SHAPING THE FUTURE OF VASCULAR HEALTH:

An Integrated Vascular Health Blueprint for Ontario

August 2012

CARDIAC CARE NETWORK

HEART & STROKE FOUNDATION

ontario stroke network

Shaping the Future of Vascular Health:

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Ontario

Dear Friends,

The McGuinty government welcomes the Vascular Health Blueprint, which aligns with the goals of our Action Plan for Health Care. We share common ground in our focus on the full patient journey, and on the importance of keeping Ontarians healthy in the first place so we can reduce the incidence of vascular disease.

One of the key strengths of this Blueprint is its emphasis on an integrated approach that builds on our current system. We continue to build a more responsive and efficient approach to managing chronic disease.

I would like to congratulate the three sponsoring organizations – the Cardiac Care Network of Ontario, the Heart and Stroke Foundation and the Ontario Stroke Network, for their leadership. I urge the many partners who make contributions to vascular health care to participate in this important endeavour.

Sincerely,

Deb Matthews

Deb Matthews
Minister

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List of Abbreviations

CDPM	Chronic Disease Prevention and Management
CIS/CMS	Clinical Information System/Clinical Management System
CCN	Cardiac Care Network of Ontario
CCO	Cancer Care Ontario
ECFAA	Excellent Care for All Act
EMR/EHR	Electronic Medical Record/Electronic Health Record
HSF	Heart and Stroke Foundation
HQO	Health Quality Ontario
LHIN	Local Health Integration Network
MOHLTC	Ministry of Health and Long-Term Care
ORN	Ontario Renal Network
OSN	Ontario Stroke Network
VHC	Vascular Health Coalition

Executive Summary

In 2010, the Cardiac Care Network of Ontario, Heart and Stroke Foundation and Ontario Stroke Network (Ontario organizations with mandates to improve vascular health) came together to form a coalition to map a new and better way of addressing the province's growing vascular-related chronic disease burden. Over a series of meetings between October 2011 and February 2012, the Vascular Health Coalition's (VHC) advisory council developed and defined an Ontario Integrated Vascular Health Blueprint. This Blueprint is rooted in a vision of "an integrated, patient-centered, accessible continuum of high quality vascular health services and resources that facilitates and fosters improved vascular health, reduced incidence of vascular disease and reduced consequences of vascular-related diseases for all Ontarians."

The Vascular Health Blueprint (Blueprint) is based upon the recognition that the common and inter-related causes and prevalence of vascular diseases require an organized, integrated approach. For example, hypertension is the most powerful prognostic factor for stroke, a leading risk factor for many heart diseases and dementia, and common among those with diabetes (of whom two-thirds die from cardiovascular disease). There is a tremendous potential to reduce the burden of vascular and vascular-related diseases by enhancing primary prevention, secondary prevention and disease management in primary care and empowering patients for self-management. The Canadian Heart Health Strategy, for example, has suggested that an integrated approach to cardiovascular disease could reduce associated healthcare costs by as much as 20%.[1]

Based on multi-sectoral input, including that of patients, caregivers and Local Health Integration Networks (LHINs), a Blueprint for province-wide action was developed. This Blueprint aligns with the chronic disease prevention and management (CDPM) framework, as well as priorities of the Ministry of Health and Long-Term Care (MOHLTC), LHIN Integrated Health Services Plans, the Excellent Care for All Act and the Action Plan for Health Care.

In order to optimize its impact the Vascular Health Blueprint focuses on making specific, targeted change in four essential domains.

Domain 1: Population health and promoting healthy public policy

Population-based interventions and healthy public policy are key approaches in stemming the future tide of vascular patients in Ontario. The Blueprint supports the healthy public policy recommendations in the report released in March 2012 by Cancer Care Ontario and Public Health Ontario, *Taking Action to Prevent Chronic Disease: Recommendations for a Healthier Ontario*. In alignment with this work, the Blueprint proposes an across-government, inter-ministerial, inter-sectoral strategy initiated by the MOHLTC, in collaboration with the Ontario Chronic Disease Prevention Alliance and Public Health Ontario, to address the risk factors for vascular disease.

Domain 2: Understanding and supporting the individual and family through the vascular health journey(s)

This domain aligns with MOHLTC's priority of “zeroing in on patient-centered care.” A key initiative will be the creation of a Patient and Family Panel to map representative patient/family journeys through the vascular care continuum, create a Vascular Patient Bill of Rights, and ensure that the patient and family perspectives are incorporated into all provincial and regional vascular activities. Particular attention will be paid to capturing the input of patients and families with unique needs due to geography, age, socioeconomic status, cultural diversity, cognitive impairment, or physical or mental health disability.

Domain 3: Improving the quality and access to a continuum of vascular services

According to the latest report from Health Quality Ontario, 93% of Ontarians have a primary care provider. Empowering primary care providers to provide their patients with optimal vascular disease prevention and management is probably the single most important approach to improving the vascular health of Ontarians. To achieve this, the Blueprint proposes:

- Providing primary care providers with tools for treating and interacting with patients, such as a common, standardized set of clinical guidelines and electronic medical records (EMRs) with the capacity to proactively prompt physicians and provide access to provider and patient resources.
- A ’shared care‘ model in which specialists collaborate with primary care providers in the delivery of high quality vascular care. This collaboration will be particularly beneficial for patients with complex care needs (e.g., patients with heart failure or atrial fibrillation, or with multiple vascular diseases), who may be treated concurrently by a primary care provider and several specialists.
- The development and dissemination of tools to improve communication between providers and patients/families, during transitions between points or settings of care, and between specialists, primary care providers and allied health professionals.

Within each LHIN, Regional Vascular Collaboratives will support primary care providers and identify opportunities for shared care and integrating or consolidating vascular secondary prevention services. For example, Regional Vascular Collaboratives will coordinate access to behaviour modification and self-management resources provided by diabetes coordinating centres, cardiac rehabilitation programs, and stroke prevention clinics.

Domain 4: Developing system enablers and efficient use of resources and assets

An integrated system will optimize existing healthcare resources but effective and sustained implementation will require investment in key resources (system enablers). Enablers include:

- A common, standardized set of clinical guidelines so care providers have one consistent best practice source (e.g., the Canadian Cardiovascular Harmonization of National Guidelines Endeavour or "C-Change" initiative). To facilitate uptake, provincial and local champions and opinion leaders will be activated to work with primary care providers.

- Strategies to support information application and flow and system improvement:

    - embedding evidence-based harmonized vascular care guidelines;
    - facilitating the flow of information across sectors and the continuum of care (e.g., between primary care providers and hospitals and between patients and primary care providers);
    - proactively supporting primary care practitioners to follow best practices in vascular disease prevention, diagnosis and management (e.g., EMR-based prompts and reminders);
    - providing self-management education and support to empower patients and families;
    - supporting the standardized measurement and monitoring of one set of vascular health indicators; and
    - establishing provincial objectives and targets for quality improvement.

The VHC will provide leadership for vascular health integration activities and advocate for essential enablers. This will include:

- Leveraging existing networks and resources, such as those within the LHINs (e.g., Regional Diabetes Coordination Centres, Primary Care, Regional Stroke Networks, Cardiac Rehabilitation, and Community Care Access Centres) and those with a provincial mandate (e.g., Ontario Renal Network, Ontario Stroke Network and the Cardiac Care Network of Ontario).

- Optimizing the use of existing information management systems, including resources such as the Ontario Diabetes Registry, Ontario Stroke Registry, and the Provincial Cardiac Registry.

- Collaborating with organizations such as the Institute for Clinical Evaluative Sciences and Health Quality Ontario to develop an evaluation and performance management system that collects and analyzes meaningful metrics and benchmarks.

- Developing a research agenda to enable knowledge development and exchange.

Immediate Implementation Priorities

Implementation of the actions outlined above will require the support of many players. It is proposed that three key structures be formed to focus the work of this strategy.

1) Provincial Vascular Health Implementation Steering Committee: The Implementation Steering Committee will include key leaders from the vascular health system to guide strategy and support implementation. As a first step, the Vascular Health Implementation Steering Committee will establish two working groups:

    - A Vascular Primary Care Working Group to advance the primary care goals outlined in Domain 3.

    - A Knowledge Management Working Group to develop an integrated approach for measurement, monitoring, continuous improvement and knowledge exchange.

    The Implementation Steering Committee will identify provincial objectives, as well as set the objectives and framework for regional activities through the LHINs and Regional Vascular Collaboratives. The Implementation Steering Committee will also build on work underway relating to hypertension, acute care vascular services, heart failure and atrial fibrillation.

    In developing the Blueprint, there was insufficient time for adequate consultation with Ontario's First Nations, Métis, Inuit and Aboriginal-identity peoples. The Provincial Vascular Health Implementation Steering Committee will address this gap; it will also ensure that the voices of other cultural and ethnic groups in the province are heard.

2) Regional Vascular Collaboratives: Regional Vascular Collaboratives will be convened by the LHINs and support primary care, identify opportunities for shared or collaborative care, and coordinate access to secondary prevention resources. In addition, to optimizing activities at the LHIN level, opportunities will be created to support knowledge exchange between Regional Vascular Collaboratives and the Provincial Vascular Health Implementation Steering Committee.

3) Patient and Family Panel: This panel will be composed of patients and family members and will support and inform the work of the Provincial Vascular Health Implementation Steering Committee. The Patient and Family Panel will ensure the strategy is driven by patient and family perspectives and needs. In collaboration with the Implementation Steering Committee, the Patient and Family Panel will ensure that the perspective of at-risk or marginalized populations are captured and addressed.

It is recommended that the MOHLTC explore opportunities to build on current provincial chronic disease initiatives, such as the Ontario Diabetes and Ontario Renal Strategies, in order to incorporate a broader vascular approach.

This is a critical period for health care in Ontario and it is important that optimal use be made of valuable healthcare resources. For the first time, three of the major organizations concerned with vascular health and care in Ontario have come together in order to develop an ambitious and impactful approach to ensure system integration, change and improvement. With the support of the MOHLTC and LHINs, the result will be significant enhancement in the patient experience, greater healthcare efficiencies, and improved health outcomes.

DOMAIN 1:
POPULATION HEALTH AND PROMOTING HEALTHY PUBLIC POLICY

- Support population-based interventions and healthy public policy
- Support the inter-sectoral strategy initiated by MOHLTC to address the risk factors

DOMAIN 2:
UNDERSTAND AND SUPPORT THE INDIVIDUAL AND FAMILY

- Support individuals and families across the continuum and at points of transition
- Improve patient outcomes and experience, especially those with special needs

INNOVATION LEADING PRACTICE

DOMAIN 3:
IMPROVE THE QUALITY AND ACCESS TO VASCULAR SERVICES

- Tools for primary care providers
- Promote collaborative care
- Improve communications

DOMAIN 4:
DEVELOPING SYSTEM ENABLERS AND EFFICIENT USE OF RESOURCES AND ASSETS

- Standardized clinical guidelines supported by technology
- Support information application and flow

Why an Integrated Vascular Health Blueprint?

Over the past decade, there have been an increasing number of warnings about looming threats to the well-being of Canadians and the sustainability of our health care system because of our aging population and increases in the prevalence of vascular conditions such as heart disease, stroke, renal disease, diabetes, and dementia.[2] [3] [4] Ontario, with a senior population that is projected to increase to 22% by 2031, is one of the provinces most likely to experience challenges.[5]

In the past, approaches to primary and secondary prevention, early diagnosis, treatment and recovery for many of the chronic diseases - including heart disease, stroke, diabetes, renal failure, vascular dementia, and hypertension - were largely treated as separate health care issues. Programs and services were divided into disease-specific and even stage-specific (e.g., prevention vs. treatment) silos, even though they share many common risk factors and disease mechanisms. For example, almost 80% of cardiovascular disease has been attributed to potentially modifiable risk factors[6] and up to 21% of cases of dementia.[7] About two-thirds (65%) of those with diabetes die from vascular complications such as heart disease and stroke.[8]

The Institute for Clinical Evaluative Sciences (ICES) and Public Health Ontario (PHO) has estimated that 60% of deaths in Ontario are attributable to smoking, unhealthy alcohol consumption, poor diet, physical inactivity and high stress, with nearly all adults reporting at least one of these five risk factors. Collectively, these five risk factors reduced the average life expectancy of Ontarians by 7.5 years and healthy-years of life (health-adjusted life expectancy) by almost ten years. [9]

The segmented nature of our current approach to vascular disease prevention and management has serious consequences for both the health of Ontarians and the sustainability of our healthcare system. For example, the Organization for Economic Co-operation and Development has estimated that up to 30% of health care costs in Canada are “wasted” due to inappropriate and inefficient treatment. [10] As noted in the report of the Commission on the Reform of Ontario’s Public Services (often referred to as the Drummond report) there is a need to better integrate care across the system in order to improve efficiencies. [11]

> My cardiology work-up involved MANY visits to different doctors at different hospitals and clinics over 18 months. So there were reports from many doctors and test facilities. My cardiologist was prudent about reviewing all the results as they came in BUT I have to ask if she could remember how tests done a year after some of the initial tests might relate to each other. There wasn’t any sort of form that compiled bottom line results of tests on one page. Instead there is either huge amounts of e-files or a thick paper file that, again, does not connect the dots or allow an observer to compare how the results might be mutually relevant.[12]

Because of inefficiencies, the province has not fully benefited from advances in vascular primary and secondary prevention and disease management. For example, as noted above, it has been estimated that up to 80% of stroke and significant proportions of cases of coronary heart disease, heart failure, renal disease, dementia and complications of diabetes could be prevented through improved management of high blood pressure. However, despite significant improvements in diagnosis and management, up to 15% (or one in seven) of Ontarians with high blood pressure are not adequately controlled and close to 20% (one in five) are not receiving any treatment.[13]

Vascular diseases and risk factors frequently co-exist and complex care patients may spend a significant amount of time "bouncing around from different healthcare providers, into acute care and back into the community with little follow-up or organization to guide their care."[14] As a result, complex care patients may be frequently re-admitted after discharge or remain in hospital in alternative level of care beds. Linkages to ensure home care, secondary prevention and recovery or rehabilitation care may be missing, fragile or fragmented.

It is time to break down artificial barriers between diseases and organizations and create a systematic, comprehensive approach that:

- Promotes and protects the vascular health of Ontarians.
- Ensures equitable and effective vascular health diagnosis, treatment and recovery.
- Improves the models of healthcare delivery to better prepare Ontario for the growing number of seniors and potential increases in vascular patients.
- Reduces avoidable vascular morbidity (illness and disability) and mortality (death).

Vascular Health Coalition (VHC)

In 2010, three provincial organizations with mandates to address various types of vascular diseases – the Cardiac Care Network of Ontario, Heart and Stroke Foundation and Ontario Stroke Network – came together and committed resources to forming a bold new coalition for vascular health. The objective of the coalition was to map a new and better way of addressing the province's growing vascular-related chronic disease health burden. During the course of a series of meetings between October 2011 and February 2012, the coalition's advisory council developed and defined an integrated vascular health blueprint.

One of the guiding principles of the Blueprint is to leverage and build upon existing resources. As noted in a 2011 report by the Change Foundation:

> It isn't a matter of money. Additional investments are not required. What is needed, instead, is to maximize the impact of existing investments through the reallocation and better targeting of funds, along with creative and innovative thinking from a system point of view, and an openness to learn from research and from the experiences of other jurisdictions. Also required—as The Change Foundation's research has shown—is the

> addition of patients and their family/friend caregivers to the roster of 'experts.' They can serve as a guiding resource in re-designing health services.[15]

As summarized in the document *Toward An Integrated Vascular Health Strategy for Ontario, Joint Statement of Commitment*, *July 23, 2010*, and reiterated in the partnership charter (Vascular Health System Coalition Charter, July 25, 2011), the goal of the Blueprint is to mobilize the vascular health community to work in alignment to improve vascular health for all Ontarians and to reduce the consequences of vascular and related diseases. The vision of the Blueprint is that of an engaged, proactive vascular healthcare system with the capacity to provide an integrated, patient-centred and accessible continuum of high quality vascular health services and resources.

Through a series of consultations with a wide variety of stakeholders, including primary care providers, specialists, allied healthcare professionals, administrators, patients, caregivers, and Local Health Integration Networks (LHINs), a blueprint for province-wide action based on eight guiding principles was developed. As well as aligning with other national and provincial initiatives in chronic disease prevention and management, the blueprint reflects:

- The chronic disease prevention and management (CDPM) framework of the Ministry of Health and Long-Term Care (MOHLTC)
- MOHLTC priorities, such as improving health care efficiencies, facilitating e-health, and reducing alternative level of care beds
- LHIN Integrated Health Services Plan priorities
- The Excellent Care for All Act
- The Action Plan for Health Care
- The report of the Commission on the Reform of Ontario's Public Services.

In order to optimize its impact, the Blueprint focuses on making specific, tangible and targeted change in four essential domains:

- Population health and promoting healthy public policy
- Understanding and supporting the individual and family through the vascular health journey(s)
- Improving the quality and access to a continuum of vascular services
- Developing system enablers and efficient use of resources and assets.

As shown in the following Figure 1, the Blueprint is focused upon those areas of the continuum of care where change may have the greatest impact. These are:

- Primary prevention and population health
- Accessible evidence-based guidelines for primary prevention, diagnosis, management and secondary prevention
- Comprehensive and timely communication during transitions and for secondary prevention, rehabilitation and recovery.

Vascular Health Blueprint Guiding Principles

1. Reflect the perspective of the individual, family and community, while recognizing the wide geographic , age, gender, socioeconomic and cultural diversity of Ontario's population.
2. Although the initial focus will be in areas where a collaborative strategy is likely to be the most effective, over time it will broaden to address all aspects of vascular health across the full continuum of care (i.e. from prevention through to palliation).
3. Support and strengthen the role of health promotion, primary care, rehabilitation, secondary prevention and community services within the system of vascular care.
4. Leverage the strengths of the current systems and support policies for vascular care and (re)organizing resources in order to optimize the efficiency and cost-effectiveness of systems.
5. Align with the broad CDPM approach and build upon and support the priorities of the MOHLTC and LHINs.
6. Apply best practice, encourage innovation and support knowledge translation.
7. Be executed, documented and communicated in an open and transparent manner.
8. Respect the individual mandate of each member organization.

Potential Impact

In people under the age of 60, reducing high blood pressure can reduce the risk of stroke by 42% and the risk of coronary heart disease by 14%. Among those ages 60 and over, good hypertension management can reduce overall mortality by 15%, cardiovascular mortality by 36%, the incidence of stroke by 35% and the incidence of coronary artery disease by 18%.[16] As well, untreated hypertension may be responsible for about 40% of cases of dementia.[17] There is a growing body of research showing a strong relationship between vascular health and brain health and dementia.[18]

The World Health Organization has estimated that 80% of heart disease, stroke and type 2 diabetes, and 40% of cancers, could be avoided if shared risk factors were eliminated.[19] Moreover, it has been estimated that over half (54%) of Alzheimer's cases in North America could be prevented through lifestyle changes and treatment or prevention of chronic medical conditions such as hypertension.[20] Better vascular risk factor control could help to reduce the burden of dementia by preventing or at least postponing it until later in life.[21]

The Conference Board of Canada has estimated that cardiovascular disease costs the nation $21 billion a year. The Canadian Heart Health Strategy and Action Plan set forth ambitious risk factor reduction targets: reducing the prevalence of hypertension by 15%, smoking rates by 25% and obesity by 20%, and increasing the proportion of children and adults eating at least five servings of fruit and vegetables per day by 20% and those physically active by 20%. The Conference Board's analysis suggests that if a comprehensive heart health strategy was implemented and these targets were met, costs of up to $5 billion a year could be avoided.[22] As well, modeling of data from Manitoba found that reducing the proportion of the population that smoke or are physically inactive or obese by 1% per year could reduce the annual economic burden by $210 million. Furthermore, the Manitoba study estimates that reducing the proportion of the population with these risk factors by 2% per year would result in even greater savings: up to $424 million a year.[23]

> During our vascular emergency treatment journey, we found the recurrent challenge that was predominant during times of waiting between visits was lack of access to information to support and manage self-care. We searched the internet looking for information, exercises, and resources that would inform, instruct, and support us during the recovery process. We were eager to play an active role in managing our recovery. Unfortunately, the time and effort spent searching for help yielded little to no fruit for our effort. Initially, valuable recovery and rehabilitation time was wasted as we sat idle between medical visits. [12]

There is also potential to reduce health care costs through improved secondary prevention and chronic disease management. A 2009 report from McMaster University noted that only one in five Ontario adults with one or more of seven chronic conditions (arthritis, cancer, diabetes,

emphysema or chronic obstructive pulmonary disease, heart disease, high blood pressure, and/or mood disorders) reported “almost always” or “most of the time” being given a written list of things to do to improve their health. Less than half (40%) received reminders when they were due for preventive or follow-up care, falling to 30% for those without a regular physician or “medical home.” Moreover, one in five Canadians with a chronic disease reported difficulty accessing immediate, routine or ongoing care. Canadians without a regular medical doctor were 1.2 times more likely to go to hospital emergency rooms (ER) for care – translating to an estimated 18,000 “excess” or potentially avoidable ER visits. The proportion of Canadians with a chronic condition that over the past two years have gone to an ER is 44% -- significantly higher than the rates reported in Australia (36%), the U.K. (36%), New Zealand (34%), the Netherlands (24%) and Germany (23%).[24]

A 2010 report by the Ontario Hospital Association noted that hard data on the cost impact of specific projects are not readily available. Approximately a quarter of direct health expenditures in Ontario can be attributed to chronic illness (excluding injury). If expenditures could be reduced by 5%, the potential savings would be $0.6 billion a year; a reduction of 10% would avoid costs of $1.2 billion.[25]

> So it was a big challenge when I left the hospital. When I got home one of the biggest challenges was where do I go from here? I felt like I was quote unquote turfed so to speak because I was left to my own devices. Like really just, fend for yourself. [12]

In addition to the potential economic impact of an integrated vascular strategy, there are also important benefits for Ontarians who are at risk or living with chronic vascular diseases. An improved, patient-centred and integrated system would improve services, continuity through transitions, health outcomes and the quality of life for patients and those close to patients (e.g., family members and caregivers). The benefits could be particularly important for frail and geriatric patients, who often suffer the most when care is poorly integrated.

Domain 1: Population health and promoting healthy public policy

Improving the overall vascular health of Ontarians will promote well-being and prevent a range of chronic and often crippling diseases. To date, Ontario has made some significant gains in improving population health through multi-faceted and inter-sectoral action. For example, in the mid-1960s, approximately half of the adult population of Ontario smoked. Through a combination of public education, health promotion, and legislation, that rate has been reduced to less than 20%. Building on these learnings, comprehensive primary prevention plans have been developed. These include Cancer Care Ontario’s 2020 Action Plan, public health’s Chronic Disease and Injuries Standards, and the joint Cancer Care Ontario/Public Health Ontario report, *Taking Action to Prevent Chronic Disease: Recommendations for a Healthier*

Ontario. But in many cases, efforts tend to be fragmented, separated into silos by disease, community or risk factors, and only poorly linked with primary care and specialist practitioners.

The Blueprint recognizes that promoting healthy public policy and population health promotion must be a key commitment of all stakeholders. As part of this commitment, it endorses the work and healthy public policy recommendation in the *Taking Action to Prevention Chronic Disease: Recommendation for a Healthier Ontario* report. In alignment with this work, the Blueprint supports an across-government, inter-sectoral strategy initiated by the MOHLTC to address the risk factors for vascular disease. The Blueprint proposes that this work be conducted in collaboration with those already working and providing leadership in this area, such as Public Health Ontario and the Ontario Chronic Disease Prevention Alliance.

All health care settings can provide leadership by having health-promoting policies and programs in place. These can include policies and programs to support smoking cessation, healthy eating and physical activity. With respect to healthy eating, the Cardiac Care Network of Ontario, Heart and Stroke Foundation and Ontario Stroke Network recently participated in a Sodium Summit which identified opportunities around food policies. For example, healthcare settings could establish purchasing requirements based on nutrition standards, provide training to food service operators on modifying recipes and reducing salting practices, train purchasers to look for and buy lower sodium goods, and develop comprehensive food policies that extends to all food served or sold in the healthcare environment. As an initial step the three organizations have already created and implemented guidelines to ensure healthy food choices at meetings and events.

How progress will be measured: To measure change in this area, the Blueprint supports surveillance of the prevalence of chronic disease risk factors and the incidence of chronic disease in partnership with agencies with epidemiologic and data collection and analysis expertise, such as the Institute for Clinical Evaluative Sciences, Health Quality Ontario, Cancer Care Ontario and Public Health Ontario. As well, the VHC will monitor the number of partnerships, collaborations and joint ventures to promote vascular health and reduce vascular health inequities.

Domain 2: Understand and support the individual and family through the vascular health journey(s)

> If you can't be the shepherd, you need somebody who's doing that for you. You cannot rely on health professionals to do that for you. I'm not denigrating the health field, I've had fabulous care, met fabulous people, but it is a world sort of limited resources. And they're not there to be your parent or your day to day caregiver. That's something that you have to set up for yourself. [12]

The healthcare experiences of all Ontarians – current and future – as they navigate our health, wellness and medical systems need to be heard, understood, and considered. Currently, there is little or no coordination of vascular care across the entire continuum or between different disease-specific groups or services. Patients and caregivers report uncertainty about how to navigate between services or settings, anxiety over whether information is being communicated to the right person at the right time, and frustration with repetition (e.g., having to repeat medical histories or tests) and avoidable delays. Fragmentation and inefficiencies are particularly challenging at transition points, such as when someone moves between primary and specialist care or in or out of hospitals or residential care.

The goal is to improve the experience of Ontarians for those at risk for and living with vascular disease. For this domain, there are two strategic objectives:

- Support and enable the individual and family to optimize vascular health across the health continuum and at points of transition.
- Improve patient outcomes and experience through attention to the circumstances of patients with unique needs (e.g., geography, age, low income, cultural diversity, cognitive impairment, mental or physical disability).

These strategic objectives align with MOHLTC's priority of "zeroing in on patient-centred care," as well as the Excellent Care for All Act objective of "improving the quality and value of the patient experience through the application of evidence-based health care." As noted in a report by the Change Foundation:

> An integrated healthcare system will improve access to services, quality of care and patient safety, and the efficiency of the delivery system and hence its sustainability—as well as the experience of patients and their family and friend caregivers. To accomplish this, we need to seek and be guided by the lived and expressed experience of the people now navigating the healthcare system. Let's begin by using these untapped resources standing right in front of us.[26]

To achieve its strategic objectives, the VHC will create a Patient and Family Panel. The key roles of the Panel will be to:

- Map representative patient/family journeys through the vascular care continuum. These maps will provide insights into where, when and how families and patients encounter difficulties and what is needed to prevent or reduce them.
- Draft a Vascular Patient Bill of Rights to ensure that all patients have a clear understanding of their rights, privileges and responsibilities.
- Ensure that the perspectives of patients and families are recognized and incorporated into all provincial and regional Blueprint activities.

The VHC is dedicated to capturing the voices of all patients and families, including those who may face barriers of culture, ethnicity, geography, age, socioeconomic status, or cognitive,

mental health or physical disabilities. For example, we know that some Ontarians such as those of South Asian, Aboriginal or African/Caribbean descent are at increased risk of developing vascular disease. Their input will provide the information needed to ensure that vascular health services are more culturally sensitive and appropriate.

> Cardiovascular disease afflicts our family. Our father died of heart disease at 49; our mother died of a stroke; one of my siblings recently had an aortic dissection and suffered a stroke as a complication; I have had bypass surgery.
>
> Based on our collective experience, I realize how important this integrated strategy is for preventing disease and supporting people dealing with disease when it occurs. Primary prevention can avert premature illness and death of people in their prime; this has enormous potential to reduce tragedy for individuals and families, and large societal costs. Better integration and continuity of services as people with disease move from acute care to inpatient rehabilitation to community based care as they recover at home will do much to make life easier for patients to have as little hassle and stress as possible as they work to return to a full life. Little changes that are practical can have a big impact. Why not ask people who go through this system how to make it better? They are key experts, since they have firsthand knowledge of what can go wrong, and what could be done to make it all go right. [12]

How progress will be measured: Measures that will be used to monitor the success of this work will include surveys of patient and family satisfaction with their healthcare experiences, the number reporting thoughtful discussions with care providers concerning vascular health promotion or disease prevention or management, and level of confidence (self-efficacy) in vascular risk management and chronic disease self-management. In addition, the VHC will work with agencies to monitor the prevalence of vascular disease risk factors and chronic diseases in at-risk populations.

Domain 3: Improving the quality and access to a continuum of vascular services

Currently, there is little or no coordination of vascular care across the entire healthcare continuum or between different disease-specific groups or services. As described in the previous section, fragmentation leads to a number of challenges and barriers for patients and caregivers/families, particularly at transition points.

> If I did not speak English well and have the motivation and tenacity to get errors corrected, some test results or appointments would have been

> lost….fragmentation leads to all sorts of errors and inefficiency in the system. The average patient has no recourse to deal with this. Patients are not served by being sent to many locations to obtain the information necessary to sort out diagnostic and treatment options…Most individuals were kind and well-meaning but logistics of the system were a definite detriment.[12]

Current practices also pose significant challenges for healthcare providers. The ability to deliver high-quality vascular care is impacted by the fact that:

- There is a lot of information on vascular health but it is predominately separated by disease or risk factors – despite the fact that patients typically present with comorbid and co-existing conditions and/or risk factors. For example, the Canadian Medical Association website provides healthcare providers with access to 28 documents and guidelines concerning cardiovascular disease, 27 on obesity, 13 concerning diabetes, 11 on dementia, 10 on renal disease, eight for stroke, six on physical activity, five for hypertension, and three on smoking cessation. Guidelines may be obtained from a number of sources such as professional organizations (i.e., Canadian Society of Nephrology, the Canadian Cardiovascular Society, Registered Nurses' Association of Ontario) or national or international bodies (e.g., European Guidelines on CVD Prevention in Clinical Practice, National Institute for Health and Clinical Excellence or NICE guidelines, etc).

- There is limited support to enable healthcare providers to translate and integrate knowledge on best practices into patient care.

- Coordination and information sharing between primary care, specialists and hospitals and, most importantly, with patients is often problematic.

According to the latest report from Health Quality Ontario, 93% of Ontarians have a primary care provider.[27] Empowering primary care providers to provide optimal, efficient vascular disease prevention and management is a key opportunity for improving the vascular health of Ontarians.

Specific objectives of the Blueprint are to:

- Provide primary care providers with tools to enhance use of best practices, communication and monitoring of treatment and progress: Two key tools are: a) a common, standardized set of clinical practice guidelines and b) an electronic medical record (EMR) system that can embed the guidelines, proactively prompt physicians, and provide links to provider and patient resources.

- Promote a shared and/or collaborative care model of vascular health care across Ontario: This may include specialists assuming leadership and collaborating with primary care providers in delivering high-quality vascular care or a collaborative approach to care

between primary care and nurse practitioners. Collaboration will be particularly beneficial for patients with complex care needs, such as those with heart failure or atrial fibrillation or with multiple vascular diseases.

- Develop and disseminate tools to improve communication between providers and patients/families during transitions and between points or settings of care: As well, tools will be developed and disseminated to enhance communication between specialists and primary care providers, as well as between medical and allied health professionals.

Activities to achieve these objectives will be undertaken at both the provincial and regional levels. At the provincial level, efforts will focus on ensuring key enablers are developed and implemented (see Domain 4 for more information). At the regional level, within each LHIN, a Regional Vascular Collaborative will support primary care providers in the delivery of optimized vascular health care. Regional Vascular Collaboratives will identify opportunities for shared care between primary and specialist care providers, as well as means for integrating or consolidating vascular secondary prevention services. They will, for example, take on the task of developing and implementing a plan to better coordinate access to behaviour modification and self-management resources within LHINs by different services, such as diabetes coordinating centres, cardiac rehabilitation programs and stroke prevention clinics. This coordination will ensure more efficient use of existing resources.

How progress will be measured: Measures used to monitor progress and quality improvement will include the percentage of patients treated in accordance with best practice standards of care and who have a vascular health improvement plan in their patient record, the proportion of patients receiving appropriate secondary prevention care or self-management training, rates of regional vascular care disparities and rates of avoidable hospitalizations and emergency department visits. This may include using and analyzing data collected with interRAI (Resident Assessment Instruments) tools.

Domain 4: Developing system enablers and efficient use of resources and assets

An integrated vascular healthcare system will optimize the use of existing healthcare resources and improve practice behaviours and patient and system outcomes. Achieving this vision will require effective implementation and strategic investment in key system enablers.

A description of the implementation process is provided in the following section (Implementation Priorities). This process will involve the support and participation of many players at the provincial and regional level.

Key enablers that are needed to ensure the success of the Blueprint are:

- A common, standardized set of clinical guidelines so care providers have a single and consistent best practice source: The Canadian Cardiovascular Harmonization of

National Guidelines Endeavour (C-Change) initiative is one example of a standardized guideline.[28] Support will be required to maintain, update and disseminate a harmonized practice guideline. In addition, provincial and local champions and opinion leaders will be activated to work with primary care providers to facilitate integration into clinical practice.

- Strategies to support information application and flow, as well as system improvement including:
    - embedding the harmonized, evidence-based vascular care guidelines into EMRs and computerized management systems (CMS);
    - providing EMR-based prompts and reminders to proactively support primary care practitioners in following the harmonized best practice guidelines and monitoring patient progress and outcomes;
    - developing and disseminating tools to improve communication between providers and patients/families during transitions and between points or settings of care;
    - providing patients with self-management and behaviour modification support in order to empower them and their families in self-care;
    - enabling the measurement and monitoring of province-wide vascular health indicators and;
    - establishing provincial objectives and targets for prevention and care improvement.

The three founding organizations of the VHC (Cardiac Care Network of Ontario, Heart and Stroke Foundation and Ontario Stroke Network) will provide leadership for vascular health integration activities. They are also prepared to advocate for essential enablers and work to:

- Leverage existing vascular networks and resources: This will include resources within LHINs (e.g., Regional Diabetes Coordination Centres, Primary Care Networks, Regional Stroke Networks, Cardiac Rehabilitation programs, and Community Care Access Centres), as well as those at the provincial level (e.g., Ontario Renal Network, Ontario Stroke Network, and the Cardiac Care Network of Ontario).
- Optimize the use of existing information management systems for vascular health monitoring and evaluation: The VHC will look for opportunities to leverage and build upon existing resources, such as the Ontario Diabetes Registry, Ontario Stroke Registry and the Provincial Cardiac Registry.
- Collaborate with organizations with data collection, management and analysis expertise: Such collaboration will make possible the development of an evaluation and performance management system that collects and analyzes meaningful metrics and system benchmarks. The Institute for Clinical Evaluative Sciences and Health Quality Ontario would be key partners in this work.

- Develop a research agenda to enable knowledge development and exchange to further vascular health promotion and prevention and vascular disease diagnosis and management.

How progress will be measured: A report card will be developed to identify progress made in all four domains.

Implementation Priorities

Implementation of all of the actions outlined in the Blueprint will require the support of many players. The founding members of the VHC are prepared to initiate the process of change and improvement by immediately forming three key enablers: a Vascular Health Implementation Steering Committee, Regional Vascular Collaboratives, and a Patient and Family Panel.

Vascular Health Implementation Steering Committee

The Vascular Health Implementation Steering Committee will be a provincial committee comprised of leaders from the vascular health system. It will identify provincial objectives, guide strategy and support implementation of the Blueprint at both the provincial and regional level (e.g., assist in developing objectives and framework for Regional Vascular Collaboratives). The Committee will explore opportunities to build on current provincial chronic disease initiatives, such as the Ontario Diabetes Strategy and the Ontario Renal Strategy, in order to incorporate a broader vision of vascular health.

The Implementation Steering Committee will also convene working and task groups to address specific activities. For example, among its first steps, the Implementation Steering Committee will establish two working groups:

- Vascular Primary Care Work Group: this group will focus on advancing the primary care objectives and activities outlined in Domain 3.
- Knowledge Management Work Group: this group will develop an integrated approach for measurement and monitoring of implementation and activities, and support continuous quality improvement, as outlined in Domain 4.

When appropriate, the Implementation Steering Committee will also build on work underway relating to acute care of vascular services, heart failure and atrial fibrillation. The Committee will also begin immediate consultation with Ontario's First Nations, Métis, Inuit and Aboriginal-identity people to ensure their voice is heard and incorporated into the work of the Blueprint. Consultations with other cultural and ethnic groups in the province will also be conducted in response to identified needs.

Regional Vascular Collaboratives

A Regional Vascular Collaborative will be convened by each LHIN. Regional Vascular Collaboratives will build on and leverage the existing vascular network resources within each LHIN (e.g. Regional Diabetes Coordination Centres, Primary Care Leads, Regional Stroke Networks, Regional Renal Program, Cardiac Rehabilitation programs, regional vascular strategies). The Collaboratives will develop local strategies to support primary care providers in improving vascular health prevention and management, identify opportunities for shared or collaborative care with specialists, and identify opportunities to integrate prevention services and resources. In addition, in order to optimize activities at the LHIN level, various knowledge exchange opportunities will be created. For example, opportunities will be created to support knowledge/information sharing between Regional Vascular Collaboratives, as well as between Regional Vascular Collaboratives and the Vascular Health Implementation Steering Committee.

Patient and Family Panel

As described in Domain 2, this panel will be composed of patients and their caregivers and/or families. It will support and inform the work of the Vascular Health Implementation Steering Committee by providing insights into the needs and concerns of consumers. The Panel, as well as work it undertakes such as mapping the patient/family health journey and creating a Vascular Patient Bill of Rights, will ensure that the strategy is patient-centred and sensitive. Working in collaboration with the Vascular Health Implementation Steering Committee and Regional Vascular Collaboratives, the Panel will also work to ensure that the perspectives of at-risk or marginalized populations are captured and addressed. This includes those who are challenged by age, geography, culture, ethnicity, socioeconomic status, and/or physical, mental health or cognitive disabilities.

Conclusion

In summary, this is a critical period for health care in Ontario. If we are to stem the growing tide of vascular ill-health and its associated costs, immediate action is needed. It is important that optimal use be made of limited and valuable healthcare resources. Wherever possible, existing resources and strategies should be broadened to encompass all vascular conditions and risk factors and coordinated in order to increase and improve efficiencies.

For the first time, three of the major organizations concerned with vascular health and care in Ontario have come together to work in a collaborative manner. The result is an ambitious and impactful approach to ensure better system integration, change and improvement. With the support of the MOHLTC, LHINs, providers, patients and caregivers, it will result in significant enhancement in the patient experience, greater healthcare efficiencies, and improved health outcomes for Ontarians.

Appendix 1: Vascular Health Coalition Membership

Steering Committee

Ms. Kori Kingsbury	Cardiac Care Network of Ontario
Ms. Mary Lewis	Heart and Stroke Foundation
Ms. Christina O'Callaghan	Ontario Stroke Network
Ms. Karen Trainoff	Heart and Stroke Foundation
Ms. Linda Kelloway	Ontario Stroke Network
Mr. Mike Setterfield	Cardiac Care Network of Ontario
Ms. Helen Angus	Ontario Renal Network, Cancer Care Ontario
Ms. Sandra Hanmer	Vascular Health Advisory Council

Advisory Council Membership

Ms. Sandra Hanmer (Chair)	Vascular Health Advisory Council
Dr. Rob Annis	North Perth Family Health Team
Dr. Heather Arthur	Hamilton Health Sciences
Dr. Mark Bayley	Toronto Rehab
Dr. Arlene Bierman	St. Michael's Hospital
Dr. Sandra Black	Sunnybrook Health Sciences Centre
Dr. George Heckman	Grand River Hospital, Kitchener
Ms. Jackie Blanchard	Patient/Family Perspective
Mr. Jeff Blanchard	Patient/Family Perspective
Dr. Roy Cameron	Patient/Family Perspective
Ms. Sharon Jaspers	Northwestern Ontario Regional Stroke Network
Mr. Nizar Ladak	Health Quality Ontario
Ms. Mimi Lowi-Young	Central West LHIN
Ms. Sharon Mytka	Southwestern Ontario Stroke Network
Dr. Liana Nolan	Waterloo Region Public Health
Dr. Hamid Nasser	Guelph General Hospital
Dr. Paul Oh	Toronto Rehab
Dr. Andrew Pipe	University of Ottawa Heart Institute
Dr. Joe Ricci	Rouge Valley Health System
Dr. Sonja Riechert	University of Western Ontario

Dr. Adam Steacie	Brockville Family Health Team
Dr. Sheldon Tobe	Sunnybrook Health Sciences Centre
Dr. Jack Tu	Institute of Clinical Evaluative Studies
Ms. Jayne Watt	Patient/Family Perspective
Ms. Liz Woodburn	Patient/Family Perspective

Support

Ms. Cynthia Johnston	Project Manager
Ms. Corinne Hodgson	Writer

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