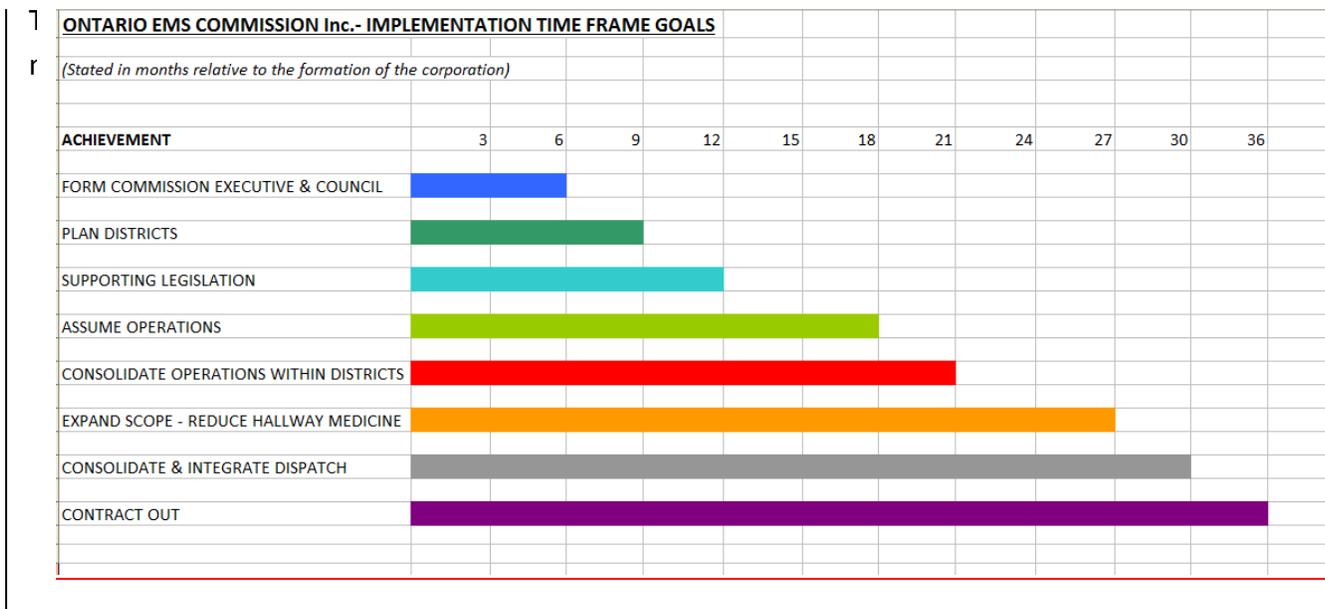
The initial period of direct operation of the ambulance services and dispatch centres will be utilized to consolidate and realign the resources into service districts that will provide optimum service delivery. During that time, the Commission will compile all of the data necessary to form the framework for the calls for RFPs and letting of management contracts.

The assembled data and the experience gained during the operation and consolidation of the combined services will also equip and enable the Commission to proficiently conduct the RFP processes and subsequently monitor, evaluate and enforce the performance and accountability for the benefit of Ontario.

Competition will be the cornerstone for contracting. The contracts should be simple, fair, performance based, and reviewed regularly for compliance. Extensions should be incorporated to encourage and reward exceptional service, performance and innovation



TIMELINE FOR THE ONTARIO EMS COMMISSION TRANSITION





The Role of EMS Commission in Health Care Integration

The formation of the EMS Commission as presented in our main document is the key step and the first of several further opportunities to streamline in health care delivery.

We propose that the Commission can effectively and carefully assist in a process of integration and amalgamation of EMS with other community and public health programs to bring vast patient centered service delivery improvements for Ontario while providing cost savings over the various system structures currently in place.

Although, we don't really know what the future will hold for EMS as a component of health care delivery, we can be sure that advancing and new technologies will open new opportunities for integration and collaboration of and between providers. The view forward as described in our paper EMS VISION – ONTARIO 2050 reveals a much changed EMS delivery model made possible by new technologies in communications, training, medical devices, treatment protocols, community infrastructure, vehicles and equipment.

In our EMS VISION – ONTARIO 2050 we describe a system of emergency medical response utilizing advanced personal medical devices and monitoring systems, community volunteer responders, highly trained paramedics, advanced autonomous vehicles and communications systems. As we approach those visions and that time in the future, the role of the provider and the paramedics will change immensely as the demand for emergency response is significantly by the technologies employed.

The changing times ahead will demand continual evolution in the administration of EMS and health care in general. The EMS Commission that we are recommending today must always stay focused on doing what is best for Ontario. It must remain lean, green and patient-centered and it must react nimbly to emerging developments to improve health care delivery as a fully integrated part of the overall health system even to the extent of working itself out of job.

Role of EMS Communications in Integrated Community Health Care

One key focus of our EMS PLAN is the “Regionalization” of EMS assets within the province. Fundamental to that concept is the ability to leverage the workforce and technology of the Ambulance Communications Centres to better manage EMS service delivery, including the emerging advance of paramedic services into community health care.

The role of the Commission's EMS communications centres can be effectively expanded to provide, coordinate and disseminate health care services and information on a broader scope. The extent to which these centres can be used is almost endless. The centres will act as the



catalyst for better coordination of service provision and ensure there is no duplication in operations.

Think of the current ambulance dispatch centres consolidated in number but expanded in scope, invested in technology and providing patients with a single point of contact.

The proper use of the technology will ensure proper care decision making and improved customer service at the right place and the right time. Not only will the Commission's communication centres provide emergency response, but they can assist in the coordination of community based health care such as those services currently overseen by local Health Units, visiting nurse organizations, mental health, etc. Systems and protocols will be developed under the direction of a "Council" of the Commission to set out the method by which the centres will work to assist in deployment of contracted service providers to assist in the provision of care in the home, or to provide improved access to mental health care. The communications centres will have the technology to share medical data, collect statistics, and store information while expanding access to care. The improvements in technology will free up care providers at all levels to do what they do best which is to treat those in need.

Regionalization and Integration of Health Care

As mentioned above, significant opportunities exist for the regionalization of Public Health. Thirty-five Health Units in Ontario provide essentially the same services. The current structure requires multiple levels of administration and management oversight at each location. A consolidation of Public Health agencies within fewer, larger Health Care Regions can be beneficial. Integration of Public Health Services with other health care partners working within a new regional system design will better coordinate service provision on a regional and provincial basis and it will eliminate duplication of service delivery, properly align responsibilities between levels of government, better utilize the private sector, and improve access while saving money.

Such consolidation will require experienced oversight to be successful. Operational and cost efficiencies can be achieved by tapping into the strengths and abilities of associated health care agencies and professions including the private sector, which may not currently be fully utilized. Opportunities exist for expanded use of public private partnerships and performance contracting. EMS communications centres can assist in performance monitoring and outcome measurements by gathering and reporting statistical data.

EMS Communications Centres (perhaps more appropriately identified as Regional Health Coordination Centres) will have the skilled workforce and technological ability to greatly assist



in the management and dissemination of information and to coordinate the health system response to any large scale pandemic. The centres can also play a key role in the collection of accurate statistical information necessary for improved performance monitoring and outcome measurement, providing the basis for decision making and actuarial forecasting of future population health needs and trends. Even something as simple as the dissemination and efficacy of the flu vaccine each year can be tracked by the communication centres' data resources.

The regional communication centres will provide even more opportunity to manage disasters. These centres will have the ability to improve and better coordinate the total health service response to large scale disasters. The centres will provide Emergency Operation communications throughout the Province. In the case of any large scale incident these centres will have the contacts to provide a multiagency response through a single point of control. Each centre can provide a safety net for local communities in the event that an emergency escalates, requiring a provincially coordinated response.

We envision the possibility of forming a single point of contact system for patients, citizens, paramedics, public health, home care, and more. We think of how we can help patients eliminate the frustration of navigating through a system of health care silos.

We think of a system that lets professionals spend more time with their patients rather than completing unnecessary paper work.

We think of improved and coordinated provision of non-emergency transportation, including timely inter-facility transport carried out by Communications Centres equipped with up to date technologies including Artificial Intelligence and linked with hospital Command Centres to optimize inner patient flow, freeing beds and reducing costs and ER pressures that cause "Hallway Medicine". This will also rid hospitals of costly transfer service contracts while assuring on-time patient transfer.

We think of fewer ambulances facing shorter waits to offload at hospital ERs and returning those critical paramedic resources to active duty in communities throughout the province.

We think of the value and benefit that the Communications Centres will provide to health care decision makers and researchers by collecting and providing ready access to robust statistical data resources available in one location. We think of the vast sums of money wasted in the development of E-Health, when much of the necessary information can be so easily and inexpensively gathered through existing and emerging technology.



The above represents our vision for EMS in the foreseeable future and the role that it can play to vastly improve efficiency in Ontario's health care system. However, we believe that the first step should remain the structural formation of the EMS Commission as recommended.

Transition to the Future of EMS

In anticipation of government approval of the recommendations put forward, we support formation of a transition team in the near future and offer Bob DeShane as leader.

The Transition Team should consist of recognized leaders and include those experienced in the following areas;

- Dr. Devlin (or representative)
- Other MOHLTC representative
- Community Paramedic Practitioner
- Ontario Paramedic Association
- EMS management
- Communications Centre Management
- Labour Law, Arbitration, Mediation and Adjudication
- Public Health
- Others as required (Health Care Consultants, system design experts, etc.)



PARAMEDIC COMMISSION PROPOSAL – WHO WINS & HOW

Patients & Public

- Greater range of paramedic services
- Better emergency response performance resulting from integrated services
- Reduced need to be transported to hospital via paramedics providing in-home care at residence (includes Nursing Home patients)
- More direct treatment solutions offered via transport to alternative care
- Significantly reduced wait time in hospital ER
- Significantly reduced Hallway Health Care
- Improved hospital admission process as a result of better in-hospital patient flow enabled by improved non-emergency transport
- Paramedics are an Essential Service – No Strike threats, no reduction of service due to labour integration or future unrest
- Increased ambulance availability and improved response times resulting from significantly improved off-load times & driving savings to front-line & staffing more ambulances
- Built-in resiliency of the Commission to deal with coming challenges of paramedic pay increases
- The Commission will create a consistency in service provision throughout the province for all Ontarians
- The Commission will increase accountability and transparency
- The Commission will restore and ensure regulatory compliance for non-emergency patient transports
- Non-Emergency Transport will be available and more fairly provided and will reduce out-of-pocket costs to patients and families
- The Commission will ensure the ability to respond to major emergencies and disaster scenarios through better overall system management, control of workforce, integrated management of fleet and communications with a lean and capable command structure.
- The Commission will provide improved Mental Health services through the community paramedicine program's integration with allied provider agencies such as Public Health and Social Services

Indigenous Peoples

- The Commission will ensure greater involvement of Indigenous Communities in the provision of paramedic ambulance services and community paramedicine
- There will be an Indigenous Peoples representative on the Commission Board of Directors



Taxpayers

- Savings will reduced demand on taxpayers at Provincial and Municipal levels – just one taxpayer
- Increased value through delivery of more and better services for the taxpayer dollar
- The Commission is a clearly identifiable provider – “the buck stops here”
- The Commission provides an improved ability to control economic influences and budget pressures
- The Commission will increase accountability and transparency

Politicians (Provincial)

- Control of paramedic workforce through single body
- Government of Ontario (Premier & Health Minister) – Improved System
- Significant reduction of Hallway Medicine and progress on election promise
- Significant savings - \$200Million or more and progress on election promise
- The Commission is a clearly identifiable provider – “the buck stops here”
- The Commission will be responsible to deliver all ambulance and paramedic services within Ontario on land, sea and air
- The Commission provides an improved ability to control economic influences and budget pressures
- Reduced friction with AMO and other municipal government representative organizations
- Built-in resiliency of the Commission to deal with coming challenges of paramedic pay increases
- The Commission will create a consistency in service provision throughout the province for all Ontarians
- The Commission will increase accountability and transparency
- Provincial politicians will be relived of lobbying efforts by Fire Unions to secure funding for Fire Paramedic and Fire EMT Programs

Politicians (Municipal)

- Relief of responsibility for paramedic workforce
- Expenditures capped at current levels will produce compounding ongoing budgetary benefit
- Savings apportioned from share of \$200Million
- Reduction of Municipal Council commitment and responsibility
- No longer in “Health Care Business”



Municipal Corporations

- Relief of responsibility of service provision
- Ability to focus on core responsibilities and cost controls
- Ability to allocate future savings to other priorities
- Future cost savings resulting from reduction of wage compression issues, long-term benefit costs, WSIB, etc.
- Reduction of employees
- Reduction of internal and external support requirements (HR, Legal, Maintenance, Purchasing & Procurement, etc.)
- Reduction of asset inventory (real-estate, vehicles & equipment)
- Removal of “cross-border” service provision monitoring and billing
- Certainty of budget requirements due to capped funding requirement

Ministry of Health

- Control of paramedic workforce
- Reduction of direct management requirement of Emergency Health Services Branch
- Commission Board of Directors is independent appointed board responsible for system
- More effective ability to legislate, regulate, monitor and enforce requirements and standards
- Financial & Efficiency benefits accruing from Hospitals and Nursing Homes as a result of more efficient, more effective paramedic ambulance service and expansion of community paramedicine & non-emergency transport services
- Built-in resiliency of the Commission to deal with coming challenges of paramedic pay increases
- The Commission is a clearly identifiable provider – “the buck stops here”
- The Commission will be responsible to deliver all ambulance and paramedic services within Ontario on land, sea and air
- The Commission provides an improved control of economic influences and budget pressures
- The Commission will consolidate 53 separate municipal ambulance administration silos and 22 separate dispatch centre administrations into 10 District Services and adopt a lean system management program
- The Commission will create a consistency in service provision throughout the province for all Ontarians and adopt “international best practices”
- Elimination of “cross-border” service provision monitoring and billing friction between municipalities
- Reduced friction with AMO and other municipal government representative organizations
- The Commission will provide vastly improved fleet management and utilization of fleet resources



- The Commission will ensure the ability to respond to major emergencies and disaster scenarios through better overall system management, control of workforce, integrated management of fleet and communications with a lean and capable command structure.
- The Commission will restore and ensure regulatory compliance for non-emergency patient transports
- The Commission will better employ opportunities for data management, statistical analysis and research and create an improved ability to compare with and adopt “best practices”

Hospitals

- *74% reduction in ER visits for Nursing Home patients who were treated in the home
- *22% reduction in ER visits due to community paramedicine and community nursing
- *50% reduction in ER visits through community paramedics monitoring complex patients at home
- *35% reduction in ambulance transports of palliative care patients treated at home
- Increased patient flow through efficiency due to improvements in non-emergency transport
- Increased efficiency and savings derived from on-time arrival for costly diagnostics and other out-patient services requiring non-emergency transport
- Relief of responsibility for ambulance service billings
- Reduction in cost for non-emergency transport and in workload for discharge planners

*Notes: * - implied improvements based on documented results achieved in Nova Scotia*

Nursing Homes & Other Care Homes

- Financial & Efficiency benefits as a result of more efficient, more effective paramedic ambulance service and expansion of community paramedicine & non-emergency transport services
- Simplified access to care and transport with a single point of contact via the Communications Centre
- Emergency Management Ontario (Ministry of Community Safety & Correctional Services)
- The Commission will provide a single point of access for EMO
- The Commission will work closely with EMO to ensure improved public safety

Paramedics

- One employer
- Increased mobility within system
- Professional Development opportunities - program expansion into Community Paramedicine



- Ability to transfer to less physically demanding roles - Non-Emergency Transport & Communications
- Greater voice in scope of practice policy development via representation (OPA) on Paramedic Council
- Evolution of Paramedic Scope of Practice via Paramedic Council eliminates demand for Self-Regulation & College
- Opportunity to contribute to building “Paramedic Culture” within system
- Opportunity to contribute to “Teamwork Culture” within integrated District Service Areas (Paramedics/Dispatchers/Management) to achieve and improve on Key Performance Indicators
- The Commission will develop strategies to protect the employment of all current staff
- The Commission will better focus on improving employment conditions including those concerning PTSD support, improved retirement, upward movement in the system

Emergency Medical Dispatchers

- One employer
- Increased mobility and opportunity of employment roles within system
- More opportunity (program expansion into Community Paramedicine, Non-Emergency Transport, communicator links to assist allied agencies – home nursing, other providers)
- Greater voice in scope of practice and training policy development via Paramedic Council
- Opportunity to contribute to “Paramedic Culture” within system
- Opportunity to contribute to “Teamwork Culture” within integrated District Service Areas (Paramedics/Dispatchers/Management) to achieve and improve on Key Performance Indicators
- Professional Development Opportunities
- The Commission will better focus on improving employment conditions including those concerning PTSD support, improved retirement, upward movement in the system

Base Hospitals

- Increased and Strengthened role for System Quality Assurance
- Increased and Strengthened role in program expansion into Community Paramedicine
- Guiding Medical voice in Evolution of Paramedic Scope of Practice policy development via Paramedic Council
- Opportunity to contribute to “Paramedic Culture” within system



Unions

- One Employer
- Addition of new employee members via expansion of Non-Emergency Transport
- Central Bargaining
- Essential Services designation (no strikes)
- Direct Representation on “Paramedic Services Arbitration Commission”
- Employee Portability of seniority & credentials
- The Commission will develop strategies to protect the employment of all current staff
- Input into improving employment conditions including those concerning PTSD support, improved retirement, upward movement in the system

Fire Departments

- Fire departments will no longer be encumbered or in competition with paramedic ambulance services within the municipal framework and will be free to pursue their goals

Private Sector

- The Commission will provide improved access to tenders for supply of goods and services accessible in one location
- More responsible use of tax dollars



Analysis of EMS Funding in Ontario and Projected Savings

Introduction

This report is written in support of the proposal for change to Ontario's EMS system:

“Optimizing ambulance and paramedic services to reduce “hospital hallway healthcare” and associated pressures while decreasing health system costs”

(Grosso McCarthy Inc. and Bob DeShane & Associates)

Funding EMS in Ontario

The Ministry of Health and Long Term Care is responsible for the operation of the Emergency Health Services Branch and for funding ambulance services, dispatch centres and other emergency services throughout the province.

Currently, a shared funding arrangement for ambulance services exists between the Ministry and Municipalities. The Ministry funds 50% of the previous year approved cost plus an adjustment for inflation. This funding method holds municipalities in a perpetual state of underfunding for current year requirements.

This document will provide a review and analysis of funding for the EMS system in Ontario. It relies on available government reporting and it draws conclusions based on that reporting.

We use the information contained in the official reports. In some cases, we extrapolate calculations where actual supporting numbers are not available, but where comparisons can be applied.

Finally, we project savings based on the information and our calculations.

Over the past five years, costs have been rising at over 6% per year.



Analysis of EMS Expenditures 2016-17

Overall EMS Program Costs

EMS Program Cost @ municipal funding level:	50%	65%
○ EHSB Direct Costs: (see notes P. 6)	80,130,304	80,130,304
○ Ministry Funding - Municipalities&Ornge (11)	827,144,278	827,144,278
○ Municipal Funding Contribution @ 50%: (12)	640,736,554	
○ Municipal Funding Contribution @ 65%:		832,957,520
○ Other Payments – Estimates No Detail: (*13)	500,000	500,000
○ Other Payments – Estimates No Detail: (*14)	461,000	461,000
○ Total Cost of Ontario EMS:	1,548,972,136	1,741,193,102

Projected EMS System Savings

Based on this expenditure summary provided and on assumptions made below, we project that our plan change will produce expenditure reductions for the provision of EMS alone in the range of \$200,000,000.



Delivery of Savings

Who will benefit?

Our innovative plan will reduce costs and produce savings in EMS funding for:

- The Ministry of Health LTC – Emergency Health Services (EMS System)
- Municipalities
- Hospitals (in addition to reducing “Hallway Healthcare”)
- Other health system partners

Delivering Savings for EMS

Savings in EMS funding will be achieved by

- Creating a new public Corporation to administer EMS in Ontario
- Transfer and optimization of EHSB employees into Commission
- Uploading the responsibility for provision of ambulance services from the municipalities
- Consolidating ambulance operations into 10 large District Services
- Consolidating municipal administrative silos
- Reduction in management staffing numbers
- Redeploying surplus management to field operations and increasing front line paramedic resource numbers
- Consolidating 22 Central Ambulance Communications Centres into 10
- Reduction in CACC management staffing numbers
- Consolidating CACC administration
- Integrating CACCs into the 10 District Services
- Consolidating CACC Administration into District Services Administration
- Further reduction in management staffing numbers
- Redeploying surplus management staff to front line communications positions
- Breaking down silos of management and streamlining management structures
- Attrition of staff management staff
- Retention of EMS management employees by municipalities
- Reduction in the number of physical operating facilities for CACCs
- Reduction in number of physical operating facilities for administration



- Reduction in number of support vehicles (over 300 Emergency response plus unknown number of administration vehicles)
- Best practices procurement
- Standardized vehicle design
- Centralized vehicle purchasing
- Other pro-active measures

Delivering savings for municipalities

Without access to more definitive information, we cannot quantify the savings to be realized by municipalities. However, the savings are certain to be significant.

We know for certain that the cost of EMS has been increasing annually at a rate much faster than inflation. We know that most municipalities contribute more than 50% of the total EMS costs. We know that the financial demands are unpredictable and uncertain and we know that municipalities constantly complain of the effect this has on their municipal tax bases.

Our plan for change will produce stability and cost savings for municipalities and will be achieved by

- Placing a “freeze” on EMS contributions at the current level
- Elimination of unpredictable increases and demands on municipal tax base
- Elimination of non-funded administration costs
- Reduction of direct staff numbers

Delivering savings for hospitals

Without access to more definitive information, we cannot quantify the savings to be realized by hospitals. However, the savings are certain to be significant.

Our plan for change will produce significant cost savings for municipalities and will be achieved by

- Reducing ER visits and “Hallway Health Care”
- Robust community paramedicine programs
- Specialized Community Paramedics (mental health, geriatric, etc.)



- Paramedics treating patients at home and avoiding unnecessary ER visits
- Paramedics referring patients to alternative care avoiding ER visits
- Utilization of CACC technologies and trained dispatchers to redirect of 911 and other related calls received from known high-risk patients to allied providers
- Provision of on-time non-emergency transport to assist in discharge of patients, allowing flow-through of ER admissions, reducing “Hallway Health Care”
- Provision of on-time non-emergency transport for specialized care and diagnostics to assist hospitals in optimizing utilization of expensive staffing and shared technologies
- Provision of seamless inter-facility transports
- Coordination of transport requirements by EMS dispatchers to reduce hospital discharge planning roles
- Reduction and elimination of non-emergency transport fees
- Elimination of the administrative requirement to generate ambulance call invoicing

Delivering savings for other health system partners

Without access to more definitive information, we cannot quantify the savings to be realized by health system partners. However, we are certain that we can offer a number of interesting opportunities.

Our plan for change will provide opportunities for partnering with health system agencies where communications technologies and where referral policies will benefit such as:

- Provision of on-time non-emergency transport where required
- Opportunities for co-ordination of technologies and call-direction via EMS CACC
- Front line community paramedic referrals to appropriate service provider agencies



**More detail concerning the methodology to produce financial savings and other positive effects for health care partners and especially hospitals are detailed in the proposal document.*

Methodology of savings delivery

Following the implementation of the program, savings will begin to be realized in increments as key targets are achieved. Improvements in system performance measures such as response times, cost per call, expanded scope of operations including community paramedicine will result with the consolidation and integration under a new lean and effective management structure.

Optimization of administration at the central level will occur with the transfer of staff from EHSB to Commission. The Ontario EMS Commission Inc. will assume the current program employees of MOHLTC – EHSB with the exception of those components of the Branch responsible for policy, legislation and regulation, which will remain separate from the operational responsibilities of the Commission. Existing programs will be rationalized within the Commission and staff levels reduced to form a lean and efficient administration to fit the new operational requirements. Staffing reductions will be achieved through attrition, reassignment by MOHLTC or re-deployment into field operations in the Districts.

Bringing together over 50 municipal EMS and 22 CACC administrative silos into 10 District operations will reduce management costs the range of 50%. Detailed information on current costs is not available.

The consolidation of administration and operations of over 50 municipalities and 22 CACCs into 10 District Services will reduce the cost of the physical facilities required. Currently, most municipalities house the administrative staff separate from operations. The goal of the Commission will be to house dispatch, operations and administration in each of the District Services in one central location, thus providing savings and at the same time enhancing awareness and sense of shared purpose amongst staff and administration as well as paramedics and dispatchers.



This realignment is projected to reduce costs for administration and CACC accommodations by 60 to 75% over current costs.

The reduction and centralization of administrative staff into 10 District Services will result in a marked reduction in the number of administrative vehicles. That reduction is projected to be 50% of the current number, which is estimated at 500 (including Emergency response Vehicles).

Estimated Expenditures vs Actual 2016-17

Estimated Expenditures

Financial Estimates information for this report is provided by the Ontario Government of Ontario Public Accounts, Provincial programs and stewardship - vote 1412. (<https://www.ontario.ca/page/expenditure-estimates-ministry-health-and-long-term-care-2016-17>)

See Appendix 1

Excerpts from that report can be seen below and highlighted notations indicate numbers used in the calculation of the costs included in this report.

Actual Expenditures

Actual expenditures for the same period (2016-17) are detailed in Vol. 3 of the Public Accounts. (<https://www.ontario.ca/page/public-accounts-2016-17-volume-3>).

An excerpted table is included below. It details the funding by municipality, First Nation and Ornge. Notations are added to signify where funding is 100% provided by EHSB and in cases where municipalities operate the CACC. The percentage of funding for those CACCs is not known.

See Appendix 2

Estimates Detail 2016-17



The estimated costs are reported in a summary section and reveal the following:

Total program estimates for Emergency Health Services Branch total \$944,684,600 (**10**). This is an increase of only 2.4% over the previous year.

2015-16 estimates are reported as \$922,323,400, an increase of 5% over the previous year.

2014-15 estimates are reported as \$876,542,532

Detail of the estimates is provided as follows: (see chart – Appendix 1)

1412-2	Emergency health services	
1	Salaries and wages	\$45,406,800
2	Employee benefits	\$7,199,300
3	Transportation and communication	\$3,178,100
4	Services	\$7,977,200
5	Supplies and equipment	\$4,902,100
6	Transfer payments	
7	Payments for ambulance and related emergency services: municipal ambulance	\$639,751,400
8	Payments for ambulance and related emergency services: other ambulance operations and related emergency services	\$68,685,800
9	air ambulance	\$167,583,900
10	Total operating expense to be voted	\$876,021,100
		\$944,684,600



Actual Expenditures 2016-17

Transfer Payments

Public Accounts 2016-17: Volume 3

Volume 3 contains the transfer payments made by ministries to recipients that are not a part of the Government of Ontario, such as hospitals, community agencies and schools. It also includes payments to vendors for goods and services, such as third-party staffing agencies, consultants and telecom providers.

Actual Expenditures: (11) \$827,144,178

This compares to the Estimates detail which gives a total of \$708,627,200

(7) at \$639,791,400 and “other emergency services costs” plus

(8) at \$68,835,800

There is a variance of Actual over Estimated of \$ 118,516,978 or + 16.7%.

Other Costs

Internal EHSB Expenditures

Actual Expenditures are not known.

Internal EHSB expenditures are estimated at \$68,663,500

This is the sum of estimates (1 to 5) which include EHSB Management and CACC costs.

For the purposes of this report, we have applied the same 16.7% variance to the estimated cost, resulting in an assumed actual expenditure of \$80,130,304.

Air Ambulance Expenditures

Actual expenditures \$181,384,860

This compares to the Estimates detail which gives a total of \$167,583,900 (9)

There is a variance of Actual over Estimated of \$ 13,800,960 or + 8.2%.

Municipal Funding Contributions (see chart – Appendix 2)



The municipalities are required to fund 50% of ambulance services costs. However, in reality they are often forced to provide contributions in excess of the requirement due to local demands and the choice of the Ministry to regard some expenditures as “unapproved” after the costs have been incurred and also due to the built in funding approval delay mentioned above. Sources say that all municipalities or the greatest majority are funding more than 50% and as much as 65%.

The Transfer Payment Schedule below provides the calculated municipal funding contribution at 50% or \$640,736,554 (12).

At 65%, the municipal contribution would be \$832,957,520

This produces a range in municipal contribution of \$192,220,966

Appendix 1

<https://www.ontario.ca/page/expenditure-estimates-ministry-health-and-long-term-care-2016-17>

As provided below

Provincial programs and stewardship - vote 1412

This vote includes Provincial Programs, Emergency Health Services and Stewardship. This program is responsible for transfer payment accountability, and operational policy development, including the planning and funding of a wide span of specialized programs. Examples of these transfer payment programs include: Cancer Care Ontario, Cancer Screening Programs, Community and Priority Services, Operation of Related Facilities, Healthy Homes Renovation Tax Credits, HIV/AIDS and Hepatitis C Programs. The program provides Ontario's share of funding to the Canadian Blood Services and also supports a blood utilization management strategy for Ontario.

In addition to transfer payment activities, Provincial programs and stewardship also includes Direct Operating Expenditures for the management and delivery of the Transfer Payments within the Vote, and for the oversight administration (stewardship) of the Local Health Integration Networks.

Emergency Health Services ensures the existence of a balanced and integrated system of emergency health services throughout Ontario. The system consists of a series of inter - related programs and services including municipally operated/contracted land ambulance services, the not - for - profit air ambulance organization called Ornge, and ambulance communications services.

Vote summary

Operating expense



Item number	Item	Estimates 2016-17	Estimates 2015-16	Difference between 2016-17 and 2015-16	Actual 2014-15
	Provincial programs	\$2,649,159,400	\$2,685,717,600	(\$36,558,200)	\$2,600,498,990
10	Emergency health services	\$944,684,600	\$922,323,400	\$22,361,200	\$876,542,532
	Stewardship	\$90,970,300	\$90,920,100	\$50,200	\$48,519,217
	Total operating expense to be voted	\$3,684,814,300	\$3,698,961,100	(\$14,146,800)	\$3,525,560,739
	Bad debt expense, the <i>Financial Administration Act</i>	\$81,000	\$161,000	(\$80,000)	\$160,000
	Total statutory appropriations	\$81,000	\$161,000	(\$80,000)	\$160,000
	Total operating expense	\$3,684,895,300	\$3,699,122,100	(\$14,226,800)	\$3,525,720,739

Operating assets

Item number	Item	Estimates 2016-17	Estimates 2015-16	Difference between 2016-17 and 2015-16	Actual 2014-15
	Provincial programs and stewardship	\$11,229,400	\$11,229,400	-	\$11,029,400
	Total operating assets to be voted	\$11,229,400	\$11,229,400	-	\$11,029,400
	Total operating assets	\$11,229,400	\$11,229,400	-	\$11,029,400

Standard account by item and sub-items

Grosso McCarthy Inc. and Bob DeShane & Associates



Operating expense

Vote - item number	Standard account by item and sub-items	Amount	Amount
1412-1	Provincial programs		
	Transfer payments		
	Cancer Screening programs	\$92,363,500	
	Operation of related facilities	\$68,875,600	
	Cancer Care Ontario	\$1,433,718,200	
	Canadian blood services	\$523,058,700	
	HIV/AIDS and Hepatitis C programs	\$61,244,200	
	Community and priority services	\$458,650,900	
	Healthy homes renovation tax credit	\$11,248,300	\$2,649,159,400
	Total operating expense to be voted		\$2,649,159,400
	Statutory appropriations		
	Other transactions		
Statutory	Bad debt expense, the <i>Financial Administration Act</i>		\$81,000
1412-2	Emergency health services		
1	Salaries and wages		\$45,406,800
2	Employee benefits		\$7,199,300
3	Transportation and communication		\$3,178,100
4	Services		\$7,977,200
5	Supplies and equipment		\$4,902,100



Vote - item number	Standard account by item and sub-items	Amount	Amount
	Transfer payments		
7	Payments for ambulance and related emergency services: municipal ambulance	\$639,751,400	
8	Payments for ambulance and related emergency services: other ambulance operations and related emergency services	\$68,685,800	
9	air ambulance	\$167,583,900	\$876,021,100
10	Total operating expense to be voted		\$944,684,600
1412-4	Stewardship		
	Salaries and wages		\$51,140,500
	Employee benefits		\$6,889,500
	Transportation and communication		\$2,702,700
	Services		\$27,030,900
	Supplies and equipment		\$3,206,700
	Total operating expense to be voted		\$90,970,300
	Total operating expense for provincial programs and stewardship		\$3,684,895,300

Operating assets

Vote - item number	Standard account by item and sub-items	Amount	Amount
1412-5	Provincial programs and stewardship		



Vote - item number	Standard account by item and sub-items	Amount	Amount
	Advances and recoverable amounts		
*13	Payments for Ambulance and Related Emergency Services: Municipal Ambulance	\$500,000	
	HIV/AIDS and Hepatitis C programs	\$375,000	
	Community and priority services	\$4,393,400	
	Cancer Care Ontario	\$5,500,000	
*14	Payments for ambulance and related emergency services: other ambulance operations and related emergency services	\$461,000	\$11,229,400
	Total operating assets to be voted		\$11,229,400
	Total operating assets for provincial programs and stewardship		\$11,229,400



Appendix 2

Public Accounts 2016-17: Volume 3

Volume 3 contains the transfer payments made by ministries to recipients that are not a part of the Government of Ontario, such as hospitals, community agencies and schools. It also includes payments to vendors for goods and services, such as third-party staffing agencies, consultants and telecom providers.

	Prov Cost Share		Mun. Share if 50/50	Total Cost	
Algoma	\$5,284,384		\$5,284,384	\$10,568,768	
Beausoleil First Nation	\$1,310,231	100% Funding		\$1,310,231	
Brant County	\$4,835,483		\$4,835,483	\$9,670,966	
Bruce	\$5,337,865		\$5,337,865	\$10,675,730	
Chatham-Kent	\$5,716,439		\$5,716,439	\$11,432,878	
Cochrane	\$6,892,539		\$6,892,539	\$13,785,078	
Cornwall	\$6,596,877		\$6,596,877	\$13,193,754	
Dufferin	\$3,277,451		\$3,277,451	\$6,554,902	
Durham	\$21,771,107		\$21,771,107	\$43,542,214	
Elgin	\$4,869,962		\$4,869,962	\$9,739,924	
Essex Windsor	\$18,756,733		\$18,756,733	\$37,513,466	
Frontenac	\$8,307,815		\$8,307,815	\$16,615,630	
Grey	\$7,063,761		\$7,063,761	\$14,127,522	
Guelph Wellington	\$8,976,269		\$8,976,269	\$17,952,538	



Haldimand	\$2,882,624		\$2,882,624	\$5,765,248
Haliburton	\$2,545,063		\$2,545,063	\$5,090,126
Halton	\$16,021,647		\$16,021,647	\$32,043,294
Hamilton	\$22,106,477		\$22,106,477	\$44,212,954
Hastings	\$7,684,033		\$7,684,033	\$15,368,066
Huron County	\$5,648,296		\$5,648,296	\$11,296,592
Kawartha Lakes	\$4,862,584		\$4,862,584	\$9,725,168
Kenora	\$9,582,433		\$9,582,433	\$19,164,866
Lambton	\$7,690,426		\$7,690,426	\$15,380,852
Lanark	\$4,363,613		\$4,363,613	\$8,727,226
Leeds & Grenville	\$5,734,017		\$5,734,017	\$11,468,034
Lennox Addington	\$2,957,768		\$2,957,768	\$5,915,536
Manitoulin Sudbury	\$10,449,814		\$10,449,814	\$20,899,628
Middlesex London	\$16,442,423		\$16,442,423	\$32,884,846
Muskoka	\$5,446,207		\$5,446,207	\$10,892,414
Niagara	\$26,279,092	incl NACS	\$26,279,092	\$52,558,184
Nipissing	\$4,685,641		\$4,685,641	\$9,371,282
Norfolk	\$4,765,635		\$4,765,635	\$9,531,270
Northumberland	\$5,855,581		\$5,855,581	\$11,711,162
ORNGE	\$181,384,860	100% Funding		\$181,384,860
Ottawa	\$52,487,460	incl CACC	\$52,487,460	\$104,974,920
Oxford	\$5,195,073		\$5,195,073	\$10,390,146



Parry Sound	\$4,725,033		\$4,725,033	\$9,450,066
Peel	\$40,482,859		\$40,482,859	\$80,965,718
Perth	\$5,384,840		\$5,384,840	\$10,769,680
Peterborough	\$7,690,262		\$7,690,262	\$15,380,524
Prescott Russell	\$6,683,551		\$6,683,551	\$13,367,102
Prince Edward	\$1,359,203		\$1,359,203	\$2,718,406
Rainy River	\$4,795,100		\$4,795,100	\$9,590,200
Rama First Nation	\$1,447,650	100% Funding		\$1,447,650
Renfrew	\$8,015,264		\$8,015,264	\$16,030,528
Sault Ste. Marie	\$3,687,595		\$3,687,595	\$7,375,190
Simcoe	\$23,176,737		\$23,176,737	\$46,353,474
Six Nations	\$2,264,983	100% Funding		\$2,264,983
Sudbury	\$10,762,669		\$10,762,669	\$21,525,338
Thunder Bay	\$13,929,677		\$13,929,677	\$27,859,354
Timiskaming	\$3,437,407		\$3,437,407	\$6,874,814
Toronto	\$123,903,975	incl CACC	\$123,903,975	\$247,807,950
Waterloo	\$13,457,624		\$13,457,624	\$26,915,248
York	\$37,872,166		\$37,872,166	\$75,744,332
11	\$827,144,278	12	\$640,736,554	\$1,467,880,832

Source: <https://www.ontario.ca/page/public-accounts-2016-17-volume-3>

2016 Canadian Census Data



Note - Columns & Calculations added by B. DeShane

Note – 1) No Costs are given for 19 Central Ambulance Communications Centre, for EHS Branch.

2) Funding for the municipally operated CACCs - Niagara, Ottawa and Toronto CACCs is

Included in the calculation. It is unclear if the municipality shares that cost.

3) Funding for Nurse Offload Programs, other EHSB programs and pilot projects is not Included in the detail.

Note - The Ministry funds 50% of APPROVED COSTS (Not all municipal costs are "approved" and therefore the Municipal Share is most likely greater than calculated.) Taken to