Vascular Risk Reduction Initiative

Executive Summary

Collectively, vascular diseases (which include heart disease, stroke, diabetes, kidney and peripheral vascular disease) affect the lives of more than 300,000 people in Alberta. Over 90% of Canadians have one or more vascular risk factor, such as high blood pressure, high cholesterol, detrimental nutrition or alcohol intake, physical inactivity, obesity or tobacco use. There is also a significant social gradient in vascular health, meaning Albertans with lower education and income have poorer vascular health, as do select ethno-cultural communities. Despite the widespread availability of proven efficacious treatments, control rates of cardiovascular risk factors are unacceptably low - referred to as 'care-gaps'. For example, 41% of Canadian hypertensives and 60-80% of high-risk dyslipidemics remain uncontrolled. Within Canadian primary care practices, 47% of patients with type 2 diabetes do not meet recommended targets for glycaemic control. Furthermore, the common and inter-related causes and prevalence of vascular diseases require an organized, integrated approach. A comprehensive provincial program of vascular risk assessment, prevention, management and follow-up will reduce deaths from vascular disease, cancer and many other chronic diseases (through improvement in shared risk factors), help people stay healthier for longer, and address health inequalities.

The Vascular Risk Reduction Program is a Signature Project, led by the Cardiovascular Health and Stroke SCN in collaboration with the Obesity, Diabetes and Nutrition SCN, the Cancer SCN and the Addictions and Mental Health SCN. This program consists of a series of projects including: a) vascular risk factor screening, case finding and early management (in primary care, community pharmacies and a worksite); and b) integrated vascular risk reduction clinics. The vascular risk factor screening, case finding and early management projects are designed to identify people at risk who are undiagnosed and those who are diagnosed and not well managed and provide risk management services in accessible community locations. It will include primary care adoption of the harmonized vascular risk reduction guidelines (C-CHANGE) with practice supports and training provided by Toward Optimized Practice (TOP); community pharmacy-based vascular risk screening and management programs targeting vulnerable populations and geographic areas with high prevalence of vascular risk factors and vascular disease; and one to two worksite(s) vascular risk screening, case-finding and intervention program as a 'proof of concept' approach. The integration of vascular risk reduction clinics project is designed to identify opportunities for integrating vascular secondary prevention services, such as hypertension, dyslipidemia, stroke prevention and cardiac rehabilitation clinics to consolidate services, improve access and provide a more integrated, patient centric approach.

The Vascular Risk Reduction Program will impact each of the six quality dimensions and increase access to screening and management services, better identify those at risk for or with established vascular disease, better manage vascular risk factors and vascular diseases, reduce the vascular risk burden of participants, reduce hospitalizations, keep people healthy for

longer, improve the quality of life of individuals living with vascular diseases, and reduce the cost to the health system. The primary outcome will be reduction in vascular burden as measured by changes in composites risk scores such as Framingham Risk or Heart Age.

This initiative has high feasibility, and a number of factors have aligned to ensure a successful outcome. The Council of the Federation has recommended, and Alberta Health has agreed to the adoption of C-CHANGE. Proven approaches for pharmacy-based programs have been studied in Alberta and independent prescribing privileges for Alberta pharmacists and a new fee code that supports chronic disease care planning will enable the successful implementation of vascular risk screening, case finding and early management in community pharmacies. Interest has been expressed by large employers and pharmacy chains, and the Zones have expressed a need to employ an integrated approach to vascular disease management. There has been considerable stakeholder support and an expert team has been engaged with extensive experience in each of the proposed project areas. Risks include the potential costs to and capacity of AHS and primary care to manage increased number of positive screens, sustained engagement of key stakeholders, variation in implementation of C-CHANGE, integration with primary care, and fluctuations in the economy that may impact private sector participation. Mitigation strategies have been identified and confidence to manage these risks is high. There are minimal long term AHS operational budget implications and the potential for significant impact on the health of Albertans is high. The project reach will go beyond vascular disease and positively impact the prevention of most chronic diseases and some cancers.

A January 2013 launch of this initiative is recommended, with immediate on-boarding of key project staff (project manager and coordinators). Initial focus will be on development of detailed work plans, completion of environmental scan of current vascular risk reduction services, confirmation of worksite and community pharmacy partners, and development of the necessary protocols, pathways and provider education resources. Intake of patients will begin in August – December 2013, dependent on project stream. Project evaluation will follow the RE-AIM framework and also consider improvements in each of the six quality dimensions. The primary care project, managed by TOP, will be completed by July 2014, and the remaining projects will be fully implemented and evaluated by March 2015.

This initiative will improve detection and management of vascular risk factors, thereby improving the vascular health of Albertans in the short term and reducing vascular morbidity and mortality in the long term. This is an opportunity for AHS and our health system to not only focus on providing care and cures, but also to focus on prevention and keeping people healthy.

Background, Current Situation and Business Needs

Background, Current Situation/Issue and Context

The Vascular Risk Reduction (VRR) Program is a Signature Project, led by the Cardiovascular Health and Stroke SCN in collaboration with the Obesity, Diabetes and Nutrition SCN, the Cancer SCN and the Addictions and Mental Health SCN. This program consists of a series of projects, to be conducted in a phased-in approach, including: 1) vascular risk factor screening, case finding and early management; 2) integrated approaches to vascular risk reduction; 3) surveillance monitoring & evaluation; 4) health economic model; and 5) integration of health promotion policy and clinical care. The first two areas are encompassed by this project summary and groundwork will continue to be laid for the remaining three. Vascular risk factor screening, case finding and early management is designed to identify people at risk who are undiagnosed and those who are diagnosed and not well managed and provide risk management services in accessible community locations. Screening and management will follow the Canadian Cardiovascular Harmonization of National Guidelines Endeavour (C-CHANGE). It will include primary care adoption of C-CHANGE with the support of clinical practice advisors and a suite of tools and processes; community pharmacy-based vascular risk screening and management programs led by pharmacists, and supported by primary care, including targeted approaches for geographic areas and vulnerable populations with high prevalence of vascular risk factors and vascular disease; and one to two worksite vascular risk screening, case finding and intervention programs as a 'proof of concept' approach. The integrated approach to vascular risk reduction is designed to identify opportunities for integrating vascular risk secondary prevention services, such as hypertension, dyslipidemia, stroke prevention and cardiac rehabilitation clinics to consolidate services, improve access and provide a more integrated, patient centric approach.

A number of circumstances and factors have aligned to shape the project and ensure a successful outcome. The Council of the Federation has recommended and Alberta Health has agreed to the adoption of C-CHANGE, including funding to support its implementation in primary care, with Toward Optimized Practice (TOP) serving as the project secretariat. Proven approaches for pharmacy-based programs have been studied in Alberta and independent prescribing privileges for Alberta pharmacists and a new fee code that supports chronic disease care planning will enable the successful implementation of vascular risk screening and early management in community pharmacies. Interest has been expressed by large employers and pharmacy chains. The zones have expressed a need to employ an integrated approach to vascular disease management, and other jurisdictions (Ontario and United Kingdom) have taken a similar approach. There has been considerable stakeholder support and an expert team has been engaged with extensive experience in each of the proposed project areas.

A full description of the background, alignment with organizational priorities and the compelling case for vascular risk reduction is presented in the scope statement (see Sections 2.0 and 6.1).

Business and Health Needs / Justification for the Project

A comprehensive provincial program of vascular risk assessment, prevention, management and follow-up has the potential to prevent heart attacks, detect unknown cases of hypertension, diabetes and kidney disease, and save lives. Collectively, vascular diseases (which include heart disease, stroke, diabetes, kidney and peripheral vascular disease) affect the lives of more than 300,000 people in Alberta.[i] While there have been gradual improvements in the prevention, diagnosis and treatment of vascular diseases, very large care gaps remain in effectively reducing vascular risk. Hypertension remains a leading cause of stroke and heart disease and is increasingly recognized as a major risk factor for dementia and kidney failure, yet 41% of Canadians with hypertension remain uncontrolled. Over 40% of Canadian adults have dyslipidemia and 60-80% of these are uncontrolled. In a Canadian primary care study, in patients with dyslipidemia, more were untreated (63.2%) than treated (36.7%) with lipid lowering therapy.

There is also a significant social gradient in vascular health, meaning Albertans with better education, higher income, and those living in some urban areas have better vascular health. Only 54.2% of Albertans achieve at least a moderate level of activity, with lower income and advanced age being associated with lower activity participation. The prevalence of vascular risk factors in the Alberta population is greater outside the metropolitan areas although there are high risks ethnic and low SES vulnerable populations in defined areas of the cities. (see Scope Statement Section 2.2 and Appendices 1 & 2 for full description of disparities in vascular risk amongst Albertans).

The common and inter-related causes of vascular diseases require an integrated approach to their prevention and management. Traditional approaches to risk reduction have focused on disease in individual vascular territories; however, the evidence from clinical research suggests that approximately 40% of patients will have involvement of more than one vascular bed. Moreover, in future these individuals are at high risk of having vascular events in all the vascular territories. There are common risk factors for and adverse health behaviours associated with vascular diseases and some cancers, including hypertension, dyslipidemia, tobacco use, physical inactivity and obesity. Rather than addressing individual risk factors or vascular diseases a holistic approach towards these high-risk patients is warranted. An integrated approach will reduce vascular disease more effectively while eliminating redundancies, promoting system efficiencies and being more patient-centric.

In summary, there is a high prevalence of vascular risk factors in the Alberta population, a disparity between rural and urban Alberta and in identifiable regions of the cities, a substantial care gap and a significant potential to impact the future vascular health of Albertans who are not aware of their vascular risk status or whose risk is not well managed. This project will address the health needs of Albertans by achieving the following:

- Increased number of individuals screened for vascular risk
- Increased access to services to reduce vascular risk and improve vascular health
- Increased number of individuals at risk for vascular disease on appropriate therapy.

- Increased number of individuals at target for vascular risk factors (blood pressure, lipid levels, blood glucose, physical activity, healthy eating, tobacco free status and alcohol intake)
- In the long term, reduced percentage of Albertans with vascular disease

Project Objectives

The objectives of the vascular risk reduction program are:

- To implement vascular risk factor screening, prevention and early management guidelines through the adoption and implementation of the Canadian Cardiovascular Harmonization of National Guidelines Endeavour (C-CHANGE) at over 2000 primary care practices and increase the percentage of individuals from the physicians' panel screened for vascular risk by 10% by June 2014. This component of the project will be managed and executed by Toward Optimized Practice (TOP) and funded by Alberta Health.

- To implement vascular risk factor screening and early management guidelines based on C-CHANGE in identified community pharmacies to improve overall access to vascular risk screening and management and also reduce care gaps for vascular risk management in vulnerable and high risk populations by March 2015.

- To implement vascular risk factor screening, intervention and management based on C-CHANGE at 1-2 large worksites and evaluate a 6-month intervention to address uncontrolled vascular risk by March 2015.

- To develop and implement a model for an integrated approach to vascular risk reduction in 3-5 Zones to address overall vascular risk in higher risk individuals in identified sites across the province by March 2015.

Business Benefits and Expected Outcomes

Business / health benefits description statements

- Implementation of the vascular risk reduction initiative will see provision of services in community accessible locations and introduction of process changes in primary care that will increase access to screening and management services. This is expected to increase the number of individuals screened for vascular risk in primary care, community (pharmacies and worksite) and integrated clinic locations.

- Once vascular risk factors are identified and management guidelines are implemented, the number of individuals who are on appropriate therapy and whose blood pressure, lipid levels, blood glucose levels, tobacco status and health behaviors are at target will increase, and therefore vascular burden will be reduced. Improvement in vascular risk burden will, in the long term, reduce the number and percentage of Albertans who develop vascular diseases.

- Additional benefits that will be realized following project completion include: prevention of other chronic diseases that share the same risk factors, improved patients' satisfaction with a more integrated approach and improved knowledge and competency for providers in vascular risk management guidelines. Furthermore, better management of vascular risk factors will lead to a reduction in emergency department visits and acute bed days and avoid health care system costs in the longer term.

- Primary care process changes for improved vascular risk screening will also lead to improved screening for some cancers and improved panel management practices.

Expected Outcomes

The primary outcome of interest is reduction in vascular risk burden as measured by a composite risk score such as Framingham Risk or Heart Age. This will be assessed at baseline and six months following initiation of the intervention.

Secondary outcomes are described in the table below. Each project implementation will be assessed according to the RE-AIM framework (described below).

Quality Dimension	Expected Outcome(s)	Baseline*	Target
Effectiveness	• Increase in proportion of individuals who are at target for blood pressure, lipid profile and health promoting behavior.	59% of hypertension is treated to target blood pressure 40% of dyslipidemia is	70% of hypertension is treated to target blood pressure. 55% of dyslipidemia is treated to target

		treated to target cholesterol level	cholesterol level
	• Relative population smoking rate decreased by 10%	Smoking rate is 17.7%	16% smoking rate
	• Improvement in overall risk score such as Heart Age or Framingham Risk score	TBD	TBD
Acceptability	• Improvement in patients' and participants' experience with vascular risk reduction screening and management initiative. (e.g. patient reported outcomes such as quality of life and patient experience)	Unknown-baseline experience rate to be measured	80% satisfaction rate
	• Increase in key stakeholders' satisfaction and perceived value of the vascular risk reduction program. E.g. value to worksite employer such as presenteeism and absenteeism	Unknown – baselines to be measured	80% satisfaction rate
Accessibility	• Increase vascular risk factor screening and management by 10%	Estimated 68% of eligible population is screened.	Increase percentage of patients screened to 78%
	• Increase access to vascular risk secondary prevention through integrated approaches to vascular risk reduction by 10%	Unknown	Dependent on baseline.
Appropriateness	• Adoption of C-CHANGE vascular risk screening and management national standard guidelines.	Unknown	80% adoption rate for C-CHANGE screening guidelines in primary care

			90% of patients/participants in the community pharmacy program are prescribed drug therapy consistent with evidence-based guidelines. 80% of participants in worksite programs achieve targets for risk factor as per C-CHANGE.
Efficiency and Sustainability	• Reduction in hospitalization rate by 10% (both ED visits and acute care admissions) in participants over age 65	Unknown	Dependent on baseline.
Safety and Risk	• Reduction in the number of adverse drug reaction in community pharmacy program participants	Unknown	Dependent on baseline

*Baseline values may differ between target populations. Baselines and targets provided are approximate and represent population averages.

In addition to measuring changes in each of the quality dimensions, each project will utilize the RE-AIM framework as the foundation for the evaluation strategy. Evaluation based on RE-AIM pays attention to evaluating the essential program elements, including external validity, that are related to the sustainable adoption and implementation of effective, generalizable evidence-based interventions. Evidence exists to support the efficacy of pharmacy and worksite based interventions and primary care practice facilitators and panel management. The purpose of the VRR evaluation will therefore be to assess how well these interventions are implemented and the likelihood they will be sustained in Alberta. The RE-AIM framework will expand the assessment of interventions beyond efficacy to multiple criteria that may better identify the translatability and health impact of the interventions, and that balances the emphasis on internal and external validity. The projects will be evaluated by examining all five of the following dimensions:

- **R**each into the target population
- **E**ffectiveness or efficacy
- **A**doption by target settings, institutions and staff
- **I**mplementation - consistency and cost of delivery of intervention

- **M**aintenance of intervention effects in individuals and settings over time. (as is feasible for the duration of the project)

Project management tools will be used to execute and monitor the progress of the project. Monthly project status reports will be used to track the progress in achieving outlined milestones and deliverables. A risk and issues log will also be maintained to document issues that affect the project as they arise.

The Vascular Risk Reduction initiative will be carried out in 4 projects:

- **Vascular Risk Reduction-C-CHANGE in Primary Care** (January 2013-June 2014):

  - This project will be managed and executed by Toward Optimized Practice (TOP) and funded by Alberta Health.
  - A detailed charter and work plan will be prepared by TOP, reviewed by the SCN working group with oversight to this project, and submitted by TOP to Alberta Health on 22 February 2013.

- **Vascular Risk Reduction- Community Pharmacy** (January 2013-March 2015):

  - This project will commence with securing pharmacy partners through a request for Expressions of Interest and developing a pharmacy-based vascular risk screening, case-finding, management and intervention protocol followed by the implementation of the protocol.

- **Vascular Risk Reduction-Worksite** (January 2013- March 2015):

  - Vascular risk on-site screening and management at 1-2 large worksites targeting 500 employees for screening and 100-200 employees for intervention and management. Proof of concept project for vascular risk screening and intervention at worksites.

- **Vascular Risk Reduction- Integrated Clinics** (February 2013-March 2015):

  - This project will commence with an environmental scan to identify gaps and opportunities for integration followed by the development of an integration model and implementation in 3-5 zones.

Project Scope

- **Primary care-Vascular Risk Reduction**

An SCN-led working group will provide oversight for this project and will be responsible for:

- Contributing to and reviewing the charter and implementation plan to be prepared by TOP.
- Providing expertise and support to TOP to ensure fidelity with C-CHANGE and screening guidelines.
- Contributing to and reviewing screening and management tools.
- Contributing to the development of evidence-based and relevant implementation, knowledge translation and evaluation strategies.
- Identifying and addressing barriers to implementation.
- Reviewing program performance and outcomes.

➢ **Community Pharmacy-Vascular Risk Reduction**

This project will focus on adopting C-CHANGE guidelines to develop and implement pharmacy-based vascular risk factor screening, case-finding, prevention, management and intervention model for uptake in selected community pharmacies. The project will include:

- Implementation in community pharmacies
- Training and education of pharmacists, practice facilitators and local primary care physicians.
- Development of a patient recruitment strategy
- Evaluation of effectiveness.

➢ **Worksite-Vascular Risk Reduction**

This project focuses on performing vascular risk screening, management and intervention at 1-2 large worksites targeting 500 employees. This project will include:

- Screening of approximately 500 employees for vascular risk factors
- Vascular risk intervention and management for identified high risk individuals includes either case-management (includes initiation and titration of medications) or composite risk score feedback (education and follow-up with family physician).
- Evaluation of interventions.

➢ **Integrated Clinics-Vascular Risk Reduction**

This project will focus on identifying opportunities for integrating secondary vascular risk prevention services such as hypertension, dyslipidemia, stroke prevention and cardiac rehabilitation. This project will include:

- Environmental scan of related vascular risk reduction services in Alberta

- Implementation of a vascular risk reduction integration model at 1 site in 3-5 Zones
- Education and training of clinic staff
- Evaluation of integration model