BCEHS | BC Emergency Health Services
Provincial Health Services Authority

BCEHS Salt Spring Island Stroke Bypass

Purpose

The BCEHS Salt Spring Island Stroke Bypass (SSISB) has been developed to assist in the rapid identification, transport, and definitive treatment of patients exhibiting signs of an acute stroke syndrome from Salt Spring Island. The need for such a program was identified through collaborative discussion with representatives from Victoria General Hospital's (VGH) stroke program, the staff at Lady Minto Hospital on Salt Spring Island, and BCEHS.

Rationale

Patients suffering from acute stroke require definitive care at a hospital equipped to provide rapid diagnosis, imaging, and definitive treatment including EVT (endovascular thrombectomy). Victoria General Hospital (VGH) is the only site within the Vancouver Island Health Authority capable of this level of acute stroke care. Patients presenting with a recent onset of stroke signs or symptoms on Salt Spring Island do not have imaging (CT) available to them in Lady Minto hospital, and thus an approach to expedite transport to VGH represents best practice to optimize patient outcomes. Salt Spring Island has been chosen for the bypass procedure for several reasons. These include a population that should support sustained but manageable use of the bypass procedure (30 to 40 cases are anticipated per year), a hospital that provides emergency and in-patient services compared to the clinics found on other Gulf Islands, and established access to air and water resources.

BCEHS staff are trained to recognize the common signs of acute stroke through the use of the FAST-VAN assessment. Early communication of a patient's status as FAST or FAST-VAN positive will set into motion a process designed to expedite their transfer to VGH for diagnosis and treatment. The process is designed to minimize frequent areas of time-loss that can occur with normal transport to the closest health care facility (normally Lady Minto Hospital). Crew-initiated 'Stroke-Launch' will set into motion a chain of events that is designed to quickly identify and enact the most expeditious plan for direct transport to VGH.

Procedure

1. Any assessed call that is designated as a **28 card** *(Stroke (CVA) / Transient Ischemic Attack (TIA)* ***or*** includes a positive ProQA Stroke Diagnostic finding (Clear, Strong, or partial) for Salt Spring Island will initiate a potential SSI Stroke-Launch

    a. A crew on scene that finds a patient's primary problem is a FAST or FAST-VAN positive stroke may also initiate a Stroke-Launch request through VIDOC, regardless of initial MPDS coding

2. The call is handled by Vancouver Island Dispatch Operations Center:

    a. The local crew is sent as normal and advised of potential 'Stroke-Launch'
    b. VIDOC requests availability of helicopter and crew from PTCC for situational awareness using a P-Request "Weather Check"

c. PTCC checks available resources for a potential Stroke-Launch and requests a weather check from the flight crew

    i. The Critical Care Paramedic (CCP) crew does not need to be informed of the potential call at this time

d. PTCC advises VIDOC of helicopter and crew availability

3. The patient is assessed on scene and the crew makes a determination and communicates with VIDOC:

    a. The patient **is** FAST or FAST-VAN positive:

        i. VIDOC advises PTCC that the patient fits Stroke-Launch criteria based on crew information and PTCC sends an air resource and crew for emergent transport to Victoria General Hospital, ***or,***
        ii. VIDOC is aware that an air response is not possible and advises crew of the next fastest method for transfer to Victoria General Hospital (i.e. water taxi, ferry)
        iii. The SSI crew notifies VGH of the incoming patient, method of transport, and ETA
        iv. The SSI crew must provide printed paperwork to the flight crew

    b. The patient **is not** FAST or FAST-VAN positive *or* is ineligible for primary transfer to Victoria General Hospital:

        i. The patient displays signs of hemodynamic instability
        ii. The patient has a grossly altered level of consciousness
        iii. The patient has any airway compromise
        iv. The patient has uncorrected hypoglycemia
        v. Other determination by the crew that the patient requires immediate care at Lady Minto Hospital

4. If the patient has been transferred by air, a crew should be dispatched to VGH to assist in the unloading and transfer of the patient through the Emergency Department and on to CT.

    a. Patients transferred by Stroke-Launch are likely to be hemodynamically stable. Relieving the air crew of the patient will help return the CCP crew to service as quickly as possible
    b. A BCEHS crew is an important part of the initial care of a patient suffering from a stroke who presents to VGH. The assistance of the BCEHS during the initial assessment and CT scan has been demonstrated to reduce the time to therapy

Notes

- Patients must be able to comply with a FAST-VAN assessment
- Unstable patients should be transported to Lady Minto for stabilization prior to transfer
- Patients who present with FAST or FAST-VAN positive signs who then experience spontaneous resolution of signs (eg. TIAs), still qualify for Stroke-Launch *if any FAST or FAST-VAN sign was witnessed by a crew member*
- Crew training is essential to the success of the Stoke-Launch program. Any questions should be raised to the Unit Chief or Paramedic Practice Educator

- Patients who self-present to Lady Minto Hospital fall under the established protocols and referral patterns within VIHA
- All cases of Stroke-Launch will be audited and reviewed for continued improvement.

Evaluation and Monitoring

All cases of stroke on SSI will be monitored. This will include both bypass and non-bypass patients. Statistics from last year show 35 calls evaluated and dispatched under the '28' MPDS code (Stroke/TIA) on SSI. Crews will complete a feedback form for every stroke call and these will be compiled and tracked for periodic reporting. Alterations to the procedure can be made if necessary based on feedback obtained.

A formal review will be scheduled for six months from the implementation date and presented to all stakeholders including VIHA, SSBC, and BCEHS CMP.