The Royal University Hospital, Acute Stroke Unit

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Saskatchewan is a province in Western Canada with a population of 1.17millon people. The province has 651,900 km^2 (405,072 miles) of rolling prairie, boreal forests, and numerous lakes. There are 8 primary stroke centers (PSC) across the province, which all connect with a single comprehensive stroke center (CSC) in a hub and spoke model. Emergency medical personnel use the locally modified and validated FAST VAN stroke screen to direct patient transfer to the most appropriate center for acute stroke care. In this way, patients may bypass PCSs to go directly to the CSC when a large vessel occlusion is suspected.

In this issue of *Stroke Clinician*, we proudly present the Acute Stroke Unit located in Saskatoon at the Royal University Hospital (RUH) CSC. The Saskatoon Stroke Program has been successful in earning Stroke Distinction through *Accreditation Canada*[1] by showing evidence of excellence in stroke care delivery (Photo 1). Having an acute stroke unit is one of the greatest determinants for attainment of this important accreditation.

Stroke units are characterized by a core team of interprofessional practice members caring for stroke patients that are segregated within a geographically defined space.[2] Numerous studies have shown that patients who receive care on a designated stroke unit have decreased complication rates, lower mortality, better functional outcomes and are more likely to return home.[2-6]

Photo 1: Stroke Distinction award photo collage.

Our RUH Acute Stroke Unit (ASU) has 14 designated stroke beds with 6 of these being high-acuity stroke beds. The ASU is supported by the LEAN methodologies quality framework, with standards of care reflecting the *Canadian Stroke Best Practice Recommendations (CSBPR)*.[7] These key recommendations guide the evolution ASU policies, practices, and quality performance measures.

Patients admitted to RUH with a diagnosis of stroke or high-risk transient ischemic attack are admitted to the ASU following their hyperacute emergency care period. With the 6 high acuity beds, patients can be monitored on the ASU directly following tenecteplase (TNK) administration or post thrombectomy. The ASU is led by an interprofessional practice (IPP) team that includes dedicated neurovascular nurses educated and clinically trained in acute stroke monitoring and care, vascular neurologists, a clinical nurse specialist (author), a nurse coordinator, physiotherapists, occupational therapists,

speech and language pathologists, a clinical dietitian, a social worker, a clinical pharmacist, a recreational therapist, and a discharger planner (Photo 2). Palliative care specialists support the team as ad hoc members.

Photo 2: Acute Stroke Unit interprofessional team members. Royal University Hospital, Saskatoon, Saskatchewan, Canada. (Author on the bottom row at far right.)

Pre-populated evidence-based stroke-specific order sets are used for most aspects of stroke management, including TNK administration, post thrombectomy care, and workup for stroke pathogenic mechanism. Evidence-adherent management strategies are used to aid in the optimization of recovery, complication avoidance, and individualized secondary stroke prevention. The IPP team works together to ensure care plans are individualized, addressing nutrition, bowel and bladder function, skin protection or breakdown, visual dysfunction, and dysphagia.

Each day, the IPP team meets in a structured "bullet rounds" to discuss all stroke patients on the service. Bullet rounds are a key part of our commitment to ongoing quality monitoring and improvement, with content that includes review of each patient's new and pending diagnostic test results, the current management plan in relation to the therapies provided, and patients' individualized needs for transitions in care. Formal quarterly meetings are held providing an opportunity for IPP team members to reflect on their shared vision for the ASU, and to discuss ideas and review emerging evidence for necessary updates in practice. The standing agenda includes an update of current and future initiatives as well as presentation and discussion of quality performance metrics.

The ASU has had success in implementing a number of patient-centered initiatives. For example, an "Aphasia Club," was initiated by the speech language pathologist (SLP) team (Photo 3). Stroke team members also completed a "supported conversation" course provided by the Aphasia Institute.[8]

Photo 3: Aphasia Club of the Royal University Hospital's Acute Stroke Unit.

Our SLPs also implemented the Yale Bedside Swallow Screen in the ASU and emergency department to ensure a standardized approach to swallow assessment. Use of Yale Bedside Swallow Screen has now been implemented across the entire province at stroke hospitals.

Our Post-Stroke Visual Impairment (PSVI) Clinic is another example of a successful

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ASU initiative. A local orthoptist and ASU occupational therapists work collaboratively in the PSVI Clinic using evidence-based standardized approaches to support patients with visual deficits. We also developed and implemented a terminal care neurological palliative care pre-populated order set by collaborating with the palliative care team to ensure provision of standardized care and information delivery to patients' significant others. Our IPP team leader also hosts a virtual, provincial monthly grand rounds for stroke clinicians in PSCs and rural facilities that covers important topics in stroke management across the care continuum.

Segregating stroke patients together on our ASU ensures continuity of evidenced-based stroke-specific care. Ultimately, the IPP specialist team approach ensures optimal patient outcomes and speeds stroke recovery.

Author Affiliations

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