

The Bulletin

Welcome to the Cardiovascular Health Nova Scotia (CVHNS) e-mail bulletin, produced 3 times annually. The Bulletin has been created to share information about the program's activities, related cardiovascular health initiatives, and ideas from around the province.

Engaging Stakeholders to Create a Sustainable Stroke Monitoring System

The government commitment to stroke care enhancements in Nova Scotia precipitated the need for ongoing, standardized monitoring of performance. CVHNS has led the development, implementation, and ongoing evolution of a provincial stroke care monitoring system. Engaging stakeholders throughout the process has been key to developing a robust, sustainable monitoring system.

CVHNS used the performance measures from the *Canadian Stroke Best Practice Recommendations* as the starting point for consultation with stakeholders and determining key indicators for provincial use. Environmental scans of local, provincial, and national stroke monitoring and surveillance were completed to help inform the process. Initial ranking of the performance measures was done at a provincial forum in June 2009. Subsequently, a small group with representatives from across the province prioritized key indicators from the performance measures chosen at the provincial forum.

CVHNS developed an Excel database which included the data fields required to generate the key indicators, as a proof-of-concept for a stroke registry. In July 2011 all seven stroke programs in the province began collecting data. Between 2012 and 2015, stakeholders were engaged in work to refine the case definition (to more accurately capture appropriate stroke and TIA admissions) and to identify the requirements for a user-friendly web-based registry. In 2016, CVHNS launched the web-based registry, developed using the open-source platform, CAISIS. A reporting function was added to the web-based system to allow stroke coordinators to access key indicators for local-level monitoring to facilitate timely quality improvement (QI). Future improvements to the monitoring system include expanding the number of indicators available through the reporting function and examining the potential for periodic audits of additional information.

Data on all admissions for stroke and TIA patients are captured through the CVHNS registry - approximately 1700 admissions annually. CVHNS disseminates annual reports on key indicators showing provincial and local stroke system performance. Registry data has been used to:

- Identify areas in need of improvement (e.g., swallow screen use);
- Identify topics for provincial stakeholder forums (e.g., lytics, hyperacute care);

- Identify practices to explore or audit further (e.g., TIA admission practices);
- Demonstrate improvements after QI initiatives (see below); and
- Illustrate to key stakeholders the increase in the uptake of best practice stroke treatments/approaches in evaluating enhancements to stroke care (e.g., use of lytics, admissions to stroke unit).

Successful use of stroke registry data to inform and implement QI can be seen in recent work in the Colchester and Valley areas. Data showed that time to lytics was an area for improvement in both areas. Their QI work involved implementing strategies to decrease time to lytics from a successful study done in Helsinki, Finland. Some of the strategies include pre-notification of the Emergency Department (ED) of a potential ischemic stroke by EHS, rapid assessment by an ED physician, faster diagnostic imaging/lab tests and results, and direct transfer of the patient to Diagnostic Imaging for a CT scan. Data collected for the registry was used to show improvements over time. In the Valley, the median door-to-needle time decreased from 77 minutes in 2013 to 60 minutes in 2015, and median door-to-CT time from 31 minutes to 13 minutes. Colchester, implementing strategies in 2016, saw a median door to CT time of 9 minutes down from 33 minutes in 2015, and 90% of cases received a CT scan within 25 minutes of arrival in the seven months post-implementation. The projects were presented at this year's Canadian Stroke Congress in Calgary.

Learning Opportunities

10th Annual Ottawa Model for Smoking Cessation Conference, January 19-20, 2018. Ottawa, ON. Visit <https://ottawamodel.ottawaheart.ca/ottawa-conference>

Canadian Women's Heart Health Summit, April 5-6, 2018. Ottawa, ON. <https://cwhhc.ottawaheart.ca/summit>

CCCN Spring Nursing Conference & Annual General Meeting, May 25-26, 2018. Niagara Falls, ON. <http://www.cccn.ca/content.php?doc=59>

CVHNS News

CVHNS Quality Indicator Reports Released

This past spring, CVHNS released quality indicator reports for stroke, transient ischemic attack, acute myocardial infarction, and heart failure for the calendar years 2012-2015. Reports were sent to

selected Health Services Managers, Zone Operations and Medical Executive Directors, Zone Directors of Quality Improvement and VPs responsible for the Zones. Our aim is to share information to inform quality improvement and service planning/delivery. Additional indicators can be generated in a variety of ways upon request. Contact your local CV or stroke coordinator to receive a copy of the report for your area. CVHNS will facilitate a discussion in your area regarding local or provincial trends, upon request. Reports for 2016 will be released early in the New Year.

Education Sessions on Transient Ischemic Attack (TIA) Management

In December 2016, two versions of a TIA algorithm developed by CVHNS were disseminated across the province. The focus of the algorithms is evidence-based, timely assessment and management of TIA. The algorithms for Primary Care were mailed to family physicians, and algorithms for EDs were distributed to all EDs in the province. The algorithms are based on *Canadian Stroke Best*

Practice Recommendations, and were developed in consultation with physicians and front-line staff across the province. To accompany the release of the algorithms, an education session on TIA management and treatment was developed by a working group of physicians and CVHNS staff, with input from stroke coordinators. The session was accredited by the College of Family Physicians. Eleven education sessions were held (coordinated locally and presented by local physician/NP champions) across the province between February and September, with 140 staff attending. For more information about the algorithms, please contact your local stroke coordinator.

Rehabilitation Database Linkages

CVHNS is gathering data related to access to stroke rehabilitation in the province through database linkage. With the assistance of Investment & Decision Support at the Department of Health & Wellness, the CVHNS stroke registry is being linked annually to the Discharge Abstract Database and the National Rehabilitation Reporting System. We now have four years (2012-2015) of data to look at trends including the proportion of admitted stroke patients who go to a rehabilitation facility, proportion receiving stroke unit care prior to rehabilitation admission, wait time to rehabilitation admission, and length of stay in rehabilitation. Some additional analyses are planned to be able to report the data by zone and by type of rehabilitation facility of admission.

Stroke Unit Staff Throughout NS Completing Online Stroke Education

Staff across the province continue to participate in the Canadian Hemispheres 2.0 Stroke Competency Series online course under CVHNS' license. Access to the course was granted to 180 staff working in stroke care across the province after a successful pilot in Fall 2016 in Western Zone. Seventy-four percent of participants are nurses (the primary target of this education initiative), with the remaining spots going to a wide range of allied health professionals who work with stroke patients

in acute or rehabilitation settings. Sixty-seven percent of the participants have completed at least one of the modules; 23% have completed all of the recommended modules. Participants have one year from starting the series to complete it; the last participant will be completed by October 5, 2018. CVHNS plans to evaluate the need for continuing the course for additional staff in the future.

Come on Nova Scotia...Check it!

Since 2012, a challenge called "Come on Nova Scotia...Check it!" has been held each May – a joint initiative of Cardiovascular Health Nova Scotia, Diabetes Care Program of Nova Scotia, and the Renal Program. As part of the Challenge, kits are provided with tools, educational materials, and instructions on how to implement a challenge in the workplace and the community. Participating organizations provide blood pressure screenings and educational events that encourage people to have their blood pressure checked, learn more about blood pressure, and use the provincial *My Blood Pressure* resources.

Many participating groups partnered with others in the community or tapped into local community events to conduct the challenge. Over 70 events were held this year and close to 3,700 blood pressures were checked (over 20,700 since 2012). More than 14 percent of blood pressures checked were in the abnormal range (>140/90 mm Hg).

Each year, three prizes are offered: most blood pressure checks in a workplace, most blood pressure checks in the community, and a random draw for all participating organizations.

Congratulations to this year's prize winners: Sterling Health Centre, Glace Bay, the Colchester East Hants region of NSHA, and MacLean & Poulain Pharmacy First Ltd., Stellarton.

If you would like to participate in future blood pressure initiatives, find out more about blood pressure, or learn how to use the provincial *My Blood Pressure Card* tools, visit:

www.cdha.nshealth.ca/my-blood-pressure.

Healthcare providers can obtain copies of the *My Blood Pressure* materials (cards, posters, and pamphlets) by completing an [order form](#) and sending it to info@nsrp.nshealth.ca.

Cardiovascular and Stroke Coordinator Projects Funded Through Nursing Strategy

As outlined in our winter 2017 issue, several cardiovascular and stroke projects received financial support through Nova Scotia's Nursing Strategy Mentorship or Innovation Funds. A number of projects were funded this year as well, with projects to be completed by March 2018.

Projects that received funding last year included one in Cape Breton, three in South West, and one in South Shore. In Cape Breton, the funding received was used to provide a cardiovascular education day at the Cape Breton Regional Hospital for six nurses from the four rural hospitals in Cape Breton. The education covered STEMI and Non-STEMI order sets based on the CVHNS *Nova Scotia Guidelines for Acute Coronary Syndromes*, transfers to the cardiology unit in Halifax including 24-hour transfer, direct admissions, and Rescue PCI. The nurses received patient education pamphlets related to cardiac catheterization and care post cath. They also learned about the Diabetes and Acute Coronary Syndrome education materials and LMS modules developed by CVHNS and DCPNS. A brief update was given on the *Provincial Protocol: Assessment, Referral, Preparation and Follow-Up for Acute Coronary Syndrome (ACS) Patients with Chronic Kidney Disease Being Considered for Cardiac Catheterization*. The nurses also had the opportunity to spend time in the Critical Care Unit following patients through the process at Cape Breton Regional Hospital. The nurses will be able to act as champions in their area and share what they've learned with their colleagues. Feedback on the day

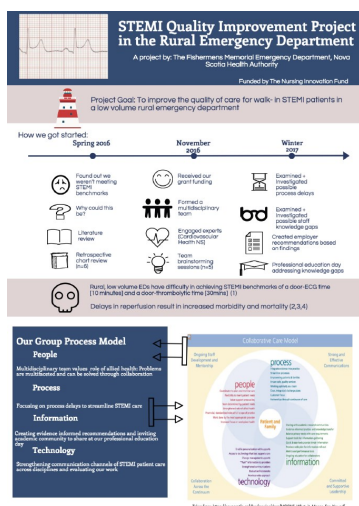
was very positive. For more information, contact Rose.Mcdonald@nshealth.ca.

In South West, the first of three projects, Code Stroke, was implemented in the Yarmouth Regional Hospital ED. Staff nurses developed an algorithm and checklist after identifying areas for process change. The nurses provided education to their ED nursing and physician colleagues. The second project, Stroke Care Education, involved five staff nurses completing three hours shadowing with a physiotherapist working with inpatient strokes. They also received one hour of education on the Canadian Neurological Scale. For the third project, ten staff nurses enhanced their knowledge of the 24-hour Cardiology Transfer Service by shadowing nurses in the IMCU and cath lab in Halifax. Feedback was received for all three initiatives. For more information, contact Kelly.Goudey@nshealth.ca.

A nurse-led, multidisciplinary team in the South Shore received a grant to promote the improvement of ECG and lytic times in their ED. The team identified structural, technical, and communication barriers in their department. The project also identified educational needs for ED staff of all disciplines. The changes which were made were: ECG machine and new portable laptop made available in a new area for the triage of possible STEMI patients; and synchronizing all the clocks and equipment in the ED.

The recommendations and pending changes are: consistent wi-fi coverage in ED to allow for easier portability of equipment (laptop and ECG machine), and enhanced translator services. Staff knowledge gaps were addressed at a STEMI Education Day on March 30th in Lunenburg. Topics included STEMI case studies with ECGs and echocardiograms presented by the Cardiologist and the Nurse Practitioner of the Heart Function Clinic at South Shore Regional. Hands-on workshops were presented by nursing and pharmacy on triage, diagnostics, and thrombolytics. The first evaluation of the education day was a positive one. A follow-up evaluation will be done

later. A poster on this project was presented at the Canadian Cardiovascular Congress in October 2017. A summary of the project is pictured below. For more information contact SusanM.Atkinson@nshealth.ca or Ashley.Swinamer@nshealth.ca.



Helpful Resources

Duceppe E, Parlow J, MacDonald P, et al. [Canadian Cardiovascular Society guidelines on perioperative cardiac risk assessment and management for patients who undergo noncardiac surgery](#). *Can J Cardiol*. 2017; (33(1):17-32.

Kapral M, Fang J, Alibhai S, et al. [Risk of fractures after stroke: Results from the Ontario stroke registry](#). *Neurology* 2017; 88(1):57-64.

Swerdel JN, Rhoads G, Cheng J. et al. [Ischemic stroke rate increases in young adults: Evidence for a generational effect?](#) *J Am Heart Assoc*. 2016; 5(12).

Towfighi A, Ovbiagele B, El Hussein N, et al. [Poststroke depression: A scientific statement for healthcare professionals from the American Heart Association/American Stroke Association](#). *Stroke*. 2017; 48(2):e30-e43.

Wechsler L, Demaerschalk B, Schwamm L, et al. [Telemedicine quality and outcomes in stroke: A](#)

[scientific statement for healthcare professionals from the American Heart Association/American Stroke Association](#). *Stroke*. 2017; 48(1): e3-e25.

CCS Guidelines TV

The Canadian Cardiovascular Society has launched [CCS Guidelines TV](#) which includes the latest guideline updates presented in a convenient video series.

Innovative Ideas

Improving ECG Interpretation

Critical care nurses in Cape Breton expressed interest in more advanced education in ECG interpretation - a beyond the basics look. The Cardiovascular Coordinator approached Dr. Paul MacDonald, Director of the Critical Care Unit about providing an education session on this topic. Although originally intended as a training opportunity for critical care nurses, the session was open to all who were interested. Invitations were sent to staff on the CCU, ICU, ED, medical floors with telemetry, renal dialysis, and cardiac services. Thirty six staff members attended. During the session, Dr. MacDonald presented 20 difficult to discern ECGs for the group to interpret including all types of heart block, 2/1 atrial flutter, and ventricular tachycardias. The interactive session was a great learning experience for all who attended. Feedback on the evening was very positive. For more information contact Rose.Mcdonald@nshealth.ca.

My BP Challenge – Let's Get Creative!

There have been a number of innovative ideas over the years to implement the *Come on Nova Scotia....Check It!* Blood Pressure Challenge and raise awareness about the importance of knowing your blood pressure. Various approaches have been used to reach a wide range of populations in creative and fun ways. These have engaged people in both the community and in the workplace while raising awareness about healthy blood pressures.

- **Partnerships:** local nursing programs, wellness centres, pharmacies, fitness facilities or other businesses, nursing homes, fire departments, restaurants, food banks, regional housing authorities and soup kitchens.
- **Community events:** invited local health care professionals to speak at a function; put on creative skits; utilized store fronts for window display; joined existing local events (e.g., fun runs, farmers markets, home shows).
- **Media:** Radio spots, social media, local websites, community newspapers, pop-up messages on computers.
- **Workplace:** challenged colleagues; appointed team captains to develop action plans; contests between departments.

Participating organizations have submitted their challenge results. We always look forward to reading their stories and sharing with you every year!

Disseminating Local Cardiovascular and Stroke Data

Cardiovascular and Stroke Coordinators play a key role in the dissemination of data for the purposes of quality improvement. Timely administration of lytic is a vital aspect of hyperacute care for both patient populations. Coordinators utilize a range of methods to share lytic data to create awareness and stimulate discussion on local performance. Some of those with whom the data are shared include: ED Manager and Staff; Emergency Physician Lead; Medical Director of Emergency Services; DI Manager, Team Lead, and Staff; and Managers and Staff of community hospitals. Some of the ways data are shared are:

- In a one page report;
- In a table with median door-to-needle times;
- Posted on a bulletin board in department;
- Posted outside triage on a monthly basis;
- Through small group discussions with staff
- By giving kudos to staff; and
- Through presentations at QI meetings and/or steering committee meetings.

New Cardiology Referral Form Available

The QEII has developed a new cardiology referral form (CD0720MR_08_2017) which is now ready for use. Both print and [PDF fillable](#) versions of the form are available for your convenience on the intranet.

This form should be used for requests for inpatient or outpatient cardiac catheterization, PCI or other intervention(s) performed in the cardiac cath lab. It should also be used for requests for inpatient transfer for ongoing care. You are encouraged to start using this form as the old cath lab referral form will soon be phased out. There is work underway to have the form added to the Electronic Form Repository throughout the province.

The new referral form has been condensed onto one page; however there are two additional pages that contain important information regarding definitions and instructions for use. Only the first page needs to be completed and faxed to the QEII.

Please contact Tony Lee if there are any questions or concerns regarding the new form at tony.lee@nshealth.ca.

CONTACT US

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www.cdha.nshealth.ca/cardiovascular-health-nova-scotia