



Sharing Approaches

to Strengthen Patient-Centred,
Integrated, Best Practice Vascular
Health Care in Primary Care

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Special Thanks to...

- All attendees. Their participation contributed to the success of the “*Sharing Approaches to Strengthen Patient-Centred, Integrated, Best Practice Vascular Health Care in Primary Care*” Session
- Susan Pilatzke, Senior Director, Health System Transformation, North West LHIN who participated in the Planning Committee of this Session and introduced the Session on behalf of the Primary Care Work Group

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Executive Summary

The burden associated with vascular diseases is growing¹. Collaborative approaches are needed to decrease the burden of vascular diseases and enable better vascular health. In Ontario, the Cardiac Care Network of Ontario, Heart and Stroke Foundation of Ontario, and Ontario Stroke Network (OSN) worked together, with multi-sectorial input and Ministry of Health and Long Term Care support, to develop a *Vascular Health Blueprint*. In 2012, the Vascular Health Primary Care Work Group (PCWG) was established to fulfill one of the Blueprint's domains, "improving the quality and access to a continuum of vascular services." One collaborative approach for addressing the vascular disease burden was to bring primary care stakeholders together in a knowledge exchange session and share approaches for strengthening patient-centred, integrated, best practice vascular health care in primary care.

The "Sharing Approaches to Strengthen Patient-Centred, Integrated, Best Practice Vascular Health Care in Primary Care" Session took place on March 31st, 2016 with 45 people in attendance, including Local Health Integration Network (LHIN) leads, Health Quality Ontario, Quality Improvement (QI) specialists, and primary health care professionals (see Appendix A for attendee list). The Session which was sponsored by the OSN provided an opportunity to receive an overview and progress update about the PCWG developing vascular health primary care resources: Vascular Health Assessment and Support Tool (VHAST), Vascular Health QI Toolkit, and the Vascular Health Medical Directives Repository. Connections were drawn with current primary care reform activities such as the [Patients First: A Proposal to Strengthen Patient-Centred Health Care in Ontario](#) by reviewing common gaps and proposals for filling the gaps to support primary care efforts. Attendees engaged in a wide-ranging discussion on the current state of vascular health care, gaps, priority needs, the interconnectedness of all vascular chronic diseases, and the difficulties encountered in patient-centred prevention and management of those with multiple concurrent conditions (see Appendix B for detailed list of discussion points).

The following summarizes current patient-centred integrated vascular health programs or initiatives that were shared by participants:

- Grandview Family Health Team (FHT) Vascular Health Clinic
- Upper Canada FHT Global Risk Reduction Program
- Heart Wise Exercise program initiated in the Champlain LHIN
- Carefirst Seniors and Community Services Association in partnership with Carefirst FHT offers health promotion and chronic disease management supports and services
- York Region District Stroke Centre and Southwest York Region Health Link with Mackenzie Health offer secondary prevention services (Cardiac Rehabilitation)
- North York General Hospital's Order Entry eCare project links specialists with primary care
- Couchiching FHT has an initiative providing patients with the ability to enter their own data into the Electronic Medical Record (EMR) via OCEAN tablets
- South East Health Integrated Information Portal in the South East LHIN connects providers between hospital and primary care

¹ O'Neill, B.J., Rana, S. N., & Bowman, V. (2015). An integrated approach for vascular health: A call to action. *Canadian Journal of Cardiology*, 31 (1), 9-102. doi: 10.1016/j.cjca.2014.10.034

Anticipated gaps and facilitators to mobilize readiness and gain support for the developing vascular health primary care resources were also brought forward by attendees (See Appendix B for detailed list of discussion points). The main gap identified was the communication challenge that exists such as between primary care and acute care settings. Another common gap identified related to the large quantity of clinical best practice guidelines that provide recommendations only for simple cases. The following is a summary of the advice received on facilitators for the developing resources:

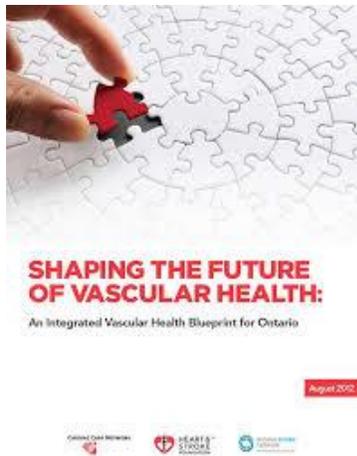
- Perform a gap analysis including a review of links to community support services
- Conduct a survey about what chronic disease tools are embedded into EMRs
- Perform a literature review on complicated/complex patient care
- Review references and resources such as Canadian Association of Cardiovascular Prevention and Rehabilitation, Choosing Wisely Canada, Computerized Provider Order Entry, and the Taber model in Alberta
- Convey that self-management is the common thread between chronic disease programs
- Include integrated algorithmic guidelines to simply outline best care management
- Provide further information about what medical directives can offer
- Consider adding more qualitative data measures (e.g., quality of life)
- Examine ways to have cross representation from other areas of the care continuum
- Connect with key collaborators such as Quality Improvement Decision Support Specialists at Family Health Teams and Community Pharmacists
- Organize a follow-up “Thought Forum” to engage “Thought Leaders” about how to strengthen common strategies (e.g., cross-over clinical forms)
- Determine strategies to raise the level of discussion at higher levels and draw more attention to this “important work”
- Examine how to align with Health Links
- Confirm that funding will be required to take this to the next required level
- Examine ways to link to Quality-Based Procedures (QBP) when available in primary care
- Bring attention to this work and inform health networks about incorporating this into upcoming work plans

Overall, there was general recognition of readiness and support for the developing vascular health primary care resources. Many participants commended the approach to develop user-friendly resources especially the VHAST to be built into EMRs. There was general interest to participate in piloting the developing resources. The Session validated the PCWG work as heading in the right direction with the right approach.

Some of the following comments were shared at the Session: *“really important work and need this now;” “it is really important to expand to other EMRs as soon as you can;” “should proceed into tapping through the constraints or gaps;” “the VHAST is building credibility in primary care as an integrated approach to vascular health care;” and “the real value in this work is preventing a Health Link patient from the start and focusing on how to prevent patients from being a vascular patient.”*

Next steps include incorporating the feedback and advice provided by the Session's attendees into the PCWG future work plans, as well as sharing this report broadly to draw more attention to this work as a strategy to strengthen patient-centred, integrated vascular health care.

Background



Vascular diseases are the leading cause of preventable death and disability in Canada.² In recognition of the growing burden of vascular diseases, many are working together in Ontario to support the improvement of vascular health. In 2010, the Cardiac Care Network of Ontario (CCN), Heart and Stroke Foundation of Ontario (HSF), and Ontario Stroke Network (OSN) with multi-sectorial input and Ministry of Health and Long Term Care (MoHLTC) endorsement and support, developed a *Vascular Health Blueprint*³ to address the growing vascular disease burden.

In 2012, the Vascular Health Primary Care Work Group (PCWG) was established to “*improve the quality and access to a continuum of vascular services*” which is one of the *Blueprint's* domains. The PCWG (see Appendix C for PCWG membership) oversees a work plan that includes identifying gaps in best practices and the resources which will enable quality improvement (QI) in vascular health care.

Working together with primary care stakeholders including Local Health Integration Networks (LHIN), opportunities have been identified by the PCWG to coordinate the efforts of various disease-specific initiatives in order to maximize synergies and create a more efficient and effective health system. An improved, patient-centred, and integrated vascular health (VH) system would save costs, as well as improve services, continuity through transitions, health outcomes, and the quality of life for patients and their families. One such collaborative opportunity was a knowledge exchange session entitled, “*Sharing Approaches to Strengthen Patient-Centred, Integrated, Best Practice Vascular Health Care in Primary Care.*” The session brought together 45 participants (see Appendix A for attendee list) from multiple LHINs, Health Quality Ontario (HQO), and various health networks including the OSN, Ontario Renal Network (ORN), and the CCN.

² Janssen, 2012

³ Vascular Health Coalition. (2012). *Shaping the future of vascular health: An integrated vascular health blueprint for Ontario*. Toronto, ON: Cardiac Care Network, Heart and Stroke Foundation and Ontario Stroke Network. Retrieved from <http://ontariostrokenetwork.ca/>

Introduction



Susan Pilatzke, Senior Director Health System Transformation, North West LHIN and member of the PCWG, introduced the session as a knowledge exchange and engagement opportunity for sharing initiatives about patient-centred and integrated vascular health best practices in primary care. The session's main objectives were to:

1. Share the progress made on initiatives under development for patient-centred and integrated vascular health best practices within primary care settings:
 - Vascular Health Assessment and Support Tool (VHAST)
 - Vascular Health QI Toolkit
 - Vascular Health Medical Directives Repository
2. Link the above initiatives with current LHIN and other local related initiatives
3. Engage attendees to provide critical feedback on developments, as well as help guide priorities and future direction

The "Blueprint" was highlighted as a foundational contributor for this concentrated work on supporting primary care in the development of integrated approaches to vascular health care. Other background information was re-introduced which included a review of strategies for synergy that had been identified during interviews with LHIN leads in 2013 and an engagement meeting with LHIN leads in April, 2014.

LHIN Interviews in 2013 revealed varying levels of complexity in vascular health programs, resources, and initiatives in primary care across the 14 Ontario LHINs such as the following:

- Chronic Disease Self-Management Programs

- Hypertension Management Program
- Sodium Reduction Campaign
- Indigenous Health Programs
- Cardiovascular Disease Prevention and Management Programs/Network
- Stroke Centres
- Stroke Patient Passport
- Diabetes Education
- Renal Programs
- Smoking Cessation Programs
- Vascular Clinics

LHIN Engagement Meeting in 2014 raised interest for early adoption of *Regional Vascular Health Collaboratives* or Programs and identified strategies for integrated vascular health care such as the following:

- Building on what is already being done
- Leveraging diabetes programs
- Re-purposing health care resources to be more patient-centred
- Developing a collaborative website/portal to support information sharing
- Determining evaluation and metrics
- Integrating with Health Links
- Engaging with other Health Organizations (e.g., Mental Health and Addictions, ORN)

During the 2014 meeting, there was commitment from multiple LHINs to continue the engagement about collaborative strategies for more integrated vascular health care. There were also multiple requests to be involved in testing of the developing vascular health primary care resources, especially the Vascular Health Assessment and Support Tool (VHAST).

Many of the recommendations from the LHIN Interviews and Engagement Meeting have been incorporated into current PCWG strategies, initiatives, and future planning.

Update on Provincial Hypertension Management Program and Vascular Health Primary Care Initiatives

An update was provided by the OSN Primary Care Team on the following practical and complimentary Hypertension Management Program (HMP) and Primary Care Work Group (PCWG) initiatives which will enable patient-centred, integrated, best practice vascular health care:

Hypertension Management Program (HMP)

The Hypertension Management Program (HMP) is an evidence-informed program developed to improve detection, management, and control of hypertension. The HMP originated from a Heart and Stroke Foundation (HSF) research project, the *Hypertension Management Initiative* (HMI, 2006-2010). The rationale for the HMI is that hypertension is a leading modifiable risk factor for vascular diseases including stroke. The HMI has evolved into the current MoHLTC-funded HMP as a provincial chronic disease prevention and management program that repeatedly has

demonstrated significant reductions in blood pressure, as well as positive changes in lab values such as cholesterol and glucose levels.

Currently, there are 59 primary care organizations representing over 110 clinics involved in the HMP. The HMP provides decision and provider resources such as those promoting self-management, as well as education, training, and practice support. The health care provider and patient-focused content is developed and maintained by the HMP team with input from Hypertension Canada, HSF, Canadian Diabetes Association (CDA), and other partners to ensure content relevancy reflects current evidence and minimal content redundancies and duplication. The HMP's operational infrastructure functions on a fully scalable, web-based delivery platform enabling sustainable program management and primary care clinic support processes.

Overall, the HMP's design to align with *Ontario's Chronic Disease Prevention and Management Framework* provides the foundational pieces for delivering vascular health care in primary care. Lessons learned from the HMP have informed the following innovative, practical, and complimentary primary care resources under development: the VHASt, Vascular Health QI Toolkit, and Vascular Health Medical Directives Repository.

Vascular Health Assessment and Support Tool (VHASt)

The Vascular Health Assessment and Support Tool (VHASt) is intending to be a patient-centred and decision support resource embedded in certified Electronic Medical Records (EMR) with clinical data being compared to best practice guidelines at point of care. The VHASt will enable the integrated documentation and management of patients with confirmed vascular conditions and risk factors. Architecture has been designed for scalability for all EMRs and additional chronic conditions.

In 2014, a *proof of concept* (POC) vascular health flow sheet was designed with primary care providers. The POC model generated enthusiasm from primary care providers, primary care LHIN leads, and other stakeholders. In 2015, an initial prototype was developed with the following features:

- Feasible specifications and integrative functions for eight vascular conditions:

Hypertension	Diabetes	Dyslipidemia	Peripheral Arterial Disease
Myocardial Infarction/Angina	Congestive Heart Failure	Chronic Kidney Disease	Stroke/Transient Ischemic Attack

- Clinical data linked to relevant Canadian Cardiovascular Harmonized National Guidelines Endeavour (C-CHANGE)⁴ clinical practice recommendations
- Functional data extraction from an Ontario MD funding-eligible EMR offering (OSCAR)
- Value-added control of data transformation (e.g., categorizing medications)

User acceptance testing was conducted with 12 primary care interprofessional health care providers at seven primary care clinics. Most agreed that the VHASt was easy to use, useful, allowed providers to accomplish their tasks, and allowed better patient management. Overall, the results were positive about the VHASt prototype features. Over half agreed that there was intent to use the VHASt. One of the physician testers described the VHASt as,

⁴ [Tobe, S. W., Stone, J. A., Walker, K. M., Anderson, T., Bhattacharyya, O., Cheng, Y. Y., et al. \(2014\). Canadian Cardiovascular Harmonized National Guidelines Endeavour \(C-CHANGE\): 2014 Update. CMAJ, 186\(17\), 1299-1305.](#)

“Covering a large number of patients in my practice and covering patients with more than one disease.”

A catalogue of clinical and functional requirements has been updated and along with the evaluation report, have informed the next phase of development.

The benefits of the future VHASt were described in comparison to what currently exists to further clarify why this would be of value to patients and providers (See Appendix D for *Future VHASt Benefits & Value Proposition Table*).

Vascular Health QI Toolkit

The Vascular Health QI Toolkit intends to be a resource that will assist primary care in the development and implementation of QI projects or plans. The goal is to create a manageable and meaningful set of vascular health QI elements for different primary care settings.

In 2014, a comprehensive Vascular Health QI Resource was developed with a broad aim statement to *“improve quality and access to a continuum of vascular health services.”* Brief vascular health supplemental QI templates are under development that connect to the broader aim. QI templates have been drafted for the following initial topics: improving screening, identification, monitoring and/or management of abdominal aortic aneurysm, hypertension, smoking cessation, and chronic kidney disease for patients with diabetes.

The PCWG has framed the VH QI Toolkit around having a positive impact on patients and offering choices. All QI templates follow the same format to facilitate orientation and effective use. The following is a sample of the hypertension QI template:

- Introduction and Background- includes a meaningful question (e.g., how might our primary care team improve the processes within our clinic to support hypertension management for more patients?). Two brief patient case scenarios are included where one scenario is what could happen if the patient has not been found and the second scenario describes what happens when the patient has been found and the process is working well. This is followed by epidemiological background information providing the reason for the primary care team's efforts
- Health Quality Ontario's (HQO) Primary Care Quality Dimensions- Population Health and Effectiveness
- Aim- broad aim statement (e.g., improve the screening, identification and management of hypertension for adult patients in primary health care teams in Ontario with a focus on patients at high risk for development of vascular diseases)
- Measures- flexible measures that cast both a 'large net' for wide screening and management to target including the 'unknown's' and/or a 'smaller net' for patients needing the greatest attention or those at high risk with identified risk factors such as diabetes
- Change Ideas- list of change ideas with a predominate focus on data discipline (e.g., implementing an EMR standard tool) and use of a decision support resource for patients or those working in primary care (e.g., use of a hypertension medical directive or practice flow algorithm)
- Sample QI Plan (QIP)- not overly filled in QIP but enough pre-populated data to get teams started
- QI Tool Examples- includes tools such as process maps (e.g., Canadian Hypertension Education Program's Hypertension Diagnostic Algorithm)
- Provider and patient resources- resource links for patients and providers (e.g., HMP and Hypertension Canada)

A survey questionnaire has been developed for focus group interviews. The interviews were initiated in March, 2016. The initial goal for the evaluation is to understand the feasibility, usefulness, and implementation ability of the Toolkit from the primary care team's perspective and if the Toolkit would augment the team's current QI activity.

Vascular Health Medical Directives

The Vascular Health Medical Directives are to be a repository of medical directives to enhance interprofessional primary care team collaboration in screening, monitoring, and managing patients with vascular diseases.

A survey was circulated which served to inform initial topics and the work plan for the vascular health medical directives. A PCWG task group is completing an environmental scan of medical directives that are in place in primary care starting with smoking cessation and hypertension management. This work is intended to align with the VHASt and the QI Toolkit projects. The environmental scan has been broad (e.g., primary care organizations in Ontario via PCWG contacts, and stakeholder organizations such as CDA, Hypertension Canada, HMP, and the Ottawa Model for Smoking Cessation). Plans also include vetting this work with various professional associations (e.g., Ontario Medical Association, Registered Nurses Association of Ontario, and Ontario College of Pharmacists).

Making the Connection... Sharing Vascular Health Primary Care Initiatives

The PCWG including associated project teams recognized that programs, resources, and initiatives from other primary care stakeholders, such as from the MoHLTC and Health Quality Ontario (HQO), further support integrated vascular health care delivery in primary care. Examples of alignment were shared including with the following Ontario sources: The MoHLTC's *Patients First: A Proposal to Strengthen Patient-Centred Health Care in Ontario* which has a focus on population health and integration at local levels; *Preventing and Managing Chronic Disease: Ontario's Framework*, and *Health Links*. Another example shared was the alignment with HQO's resources for supporting primary care teams (e.g., QIPs and Primary Care Practice Reports). HQO refers to a higher priority being placed on population health and system integration in the coming years, and improving performance in six quality dimensions. The PCWG initiatives are in concert with these priorities.

Common Gaps

The following gap analysis (Table 1) was reviewed by the OSN Primary Care Team noting common gap elements identified within the Ontario sources listed above:

Table 1

Common Identified Gaps in Care

Provincially Identified Gaps	PCWG Identified Gaps
<p>Chronic diseases are leading cause of death and disability Population health not consistently part of health system planning; variability noted</p>	Growing burden of vascular diseases; lack of consistent, coordinated approach within PC
<p>Health services fragmentation in planning and delivery-can result in inefficient use of patient and provider time and resources, and poor health outcomes</p>	Complex medical conditions
<p>Disease-or symptom-focused versus patient-centred care approach to chronic diseases</p>	Lack of integrated, patient-centred VH case management
<p>Lack of access to decision support systems to facilitate delivery of optimal care</p>	Lack of streamlined access to VH best practices
<p>Duplication. Disparate ways that different health services are planned and managed</p>	Disparate VH best practice care elements
<p>Data quality and burden of data collection</p>	Non-standardized VH data
<p>Data timeliness and comprehensiveness is limited with administrative databases</p>	Limited access to real time patient and practice level VH outcomes' reports

Note: PC: Primary Care; VH=Vascular Health

Common Proposals

The following proposals (Table 2) to address the gaps in care were also reviewed by the OSN Primary Care Team noting common proposals between the Ontario sources and the PCWG's priority initiatives:

Table 2

Common Proposals to Fill Care Gaps

- Supporting primary care with more effective **integrated approaches**
- Determining what's more relevant to patients to ensure patient needs are being met; involving patients and providers in co-design of the health care system; how to improve **patient and provider experience**
- **Continuous Quality Improvement** resources
- Enabling **regular measurement and feedback**

- Making it easier for **system navigation** such as between primary care and specialists; connecting primary care to community support services and resources in local communities
- Providing more **consistent, coordinated care** (e.g., examining ways the primary care initiatives support Health Link Coordinators); improving seamless links between primary care and other services; better connection between care providers
- Supporting **ease of self-management**
- **Targeting populations especially those a high risk** for chronic disease (e.g., stroke)
- Engaging in **population health improvement** (e.g., smoking cessation)
- Moving from disease or symptom-focus to **patient-centred care management** approaches to chronic diseases
- Enabling **adoption of innovative technology** that would assist in focusing efforts on populations at risk and identifying local health profiles
- **Strengthening consistency and standardization** while being responsive to local needs; maintaining provider clinical autonomy
- **Encouraging productive interactions and relationships** leading to informed activated prepared patients, practice teams, and communities
- Linking to **shared clinical guidelines**
- Having **evidence-based practice guidelines embedded into daily clinical practice**
- Providing **decision support tools** for providers and patients with system reminders and alerts; improving decisions about care
- Improving **quicker access to health information** such as diagnostic imaging and laboratory results; making it easier to monitor and coordinate
- **Linking to Information Systems through EMRs** for more timely data to identify patients with specific conditions and those at risk; being as proactive as possible
- Enhancing local knowledge and skills through **accessible resources at point of care**

Complex medical conditions require common approaches with many people working together within and across sectors. The PCWG recognized that the vascular health primary care initiatives would contribute to filling the gaps to support primary care efforts for improving vascular health care for patients.

What is the Situation Now? Audience Poll of Similar Initiatives



The following Ontario examples of patient-centred, integrated vascular health programs or initiatives along with successes, lessons learned, comments, and advice were shared:

- **Grandview Family Health Team (FHT)**, in Cambridge, has a Vascular Clinic that offers vascular disease screening, a review of patient's health profile for vascular disease risk, as well as diabetes, hypertension, dyslipidemia, and smoking cessation services.
- **Upper Canada FHT**, in Brockville, has a Global Risk Reduction Program that includes smoking cessation, nutrition counselling, diabetes education, foot care, and an anticoagulation clinic.
- **Vaughan Community Health Centre (CHC)** participants expressed interest in embedding the HMP flow sheet and upcoming VHAST into their EMR. It was noted that all CHCs have the Nightingale EMR offering in place. Currently, Telus-Practice Solutions and OSCAR support the HMP flowsheet. Feedback for the VHAST was to expand beyond the OSCAR EMR offering in order to sustain the work and be reflective of all primary care settings.
- **North York FHT** participants expressed that there are competing EMR vendors. It is challenging to adopt one integrated system when EMRs have different locations for separate clinical flow sheets and store other resources such as data reports separately.
 - One potential solution offered is through the latest proposed version of HMP flowsheet (version 3) which is undergoing refinement of its technical requirements. Protocols for query development (e.g., hypertension) have been developed by Quality Improvement Decision Support Specialists (QIDSS) in collaboration with partner organizations (e.g., HMP)
- **York Region District Stroke Centre & Southwest York Region Health Link with Mackenzie Health** has received support through the Central LHIN Aging at Home funding to link patients to secondary prevention services in cardiac rehabilitation. Self-management is a large component of the program. It had been noted that many patients (not just those with cardiac disease) have benefited from cardiac rehabilitation. Cardiac rehabilitation offers a comprehensive chronic disease prevention and management program. The London Health Sciences research study on *Comprehensive Cardiac Rehabilitation for Secondary Prevention after TIA or Minor Disabling Stroke* was highlighted. The premise is that patients require structured exercise training, education, and counseling. Cardiac rehabilitation has demonstrated improved health outcomes such as reduction in hospitalization. One challenge identified was the variation in the process for referring and accessing cardiac rehabilitation. Ideally, access to cardiac rehabilitation needs to be improved.

- **Champlain LHIN-Heart Wise Exercise** was highlighted as one integrated cardiovascular program among many Champlain LHIN programs to help address gaps in care delivery. Heart Wise Exercise is a cardiovascular community program provided by community exercise providers that started in Ottawa and is now offered throughout Ontario. It was noted to be “beneficial to both the heart and the brain.”
- **Carefirst Seniors and Community Services Association** covers the Greater Toronto Area (GTA) and York region and offers integrated health promotion and prevention programs and services based on community needs such as the Carefirst Health Promotion and Chronic Disease Management Centre. The Carefirst Health Promotion and Chronic Disease Management Centre has partnered with the Carefirst FHT to provide a team that offers the following:
 1. Health Support Group (e.g., Renal Support Group)
 2. Health workshops (e.g., Healthy Cooking Class, Metabolic Syndrome Workshop, and Weight Management Clinic)
 3. Chronic disease prevention and rehabilitation programs
 4. Individual counselling
 5. Chronic diseases self-management learning series
 6. Service provider training series
- **North York General Hospital** reviewed their Order Entry eCare project as a way to connect specialists with primary care. The North York General Hospital achieved HIMSS Level 6 and is a host for the Canadian Computerized Provider Order Entry (CPOE) Toolkit, a collaborative for sharing knowledge and an order set library. The Clinical & Systems Transformation (CST) project is working to emulate the hospital's experience. CST supports health organizations in establishing common clinical and process standards, including work flows, order sets, clinical guidelines, integrated plans of care, and a common electronic health record.
- **Couchiching FHT**, in Orillia, has implemented an initiative that provides patients with the ability to enter their own data into the EMR that is securely transferred through OCEAN tablets from CognisantMD (e.g., COPD program-screening for smoking and COPD).

A few participants commented that the,

“Real value in the PCWG work is preventing a Health Link patient from the start.”

Others commented about the importance of focusing on how to prevent patients from being a vascular patient; needing to start early and repeatedly getting the message out. Many valuable comments and further advice were shared. Table 3 summarizes some of the comments and advice shared about patient-centred, integrated vascular health programs or initiatives:

Table 3
Comments and Advice about Patient-Centred, Integrated Vascular Health Programs or Initiatives

Comments	Advice
Challenges exist in sustaining gains patients have made once discharged from hospital. Some communities offer maintenance programs.	Success lies in making maintenance programs more accessible.
Gap studies have shown that there is a lack of integrated community support services. Services that include exercise are beneficial even in patients with severe arthritis.	Perform a gap study and include review of links to community support services with primary care. Examine facility-based gaps and successes.

	Examine common elements and leverage current resources.
Difficult for patients to have to go to multiple clinics.	Integrate prevention under one PC "roof."
Not many quick fix programs exist. "Spaghetti" map of multiple steps a patient has to take in relation to chronic disease prevention. The common link is self-management.	Self-management is the right fix and is the common thread between chronic disease programs. Integrate self-management programs.
Prevention of fragmentation can be obtained through data sharing. Lack of evaluation in primary care in demonstrating how effective primary care is at delivering vascular health evidence-based prevention and care.	Need more data sharing. Need a common access point to avoid duplication. Align with HQO PC performance indicators.
<i>Vascular Health Journey</i> map developed by patients with vascular diseases is helpful to maintain focus on patient-centred care. Patient tablets could speed up encounter time (e.g., patient completing screening information in the waiting room).	Examine ways to have cross representation from other areas of the care continuum at various committees to facilitate transitions on the vascular health journey. Instill the value of guidelines but at the same time balance with what really matters for the patient.
Many different stakeholders are advocating for this "important" work.	Bring attention to this work when people are updating their work plans (e.g., Regional Stroke Network work plans). Build on a pocket of movement and capitalize on the momentum. Organize a follow up "Thought Forum" to strengthen common strategies and to figure out how to raise the level of discussion at higher levels and draw more attention to this work.
Collaboration is important- "need others."	Draw connection from the primary care initiatives to stroke prevention and NACRS Lite project. Include community pharmacists. Determine best option for branding.
Vascular Health PCWG initiatives can be applied to hospitals.	Link initiatives to Quality-Based Procedures in primary care; provide incentives for vascular health best practices.
There are other references and sources of integrated care to draw from.	Review the reference- Canadian Association of Cardiovascular Prevention and Rehabilitation. Review <i>Choosing Wisely</i> Canada. Align with Computerized Provider Order Entry (CPOE).

Note: NACRS: National Ambulatory Care Reporting System

Future Planning

The following high level overview of the PCWG Work Plans and timelines was shared:

2016/17

Priority 1: The VHASt (Complete Beta (next phase) Prototype)

- Assess readiness with key stakeholders and engage in optimal development pathway strategies
- Conduct environmental scan of current systems
- Develop VHASt privacy framework; update program agreements
- Link to best practice resources and community services
- Build requirements into next iteration
- Check functional requirements
- Test at x number of sites of x number of LHINs
- Test the scope for all vascular health diagnoses (e.g., Peripheral Arterial Disease, Dementia)
- Confirm the role of the Institute for Clinical Evaluative Sciences (ICES)
- Develop the evaluation framework
- Continue to build on current collaborations and partnerships

Priority 2: VH QI Toolkit & Medical Directives

- Recommend refinement and further development of the QI Toolkit
- Recommend vascular health medical directives supporting primary care

Priority 3: Integrated VH Care

- Engage and align with provincial efforts to advance integrated vascular health care
- Connect the three priorities and build a supporting program based on learnings from the HMP

2017/18

- Full scale pilot and research strategy
- Complete a long-term scalability and sustainability plan
- Migrate the HMP into a Vascular Health Program

2019 & Beyond

- Increase research and implementation
- Consider incorporation of other chronic conditions

Important Components for Strengthening Patient-Centred, Integrated, Best Practice Vascular Health Care

Participants gathered in facilitated break-out sessions to discuss which components of the approaches presented (including the VHAST, QI Toolkit, etc.) were most important to local and regional programs or initiatives for strengthening patient-centred, integrated health care (e.g., embedding patient and provider resources at the local level). Many people commended the approach to develop user-friendly resources, especially for the VHAST to be embedded in certified EMR offerings. Expectations are high for developing these resources.

Tips:

- Continue to recognize the interconnectedness of other health issues with vascular health
- Need to determine compatibility with other EMRs and pilot beyond OSCAR
- Conduct survey about what chronic disease tools are embedded into EMRs and how many have vascular health components embedded into their EMRs and other systems
- FHTs have become sophisticated in developing their own flowsheets and using their EMRs effectively
- Examine [Taber Model](#) from Alberta which is a complete practice model for integrated primary health care system
- Perform a literature search on complicated patient care and on implementation science
- Raise attention to the importance of self-management in adding meaningful value to a VH program
- Determine how to engage all providers
- Engage “Thought” leaders about the cross-over of clinical forms

The following are highlighted **themes** noted from the facilitated discussions about the important components of the plans for the vascular health primary care resources (See Appendix B for a detailed list of discussion points):

Providing practical ways for managing integration

- Providing an overall picture of the patient
- Patients with fewer co-morbid conditions have better clinical outcomes; patients can have “10 plus” chronic conditions
- Many EMRs have multiple flowsheets; an integrated multipurpose single flow sheet at the practice level is ideal
- Integration with connection of EMRs helps address the issue of competing priorities
- Generating an integrated action plan for patients that they can “take away” (e.g., place on their fridge)
- Linking directly to integrated clinical best practice guidelines

Embedding appropriate links to patient and provider tools and services

- Building in educational components relating to best practices
- Striving to ensure resources are appropriate for all patients (equity)
- Linking to self-management resources

People involved feel they have been included in making a positive difference

- Seeking patient advice and engagement during the design
- Including people working in primary care and its stakeholders in opportunities to be involved
- Seeking contributions from various interprofessional health provider (IHP) groups; received early buy-in from IHPs
- Engaging physicians was valuable

Tips:

- Seek specialist endorsement
- Need further information about what medical directives can offer; "Practice Flow Map" may be needed instead; examine clinical processes and allow for flexibility of roles
- Translate reporting directly at the local level
- Ensure ease of pulling data by providers
- Consider ease of pulling VHAAS data into a registry
- Consider qualitative data measures (e.g. quality of life)
- Align/link with health organizations to increase capacity by integrating elements with existing VH program resources; be part of a menu of resources
- Examine how to align with Health Links since Health Links have engaged teams in an integrative approach
- Examine [South East Health Integrated Information Portal \(SHIIP\)](#) in SE LHIN connecting providers between hospitals and primary care
- Include ways to overcome inertia in change management processes
- Show resources/program as being evolutionary versus "something (else) that is new"
- Continue the "Sell" through
 - Education
 - Demonstration of credibility
 - Quality
 - Self-Management process/skills

General Tips:

- Include IT support resources to enable implementation such as integration of data
- Ensure there is a MoHLTC level of acknowledgement
- Look for other investors for the VHAAS

Ease of adoption by multiple providers

- Quick way to identify problems
- Practical resources appealing to different abilities and skills

Comprehensiveness; Standard elements

- Including elements of prevention of chronic vascular diseases
- Hospital level medical directives are in place but not many primary care medical directives. Aiming to have common order sets instead of everyone using their own

Ease of monitoring quality Indicators

- Helpful that tracking tools are being included
- Focusing on meaningful outcomes
- Primary care is collecting different measures-envison this work as weaving the quality indicators together (e.g., CHF, diabetes, hypertension); helping practices to figure out how to prioritize indicators
- Building local and aggregate data
- Connecting to practice reports with the ability to print local practice reports. Would have the ability to analyze a diabetes cohort from the primary care practice and track these patients in real time

Helping with work flow; Coordination of patient flow

- Utilization of vascular health tools would provide added support to physicians
- Ability to determine if patients have been screened
- Enhancing ability to communicate between Emergency Department, Hospital, and Primary Care
- Improving coordination of prevention and care

Many commented,

"We want one flow sheet as opposed to ten flowsheets."

One participant commented,

"The VHAAS is building credibility in primary care as an integrated approach to vascular health care."

One other important component to consider that was discussed throughout the Session was to determine how the VHASt and the other primary care initiatives connect to the [Quality-Based Procedures](#) (QBP) pathway. Currently, there is a lack of QBPs in primary care. The vascular health primary care resources being developed will enable the adoption of best practices within primary care and the linkage to QI and evaluation, thus facilitating the potential connection to QBP. Primary care would be an important QBP episode of care and the inclusion of primary care would achieve greater impact on the health system. Foundational pieces have begun such as the prevention and community components of QBPs for stroke care (QBP, 2013). The developing vascular health primary care resources and the HMP offer practical ways to adopt evidence-informed practices in order to improve the patient experience and clinical outcomes. This would also assist in linking primary care and hospital care. It was suggested that strategic planning take place to examine using the VHASt as a data source in assisting with monitoring QBPs in primary care.

What are the anticipated gaps and facilitators to mobilize readiness and gain support for the vascular health primary care resources?

Many of the Session's participants commented that, "this work should proceed into tapping through the constraints or **gaps**" (See Appendix B for a detailed list of the anticipated gaps discussed). One main gap identified by participants was the **communication challenge** that exists between acute care and primary care settings which negatively impacts patients. The most common gap mentioned related to clinical guidelines. Comments were made repeatedly about the challenges faced by primary care providers in deciding which guidelines are appropriate for their patients given the large selection of guidelines to choose from. Guidelines are helpful for patients with a single disease. It was acknowledged that simple cases are not the norm; in practice, primary care providers see complex cases and often guidelines provide discrepant recommendations.

Besides identifying gaps, anticipated **facilitators** to mobilize readiness and gain support for the vascular health primary care resources were also identified (see Appendix B for a detailed list of the anticipated facilitators discussed). Most of the identified facilitators have already been considered and have been included in the PCWG work plan such as **determining what is important to patients and people working in primary care** (e.g., saving time, providing education credits, and enabling better patient outcomes). Other facilitators previously identified were to ensure the resources are **easy to use and adopt in real world primary care practices**. Validation of these vascular health 'models' is needed in real primary care practices; ability to embed within normal workflow processes and enhance the work flow in the primary care clinic. Some mentioned continuing **collaborative efforts** with primary care stakeholders and to extend beyond to across the entire care continuum. Important collaborator groups were also mentioned such as the QIDSS working in FHTs. Having **implementation and sustainability strategies in place** were also discussed. **Inclusion of integrated algorithmic guidelines** as a method for simply outlining best care management processes was also one of the many identified facilitators. Looking toward the future of primary care reform including the **alignment of primary care indicators** as another possibility to leverage this work. Again, a common theme of **alignment with QBPs** when available in primary care was emphasized by some attendees, as well as **alignment with Choosing Wisely Canada**.

One obvious facilitator identified was the necessary **funding** in order to take the resources to the next level of development (e.g., pulling of indicators from EMRs in order to make the connection to QI). Finally, **flexibility in consideration of clinical judgement and patient preferences** would be an important inclusion requirement.

Summary

Overall, anticipation was high for the fully developed vascular health primary care resources. There was general interest to participate in piloting the primary care resources. Participants requested information about who has already been involved from their area in this work. Many participants voiced that they would prefer to get started using the VHASt and Vascular Health QI Toolkit, even at the early stages of development.

Next steps include following up and incorporating the feedback and advice provided by the Session's participants into the PCWG future work plans, as well as sharing this report broadly to draw more attention to this work as a strategy to strengthen patient-centred, integrated best practice vascular health care in primary care.

There was general recognition of readiness and support for the developing vascular health primary care resources from the Session's participants. One participant commented,

"The Session successfully highlighted the primary care priorities and this work is right on track for what is needed in primary care."

Appendix A
Knowledge Exchange Session Participants
March 31st, 2016

Name	Designation	Organization
Brendan Alexander	Health Informatics Specialist	Hamilton Family Health Team
Isabel Araya	Executive Director	Vaughan Community Health Centre
Leah Bartlett	Senior Integration Specialist	Champlain LHIN
Christopher Beaudoin	Project Manager, Health Information Initiatives	Ontario Stroke Network
Monisha Bhatt	Business Strategist	Ontario Renal Network
Venera Bruto	Neuropsychologist	Queen Square Family Health Team
Victoria Bui	Quality Improvement Decision Support Specialist	Hamilton Family Health Team
Julie Carthew	Advisor	North Simcoe Muskoka LHIN
Hazel Desamito-Kathuria	Nurse Practitioner	Vaughan Community Health Centre
Agnes Gibson	QI Specialist	Health Quality Ontario
Kelly Gillis	Sr. Director, System Design and Integration	South West LHIN
Jennifer Harris	Regional Manager Central Director	Cardiovascular Disease Prevention and Rehabilitation Outreach Heart Wise Exercise University of Ottawa Heart Institute
Sue Hranilovic	Primary Health Care Nurse Practitioner	St. Michael's Hospital Family Health Team
Carrie Jeffreys	System Design and Integration Lead	South West Local Health Integration Network
Nabil Kanji	Pharmacist	East GTA Family Health Team
Dr. Stewart Kennedy	Primary Care Physician Lead	North West LHIN
Margery Konan	Senior Consultant	Toronto Central LHIN
Tara Laskowski	Coordinator Nursing Program	Hamilton Family Health Team
Maureen Laughren	Primary Health Care Nurse Practitioner	East End Family Health Team
Helen Leung	CEO	Carefirst Seniors and Community Services Association
Malaena Lynch	Sr. Admin. Primary Care Programs	Ontario Stroke Network
Cally Martin	Regional Director	Stroke Network of Southeastern Ontario

Name	Designation	Organization
Kristy McQueen	System Design & Integration Lead	South West LHIN
Marjan Moeinedin	Quality Improvement Specialist	North York Family Health Team
Cheryl Moher	Regional Director	Central East Stroke Network
Patrick Moore	Communications Manager	Ontario Stroke Network
Dr. Heather Murchison	Primary Care Physician Lead	North West LHIN
Colleen Murphy	Project Manager, Primary Care Work Group	Ontario Stroke Network
Judy Murray	District Stroke Coordinator	Mackenzie Health
Christina O'Callaghan	Executive Director	Ontario Stroke Network
Thiv Paramsothy	Quality Improvement Decision Support Specialist	East GTA FHT
Susan Pilatzke	Senior Director, Health System Transformation	North West LHIN
David Raan	Quality Improvement Decision Support Specialist	Humber River Family Health Team
Sandy Rao	Senior Lead Health System Development	Mississauga Halton LHIN
Ryan Sanjie	Medical Student	University of Saskatchewan
Francesco Sijinardo	Analyst	Ontario Renal Network
Anusha Sivalogarajah	RN	East GTA Family Health Team
Stephen Sundquist	Sr. Manager, Primary Care Programs	Ontario Stroke Network
Ann Thomas	Senior Specialist	Ontario Renal Network, CCO
Anson Trinh	Quality Improvement Decision Support Specialist	Hamilton Family Health Team
Chantelle Vernon	Health Planner, Systems Design and Integration	Central East LHIN
Elizabeth Villar-Guerrero	Clinical Team Manager	North York General Hospital
Sue Wojdylo	Senior Consultant	Central East LHIN
Graham Woodward	Vice President	Cardiac Care Network
Jennifer Wraight	Quality Improvement Specialist	Health Quality Ontario

Appendix B

Discussion Points Raised at the Breakout Sessions

1. What components of the approaches presented (including the VHASt, Vascular Health QI Toolkit, Vascular Health Medical Directives, etc.) are most important to your programs or plans for strengthening integrated, patient-centred health care in primary care? (e.g., embedding patient and provider resources at the local level)
 - Quick way to identify problems
 - Providing an overall picture of the patient
 - Improving coordination of prevention and care
 - Many EMRs have multiple flowsheets; an integrated multipurpose single flow sheet at the practice level is ideal. Patient have 10+ chronic conditions
 - Expectations are high for developing these tools, "want one flow sheet as opposed to ten flowsheets"
 - Connection to practice reports with the ability to print local practice reports. Would have the ability to analyze a diabetes cohort from the primary care practice and track these patients in real time
 - Patients with fewer co-morbid conditions have better clinical outcomes following vascular surgery (CARP study)
 - The integrated vascular health programs have given people working in primary care and its stakeholders an opportunity to be involved
 - Would prefer to get starting using the VHASt and QI toolkit even at the early stages
 - Ease of adoption by multiple providers
 - Sought contributions from various interprofessional health provider groups; Received buy-in by IHPs
 - Building awareness at an educational level (e.g. best practices)
 - Practical resources appealing to different abilities and skill sets
 - Sought patient advice during the design and have patient engagement
 - Included elements of prevention of chronic vascular diseases
 - Will link to self-management resources
 - Striving to ensure resources are appropriate for all patients (equity)
 - Hospital level medical directives are in place but not many primary care ones. Aim to have common order sets instead of everyone using their own
 - Engagement of physicians is valuable but often difficult to engage physicians in QI projects. Need to determine tips on how best to engage physicians
 - Determine how to engage all providers
 - Health Link involvement needs to be considered
 - Helping that type of tracking tools are being created
 - Toronto Central LHIN participant requests information about who has been involved from their area in this work
 - Need to determine compatibility with other EMRs and pilot beyond OSCAR
 - Look for other investors for the VHASt

- Conduct survey about what chronic disease tools are embedded into EMRs and how many have vascular health components embedded into their EMRs and other systems
- FHTs have become sophisticated in developing their own flowsheets and using their EMRs effectively
- Readiness is present. Should proceed into tapping through barriers
- Need funding to assist with pulling indicators from EMRs in order to make the connection to QI
- Primary care is collecting different measures-envision this work as weaving the quality indicators together (e.g., CHF, diabetes, hypertension)-helpful for practices to figure out how to prioritize indicators
- Examine how to align with Health Links as Health Links have engaged teams in an integrative approach
- Examine Taber Model from Alberta which is a complete practice model for integrated primary health care system
 - Prescheduling patients
 - Patient at risk profiles –decide who needs to see patients
 - Ensure the right team member or group is connected to patients with certain risk or disease profiles
- Examine SHIP in Southeastern Ontario that is connecting hospitals with primary care
 - Complex patients
 - Notify that patient in ER
 - Supporting Health Link
 - Between providers
- VHASt provides an overall integrated approach-not just at the provider level
- Integration helps address the issue of competing priorities and connection of EMRs
- Strategic planning would involve Quality-Based Procedures for primary care; look at using the VHASt to track QBPs in primary care
- Requires different specialists' approval and endorsement
- Utilization of vascular health tools would provide added support to physicians
- VHASt suggestions:
 - Ability to determine if patients have been screened
 - Easy to pull by provider
 - VHASt Report pulled into registry
 - Local & aggregate data
- Consider how VHASt information would be transferred from the hospital from a primary care perspective
- Enhance ability to communicate between Emergency Department, Hospital, and Primary Care

What is Missing?

- Engage “Thought Leaders” about cross over of clinical forms
- Need to consider reporting out with physicians and other primary care members of the team
- Ability to generate an action plan for patients that they can “take away” (e.g., place on their fridge)
- Focus on linking to meaningful outcomes
- Reporting needs to be directly translatable at the local level; avoid extra work
- Provide qualitative data measures (e.g. quality of life)
- Include IT support resources to enable implementation such as integration of data
- Ensure there is a Ministry of Health level of acknowledgement
- Recognize the interconnectedness of other health issues with vascular health
- “Medical Directives” doesn’t resonate with primary care
 - “Practice flow map” may be more appropriate
 - Examine clinical processes and allow for flexibility of PC roles
- Need further information about what Medical Directives can offer
- Patients may identify other IHPs as their primary provider
- Offer teaching about implementation and buy-in about change management tools
- Alignment/linkages to increase capacity by integrating elements with existing VH program resources
 - This work is part of a menu of tools
- Determine where the VHASt fits with Quality-Based Procedures pathway. Primary care to be included as an important QBP episode of care in order to achieve full impact on the health system and build from work that is in place (Stroke QBP which includes a prevention and community component). Implementation resources being developed for adoption of best practices within primary care with links to QI and evaluation will be important links to QBP. Offers practical changes to adopt evidence-informed practices in order to improve patient experience and clinical outcomes (QBP, 2013)
- Demonstrate how to adapt resources without abandoning existing programs; ability to show resources/program as being evolutionary versus “something (else) that is new”
- Include in planning the ways to overcome inertia in change management and process such as placing emphasis on the following:
 - The “Sell” through education and demonstration of credibility
 - Quality
 - Self-Management process/skills
- There exists some lack of professional awareness of importance of self-management; will need education on self-management process and skills to help raise attention to the Importance of self-management in adding meaningful value to VH programs

2. What are the anticipated gaps and facilitators to mobilize readiness and gain support for the vascular health primary care resources?

Gaps:

- Accuracy of Guidelines (Diabetes – Hypertension)
- Which Guidelines?
- Ross Upshur – “Ignore Guidelines”
- Guidelines are siloed
- Guidelines are only medical
- Enable “Soft Skills” which equals necessary skills
- How can Primary Care support Acute Care QBPs?
 - Add to Committee membership
- Communication between Acute Care and Primary Care
- Education about who can provide what care (patient communication)
- What's in it for me? (Get Continuing Medical Education (CME)/Continuing Professional Development (CPD))
 - Time
 - Ease of use
 - Better outcomes
- What's in it for patients?
- Effective capture of qualitative data
- Funding
- Targets / Volume
 - MoHLTC & LHIN targets are very specific (definitions)
- Policy planning, expectations
 - Policies need to be clear
 - Communications
 - In consultation with providers
- Validation of the VHASt
 - Is model applicable to real practice?
 - Showing the benefits
 - Inertia
 - 20% paper based primary care practices
- Strategy of implementation needs to be determined
- Volume of different primary care practices
 - Expectations (e.g., Community of Practices)
- Collaboration across continuum of care
 - Primary care reform (ongoing) Facilitator too
 - Alignment of Primary Care indicators
- Capacity
 - Change management
 - Physician and IHPs shortages and turnover
- Workflow challenges
- Integrate into / adjustable into

Facilitators:

- Research on complicated patient care
- Integrated, algorithmic guidelines
- Focus on empirically proven parts of guidelines; not always 100% guideline adherence
- Review Implementation Science literature
- Alignment with QBP (when available in primary care)
- Choosing Wisely
- True team-based care
- Utilize mobile technology
- Linking data to QIDSS
 - Data storage specifications
- Awarding education credits
- Patient involvement
- System wide data access (e.g., through ICES)

Appendix C

Primary Care Work Group (PCWG) Membership

Name	Role/Organization
Dr. Noah Ivers	Family Physician, Women's College Hospital Clinical Scientist, Department of Family and Community Medicine, University of Toronto Chair of the PCWG
Tupper Bean	Executive Director, Centre for Effective Practice
TBC	Ontario Renal Network
Karen Nicole Smith	Patient Experience Advisor
Millie Graham	Patient Experience Advisor
Brenda Smith	Nurse Practitioner, Timmins and District Hospital
Dr. Christopher Jyu	Primary Care Physician Lead, CE LHIN
Dr. Sheldon Tobe	Hypertension and Nephrology HSF/NOSM Chair of Aboriginal and Rural Health Research, Canadian Cardiovascular Harmonization of National Guideline Endeavour (C-CHANGE) Initiative
Heather McConnell	Associate Director, Registered Nurses Association of Ontario
Mustafa Coja	Program Manager, Ottawa Model for Smoking Cessation in Primary Care, University of Ottawa Heart Institute
Susan Pilatzke	Senior Director, Health System Transformation, North West LHIN
Dr. Gordon Schacter	Primary Care Physician Lead, South West LHIN
Dr. Adam Steacie	Family Physician, Upper Canada Family Health Team, Ontario Medical Association
Dr. Jonathan Thomas	Family Physician, Lion's Head Family Health Team
Patricia O'Brien	Manger, QI Programs, Department of Family and Community Medicine, University of Toronto
Christine Papoushek	Pharmacist, Toronto Western Family Health Team
Mike Setterfield	Director, Vascular Services, Cardiac Care Network
Dr. Catherine Yu	Staff, Division of Endocrinology and Metabolism, St. Michael's Hospital

Name	Role/Organization
Carolyn Gall Casey	Director, Education, Canadian Diabetes Association
Chris O'Callaghan	Executive Director, Ontario Stroke Network
Stephen Sundquist	Senior Manager, Primary Care Programs, Ontario Stroke Network
Christopher Beaudoin	Project Manager, Health Information Projects, Ontario Stroke Network
Colleen Murphy	Project Manager, PCWG, Ontario Stroke Network
Graham Woodward	Vice President, Cardiac Care Network
Dr. Nick Kanya-Forstner	Family Physician, Timmins FHT

Consultative Role

David Banh	eHealth Ontario
Dr. Jocelyn Garland	Nephrology, Kingston General Hospital
Bertha Hughes	Nurse Practitioner, Vascular Surgery, St. Michael's Hospital
Caroline Lawrance	Outreach Facilitator, Ottawa Model for Smoking Cessation in Primary Care, University of Ottawa Heart Institute
Joanne Lewis	Manager, Diabetes Education, Canadian Diabetes Association

Appendix D

Production-Ready Vascular Health Assessment & Support Tool (VHAST) Benefits & Value Proposition

Value	Current Environment	Future State-VHAST	Benefits
Capacity	<ul style="list-style-type: none"> Data elements & flowsheets for 3 vascular conditions Not easily scalable 	<ul style="list-style-type: none"> Data elements for any combination of 8 vascular conditions Design scalable 	<ul style="list-style-type: none"> “Dashboard view” of individualized patient care status Greater breadth for addressing CD
Integration & Quality Improvement	<ul style="list-style-type: none"> Search disparate disease-centred views ↓ Integrated CDM User-customized forms required 	<ul style="list-style-type: none"> Easily access common care elements within an integrated, patient-centred view Capacity to manage multiple CDs concurrently 	<ul style="list-style-type: none"> Streamlined work flow/less navigation Enhanced inter-professional communication/collaboration Minimized data entry duplication
	<ul style="list-style-type: none"> Non-standardized data elements reside on individualized forms 	<ul style="list-style-type: none"> Common data elements displayed in data fields within a consistent, standardized view 	<ul style="list-style-type: none"> CD data base with standardized health indicators Improved population level & QI planning & reporting
Clinical & Patient Decision Support	<ul style="list-style-type: none"> Disease-specific CBPG’s dissemination vary Limited access to integrated CBPG’s in EMRs Data alerts vary 	<ul style="list-style-type: none"> Point of care decision support via EMR-embedded, harmonized guidelines (including C-CHANGE) Integrated care plan prompts for 8 vascular conditions 	<ul style="list-style-type: none"> Results compared directly to current CBPG’s Seamless CBPG updating Improved best practices ↓ Vascular events & admissions
	<ul style="list-style-type: none"> Rx not categorized by drug class Rx compliance per CBPG’s not flagged consistently 	<ul style="list-style-type: none"> Categorizes vascular drugs Comparisons of patient Rx & CBPG-recommended drug therapy 	<ul style="list-style-type: none"> Prominent display of recommended drug therapy
Support Patient Self-Management	<ul style="list-style-type: none"> No standard tracking of patients’ readiness for modifying risk factors, lifestyle goals, or progress 	<ul style="list-style-type: none"> Incorporates tracking of patient lifestyle goals, priorities, behavior change, progress & supports Links to patient education resources 	<ul style="list-style-type: none"> Capacity to better engage, monitor & support patients in self-management Improved risk factor control

VH: Vascular Health; CDM: Chronic disease management; CQI: Continuous quality improvement; KT: Knowledge translation; QIP: Quality improvement plan; CBPG: Clinical best practice guideline; C-CHANGE: Canadian Cardiovascular Harmonized National Guideline Endeavour; Rx: Prescription; HCP: Health care provider