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ONTARIO STROKE STRATEGY

The Health and Emergency Medical Services Committee recommends the adoption of the recommendations contained in the following report, June 1, 2006, from the Commissioner of Community Services, Housing and Health Services:

1. RECOMMENDATIONS

It is recommended that:

1. Council approve a pilot project for York Region EMS to participate in the Ontario Stroke Strategy which involves a medical redirect of stroke patients to a District Stroke Centre by EMS paramedics.

2. Staff provide a further report to Council on the outcomes of the pilot project to determine future participation.

2. PURPOSE

The purpose of this report is to receive Council approval for a pilot project related to the provincial initiative known as the Ontario Stroke Strategy.

3. BACKGROUND

3.1 History of the Ontario Stroke Strategy

In the fall of 1998, the Heart and Stroke Foundation of Ontario (HSFO) launched the Coordinated Stroke Strategy, a three-year demonstration project to test the model of region-wide coordinated stroke care across the continuum of care. A joint working group of the Ministry of Health and Long-Term Care (MOHLTC) and HSFO was formed to identify existing gaps, develop new approaches for stroke prevention, and establish a coordinated emergency response system to facilitate timely access to diagnostic testing and effective treatment.

The working group's final report entitled "Towards an Integrated Stroke Strategy for Ontario" was submitted to the MOHLTC in May 2000. The report recommended a comprehensive province-wide system of organized stroke care encompassing the entire continuum of care including, prevention, emergency response, and rehabilitation.

The Minister of Health and Long Term Care endorsed the report and committed to a four-year implementation for integrated stroke care on June 19, 2000. The Ontario Stroke Strategy identifies 26 Stroke Centres across Ontario with the goal to reduce the

incidence of stroke and to improve patient care and outcomes for persons who experience a stroke. Stroke centres are mandated to organize their human and medical resources so that stroke patients can be identified and treated both rapidly and appropriately for the needs of the patients. York Central Hospital in Richmond Hill has been designated as a District Stroke Centre and was officially opened on November 16, 2005.

4. ANALYSIS AND OPTIONS

4.1 What is a Stroke?

A stroke is a disruption of the blood flow to the brain which deprives the affected area of oxygen. The part of the body controlled by the damaged brain cells is adversely affected, causing symptoms such as weakness on one side or a loss of speech. For those that survive the first few hours after a stroke, the brain injury may progress quickly and can lead to permanent disability. Strokes are caused by either blood clots, or a ruptured blood vessel. Studies indicate that effective treatment requires rapid treatment by a team speciality trained in stroke management.

4.2 Ontario Stroke Statistics

In Ontario:

- Stroke is the third leading cause of death and disability in Canada.
- Stroke is the leading cause of patient transfer to a long-term care facility.
- Stroke is estimated to cost the Ontario economy over $850 million per year.
- Stroke affects at least 16,000 people each year.
- At least 90,000 people in Ontario are living with the effects of stroke.
- Incidence of stroke is expected to increase in frequency pushing hospital admission upwards of 9% by 2010.

4.3 York Region District Stroke Centre Stakeholders

Stakeholders representing the entire continuum of care including, prevention, emergency response, and rehabilitation have been involved in the planning of organized stroke care in York Region since April 25, 2005. York Region hospitals, the York Region Base Hospital Program (Markham Stouffville Hospital), Community Care Access Centres, long term care facilities (private and public), community support groups, the MOHLTC Central Ambulance Communications Centre, and the York Central District Hospital Stroke Centre have formed a local District Stroke Council (DSC). Over the course of the past year, the DSC has convened several planning and activation committee meetings with respect to Stroke Strategy within the Region.

4.4 Proposed Pilot Project

In order for patients to receive the treatment benefits offered by the York Central Hospital District Stroke Centre, they must be identified and transported to the centre within two hours of the onset of stroke symptoms. The pilot proposed by the DSC involves the identification of stroke patients by York Region EMS Paramedics using the

Provincial Acute Stroke Protocol (PASP). Patients meeting this protocol would be transported directly to the closest stroke centre. Accordingly, these patients would be fast-tracked upon arrival at the District Stroke Centre.

4.5 Patient Outcomes

The 1996 National Institute of Neurological Disorders and Stroke Study (NINDS) showed the most positive results and served as the basis for the change in stroke treatment in North America. The study showed significantly less disability in patients treated within three hours. Reports from other jurisdictional areas that have implemented the Ontario Stroke Strategy report patients receiving treatment have a 30% better chance of returning to normal or near normal function within three months of having had a stroke. In order to receive the benefits, the treatment must be given at a stroke centre within three hours of the onset of symptoms.

4.6 Potential EMS Performance Impacts

A key priority of the proposed pilot is to monitor the impacts of the stroke strategy on EMS performance. More specifically, potential call volume increases, patient redirection and off-load delays have a direct correlation to response times and performance. At this point, service impacts cannot be clearly defined. It is anticipated, however, that the travel time to hospital for some patients (identified under the PASP criteria) may be longer as a result of not being directly transferred to the closest available hospital. If York Region EMS however is not involved in this pilot, participating hospitals will request that CACC transfer the patient (in accordance with PASP protocols) to the District Stroke Centre, which may result in a second transfer for the patient. An outcomes follow-up report will be prepared following the proposed pilot.

4.7 Paramedic Training

In 2003, all York Region Paramedics underwent training in stroke assessment and management as part of the MOHLTC mandatory continuing medical education. In April 2004, the MOHLTC Emergency Health Services Branch issued a Training Bulletin to Ontario Paramedics with indications and contraindications for bypassing a community hospital and transporting patients directly to a designated stroke centre under an Acute Stroke Protocol. The protocol involves recognizing the signs and symptoms of a stroke, and the patient can be transported within two hours of a clearly determined time of symptom onset or the time the patient was last seen in a usual state of health. If the patient meets all the conditions of the protocol Paramedics inform the Central Ambulance Communication Centre and obtain authorization to transport the patient to the designated stroke centre. In 2006, York Region EMS conducted refresher training on stroke assessment, management and the Ontario Acute Stroke Protocol.

4.8 Memorandum of Understanding

York Region EMS has been provided with a draft Memorandum of Understanding (MOU) by the DSC, dated April 19, 2006, regarding the medical redirect and repatriation of acute stroke patients within the Region. The MOU, which proposes York Region EMS as a signatory, is currently being reviewed and analyzed by York Region Corporate

Services (Legal Services Branch) and Health Services Department Staff. Any MOU to be executed by the York Region Health Services Department regarding the medical redirect and repatriation of Stroke patients within York Region shall be the subject of a further Report to Committee and Council for approval.

4.9 Relationship to Vision 2026

York Region EMS continues to support the Vision 2026 goals of Responding to the Needs of Our Residents and Supporting a Safe and Healthy Community.

5. FINANCIAL IMPLICATIONS

All costs related to the 2006 Paramedic Training on the Ontario Acute Stroke Protocol have been absorbed within the approved 2006 EMS budget. At this time, no additional pilot project implementation costs are anticipated.

6. LOCAL MUNICIPAL IMPACT

York Central Hospital is the designated Stroke Centre for York Region. Patients assessed that meet the criteria under the PASP will be transported directly to York Central Hospital from any municipality in York Region. With the exception of PASP calls, the current deployment plan will remain intact for all other calls.

7. CONCLUSION

A pilot project will provide the necessary analysis to better understand the potential performance and financial impacts on York Region EMS with the implementation of the Ontario Stroke Strategy. Staff will provide a further report to Council on the outcomes of this pilot in order to determine further participation in the Ontario Stroke Strategy.

The Senior Management Group has reviewed this report.