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YORK REGION EMERGENCY MEDICAL SERVICES PARTICIPATION IN STREAM STUDY PROJECT

The Health and Emergency Medical Services Committee recommends the adoption of the recommendations contained in the following report, September 18, 2008, from the Commissioner of Community and Health Services:

1. RECOMMENDATIONS

It is recommended that:

1. Council approve York Region's partnership with Southlake Regional Health Centre for the participation of our Emergency Medical Services in the Strategic Reperfusion Early After Myocardial Infarction (STREAM) Study project.
2. The Commissioner of Community and Health Services be authorized to execute the necessary contracts on behalf of York Region for this project, subject to review by Legal Services.
3. Staff report back to Council on the outcomes of the study.

2. PURPOSE

This report seeks Council's approval to participate in the STREAM Study project. STREAM is an international, multi-centre Emergency Medical Services (EMS) trial that will evaluate the impact of patients diagnosed with a specific type of heart attack receiving clot dissolving drugs and direct admission to the Southlake Regional Health Centre cardiac catheterization laboratory versus direct admission to the Southlake Regional Health Centre cardiac catheterization laboratory alone. Southlake Regional Health Centre would be one of the six sites in Canada, and the only site in Ontario, participating in this international study.

3. BACKGROUND

Surviving a heart attack requires prompt attention and specific treatment interventions

When the blood supply to the heart is slowed or stopped because of a blockage, a heart attack occurs. Atherosclerosis, the narrowing of coronary arteries due to plaque buildup, causes more than 90% of heart attacks. The length of time the blood supply is cut off will determine the amount of damage to the heart.

The goals of initial treatment are to minimize damage by restoring blood flow to the heart and to determine the amount of damage to heart tissue. Intensive research over the last 20 or more years has demonstrated that prompt treatment can decrease damage from a heart attack and increase the chance for survival.

The treatment for heart attack victims is varied based on hospital services

The first treatment of choice for a type of heart attack known as ST-elevation myocardial infarction (STEMI) typically is performed by threading a slender balloon-tipped tube – a catheter – from an artery in the groin to a trouble spot in an artery of the heart. The balloon is then inflated, compressing the plaque and widening the narrowed coronary artery so that blood can flow more easily. This procedure is referred to as percutaneous coronary intervention (PCI) and is performed at hospitals with a cardiac catheterization lab; in York Region, Southlake Regional Health Centre is the designated cardiac centre.

When PCI treatment is not available or delayed, clot dissolving drugs can help prevent further heart damage. As compared to PCI, the drug treatment is a therapy that is immediately available at all hospitals and requires much less technical effort and equipment. It has been shown to be beneficial and most effective when it is administered early after the onset of symptoms.

Options for heart attack victims will ensure the best treatment strategy

The STREAM Study project will evaluate the efficacy of a treatment strategy designed to reflect optimal clinical practice that includes prehospital clot dissolving drugs followed by PCI, as required, or only PCI for some patients.

STREAM is a multi-national study involving several EMS agencies in Canada

STREAM sites in Canada include Edmonton, Winnipeg, St. John, Halifax, St. John's. The Canadian arm of the trial is coordinated through the University of Alberta, with Dr. Robert Welsh as the study coordinator. Locally the STREAM Study project will be managed by Dr. Warren Cantor, Interventional Cardiologist, Southlake Regional Health Centre. The lead coordinating investigator for the study is Professor Frans Van de Werf, University Hospital Gasthuisberg, Belgium. Southlake Regional Health Centre supports STREAM Study project participation (see *Attachment 1*). Central East Prehospital Care Program also supports participation in the study (see *Attachment 2*).

4. ANALYSIS AND OPTIONS

York Region EMS will deliver clot dissolving drugs under the authority of a cardiologist

Currently, York Region EMS transports patients suffering from heart attacks meeting specific clinical and time criteria directly to the PCI lab at Southlake Regional Health Centre. Those who do not meet the specific criteria will continue to be directed to the closest hospital. With minimal training and using existing infrastructure, York Region EMS will be able to meet the study participation requirements.

Under the study protocol paramedics will administer clot dissolving drugs under the authority of a cardiologist while in transit to the PCI lab. In addition, York Region EMS has the opportunity to join an international project and validate the optimal treatment for heart attack patients.

Personal health information is protected

The STREAM Study utilizes an electronic case record which is housed with an independent company and at arms length of the sponsor. Data will be de-identified and patient confidentiality will be assured.

STREAM will adhere to Canada's federal privacy law, *Personal Information Protection and Electronic Documents Act 2000* (PIPEDA), and the Ontario privacy legislation, *Personal Health Information Protection Act 2004* (PHIPA), in preserving patient confidentiality and the need to obtain informed consent.

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

Southlake Regional Health Centre will supply the clot dissolving drugs to be used in the study at no cost to York Region.

6. LOCAL MUNICIPAL IMPACT

All lower tier municipalities will have access to evidence-based prehospital care protocols during transport to Southlake Regional Health Care Centre. After receiving their initial care, patients will be repatriated back to their local hospitals to recover and be closer to home and family.

7. CONCLUSION

Participation in the STREAM Study project is an opportunity for York Region EMS paramedics to provide the most appropriate treatment strategy under the project to heart attack patients that fit the criteria.

It is recommended that York Region EMS participate in the STREAM Study project.

For more information on this report, please contact Norm Barrette, General Manager, Emergency Medical Services, at Ext. 4044.

The Senior Management Group has reviewed this report.

(The attachments referred to in this clause were included in the agenda for the October 2, 2008 Committee meeting.)