Tick tick tick ... Time is brain

Stroke specialists' race against the clock to save patients in new trial

October 29, 2010 (Toronto, ON) – A stopwatch could mean the difference to receiving faster care for time-sensitive treatments such as tPA for stroke in the Emergency Room; say stroke researchers of their new study.

"This is a simple low-cost innovation that we hope will help to improve the outcomes of patients with acute stroke," says Dr. Richard Swartz, principal investigator of the study and Director of the Stroke Research Unit at Sunnybrook Health Sciences Centre.

A large red LED stopwatch clock is being attached to the stretcher of stroke patients at the moment of their arrival in the emergency room to act as a constant visual reminder to all team members of the urgency of the situation.

"We think this simple visual cue in emergency rooms will optimize the quality of stroke care by: improving treatment times for tPA administration (a powerful drug used for eligible patients within the first 4.5 hours of stroke onset); reducing potential delays in time utilized in stroke protocol; and improving patient outcomes," says Dr. Swartz, also Director, University of Toronto Stroke Program and Assistant Professor, Division of Neurology, Department of Medicine, at University of Toronto. "We believe that even a small reduction in treatment time for tPA could, if applied to every patient, provide a clinically meaningful benefit in terms of improved stroke recovery and reduced disability."

"Our goal is to achieve the most rapid and accurate diagnosis and treatment of stroke, ideally within 60 minutes of hospital arrival. The faster the better when dealing with stroke emergencies," adds Dr. David Gladstone, co-principal investigator of the trial and Director of the Stroke Prevention Clinic at Sunnybrook.

The trial results and protocol, if positive, could become best practice and expanded to other stroke centres across Ontario and around the world. In addition, this model could be expanded to other conditions that have time-sensitive treatments. Approximately 450 "Code Stroke" patients are expected to be a part of this 18-month trial at Sunnybrook, with additional patients recruited from St. Michael's and Toronto Western Hospital, part of University Health Network. The trial was launched at all three sites earlier this month as a joint initiative of the University of Toronto Stroke Program. All patients who present at the Emergency Department with suspected stroke will be eligible and will be randomized in two-week blocks. Researchers will compare the median times between the clock "on" period versus the clock "off" periods.

The study is funded by Sunnybrook Health Sciences Centre's Academic AFP Innovation Fund.

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Media contact:

Nadia Norcia Radovini Sunnybrook Health Sciences Centre (416) 480-4040