Ontario

Community Paramedicine

Framework for Planning, Implementation and Evaluation

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Home and Community Care Branch
Ministry of Health and Long Term Care

Purpose

This Framework is intended to be used by LHINs and their health system partners as a tool for decision-making and program planning, implementation and evaluation when considering the role of Community Paramedicine in their communities and in the context of broader health system transformation.

The Framework was developed with the engagement of paramedics, LHINs, municipalities and District Social Services Administration Boards (DSSAB). The Framework benefits from their commitment to developing CP programs that meet shared values of improving access to care in the community, improving coordination of care and effectively managing health system resources. The Framework will be adapted over time based on new data, lessons learned and ongoing fit with provincial and LHIN initiatives.

Background

Ontario's health care system has been evolving and improving over time and is successfully shifting care delivery from hospitals and long-term care homes to people's homes and the community.

However, health services, especially in the community, can be fragmented, uncoordinated and unevenly distributed across the province. As a result, patients and caregivers can experience difficulties finding the "right door" to the care and the supports they need in the community when they need them most. Some rely on calling ambulance services and seeking help in hospital emergency departments (EDs) for conditions that could be treated more effectively through primary or home and community care.

The Ministry of Health and Long-Term Care (ministry) is taking steps that are expected to reduce gaps in the health care system and therefore improve connections between patients and services in the community, while reducing the need for 911 calls and ED visits. They include:

- Transforming home and community care under *Patients First: A Roadmap to Strengthen Home and Community Care*;
- Expanding the mandate of the LHINs under the *Patients First Act, 2016* to enhance access to primary care services and home and community care and better integrate health care services and the care experience; and
- Improving home care services for high needs patients and caregivers as well as other supports for complex patients through increased funding for home and community care, bundled care, and Health Links.

Beginning in 2014, the ministry funded Community Paramedicine (CP) pilots in regions across Ontario, where paramedics applied their training and skills outside their traditional roles of providing ambulance services. Initial CP models focused primarily on reducing 911 calls for ambulance services and transports to emergency departments among non-urgent patients by proactively tracking frequent 911 callers and offering to connect them with the local Community Care Access Centre (CCACs), now the LHIN home care services. CP models have continued to evolve to include home visits and monitoring patients with complex needs, especially frail seniors living in isolation and often disconnected from the health system.

Through the investment in the pilots, the ministry has learned that CP can have a role to play in Ontario and, and that the success of each CP program is tied to local needs, services, and partnerships. In 2017/18 the government allocated $6.0 million in annual funding to support LHINs in implementing CP programs in their local communities in collaboration with municipalities, paramedic services providers and other local health care partners. Each LHIN has been provided a specific allocation, with terms and conditions about the use of the funds.

Benefits of Community Paramedicine

Lessons learned from the CP pilots, along with evidence from peer reviewed and other literature, support that CP can provide value to the local health care system and contribute to improved patient health outcomes in the community.

Patients can benefit from increased access to health care in their homes or in the community as Paramedics identify patients who have unmet needs and connect them to the appropriate resources or provide services in collaboration with teams of professionals.

Community Paramedic/Emergency Medical Services can benefit from reduced 911 calls for ambulance services and transports to emergency departments, as patients are proactively connected to the care they need in the community.

Hospitals can benefit from reduced emergency department visits, and potentially hospital admissions, by patients who can be better managed in the community.

Community Agencies can benefit from increased integration with other care providers and increased supports for clients.

Primary care and other health care providers can benefit from a reduction in unnecessary office visits as Community Paramedics provide home visits in collaboration with other health care professionals to monitor patients' conditions and provide interventions at home.

Paramedics invoved in CP can benefit from an expanded role that brings opportunities for career growth and job satisfaction.

Examples of studies to date include:

- Community Paramedicine: Provincial Evaluation Report: Health Innovations Group, May 28, 2014
- The Community Health Assessment Program through the Emergency Medical Services project
- The Community Paramedicine Remote Patient Monitoring Program
- Community Paramedicine: Framework for program development (2017 CSA Group)
- Effectiveness of a community paramedic-led health assessment and education initiative in a seniors' residence building: The Community Health Assessment Program through Emergency Medical Services (CHAP-EMS)

Ontario's Paramedics

Paramedics are government-regulated health professionals who provide patient care under a paramedic/ambulance service, as part of the emergency response system. They are delegated the ability to perform controlled acts and other advanced medical procedures by physicians who work for a provincial network of Base Hospitals.

All paramedics are trained to provide patient care in the setting of acute medical and trauma conditions, including cardiac arrests. Patient care assessment and management may include: vital signs monitoring, history gathering, oxygen administration, hemorrhage control, and cardiopulmonary resuscitation (CPR).

Paramedics triage patients and participate in determining the most appropriate transport destination, depending on the patient's condition and acuity level.

There are three practice levels in Ontario: Primary Care Paramedics, Advanced Care Paramedics, and Critical Care Paramedics. Each practice level progresses in its scope of practice.

- Primary Care Paramedics (PCP) are able to administer medications, including epinephrine, glucagon, and nitroglycerine, and perform advanced diagnostic procedures, such as 12-lead electrocardiograms. In some areas, PCPs can also perform intravenous therapy.
- Advanced Care Paramedics (ACP) are able to administer additional medications (e.g. morphine, midazolam), and are able to perform intravenous therapy, endotracheal intubation, and several other advanced medical procedures (e.g. cardioversion, intraosseous therapy).
- Critical Care Paramedics (CCP) are able to administer further medications, and perform further advanced medical procedures (e.g. blood product administration, urinary catheter insertion).

A paramedic from any practice level may be appropriate to participate in a Community Paramedicine program.

Community Paramedicine is not included under the definition of ambulance service in the Ambulance Act nor is it a core activity under the current legislation that governs Emergency Medical Services programs and resources.

LHINs will ensure that Community Paramedicine does not duplicate existing resources and care delivery models and processes while assessing the costs of Community Paramedicine compared to other health care delivery options.

Community Paramedicine Program Delivery

Community Paramedicine program delivery is generally defined through the model of care. CP program and models of care in Ontario vary depending on the local needs. Models of care may include paramedics in expanded roles and/or with an extended scope of practice in when applying paramedic competencies in non–traditional community environments through collaborative or differentiated practice. For example, some CP programs may aim to reduce the number of patients transported to ED either by re-directing them to service providers not located at a hospital or by providing the necessary care in place i.e. through a home visit or in a CP clinic setting. Examples of models drawn from the CP pilot programs and sample budgets are included as Appendix A.

Ontario's CP Programs have typically included an Assessment and Referral component, with referral to a home visit program and/or Community Paramedicine-led clinics.

Assessment and Referral

- Paramedics respond to frequent 911 callers conduct patient assessments and refer patients as needed to home and community services, including LHIN home care services (formerly CCAC services), Mobile Mental Health Response Teams, and Collaborative Care teams within Health Links.
- A specific model of assessment and referral that has been adopted by many Paramedic Services providers is known as Community Referrals by EMS (CREMS). CREMS has been established in most LHINs in the province.

Home Visits

- Community Paramedics provide in-person and virtual home visits to provide care and monitor seniors and other patients at risk of losing their independence to live at home. This is an integrated model where paramedics work closely with health care partners such as LHIN home care services, Geriatric Emergency Management (GEM) Nurses, and acute or primary care teams of professionals.
- Some models have embedded paramedics into Family Health Teams to support physicians in monitoring at-risk patients through more frequent home visits. Other models embedded paramedics into the Circle of Care led by the local acute care hospital to support early discharge of admitted patients and smooth transition from hospital to home, especially patients identified as high-risk for re-admission.
- Other models involve scheduling home visits with patients in the community during a paramedic's downtime between 911 calls. Innovative remote monitoring technology such as Telemedicine and Telehomecare are also used by some models.

Community Paramedic-Led Clinics

- Community Paramedics provide flu shots, education about healthy living, chronic disease prevention education, blood pressure checks, blood glucose checks, and other services.
- Clinics are offered in geographic areas with limited access to health care providers, or in locations with high numbers of frail patients such as seniors' buildings or shelters.

Community Paramedicine is a model of care whereby paramedics apply their training and skills in "non-traditional" community-based environments, often outside the usual emergency response and transportation model. (Ontario Association of Paramedic Chiefs, 2014)

Community Paramedicine Framework Program Parameters

As there are no nationally or internationally accepted guidelines for the development of CP programs and as CP is not captured under any legislative or regulatory framework, it is important to create a programmatic structure in order to address patient safety risks that may emerge while promoting high-quality services and the adoption of operational best practices. The Framework program parameters are based on the experiences and lessons learned from the CP pilots funded by the ministry beginning in 2015, and other literature and best practice. These elements are consistent those items deemed to the most critical in developing an effective CP program as noted in the recently released *Community paramedicine: Framework for program development.* (2017 CSA Group)

This Framework is made up of six program parameters that have been identified as important for successful and high-quality Community Paramedicine initiatives:

1. Program Overview
2. Program Goals
3. Partnerships and Collaboration
4. Accountability and Operational Guidelines
5. Quality Assurance Guideline
6. Performance Measurement

These six parameters are not in isolation from one another. Indeed, there is substantial overlap among them. Each parameter contains a description of key elements, with possible approaches or criteria.

1. CP Program Overview

The program proposal clearly demonstrates how it will address the needs of the community. The success of a CP program depends on how well it addresses specific community health care gaps and responds to local circumstances and conditions.

Dimension	Key Elements	Approach/Criteria
Demonstrated need/evidence of health care gaps	Based on a community assessment, the program proposal identifies: • Service gaps • Defined cohort population that cannot be addressed through established resources/services • Resource/capacity gaps, e.g. shortages of health human resources, such as home visit nurses or primary care physicians • Support from local service providers and partners re: proposed intervention/activity	Data and evidence to consider for determining service utilization patterns and gaps, for example**:** • Volume of repeat 911 calls and ambulance transfers • Volume of ED visits for non-urgent needs • Wait times for community services, including home care services • Percentage of patients with no access to primary care Cohort populations to consider for proposed initiative: • Older adults with Chronic Obstructive Pulmonary Disease, Congestive Heart Failure, Diabetes • Older adults being supported in the community as they wait for long-term care home placement • Frequent users of 911 services • Those experiencing frequent hospital re-admissions • Recently discharged patients who may

Dimension	Key Elements	Approach/Criteria
		be at risk of hospital re-admissions • Those experiencing frequent/sub-optimal transitions of care • Patients who have limited access to primary care and/or home care • Patients living in unsafe conditions, who may not necessarily fit the criteria for home care services
Relevant system partners	Demonstrates collaboration with system partners in development and implementation of community needs assessment, program planning and implementation. The partners include providers and community representatives who have a stake in or will be impacted by the proposed initiative. The key partners also include an entity that will be accountable to, receive funding from and report to the LHIN on behalf of the CP project lead.	Partners may include: • Health Links • LHIN • Heath Service Providers (HSPs) • Municipality/DSSAB/Emergency Medical Services (EMS) • Hospitals/Emergency Departments • Family Health Team • Primary care provider Consider partners based on who they represent and how they will be engaged at different points and processes depending on the CP model, scope of services, readiness and capacity. As local Paramedic/Emergency Medical Services providers are not Health Service Providers (HSPs) under the Local Health System Integration Act (LHSIA), LHINs may flow funding through HSPs that are providing clinical leadership as part of the Community Paramedicine programs, e.g. community health centres or hospitals.
Cost benefit analysis	The LHIN undertakes a comprehensive cost-benefit analysis that assesses the availability of existing capacity, resources, and service delivery models when considering the development of new models staffed by paramedics. The cost analysis assesses risks of paying twice for the same services, while obtaining similar outcomes.	The analysis includes potential opportunities for cost avoidance or future savings as a result of health system outcomes such as: • Reduced 911 calls • Reduced ED visits • Reduced hospital and Long-Term Care Home admissions and readmissions • Benefit analysis can include: • Number of new referrals to home and community care services • Increased access to health care services for identified populations • Increased quality of life for patients

2. Program Goals and Scope

The program proposal has a clear description of program goals, target population and scope of services.

Dimension	Key Elements	Approach/Criteria
Program Goals	Goals and type of model/services relate to the specific gaps that the program will help to address. Goals and type of model/services relate to health system and regional priorities, such as integration of care/services. Measurable goals and objectives include implementation, intermediate (short-term) and long-term outcome goals. Clear description of the activities, processes and outcomes of the proposed CP program and includes services across one or more model of care: • Assessment and Referral • Home Visits • Community Paramedic Led Clinics • Other CP models Potential opportunities for cost avoidance or future savings as a result of health system outcomes and will ensure the cost of operationalizing a CP program will remain competitive compared to other available service options.	Key features of goals, program scope, model and services: • Should relate to identified gaps and available resources • Have support from local service providers and partners that will be stakeholders in the proposed CP activity • Offers best use of limited capacity • Defined catchment and target populations and scope of services that community paramedics will be performing, highlighting which services will need medical oversight • Should build on existing and established community linkages and partnerships • Clear criteria and processes differentiating roles of partners • Commitment, buy-in and support from paramedic service organization/EMS and municipality/DSSAB Depending on the model, the goals should aim to achieve the following outcomes: • Reduce 911 calls for ambulance services • Reduce emergency departments visits • Reduce hospital admissions • Increase access to home and community services for patients and caregivers with unmet needs • Improve coordination for patients undergoing transitions in care (e.g. hospital to home) • Improve inter-professional collaborations and partnerships • Improve the patient and caregiver experience and outcomes

3. Partnerships and Collaboration

The program proposal creates strong partnerships and collaborations.

Dimension	Key Elements	Approach/Criteria
Planning and design of CP initiative	Engagement of diverse representatives of both formal and informal partners such as providers and communities who have a stake in or will be affected by proposed initiative. Clear, accessible, comprehensive information to facilitate community involvement. Demonstration of building relationships among participating organizations. Appropriate use of available evidence and a focus on data driven capacity planning and design. Capacity and readiness assessment of partner organizations. Investigation of funding opportunities from various health care partners.	Proposal reflects collaboration with existing health, social service and medical communities and local populations to engage in: • Planning process to identify sub-sets of populations that have poor health outcomes relative to the general population and map out their unique needs and challenges • Use this information to develop a plan to address identified needs, including service pathways, identify roles of appropriate providers and organizations, including cross-sector partnerships • Work towards integrating or co-ordinating care across organizations • Clearly defining the circle of care and facilitating the sharing of patient information or Electronic Medical Record
Delivery of the proposed CP activity and partner organization role/s	A key partner is an entity that will be accountable to, receive funding from and report to the LHIN on behalf of the CP project lead. Formalized inter-provider agreements and common expectations, including policies and processes that ensure effective collaborations. Where organizations/partners are involved in the delivery of the proposed initiative, proposal identifies (where applicable): • Role/function of each partner with respect to the proposed CP activity • Plan for sharing of HHR resources among partner organizations, e.g. nursing, LHIN coordinators, paramedics experiencing down-time, etc. • Plan for shared care and resources e.g. Telehomecare, Nurse-Led Outreach Teams, Rapid Response Nurses, Nurse Practitioners, etc. • Role of the applicable Upper Tier Municipality (UTM) or DSSAB in the	Policies and procedures with boundaries around the program and roles, such as: • Formal agreements/MOUs especially for proposals that include CPs as extenders of an inter-professional team/primary care team for home visits/monitoring • Mechanisms/processes by which partner organizations stay connected throughout the lifecycle of the project (e.g. communicate, problem solve, reach consensus on key decisions, make decisions regarding improvements, etc.) • Timely ongoing communication among partner providers and patients (e.g. group meetings, committees, dispute resolution procedures) and use of technology that allows patient information sharing and timely updates • Information about how resources will be shared/leveraged

Dimension	Key Elements	Approach/Criteria
	development and sustainability of this CP program	• Clarity with respect to access points/processes for admission and discharge. • Clarity in terms of referral, transition processes and hands-offs between health care professionals

4. Accountability and Operational Guidelines

The program proposal has clear structures and processes to ensure strategic, operational and accountability requirements are in place and working, and that these are consistent across similar programs in the province.

Dimension	Key Elements	Approach/Criteria
Role of Municipality/District Social Service Administration Board	Consistent with the municipal responsibility for ensuring the proper provision of land ambulance operations, the proposal includes a description of risks where CP activity may interfere with the core business of providing emergency response, and actions to mitigate these risks. Consistent with the province providing a grant to municipalities for 50 percent of the approved costs for providing ambulance services required under legislated standards (*Ambulance Act, 1990*), the proposal recognizes municipalities are not expected to assume funding for non-land ambulance programs such as CP.	To ensure that CP programs do not interfere with the proper provision of ambulance services, the program has appropriate accountabilities such as: • Formal agreements/MOUs, including the municipality/DSSAB, especially for proposals that include CPs as extenders of an inter-professional team/primary care team for home visits/monitoring • Clarity about the nature and activities that are included in the proposed CP program • Identification of how resources and funds are utilized and the sources of CP funding • Oversight, documentation/reporting if ambulance service resources are shared for the purposes of the CP program
Accountability	In recognition that CP is not included under the definition of ambulance service in the Ambulance Act nor is it a core activity under the current legislation that governs EMS programs and resources, the proposal and service agreement with the key partner/Health Service Provider: • Clarifies resources and funds that will be utilized and the sources of CP funding, beyond the LHIN funding, if required. • Defines the governance and oversight/reporting structure among the parties involved, including expectations of each • Explains how the governance and	Funding and service agreements to include terms, conditions and/provisions addressing: • Program oversight, governance and accountability structures, policies and processes • Model of care, scope of services, CP provider role and eligibility requirements • Budget details, financial management/oversight, etc. • Roles of partners, other sectors • Physician delegation/medical oversight, clinical appropriateness • Guidelines and/or tools to be used • Performance measurement and quality

Dimension	Key Elements	Approach/Criteria
	accountability structures will ensure that all CP activities fall within current legislative or programmatic framework parameters	improvement reviews and reporting
Budget	Detailed budget includes: • Which items are one-time and which items will be ongoing operational costs • Funding commitments from other partners that could help sustain the proposed CP activity, where applicable, with explanation and details on these commitments • Alternative funding sources that were explored • Risks and mitigation strategies to ensure sustainability of program • All costs and their corresponding description • Resources (including staff, equipment and supplies) that are provided in-kind by partner agencies or local Emergency Health Services/Municipality and how they will be accounted for and/or reimbursed to the land ambulance operations budget • Approval from applicable UTM/ DSSAB	The budget is: • Realistic • Sustainable • Comprehensive • Does not overlap with services covered by Emergency Medical Services, for example 911 caller assessments such as CREMS
Operational Policies	Number and type of staff and responsibilities, co-ordinators, paramedics, etc. Details on how paramedics are assigned to CP roles and schedule based on scope of program and objectives. Clarity of roles and responsibilities. Details on policies and standard operating procedures and applicable service related parameters and tools such as: • Patient/client selection, assessment, follow-up • Decision support tools/procedures such as general physical assessments, home safety assessments and medication reviews	CP roles to consider: • Level of paramedic assigned to the CP initiative. • Entire shift dedicated to CP • Entire position(s) dedicated to CP • Paramedics in a dual role with CP activities during staff downtime while ensuring emergency services are the first priority Description of any policies, procedures and/or tools that address the following: • How patients are enrolled • Who initiates the visit • What is the response time and process for receiving requests • Referral documents, tools (paper or electronic) to document/ track event • Requirements for patient consent for release of information? Defined conditions under which CP may practice: • Within a service area,

Dimension	Key Elements	Approach/Criteria
		• Which settings - home or clinic, as part of health team (if MOU in place) Defined service specific procedures and tool/resources flow-charts, check lists that are used, such as: • Home safety assessment falls assessment • PERIL assessment • Clinical services (wound care, medication compliance and reconciliation)

5. Quality Assurance and Patient Safety

The program proposal supports the delivery of consistent, safe, and high-quality care.

Dimension	Key Elements	Approach/Criteria
CP Provider Effectiveness – Competency and Training	Key qualifications and recruitment criteria for CP providers. Required knowledge and competencies for CP providers in terms of: • skill sets • practice setting • medical oversight Content/skills considered core and optional and customized to local needs. Education and training needs, if applicable, in any core/relevant areas such as medical care, referral practice and documentation. Initial and ongoing professional development that addresses clinical, social, physical and emotional demands of specific CP patient population, if applicable. How CP providers access education and training. Policies and processes that address co-ordination and/or integration with family and other social support structures. Processes and mechanisms for	Selection and recruitment criteria for CP providers: • Experience • Knowledge of community and relationship building skills with providers within the Circle of Care Additional or customized training may focus on the following, depending on the CP model: • Patient assessment of chronic, non-acute care conditions • Clinical governance, support and provision for clinical reporting • Relationship and working with other health care providers in areas such as leadership, management, and communication • Clinical referral pathways for patients and available community resources • Content in primary care and public health • Patient satisfaction/informed consent. • Processes and mechanisms for • Appropriate documentation, reporting and quality performance review/analyses • Documentation and contributing to the patient's record • Patient and Paramedic safety.

Dimension	Key Elements	Approach/Criteria
	determining ongoing supervision and assessment, including clinical supervision if appropriate.	Training options may include: • classroom, online or distance learning • self-directed learning through modules and/or patient simulation • peer-to-peer learning to promote sharing and exchange of best practices
Patient Safety, Medical Delegation	The model of care and/or Controlled/Delegated Acts in the proposal and the model of care the proposal fits into (e.g. defined CP service specific procedures – home safety, social support evaluation, clinical services - wound care, medication compliance and reconciliation). Activities/services expected of CP providers that may include a Controlled/Delegated Act. Level and nature of medical oversight required for services such as medical assessment, diagnosis, and/or treatment, particularity in rural communities that lack provider resources. The process of how this work will be delegated by a responsible physician. Communication channels between the CP and role of medical lead. Documentation, reporting, monitoring and review mechanisms, particularly those that ensure timely and appropriate care. If medical direction/oversight is assured through a formal agreement. Process for obtaining patient consent for treatment and release of medical information. Protocols and guidelines to be developed in consultation with physicians, nurses and other health care professionals, compliant with applicable paramedicine practice or	Processes to seek/obtain advice on necessary competency, training and education from medical oversight teams. Processes/protocols for contacting physicians preferably a family physician or one who has an ongoing relationship with the client/patient to direct/support CP provider for: • Home visit initiated by physician referral • Defined service specific procedures – patient history, review of chief complaint • Conferring with physician on next steps • Ensuring timely, ongoing communication between the CP and physician for assessment, follow-up, monitoring and/or advice on emerging issues/needs • Documentation/record keeping that is integrated into existing systems and real-time and/or electronic format Processes/protocols to address/ensure: • Adequate patient assessment • Appropriate care for the given patient condition • Adherence to clinical guidelines • Appropriate documentation • Appropriate communication • Appropriate follow-up post assessment and/or interventions Plan and processes for measuring and managing performance, provide feedback on case reviews (especially where controlled acts are delegated to the CP provider and the role of the medical lead), such as: • Quality assessment/assurance for service/s • Sharing and discussing evidence informed care with CP provider, helping him/her to recognize optimal care and

Dimension	Key Elements	Approach/Criteria
	legislative or regulatory frameworks.	management of care at home • Directing/overseeing education • Flow sheets to prompt evidence-based discussion and care planning • Chart reviews • Error reporting, performance improvement • Clinical handoffs Use of evidence-based protocols, guidelines and standardized assessment tools to provide safe and consistent care. Use of policies/processes to proactively identify any patient safety risks and determine mitigation strategies that can be applied in a timely manner.
Patient Safety Monitoring	Quantitative and qualitative measures to investigate unintended consequences and the real costs and safety implications of CP. Consistent and standardized patient care and administrative data collected for each episode of care and track and evaluate progress including monitoring trends and identifying outliers. Process for reviewing practice patterns, appropriateness of care by CP providers including those performing outside the standards of care. Documenting possible unintended consequences (positive or negative) to EMS systems, other health system organizations, patients, and communities.	Processes for identifying and resolving issues and to improve the program and patient care, such as: • Monitoring program or staff deficiencies; monitoring trends • Identifying corrective issues, opportunities and/or actions Policies/processes for follow-up, such as: • Individual reviews • Ongoing or additional training of staff
Managing Patient/Caregiver Experience	Understanding patient needs and experiences in receiving services from CP providers/program, including: • Identifying patients who are eligible for the CP program • Patient perspectives and choices • Clarifying reason for visit, assessment process, findings and what needs to be done • Involving patient/caregiver in decision-making	Policies/processes and mechanisms to ensure that: • CP providers are properly triaging patients to distinguish those who need a higher level of care • Patients at home are safe and avoiding the risks of unnecessary hospitalizations, as well as hospital acquired infections • Patient populations and conditions are identified for whom safety improvements can be made and as well as those for whom CP may cause

Dimension	Key Elements	Approach/Criteria
	• Taking/spending enough time with patient/caregiver • Seeking informed consent at appropriate points/steps Note: A Sample Patient/Caregiver survey developed as part of the PC pilot process is included as Appendix B.	greater harm compared with usual care Patient and caregiver feedback is addressed, including any complaints • Patient expectations, perceptions, and satisfaction with CP services are understood and assessed • Timely communication within the team of care providers about issues relating to the patient/caregiver Policies/processes to ensure: • Respectful and sensitive approach to communication, information gathering • Medical information concepts are conveyed in a language and manner that easy to understand, and follow, • Patient/caregivers have an opportunity to ask questions • Patients/caregivers are aware of process to raise issues and file complaints

6. Output and Outcome Measurement and Reporting

The program has processes in place to collect data for the measurement of processes, services and outcomes to understand and evaluate program functioning, and impacts. This includes mechanisms for tracking key performance metrics reflecting the contributions of the proposed CP activity to improved patient and system outcomes, and continued cost effectiveness in relation to other available service options. Mechanisms may include:

- Data collection methods, resources across multiple sectors (e.g.Emergency Medical Services, LHIN, other).
- Appropriate definitions, measures, and instruments —using existing ones wherever possible—to evaluate CP impacts on patient access, safety, health outcomes, experience, and overall healthcare costs.
- Common approaches to identifying patient population, establishing a baseline, tracking performance and progress using shared data, data linkages, quality improvement processes, reporting roles and responsibilities.
- Data/sources/indicators that identify target patient populations, conditions, and care settings where the use of CP providers can yield the greatest cost savings.
- Tools and resources that promote sharing of outcomes, quality metrics and integrated quality improvement processes.

Each LHIN is required to report annually within two months past year end (Q4) to the ministry on a set of indicators that include outcome and output measures. The preliminary set of indicators to be collected are identified in the table on page 15. These indicators may change over time. In addition, individual LHINs may choose to collect additional qualitative or quantitative measures depending on their needs for planning purposes.

CP Activity	Indicator	Definition
Assessments & Referrals	Difference in number of 911 calls for emergency medical services received in 2016/17 fiscal year compared to 2017/18 fiscal year	The difference between the number of 911 calls for emergency medical services in 2016/17 and the number of 911 calls for emergency medical services in 2017/18, in areas in which CP services are offered
	Number of calls resulting in referrals to local services/programs	Number of 911 calls for emergency medical services that resulted in a referral of the patient to services/programs in the area.
Home Visits	Number of patients enrolled in a CP Home Visits program	Number of individuals who have received home visits through a CP Home Visits program in the time period being reported.
	Number of patients ≥ 75	Number of enrolled patients in the time period being reported who are aged 75 or older.
	Number of patients with 3 or more ambulatory care sensitive chronic health issues	Number of enrolled patients in the time period being reported who have 3 or more of the following chronic conditions: COPD, asthma, epilepsy, diabetes, heart failure & pulmonary edema, hypertension, angina.
	Number of home visits	Number of CP home visits completed in the time period being reported.
	Number of referrals	Number of referrals (for services through LHIN, Primary Care, Community Support Services, or other health, social or community services providers) completed for patients enrolled in the CP Home Visits program for the time period being reported.
	Difference in number of 911 calls received from enrolled patients in 2016/17 fiscal year compared to 2017/18 fiscal year	The difference between the number of 911 calls being reported from patients enrolled in the CP Home Visits program in 2016/17 fiscal year compared to 2017/18 fiscal year.
	Patient experience	% of enrolled patients who rated the CP service as excellent (or the top rating of experience based on the survey method/tool in use).
Wellness Clinic	Number of patients who attended one-to-one CP Clinic education sessions	Number of individuals who attended a one-on-one CP Clinic education session in the time period being reported. Each visit is counted separately (i.e. one individual who attends 3 separate sessions is counted as 3).
	Number of patients who attended group CP Clinic education sessions	Number of individuals who attended a group CP Clinic education session in the time period/quarter being reported. Each visit is counted separately (i.e. one individual who attends 3 separate sessions is counted as 3).
	Number of patients ≥ 75	Number of patients who attend a CP Clinic education session in the time period being reported who are aged 75 or older. Each visit is counted separately (i.e. one individual who attends 3 separate sessions is counted as 3).
	Number of patients with 3 or more ambulatory care sensitive chronic health issues	Number of patients who attend a CP Clinic education session in the time period being reported who have 3 or more of the following chronic conditions: COPD, asthma, epilepsy, diabetes, heart failure & pulmonary edema, hypertension, angina. Each visit is counted separately (i.e. one individual who attends 3 separate sessions is counted as 3).
	Patient experience	% of enrolled patients who rated the CP service as excellent (or the top rating of experience based on the survey method/tool in use).

APPENDIX A Community Paramedicine Pilot Programs

In 2014/15 and 2015/16, the ministry supported the development of 30 Community Paramedicine pilots across the province. Although there are other emerging models for CP, the 30 pilots focused on three broad models:

Model 1: Assessment and Referral

Paramedics responding to frequent 911 callers for ambulance services conduct patient assessments and refer patients as needed to home and community services, including LHIN home care services, Mobile Mental Health Response Teams, and Collaborative Care teams within Health Links.

Key Features:

- Paramedic completes patient assessment and referral during a regular response to an emergency call to patients deemed to be living at risk.
- Assessment tool (PERIL), training modules and referral pathways (some electronic) have already been developed and are in use.
- Leverages on the paramedic's clinical experience to assess clients' needs for referral and, with consent, refers the patient to appropriate health agencies (e.g. LHIN home care services).
- As the assessment and referral is done during the regular work of the paramedic, there are no ongoing costs for staff or supplies.
- Paramedic Referrals (PR) were developed as a response to situations in which paramedics encountered patients with unmet needs. Such patients often presented as frequent callers to 911 whose core issues continued to go unresolved. Screening and referral are two features common to all PR models and can involve assessments based on general observations or the use of validated tools. Referrals are typically simply the act of informing the LHIN of a client's needs.

Example:

- Community Referrals by EMS program (CREMS) - Paramedics refer eligible patients to community-based care options after a brief assessment while responding to an emergency call.

Sample budget (start-up funds only)	Year 1	Year 2
Staff Training Development	$2,500	$0
EMS Training	$57,300	
Public Education/Outreach	$6,500	$0
Policy Development	$3,000	$0
Total	**$69,300.00**	$0

Results:

Over a period of nine months, one program trained 274 paramedics on the assessment and referral process, and completed 3,006 PERIL assessments. 98% of the patients assessed were over the age of 65. Out of these assessments, 458 referrals were made to the CCAC, 80% of which resulted in new services added to support the patient in their home.

Model 2: Home Visit – Including remote monitoring

Community Paramedics provide home visits and care to seniors and other patients at risk of losing their independence to live at home. Service delivery approaches include embedding paramedics into Family Health Teams, or utilizing paramedic "downtime" between 911 calls.

Model 2a: Home Visits during "Paramedic Downtime"

Key Features:

- Paramedics make home visits during "downtime" between emergency responses.
- Dependent on volume of calls the service receives.
- Paramedics may need training to fulfill Community Paramedic role.
- These visits may be ad hoc (when a paramedic is in the neighborhood) or scheduled. They may also result in additional referrals as needed.
- Programs in more urban or densely populated areas do not routinely have this type of time available.
- Cost should be minimal, as programs will only need start-up funding (i.e. training, training time).
- Training and education curriculums have already been developed, and can easily be replicated.

Examples:

- Both Renfrew and Niagara EMS leverage "down time" from paramedics who are "on station" awaiting 911 calls. In both cases the programs were started by advanced paramedics stationed in rural areas who had extra time available while waiting for 911 calls.
- Typically staffed by advanced care paramedics who, during regular shifts, visit at-risk seniors living in their homes in rural or remote areas.
- During a visit, paramedics provide a range of services to clients including monitoring vitals, fall risk assessments, etc.
- In the Niagara CP pilot, the Community Paramedicine Response Unit makes home visits to seniors with complex needs in the region, assesses their service needs and connects them with primary care physicians, local pharmacists, home care (previously CCAC) falls prevention and other community support services.

Sample Budget:	Year 1	Year 2
Staff Coordination/Admin support (.8 FTE)	$61,000	$61,000
EMS Training	$17,000	$11,000
IT, Communications	$26,400	$26,400
Administrative Costs	$14,300	$14,300
Total	**$118,700.00**	**$112,700.00**

Results:

Over a period of 18 months, one of the programs enrolled 59 patients and completed 458 home visits. Most patients were over the age of 65 and had two or more chronic health issues. During the visits, point of care tests such as ECGs and Blood Glucose were conducted and education/coaching to help support the patient in their home was provided. Eighteen referrals to various home and community care services were completed, almost have of which resulted in new or increase services for the patients.

A 93% decrease in 911 calls and a 77% decrease in the number of ambulance transports to the ED by the patients enrolled in the program over the last 12 months was reported.

Model 2b: Home Visits by dedicated Community Paramedics

Key Features:

- In areas where call volumes do not allow for paramedic downtime, dedicated positions may need to be created.
- Home Visits: One dedicated paramedic may visit seniors in their homes for assessment and follow up for short term assistance or for long term monitoring.

Example:

- In the West Carleton Family Health Team (WCFHT) CP pilot, designated community paramedic staff completes home visits delegated by Family Health Team physicians. The community paramedic staff is available to respond as needed during the usual daytime hours.

Sample Budget	Year 1	Year 2
1.0 FTE Community Paramedic	$100,000	$100,000
EMS Training	$17,000	$11,000
IT, Communication equipment and maintenance	$19,000	$3,200
Supplies	$3,200	$3,200
Vehicle lease	$12,000	$12,000
Total	**$151,200.00**	**$129,400.00**

Results:

Over 18 months, this program enrolled 155 patients and completed almost 700 home visits. The majority of patients were over the age of 65 and 60% had four or more chronic health issues. During the home visits, the paramedic staff performed over 500 point of care tests, about 50 education or coaching activities, and 190 referrals to home and community care services. Staff completed seven delegated acts during this time. A 30% decrease in 911 calls and 45% decrease in the number of ambulance transports to the ED by the patients enrolled in the program over the last 12 months was reported.

Specific Considerations:

- Strong consideration needs to be taken about adding new/additional paramedic staff to make home visits, versus utilizing downtime of current paramedics to expand access to home and community care and primary care, when other home visit services may be available (i.e. nursing).
- More data and additional research on the impact of the Home Visit model on 911 calls and ambulance transports to the ED would contribute to the body of knowledge supporting this community paramedicine model.

Model 3 –Community Paramedic Led Clinics

The goal of Community Paramedic Led Clinics is to provide early identification of health problems, referrals as well as health teaching and preventative interventions. These clinics can be run solely by CP practitioners or in partnership (e.g. with Public Health, Diabetes Outreach).

Key Features:

- Community paramedics provide chronic disease prevention education, blood pressure checks, blood glucose checks, general wellness assessments, flu shots, education about healthy living, and other services.
- Clinics are held in geographic areas with limited access to health care providers, or in locations with high numbers of frail patients, in settings such as community centres, pharmacies, senior centres, community housing complexes, shelters and local restaurants.
- Frequency of clinics ranges from regularly scheduled monthly events to seasonal or ad hoc.

Examples:

- In York Region, paramedics provide service to clients in shelters where two paramedics visit three shelters on a weekly or bi-weekly basis and offer vital checks, diagnosis, diabetes care, health teaching, system navigation, and referrals. No formal instruments are used for assessment.
- In Hamilton, a pilot research program provides primary care services to clients in a subsidized housing complex. The care provided include a variety of services such as a review of healthy lifestyles, risk assessment, measuring blood pressure, assessing diabetes risk and diabetes foot care.
- In Renfrew County, voluntary paramedics and students deliver Community Paramedic Led Clinics in the region where residents are welcome to drop in for staff to monitor vitals and blood glucose on a monthly basis. No formal assessment instruments are used.
- The CP program of the County of Brant includes clinics in identified municipally owned buildings providing subsidized rental accommodations for seniors and other vulnerable populations.
- The Algoma, Cochrane, Manitoulin-Sudbury EMS has established community paramedic-led clinics within social housing complexes in partnership with the DSSAB.

Sample Budget	Year 1	Year 2
1.5 FTE Community Paramedic	$ 42,500	$ 92,900
Staff Co-ordination/Admin Support	$ 32,900	$ 71,400
Staff Training/Development	$ 10,000	$ 0
IT, Communication, Equipment & Maintenance	$ 20,500	$ 6,900
Vehicle	$ 4,700	$ 10,000
Supplies	$ 34,000	$ 0
Total	**$ 144,600**	**$181,200**

Results:

Over a period of 18 months, one program has engaged with 120 patients (88% over the age of 65, 33% with 4 or more chronic conditions), and completed 393 assessments. The CP providers have completed point of care tests such as ECGs and Blood Glucose, and a number of health awareness/self-management assessments and coaching activities to help support the patient in their communities. They have completed 27 referrals to various home and community care services, 63% of which resulted in new or increase services for the patients.

There has been a 93% decrease in 911 calls and a 77% decrease in the number of ambulance transports to the ED by the patients enrolled in the program over the last 12 months.

Specific considerations:

- Value for the Clinic model may be found in areas where there is a lack of other resources – particularly primary care and public health - available to provide the services.
- Initial research on the Community Health Assessment Program through Emergency Medical Services (CHAP-EMS) found that 15% of participants dropped one CANRISK category (e.g. high to moderate) during the intervention and EMS call volume decreased 25% during the intervention compared to previous two years.
- More data and additional research that would contribute to the body of knowledge supporting this model of community CP led clinic.

APPENDIX B Sample Patient/Caregiver Community Paramedicine Experience Survey

The survey questions below were developed by the Community Paramedicine Steering Committee to be used as part of the CP pilot. While this survey focusses on satisfaction as opposed to patient experience, it can be used as template from which patient experience can be measured.

Community Paramedicine Program Patient / Caregiver Satisfaction Survey

Instructions to Patients / Caregivers

- The purpose of this survey is to obtain feedback from patients / caregivers enrolled in Community Paramedicine programs for the purpose of determining how the programs could be improved.

This questionnaire is about the services and care you, or the person you care for, have received from the Community Paramedicine Program since your enrolment on [date]. Therefore, when answering the questions, please think only of your experiences with paramedics within the Community Paramedicine Program.

- The information you provide in this survey will be kept anonymous and private.
- It is your choice to take part in this survey. You are under no obligation to do so. The care you receive from the Community Paramedicine Program will not be affected in any way by whether you take part in this survey.
- Please do not write your name on the questionnaire, or include any other information that may identify you, so that your answers remain private and anonymous.
- By completing and submitting this survey, you are agreeing to these terms.

To answer a question, please put a check mark (√) in the box by the answer that is closest to the way you feel about the services and care provided to you, or if you are a caregiver, to the person you care for.

<u>Questionnaire items</u>

Please identify whether you are a:

Patient	Caregiver / Family Member
☐	☐

1. **The community paramedics provided me with helpful advice and information on how to maintain or improve my own health and well-being, or the health and well-being of the person I care for.**

Strongly agree	Agree	Disagree	Strongly disagree
☐	☐	☐	☐

2. **The community paramedics improved my knowledge about health and social services that are available.**

Strongly agree	Agree	Disagree	Strongly disagree
☐	☐	☐	☐

3. **I feel better prepared to deal with concerns I may have in the future about my own health and well-being, or the health and well-being of the person I care for.**

Strongly agree	Agree	Disagree	Strongly disagree
☐	☐	☐	☐

4. **The community paramedics gave me explanations that were easy to understand regarding my own health concerns, or the health concerns of the person I care for.**

Strongly agree	Agree	Disagree	Strongly disagree
☐	☐	☐	☐

5. **The community paramedics listened to my concerns.**
   Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐

6. **The community paramedics took the time to answer my questions.**
   Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐

7. **The community paramedics were compassionate and sensitive to my health and well-being concerns, or to the health and well-being of the person I care for.**
   Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐

8. **The Community Paramedicine Program has aided my overall health and well-being, or the health and well-being of the person I care for.**
   Yes ☐ No ☐

9. **Overall, how satisfied are you with the services and care provided by the community paramedic(s)?**
   Very satisfied ☐ Satisfied ☐ Dissatisfied ☐ Very dissatisfied ☐

10. **How would you rate your overall experience with the services provided by the community paramedic(s)?**
    Poor ☐ Good ☐ Very Good ☐ Excellent ☐

11. **Would you recommend this service to others?**
    Yes ☐ No ☐

Your thoughts (Please do not include any information that can identify yourself, or if a caregiver, the person you care for).

12. **What do you see as the overall benefits to this program?**

13. **Do you have suggestions for how this program could serve you better?**