

Request for Decision

Emergency Medical Services Community Paramedicine

Presented To:	Community Services Committee
Presented:	Monday, May 05, 2014
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Recommendation

THAT the City of Greater Sudbury authorize the Chief of Fire and Paramedic Services to execute the appropriate agreements between the City of Greater Sudbury and the Ministry of Health and Long-Term Care (MOHLTC) and other health care partners as required to secure available funding as may be awarded to implement Community Paramedicine initiatives proposed by the City in the report dated April 23, 2014 from the Chief of Fire and Paramedic Services regarding Emergency Medical Services Community Paramedicine.

Finance Implications

If any of the projects are approved, there will be no budget implications as the projects will be 100% provincially funded.

Executive Summary

There is growing evidence that a fully integrated Community Paramedicine program can be used to address identified needs within aging and vulnerable populations to reduce ambulance call volume, emergency department visits, and hospital and/or long term care admissions thereby extending the ability for some residents to live longer independently in their homes with appropriate community support. This will result in improved quality of life and may result in future cost avoidance for Paramedic services and savings for the health care system as a whole.

This January, the MOHLTC announced a \$6 million investment to support the expansion and development of Community Paramedicine initiatives across the province to help older adults and other patients receive the care they need in their homes, while reducing unnecessary emergency room visits and hospitalizations. Emergency Services seeks the City's approval to implement the three Community Paramedicine initiatives, once implemented these initiatives are expected to improve access to the "right care" at the "right time" and in the "right place" which directly links to one of this term of Council's Strategic Priorities "Promoting a Healthy Community".

Signed By

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Division Review

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Background

The aging population is a key driver of increased calls for Paramedic services and is projected to continue to increase over the next 20 years. Currently, patients 60 years of age and older represent almost 60% of our total call volume, the Service is forecasting a 33% increase in service request volume for cohorts 65+ over the next eight years (*Archibald 2013*).

Canadian population-based data confirms that frail seniors living in the community are nearly four times more likely to be institutionalized and twice as likely to die (*EMSCC 2012*). Frail older people who often have complex and inter-related health and social problems are vulnerable to serious and potentially preventable adverse outcomes. Many frail older adults are homebound and have challenged access to medical care and often suffer higher rates of complex and multiple illnesses including dementia and functional impairments. These measurements clearly demonstrate the need for Paramedic Services to reform strategies, focusing more on Community Paramedicine to address seniors' needs and chronic disease in the home with support from Community based programs.

Dr. Sinha, the Provincial Lead on Ontario's Seniors Strategy in his 2012 report "*Living Longer, Living Well*" has recommended the development and expansion of Community Paramedicine Programs that can offer significant contributions to improvement of health care in Ontario. The MOHLTC continues to consult with healthcare stakeholders including the Ontario Association of Paramedic Chiefs (OAPC), and Municipal Paramedic Services to determine advancing the development of a provincial Community Paramedicine program.

A number of pilot Community Paramedicine Programs have been undertaken across Canada that utilize Paramedics with an enhanced role in screening, community health referrals, and diverting patients from the Emergency Department to more appropriate community-based services, a description of some programs are provided in Appendix 1.

In the fall of 2013, the MOHLTC in partnership with the OAPC funded work on a Provincial Community Paramedicine Toolkit to support the roll-out of a standardized and evidence-based community Paramedic referral program. These assessment tools will enable Paramedics, with a patient's consent to make a direct referral to appropriate community agencies, the most common being CCACSudbury is an active participant in this exciting process, collaborating with Huntington University and Behavioral Supports Ontario (BSO) we are developing and validating additional assessment tools for dementia, delirium, and depression and will be conducting a research trial to validate these new tools for use by emergency responders across Ontario. The Paramedic Referral Toolkit and BSO assessment tools will be implemented in Sudbury once available.

Community Paramedicine Program in Sudbury

Locally, the City's Paramedic Division has been actively involved on several Community Paramedicine initiatives. The aim of these initiatives is to provide positive benefits for our patients, while at the same time reducing demands for Paramedic services reducing the overall impact on the local health care system. While the Community Paramedicine Program in Sudbury is still being developed, our initiatives generally focus on three key areas: Prevention and Education, Intervention, and Diversion Strategies.

Prevention and Education

- Care Link Medical Information which are magnetized fridge file holders that were developed in Sudbury and have now been used in other areas of the province to provide quick easy access to timely medical information in an emergency.

- Prevention of Alcohol Related Trauma in Youth (PARTY) Program – partnership with Health Sciences North Trauma Program aimed at providing education for highschool students on the dangers of alcohol and increased risk of trauma in our youth.
- The Public Access Defibrillator (PAD) program is coordinated through Paramedic Services with over 120 units placed within the City in partnership with the Heart and Stroke AED program. Public CPR training to encourage citizen CPR and use of the public access defibrillators help decrease out of hospital sudden cardiac arrest deaths.

Intervention

- Since 2011, Paramedics have been able to submit “*Community Health Concern Reports*” to the Service. These reports identify patients who are faced with challenges in the home that may result in a medical crisis or a loss to their independent lifestyle, such as unsanitary living conditions; “failure to thrive”; or high utilization of Paramedic services. These patients may benefit from additional community intervention and/or support. These reports result in a case review and typically some type of referral process from the Paramedic Service to our community partner agencies to address their unmet needs.
- The Service also works to identify patients with a high utilization of Paramedic Services for intervention. Only about 40% of those high-use patients will accept additional assistance aimed at reducing their dependency on Paramedic Services. We have seen a 65% reduction in Paramedic service use for those patients who accept paramedic service intervention. Unfortunately, for the frequent users of Paramedic Services who refused our service intervention, we saw an average increase of 8% across the year.

Diversion

- Discussions are ongoing between the Paramedic Division and HSN Mental Health and Addictions on diversion strategies that would see patients transported by Paramedics to specialized clinics and treatment centres within the community. This Diversion strategy is aimed at decreasing non-acute transportation to the Emergency Department (ED) reducing ED overcrowding, but most importantly, may better meet the patient's needs further reducing the utilization of Paramedics and ED visits.

Community Paramedicine Funding

The MOHLTC has allocated \$6 million in provincial funding to support the expansion and development of Community Paramedicine initiatives across the province to help older adults and other patients receive the care they need in their homes, while reducing unnecessary emergency room visits and hospitalizations. This one-time funding of up to \$300,000 per proposal for the 2014-2015 fiscal year should contribute to: improved patient access to the right care in the right place; improved delivery and coordination of services in the community for older adults and other patients with unmet needs; and System partnerships, collaborations, and resources sharing among service providers.

In order to access this funding opportunity, the city's Paramedic Service is working in collaboration with our community stakeholders including Health Sciences North, Behavioral Support Ontario, NELHIN and CCAC in exploring and developing three (3) separate funding proposals to improve our Community Paramedicine Program.

The three (3) proposals are:

1. Community Paramedic Extended Care Transitions Proposal - \$300,000

To establish a program in collaboration with Health Sciences North, the North East Community Care Access Centre and primary care physicians that would see specially trained Community Paramedics providing follow-up care and support to patients discharged from the hospital with Chronic Obstructive Pulmonary Disease, Congestive Heart Failure, Diabetes and Early Dementia who are older adults and at risk for readmission.

The utilization of Community Paramedics has the opportunity to significantly improve outcomes including reductions in EMS 911 calls, decrease readmissions, and improve quality of life through the ongoing monitoring of patients discharged from the hospital both in the immediate discharge period (30 days) but also

in the period extending beyond the 30 day follow-up of the current model. Given that there is base-line data on approximately 300 patients who are enrolled in the current Care Transitions and Rapid Response Model there is an opportunity to evaluate the impact of introducing Community Paramedics into the current intervention model using a quality improvement approach.

2. Behavioral Support Ontario Referral Proposal - \$194, 745

The proposal is to provide Greater Sudbury Paramedics with enhanced knowledge and skills surrounding the normal and abnormal aging process and the 3Ds (delirium, dementia and depression) by means of an educational workshop and training session for the use of the '3Ds-FIRST' tool. This increased education will result in the paramedics' abilities to better detect early-to-late and moderate-to-severe signs of cognitive impairment among older adults. With this enhanced knowledge, paramedics will be able to decide whether such individuals would benefit from a referral to North East Behavioral Supports Ontario (NE BSO) for their mental health care needs.

3. Health Promotion, Prevention, and Education Proposal - \$107,936

Is for a one year temporary position that would be responsible for the development of a health promotion, education, injury prevention program to assist citizens in chronic disease recognition and prevention, referral and health system navigation process, public education and injury awareness/prevention strategies. The goal of the project will be to have a number of fully developed "canned programs" that can be delivered by paramedics in a standardized and consistent manner.

If successful, the Chief of Fire and Paramedic Services will need to enter into funding and operational agreements to support approved proposals.

Conclusion

There is strong evidence that Community Paramedics can support patients in their homes outside of the traditional institutional care model reducing 9-1-1 calls for Paramedic response, Emergency Department visits, and hospital and long-term care admissions. These types of reductions have the ability to result in cost savings from the traditional model of institutional health care with an opportunity for a re-investment of these savings to ensure the long-term sustainability of Community Paramedic Programs.

The Chief of Fire and Paramedic Services will continue to advocate for an integrated Community Paramedicine Program in Sudbury aimed at improving the quality of life for our residents and focusing on three overarching themes – building capacity, synergistic partnerships and innovation while ensuring to continue to provide first-class emergency services that are responsive, reliable, timely and safe.

Recommendation

That the Chief of Fire and Paramedic Services be authorized to execute the appropriate agreements between the City of Greater Sudbury and the Ministry of Health and Long-Term Care(MOHLTC) and other health care partners as required to secure available funding as maybe awarded to implement Community Paramedicine initiatives proposed by the City.

Appendix 1:

Canadian Community Paramedicine Programs

Nova Scotia:

The first Canadian program was developed on Long and Brier Islands isolated communities off the coast of Nova Scotia and has demonstrated cost savings with a 40% reduction in EMS transport to the Emergency Department as well as 28% reduction in Doctor's visits. The annual ambulance call volume for the islands was 150 calls per year. There was the capacity to utilize Paramedics to address the non-urgent medical concerns of citizens. Community Paramedics, Nurse Practitioners, with an offsite collaborating physician, provide the day to day medical assessment, chronic disease monitoring and management including expanded scope of practice that permits minor procedures such as diagnostic testing. An at home Vital signs, Interview, Safety Inspection Treatment (VISIT) program was undertaken by community Paramedics to provide the opportunity for additional services to be made available to citizens of these small isolated islands. This proactive wellness monitoring and education program has resulted in an increase of overall health of islanders and cost savings for the health care system.

Nova Scotia continues to expand the Community Paramedic Program to other areas tailored to meet the local needs. In Cape Breton a Collaborative Emergency Care Program (CEC) involves a Registered Nurse (RN) and Paramedic staffing the Emergency Department during the overnight hours. The team is supported by an on-line oversight physician. The RN and Paramedic treat general malaise (earaches, sore throats, colds), minor trauma (lacerations, simple fractures), allergies, back pain, minor diabetic issues and perform fall assessments. The additional training for paramedics for extended skill set includes suturing, slab casting and otoscope skills. The patients are assessed with one of three decisions being made:

- 1) Treat and release outright
- 2) Treat and release with scheduled primary care appointment
- 3) Transport for definitive care

Toronto:

The Toronto EMS Community Paramedic Program was created in the fall of 1999. The program is a non-emergency community-based service with a focus on health promotion and injury prevention. Toronto has been at the forefront with a number of innovative community programs. Toronto was the first Emergency Medical Service (EMS) to provide influenza immunization to the homeless, vulnerable and house-bound population. They have also assisted the Public Health Unit in large immunization programs.

The Community Referrals by Emergency Medical Service (CREMS) program has been extremely successful since its inception in early spring 2006. This program involves front line responding Paramedics identifying patients that are in need of additional health care or support services. Verbal consent is obtained and referrals are made to the appropriate Community Care Access Centre (CCAC) for further assessment and determination of what kind of services can be provided to meet the patient's needs. In the event a patient does not provide verbal consent and the Paramedics determine that additional support could assist the patient, a follow up visit

with a Community Paramedic is scheduled and the opportunity to discuss health options often results in a referral.

The CREMS program was piloted in Toronto and demonstrated success in community referral for patients that benefit from the services coordinated through the local CCAC. The program includes a community Paramedic that follows up with the patients that “refuse” immediate referral and they are often able to convince the patient that a connection to CCAC would be advantageous to address their mobility or assist with the challenges of daily living. A 73.8% reduction of 911 calls from target population in 2010 not only resulted in patient satisfaction, improved quality of living but clearly demonstrated a direct positive cost avoidance savings for Toronto EMS.

Injury prevention programs such as Partners Promoting Window and Balcony Safety for Children program has been spearheaded by Toronto EMS. This program provides education, use of safety devices and tips to help prevent falls of children. In addition hot and cold weather response plans have been successful in preventing emergencies associated with temperature extremes.

Renfrew County

Renfrew County Paramedic Service partnered with the Local Health Integration Network (LHIN) and community stakeholders to develop the “Aging at Home Strategy” for seniors in Deep River. The goal of the program was to allow seniors to live at home as long as possible with a “team approach” that includes Paramedics, personal support workers, housekeeping and maintenance. Most seniors required only minimal assistance to be able to stay in their homes. Currently thirty-two (32) seniors are being monitored in their home and recent data indicates, of this group, there has been a 50% decrease in emergency calls. The Paramedic’s role is to improve the quality of life and prevent emergency calls by taking vital signs, identifying and removing hazards, ensuring medications are taken as prescribed by physicians and educating patients on their medical conditions. The non-emergency vehicle (that carries essential equipment) can transport patients to the Deep River Hospital for appointments and non-emergency reasons. In this situation lengthy waiting lists for admission to long-term care facilities provided an opportunity for paramedics to assist in positively impacting this new reality.

In addition to the Aging at home Strategy in Deep River program previously described, Renfrew County has a number of other Community Paramedicine Programs including Wellness Clinics that provide residents, with challenges accessing a primary care provider, the opportunity for monthly assessments. The assessments include the monitoring of; blood glucose, temperature, heart rate and blood pressures that are recorded on a monthly basis. The records are provided to the patient to bring to their physician to help diagnose health problems in early stages.

Renfrew County also has a Heart Wise Exercise Program developed in partnership with the University of Ottawa Heart Institute. The purpose is to identify Community Exercise Programs that would benefit from an on-site Automatic External Defibrillator (AED) and staff training in its use as well as in Cardiopulmonary Resuscitation (CPR). Paramedics participate in community mass training for the AED and CPR in conjunction with healthy living workshops.

In low density call volume areas, Paramedics assist the community by providing Ad hoc

home visits to seniors between calls. These visits provide an opportunity for paramedics to assist seniors in accident proofing their home and educate them in injury prevention strategies to keep older adults safely at home for longer period of time.

York EMS

The Expanding Paramedicine in the Community (EPIC) clinical trial currently being undertaken (commenced June 2013) by York County EMS, is the second randomized control trial of Community Paramedicine in the world. In the EPIC trial a select group of Advanced Care Paramedics were given additional training in chronic disease management. The EPIC study will enroll 500 patients with a history or combination of the three most common chronic diseases (Diabetes Mellitus (DM), Congestive Heart Failure (CHF) and Chronic Obstructive Pulmonary Disease(COPD)) The “Control “ group will not receive the care of Community Paramedics and will serve as baseline data. The “Intervention” group will be treated by Paramedics, under the medical oversight of a primary care physician, in the home. This group of patients will be visited at home by the Community Paramedics through regularly scheduled visits and upon request of the family health team for patients experiencing exacerbations of their condition. The Community Paramedics are not working out of Emergency vehicles and not responding to 911 calls. They will however have all the equipment to provide emergency treatment if required and contact dispatch to initiate emergency vehicle response when necessary.

The additional training was provided by Centennial College that has developed a curriculum based on the UK Community Paramedic training program. The program focused on primary health care and chronic disease management.

York EMS has also developed a Community Clinical Program for health assessments at Emergency Shelters to address the homeless that often suffer from chronic disease that is poorly managed such as diabetes. This program provides the Paramedic an opportunity to interact with the marginalized population and address issues prior to escalation to a possible life threatening emergency.

Saskatoon

The Saskatoon Health Bus is an inter-professional mobile primary Health Centre staffed by a Nurse Practitioner and Paramedic. There is no charge for services and no appointment necessary. The bus often provides care to the marginalized population diagnosing and treating common illnesses and injuries. They provide testing, education and counseling for pregnancy, sexually transmitted infections and birth control, chronic disease monitoring, wound care management and suturing and suture removal for minor lacerations. In addition, the health bus assists patients to connect with community services such as; mental health and addictions services.

These are but a few successful programs currently in Canada that utilize the expertise and training of paramedics to provide non acute care in the community.