

In 2013-14, the Provincial Leadership Team for health care in Saskatchewan identified the need for a clinical pathway in acute stroke care. **The goal of the Pathway is to improve outcomes for stroke patients by preparing stroke teams across the province to provide timely and effective care in the critical first hours after stroke symptom onset.**

This pathway is in the development phase. Clinical implementation of pathway protocols has begun in several health regions. Province-wide implementation will take place gradually as regions build capacity. System-wide implementation of pathway protocols is targeted for October 2016.

Hospitals with Acute Stroke Services

Whether stroke alert is called by EMS personnel, primary care or in a local health centre, patients should be transported directly to a CT-enabled facility with access to advanced imaging and assessment. Facilities include Cypress Regional Hospital in **Swift Current**; Dr. Fred H. Wigmore Regional Hospital in **Moose Jaw**; **Yorkton** Regional Health Centre (alternate protocols in place March 7 to April 5, 2016 due to CT upgrade); Victoria Hospital in **Prince Albert**; Battlefords Union Hospital in **North Battleford**; and **Lloydminster** Hospital. **Regina General Hospital** and **Royal University Hospital Saskatoon** are designated tertiary centres for stroke.

Changes to Stroke Alert Timelines

With previous stroke protocols, patients were transported emergently to a regional or tertiary hospital within 3.5 hours of the onset of stroke symptoms. This was to allow for administration of tissue-plasminogen activator (tPA) within 4.5 hours. Patients outside this window were not treated emergently. Often they were admitted to local hospitals without comprehensive assessment or diagnosis. Suboptimal outcomes were costly for patients and the health system.

In the Acute Stroke Pathway, as per Canadian Stroke Best Practice Recommendations (2015), **patients up to 6 hours from onset of stroke symptoms will be emergently transported** to a hospital with acute stroke services for advanced imaging (CTA). Patients who wake up with stroke symptoms may be similarly managed. Stroke teams have an option to accept patients up to 12 hours from symptom onset at their discretion. Under this protocol most patients benefit from early comprehensive assessment and diagnosis, which sets the stage for better recovery and

secondary prevention. Some patients will be eligible for hyperacute treatment.

Hyperacute Stroke Treatment

Administration of tPA within 4.5 hours is still associated with best outcomes. However, the availability of **endovascular therapy** provides another proven treatment option for patients with large vessel occlusions. Patients can be eligible for endovascular therapy up to 12 hours from the onset of symptoms.

Endovascular treatment involves mechanically removing the clot from the blocked artery. Saskatchewan neurosurgeons have participated in groundbreaking research on this procedure, which has been shown to markedly reduce death and disability from stroke. In 2015, 45 patients from across the province received endovascular treatment at Royal University Hospital.

Transient Ischemic Attack (TIA)

Patients presenting with symptoms of TIA may avoid disabling stroke if they receive urgent assessment and treatment. Pathway tools assist primary care providers to assess patient risk and direct them for appropriate follow-up.

FAST Campaign

All health regions are encouraged to help educate the public about stroke symptoms and the need to take urgent action. See www.heartandstroke.com.

Resources

Find **Acute Stroke Pathway** tools and protocols at <http://sasksurgery.ca/provider/acutestroke.html>. For the Canadian Stroke Best Practice Guidelines go to www.strokebestpractices.ca.