Alberta Region

Chronic Disease Prevention and Management Action Plan

March 2016

This Action Plan was prepared for the Chronic Disease Prevention and Management Working Group of the Prevention Subcommittee of the Alberta Co-Management Committee

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Acknowledgements

I wish to thank the Working Group, particularly its co-chairs, for their thoughtful (and cheerful) guidance and feedback to this project throughout.

I wish to also thank each of the Health Directors and their staffs who opened up the hospitality of their communities for our community consultations. These community meetings were open, honest, and full of sharing and learning (mostly mine).

The challenge coming out of the community consultations was to create an Action Plan that reflected the spirit of these gatherings. How does one create a document that has a spirit? Hopefully the actions that come from this Action Plan honor the spirit that was reflected in the process of its creation and the desires of community members and all their relations for health and wellness.

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Executive Summary

The rising impact of chronic disease is of significant concern to Alberta First Nations. This impact is felt in terms of disproportionately high rates of death, disease, and disability and is reflected in rising health care costs and the need for increasingly complex patient care.

The main modifiable behavioral risk factors for chronic disease are unhealthy weight (overweight/obesity), physical inactivity, unhealthy eating, tobacco use and harmful alcohol use. Up to 80% of heart disease, stroke, and type 2 diabetes and over a third of cancers could be prevented by eliminating these shared risk factors (World Health Organization, 2008). For First Nations, chronic disease is also rooted in historical trauma and the legacy of residential schools. Addressing this root cause is important for any meaningful and sustainable progress to be made in reducing rates of chronic disease.

This action plan is intended to serve as a resource for Alberta First Nations identifying best and promising practices that can guide their efforts to prevent chronic disease in their communities and provide effective chronic disease management for their people. It also makes recommendations that can strengthen the capacity of the system in order to be able to support and provide effective chronic disease management and prevention.

The methodology for the creation of this Action Plan consisted of:

1. Research into best practices and models for chronic disease prevention and management with a particular focus on First Nations and the risk factors of alcohol use, tobacco use, unhealthy eating, and physical inactivity
2. A series of stakeholder consultations with key organizations and personnel in Alberta and beyond who work in areas related to chronic disease management and prevention with the same focus on the risk factors of alcohol use, tobacco use, unhealthy eating, and physical inactivity
3. A series of community consultations with a sampling of First Nations communities in Alberta

Some of the themes emerging from these consultations that helped inform our strategy include:

- There are large gaps in continuity of care when patients move between off-reserve and on-reserve systems. Chronic disease management is a mix of two systems at present and is not patient-centered
- There is a discrepancy between the federal and provincial standard for services (i.e. medication coverage)
- Food security and transportation are big barriers for community prevention initiatives

- Change happens at the speed of trust
- If a community doesn't have a cohesive health centre team, then nothing else matters
- 100% of chronic disease management is psychosocial
- Healing/wellness has to come from community
- Chronic disease is embedded in layers of historical trauma
- A greater emphasis is needed on the role/influence of women in community
- The larger challenge is not a lack of programs or information; it's people coming
- When a traditional healer is in the community, they are booked solid whereas programs offered as part of the health care system are hard to get people to.

This Action Plan is organized in the following sections:

1. Best Practices for Chronic Disease Prevention
2. Best Practices for Community Healing and Trauma Recovery
3. Best Practices for Chronic Disease Management
4. Summary of Recommendations

Best Practices for Chronic Disease Prevention

A number of evidence-based practices to address the risk factors of alcohol, tobacco, unhealthy eating, and physical inactivity were identified. Examples of these practices grouped by risk factor include:

Tobacco Prevention

- Aboriginal communities should adopt a minimum age for the sale of cigarettes
- Because cost influences tobacco use, Aboriginal communities should be encouraged to place their own surcharge on tobacco products (when purchased for non-traditional use) to increase the price to match off-reserve prices; the increased revenue should then be directed to smoking prevention programs in the community
- A well-defined system should be established within a community to enforce all tobacco laws. The consequences of breaking these laws should be well defined
- Cigarettes and other tobacco products should remain behind counters and out of sight in all stores
- Aboriginal communities and their funders and stakeholders should provide smoking cessation programs including quit lines, media messaging, and effective cessation therapies

Physical Inactivity Prevention

- Physical activity programs should have a social support element, as research shows that adding social support to interventions (usually from family members) provided an additional weight loss of 3.0 kg at up to 12 months follow-up (compared with the same intervention with no social support element)
- interventions which targeted *both* physical activity and diet rather than only one of these behaviours produced higher weight change (additional weight loss around 2-3 kg at up to 12 months)
- more intensive interventions (those including more behaviour change techniques, more contact time or a longer duration of intervention) generated significantly more weight loss than less intensive interventions (an additional 2.3 kg at a median seven months follow up)
- communities increase their effectiveness in promoting physical activity where health agencies partner and coordinate efforts with community organizations, including schools, businesses, planning and transport agencies, healthcare organizations, and recreation agencies

Unhealthy Diet Prevention

- Broadly speaking, to improve the quality of food available in Indigenous communities, it makes sense to:
    - improve access to traditional local foods
    - reduce the prices of healthy foods, with government enforcement
    - increase education in and demand for "good" food, and understanding of the impact of poor diet on health; and
    - increase the prices of "junk food" (nutrient-poor, high-energy, sweet or fatty foods and drinks), perhaps through increased taxes.
- Indigenous communities' attention to their food systems may be increased if interventions are based on communities' own knowledge bases, especially if there is limited use of market food and ensured access to traditional food
- Programmes must reflect communities' own world views, allowing them to accomplish goals that are within their own priorities and to recognize the values within their own environments.
- Interventions based on local cultural knowledge and focusing on children's health, and food for women and children have universal appeal
- Improve geographic availability of supermarkets in underserved areas
- Provide incentives to food retailers to locate in and/or offer healthier food and beverage choices in underserved areas
- Improve availability of mechanisms for purchasing foods from farms
- Restrict availability of less healthy foods and beverages in public service venues

Alcohol Prevention

Effective preventive interventions for alcohol misuse include:

- Dram shop liability
- Electronic screening and brief intervention (e-SBI)
- Increasing alcohol taxes
- Maintaining limits on days of sale
- Maintaining limits on hours of sale
- Privatization of retail alcohol sales
- Regulation of alcohol outlet density
- Enhanced enforcement of laws prohibiting sales to minors

A NNADAP review of effective interventions in addictions prevention highlighted a number of approaches, including (Gifford, 2009):

- Studies of youth substance abuse programs indicate that offering strong content for behavioural life-skills development; emphasizing team-building and interpersonal delivery methods, including self reflection approaches; and providing intense contact with youth can produce consistent and lasting reductions in substance use
- unsupervised after-school recreational facilities, a range of community activities and student organizations were all associated with reduced cigarette smoking and alcohol abuse
- There is a large and growing base of empirical evidence demonstrating that alcohol supply control is an effective deterrent to alcohol abuse in North America; however, in its extreme form —complete prohibition — it is an ineffective policy for reducing alcohol problems in Aboriginal communities. The exception to this evidence is prohibition in remote communities, which is shown to have some success at reducing harm

Health Canada's Renewed Framework to Address Substance Use Issues Among First Nations People in Canada (Assembly of First Nations, National Native Addictions Partnership Foundation, & Health Canada, 2009) identified key components of a strategy for universal prevention and health promotion, including:

- focus on preventing/reducing possible substance use issues through a whole community/multilevel approach, within a broader public health framework;
- prevent multiple problem outcomes (e.g., substance use issues, suicide, and mental health issues) through a multi-component, community wellness-based approach (e.g., as school, policy, parent, and media programs or self-care/management tools);
- include a focus on addressing and de-normalizing the inherited effects of colonialism—lateral or community violence, guilt, shame, etc.—in fostering a transition to healthier lifestyles built on a strong cultural foundation;

- draw on mainstream and Indigenous knowledge;
- build capacity within communities, with an emphasis on supporting communities in need through shared learning and mentorship;
- opportunities for communities to dialogue on effective strategies for prevention and health promotion;
- harmonize or link existing addiction, prevention—related, and mental health promotion—based services and funding;
- prioritize the health and well-being of children and youth;
- target prevention activities for high-risk groups; and
- include secondary risk reduction services and supports to people who are actively using alcohol and other drugs

Best Practices for Community Healing and Trauma Recovery

The impact of risk factors on chronic disease is large. However, this focus has limitations. As summarized by Dr. Jeff Reading (J. Reading, 2009)

> "(a) problem with the…risk factor approach is that, while adults are being targeted to change their lifestyle habits, the next generation will grow up in the same conditions that have fostered the development and onset of chronic disease in their parents."

It is important to recognize the larger context for these issues and take a more comprehensive approach than a risk factor focus provides. This requires addressing the root causes of these risk factors, which are embedded in the community and the history of colonialism and residential school with its resultant historical trauma. Action at this level requires a process that can guide healing and change of the community and social context itself.

The community healing process has been analyzed and described in detail (Abadian, 1999; P. J. Lane, Bopp, Bopp, & Norris, 2002). Key elements include:

- A core group of people committed to healing and change
- A comprehensive community plan
- Community safety and stability
- Supportive leadership
- Understanding the community change and healing process
- Technical support to guide a process of learning, healing, change, and development

Community healing is a difficult process, challenged both internally and externally by system constraints, vested interests, and an inertia created from a way of doing things. Long-term technical support is vital to the ongoing learning, change, and healing processes within community. Long-term funding support is also essential to this effort.

In addition, promising healing practices share a number of key characteristics, including:

- values and guiding principles that reflect an Aboriginal worldview;
- a healing environment that is personally and culturally safe;
- a capacity to heal represented by skilled healers and healing teams;
- an historical component, including education about residential schools and their impacts;
- cultural interventions and activities; and
- a diverse range and combination of traditional and contemporary therapeutic interventions

Best Practices for Chronic Disease Management

Despite advances in our understanding of chronic disease care and in the effectiveness of treatment, research shows that there is a gap between evidence and practice (S. Harris, Ekoe, & Zdanowicz, 2005)(Braga, Casanova, & Teoh, 2010) and that patients frequently do not get the care they want or need (McGlynn et al., 2003).

Analysis by the Canadian Institute for Health Information on gaps in diabetes care found in a study population where 96% of people had a regular doctor (Canadia Institute for Health Information, 2009) that:

> "Adults with diabetes are receiving less care than is recommended, including HbA1c tests, urine protein tests, dilated eye exams, foot exams, influenza immunizations and self-managed care. In Canada:
>
> - 81% of the adult population with diabetes received an HbA1c test
> - 74% received a urine protein test
> - 66% received a dilated eye exam within the past two years
> - 51% had their feet checked by a health professional
> - only 32% had all four of these recommended care components"

In recognition of, and response to, gaps such as these in care between clinical practice and evidence-based guidelines, models such as the Chronic Care Model have been developed and adopted to help transform the care of patients with chronic disease from acute and reactive to proactive, planned and population based.

A review of almost 1,000 published articles looked at empirical evaluation(s) of CCM-based interventions and observational studies found a consistent and positive relationship between the presence of CCM elements and health or financial outcomes.

The success of the Chronic Care Model is a leading best practice for chronic disease management.

Factors influencing the successful implementation of chronic care models were identified in a systematic review and focused on four themes related to implementation within a primary healthcare setting (Davy et al., 2015):

1. the acceptability of the intervention for healthcare providers
2. preparing healthcare providers for the implementation of a CCM
3. supporting patients as the way in which they receive care changes
4. ensuring appropriate resources to support implementation and sustainability

A Chronic Disease Management Collaborative in the Alberta Region also needs to be designed and operate in a way that is decolonizing, specifically:

- embracing First Nations values and traditions
- recognizing First Nations traditional healers and healing modalities
- adapting clinical evidence and priorities to a First Nations worldview

Summary of Recommendations

This action plan is intended to serve as a resource for Alberta First Nations identifying best and promising practices that can guide their efforts to prevent chronic disease in their communities and provide effective chronic disease management for their people.

It also makes recommendations that can strengthen the capacity of the system in order to be able to provide effective chronic disease management and prevention. These recommendations can be considered at a community, tribal council, and regional level as ways of strengthening chronic disease prevention and management are being considered.

The recommendations made throughout the document are summarized here as follows:

1. Recommendations Adapted from the Auditor General Report on CDM in Alberta
1.1. Set regional objectives and standards for Chronic Disease Management services to be provided on-reserve 1.2. Strengthen supports, staffing, and funding in health centers so that CDM services can be provided 1.3. Facilitate the sharing of health information among providers and with the patient themselves 1.4. Evaluate the effectiveness of existing medical record systems and create a plan to improve medical record systems in health centers 1.5. Develop the capacity to assess demand for CDM services across the region 1.6. Quantify the reach of family physician coverage on-reserve, and develop a plan to increase coverage and for the provision of care to patients who do not have a family physician 1.7. Work with Health Directors and staff to support comprehensive team-based care to patients with chronic disease 1.8. Establish systems and processes to measure and report the effectiveness of CDM services
2. Recommendations to Strengthen Health Care Delivery in First Nations Communities
2.1. We recommend that transportation services in First Nations communities be viewed as an integral part of the health care delivery system and be funded accordingly 2.2. We recommend that waiting lists be analyzed to identify areas of high demand and a plan be created to reduce waiting lists for health care services 2.3. We recommend that assistance be provided to help patients navigate and access NIHB services 2.4. We recommend that support be provided for the regional coordination of health care when there are clusters of communities who wish to partner and are able to do so 2.5. We recommend that health care providers and systems be culturally grounded and appropriate 2.6. We recommend that a human resources strategy be developed to address recruitment and retention and that staffing be linked to health status on-reserve and the demand for health care services, with funding to pay staff equitably in comparison to their counterparts in the provincial system and to add staff to build capacity to meet demand 2.7. We recommend that agreements and guidelines be developed to clarify jurisdictional responsibilities and to reduce and eliminate gaps between health care provided on and off reserve, including regarding the flow of information

3. Recommendations from our Stakeholder Consultations

3.1. We recommend the development of protocols and guidelines for patient-centered care that follows First Nations people from on-reserve to off-reserve and return as they access services

3.2. We recommend a review of coverages for medications with the intent of ensuring alignment with provincial standards. We also recommend that other areas of medical care be examined to ensure they are up to the same standards as exists in the provincial system in order to eliminate disparities in the quality of care between the two systems

3.3. We recommend a review of access to diagnostic services and the establishment of standards for access for First Nations communities

3.4. We recommend continued support for food security initiatives as a foundational component of chronic disease prevention. We also recommend that transportation systems and infrastructure on-reserve be reviewed and recommendations made for improvement with an emphasis on how transportation infrastructure, or the lack thereof, contributes to patient care, prevention, and healthy living.

4. Recommendations from our Community Consultations

4.1. We recommend that a guiding principle of regional and community chronic disease initiatives be trust

4.2. We recommend that emphasis be given to supporting and developing health centre teams and health centre leadership – building effective teams, learning effective leadership practices, etc.

4.3. We recommend that chronic disease work and workers be sensitized to trauma and mental health work, and that chronic disease be more tightly integrated with mental health

4.4. We recommend that all chronic disease work be community-driven, with needs identified by the community, projects implemented under the control of communities, and with adequate resources and organizational supports provided to communities who undertake this work

4.5. We recommend that emphasis be given to the role of women in First Nations society as a key component of community healing and change

4.6. We recommend that community programs be designed and offered in partnership with community members so that participation rates can increase

4.7. We recommend that traditional healers be incorporated into chronic disease care and mental health care and that supports and processes be put into place to facilitate their inclusion in these systems

5. Recommendations from Best Practices in Prevention

5.1. First Nations communities be supported in applying evidence for effective prevention in their priority areas related to tobacco reduction, physical inactivity, unhealthy eating, alcohol prevention.

5.2. First Nations communities be supported in prioritizing cost-saving preventive interventions

6. Recommendations for Community Healing and Trauma Recovery
6.1. Regional prevention activities for chronic disease prioritize focusing on its root causes and focus on the community healing and change process 6.2. Communities that wish to be supported in a long-term comprehensive community healing and recovery process receive funding to build their internal capacity and receive external technical support in order to be able to sustain this work over a 10+ year period 6.3. Communities be supported in the development of comprehensive community plans and their subsequent implementation as a first step in systems and community change 6.4. Communities receive ongoing funding, support, and assistance as they work to implement and learn from their comprehensive community plans
7. Recommendations for Evidence-Based Chronic Disease Management
7.1. First Nations communities be supported in adopting elements of the Chronic Care Model and Expanded Chronic Care Model to improve patient care and reduce gaps between evidence and practice in the provision of chronic disease management 7.2. A Chronic Disease Collaborative be established for First Nations communities to support their systems and practice changes in chronic disease management

8. Recommendations for the Development of a First Nations Chronic Disease Collaborative

8.1. Chronic Disease Collaborative needs to establish a culturally safe environment

8.2. The design of a Chronic Disease Collaborative needs to find a balance between interventions based on a synthesis of evidence and experience, and consideration of local values, demographics and cost effectiveness data.

8.3. A Chronic Disease Collaborative needs to explicitly avoid any appearance of victim-blaming in discussing 'lifestyle' choices since in lower socio-economic groups 'lifestyle' choices are often reflective of unrelenting environmental constraints rather than personal preferences. For example, structural determinants of fresh food availability in remote settings are more important factors than personal choice in determining food intake.

8.4. A Chronic Disease Collaborative needs to understand the special socio-cultural context of chronic disease. Diabetes, for example, is not simply a lifestyle disease, but rather it is seen as resulting directly from colonisation, and bound up with what is often perceived as a 'loss of culture' and a move towards Western patterns of living. In response the focus emphasized creating capacity in local communities so that social relationships and cultural understanding can be developed and systematically incorporated into programs.

8.5. A Chronic Disease Collaborative needs to incorporate Aboriginal traditions and culture into its programs to contribute to the recovery of indigenous knowledge and culture that is an important part of the decolonizing process.

8.6. A Chronic Disease Collaborative working to improve collaboration within this system should begin by accepting that the existing set of relationships have been shaped by broader political and social forces, acknowledging that this is the context in which they are trying to promote new collaborations.

8.7. A Chronic Disease Collaborative needs to evaluate systems-level change. These could include measures of community capacity or the presence of infrastructure, as well as changes to organizational policies or behaviour.

8.8. A Chronic Disease Collaborative needs to include and prioritize traditional healers as an important entry point and component of chronic disease management

1.0 Introduction

The rising impact of chronic disease is of significant concern to Alberta First Nations. This impact is felt in terms of disproportionately high rates of death, disease, and disability and is reflected in rising health care costs and the need for increasingly complex patient care. The rising rates of chronic disease are also rooted in historical trauma and the legacy of residential schools. Addressing this root cause is important for any meaningful and sustainable progress to be made in reducing rates of chronic disease.

1.1 The Disease Burden of Chronic Disease

First Nations people in Canada have higher rates of chronic disease than the general Canadian population. As summarized by the National Collaborating Centre for Aboriginal Health ((Linda Earle, 2013):

- The prevalence of diabetes has increased from 6.4% in 1991 to 19.7% by 2004 for First Nations, which is estimated as underrepresenting the true prevalence by two to three times due to undiagnosed cases. This compared to a prevalence of 6.8% in 2008/09 for all Canadians (*Diabetes in Canada: Facts and figures from a public health perspective*, 2011).
- Heart disease is two to three times higher among First Nations peoples than the rest of the Canadian population.
- While cancer mortality rates in First Nations people are lower than in other Canadians for many cancers, cancer incidence is increasing at a faster rate and cancer survival rates are lower among First Nations peoples than in the rest of the population

FIRST NATIONS PEOPLE IN CANADA HAVE HIGHER RATES OF CHRONIC DISEASE THAN THE GENERAL CANADIAN POPULATION

The increase in diabetes rates can happen very quickly. Over an 8-10 year period, the prevalence of diabetes had increased by 45% in the Sioux Lookout Zone of Ontario, doubled in Saskatchewan Aboriginals, and increased by 66% amongst Métis in northern Alberta (Linda Earle, 2013).

Heart disease rates have been decreasing around the world, except in Aboriginal populations which continue to experience a rapidly growing burden of morbidity and mortality related to heart disease. This persistent increase is "associated with rapid changes to food security because of lack of affordability and availability of traditional and other nutritious foods…and additional upstream health determinants including household poverty, poor self-perception of health and well-being, challenges for access to preventive services and medical treatment, care and/or rehabilitation, and gradients in a plethora of upstream contributing health factors." (J. Reading, 2015)

Cancer is the third most common cause of death among First Nations living in Alberta (Health Canada, 2011). The most common cancers diagnosed among First Nations in Alberta from 1997 to 2010 were breast, lung, colorectal and prostate. These four cancers accounted for 51% of new cancer cases and 48% of cancer deaths (lung (25%), breast (9%), colorectal (8%) and prostate (6%)). In 2010, breast cancer (in females) and prostate cancer (in males) were the most common newly diagnosed cancer among First Nations in Alberta (Health Canada, 2013).

This inequitable burden of disease is also avoidable. Recent analysis by Statistics Canada found that (Park, Tjepkema, Goedhuis, & Pennock, 2015):

- First Nations men were 2 times as likely and First Nations women 2.5 times as likely as non-First Nations men and women to die from avoidable causes.
- Diabetes, alcohol and drug use disorders, and injuries were the causes contributing most substantially to these avoidable deaths

1.2 Chronic Disease and Rising Health Care Costs

Health care costs increase in association with both the increasing global burden of disease and the increasing number of chronic diseases an individual has.

Over 60% of Alberta First Nations have at least one chronic condition. This varies with age ranging from 55% of First Nations aged 30-39 having a chronic disease to 90% of First Nations aged 60+ having a chronic disease (Pace et al., 2012).

Analysis of Alberta data by Alberta Health Services ((Morrin & Jorgensen, 2010) found that individuals with one chronic condition use four times as many health care resources as healthy individuals. If an individual has more than one chronic condition, costs increase dramatically. Individuals with two chronic conditions use almost ten times as much while individuals with three or more chronic conditions use over twenty-seven times as much health care resources as healthy individuals.

INDIVIDUALS WITH ONE CHRONIC CONDITION USE FOUR TIMES AS MANY HEALTH CARE RESOURCSES AS HEALTHY INDIVIDUALS

More recent research into super-utilizers of health care, defined as having three or more hospitalizations in a rolling twelve-month look-back period or having both a serious mental health diagnosis and two or more hospitalizations in that look-back period, confirms the relationship between multiple chronic conditions and the cost of care and found that (Johnson et al., 2015):

- Among people in the top 1 percent of acute care spending, nearly 83 percent had three or more chronic conditions, and more than 60 percent had five or more
- The vast majority (in the case of this study, 82 percent) of super-utilizers have multiple comorbid chronic conditions, including mental health conditions

- Fewer than half of super-utilizers identified at one point in time remained so just seven months later, and the figure was only 28 percent twelve months later. The majority of super-utilizers experienced brief periods of super-utilization and then returned to lower utilization. Changes in super-utilizer status likely reflect multiple factors, including the natural history of illness that flares up and then improves over time, the impact of care on the course of disease, and mortality.

Providing effective care and prevention for super-utilizers with multiple chronic conditions has the potential of saving health care costs.

The costs of health care may even be higher for Alberta First Nations who tend to have greater barriers in access to health care and gaps in the provision of health care services.

1.3 Chronic Disease Risk Factors

The main modifiable behavioral risk factors for chronic disease are unhealthy weight (overweight/obesity), physical inactivity, unhealthy eating, tobacco use and harmful alcohol use. Up to 80% of heart disease, stroke, and type 2 diabetes and over a third of cancers could be prevented by eliminating these shared risk factors. (World Health Organization, 2008)

UP TO 80% OF HEART DISEASE, STROKE, AND TYPE 2 DIABETES AND OVER A THIRD OF CANCERS COULD BE PREVENTED

To better understand chronic disease risk factors in the Alberta Region, the Alberta First Nations Regional Health Survey provides a snapshot of the prevalence of chronic disease risk factors.

According to the 2008/10 Alberta First Nations Regional Health Survey (Pace et al., 2012):

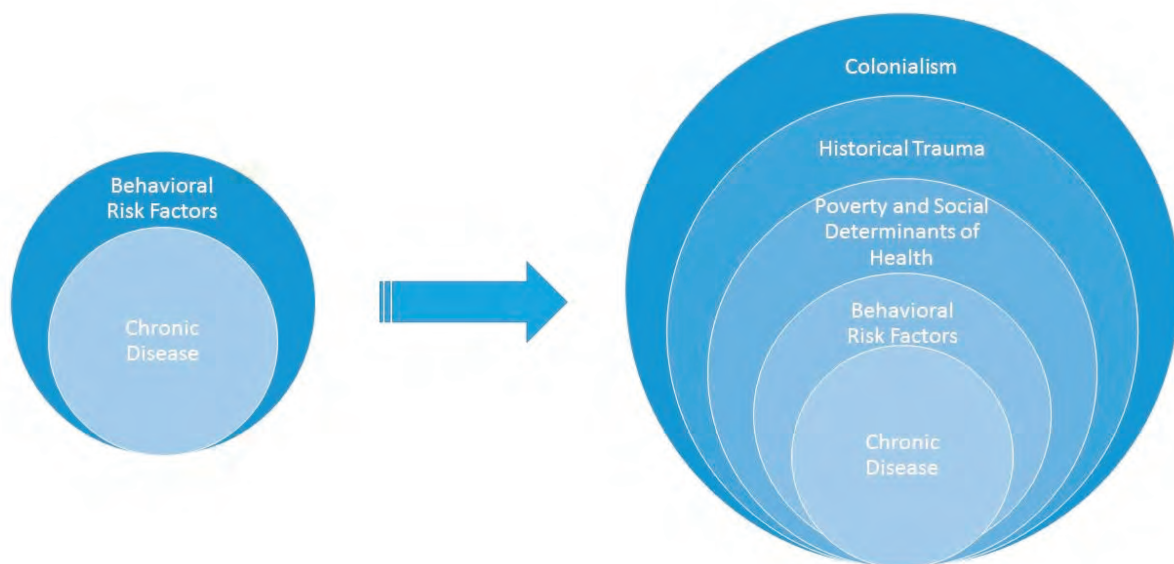
- Roughly half of adults smoked daily (49.2%)
- Of current smokers, over three quarters (76%) stated they had never tried to quit in the preceding 12 months
- Over half of adults (61.7%) said that they drank beer, wine, liquor or other alcoholic beverages in the 12 months preceding the survey
- Of current drinkers, almost two thirds (63.8%) qualify as heavy drinkers (5 or more alcoholic drinks on a single occasion at least once per month)
- Alcohol and drug abuse were identified as the most significant community challenge (82.6%), greater than housing, employment, gangs, or any other issue
- Two thirds of adults (66.2%) spent 30 minutes or more in daily physical activity, with walking (83.7%) being the most common physical activity followed by gardening & yard work (38.9%), running or jogging (32.1%), weights or exercise equipment (31.5%),

swimming (29.6%), berry picking & food gathering (28.3%), dancing (25.7%), and golf (25.5%)
- Two thirds of adults (67.2%) sometimes, rarely, or never eat a nutritious balanced diet. Almost half (47.6%) of adults said that they couldn't afford to eat balanced meals, nearly one quarter (24.8%) of adults cut the size of their meals or skipped meals because there wasn't enough money for food

From an epidemiological perspective, the impact of risk factors on chronic disease is large. Given this impact, it is only natural that targeting these risk factors has been the prevailing model for taking action on chronic disease. However, this focus has limitations. As summarized by Dr. Jeff Reading (J. Reading, 2009)

> "(a) problem with the…risk factor approach is that, while adults are being targeted to change their lifestyle habits, the next generation will grow up in the same conditions that have fostered the development and onset of chronic disease in their parents. When these conditions are grounded in poor socioeconomic status, the disease risk is increased and the applications of a…lifestyle approach to chronic disease is ineffective. Social disparities and inequities in health documented in Aboriginal communities across the country suggest that a…risk factors approach alone is not enough."

In short, while these lifestyle factors and behaviors have a large impact on health, it is important to recognize the larger context for these issues and take a more comprehensive approach than a risk factor focus provides.



1.4 Exploring the Root Causes of Chronic Disease Risk Factors

Alcohol, drug, and tobacco use is high among First Nations today. From a public health perspective, addictive behaviors are viewed as problems that lead to chronic diseases and poor health outcomes. From a more holistic perspective, the addictive behaviors that from a health perspective are viewed as a "problem" are often in fact a "solution" that masks or numbs deeper injuries and pain that came from abuse, neglect, and/or abandonment.

For First Nations, the history of colonization and residential school created deep and lasting pain for which the high rates of addictive behaviors are only the tip of the iceberg. Residential school survivors have documented numerous cases of psychological, emotional, physical, and sexual abuse and their devastating impact. As summarized by Deborah Chansonneuve in a report for the Aboriginal Health Foundation (Chansonneuve, 2007)

> "The impacts of residential school abuse continue to reverberate in Aboriginal families and communities as they struggle to recover from the magnitude of their losses. These losses include:
>
> - for over a century, many Aboriginal children aged 4–18 had virtually no experience of family and community life;
> - families were deprived of ordinary bonds of love, care, and pride and the right to parent their own children;
> - traditional knowledge about parenting skills and child development were destroyed;
> - loss of language and the ability to communicate with Elders;
> - theft of homelands and ancestral territories diminished hunting, fishing, and agricultural skills;
> - economic self-sufficiency and an ancient, deeply spiritual connection to the land was undermined;
> - denigration of spiritual traditions led to loss of cultural identity and pride;
> - loss of feeling loved, valued, and cared for led to an inability to trust in self or others; and
> - loss of self-determination undermined the capacity for hope"

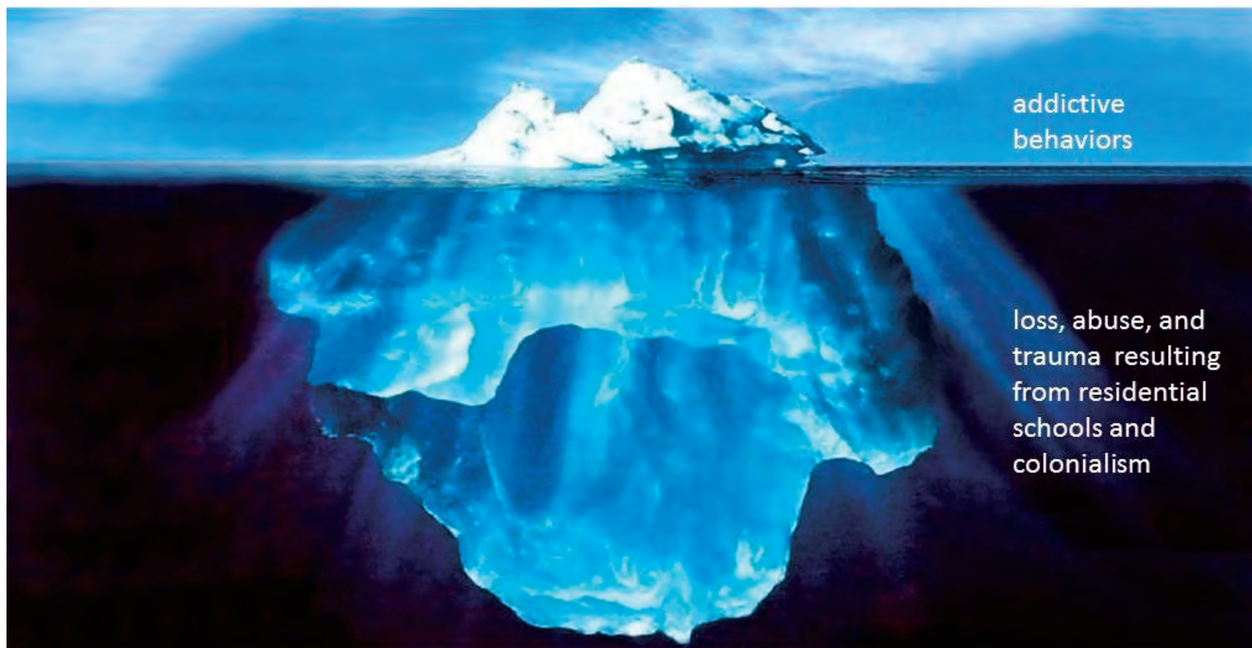
These losses, and other impacts from abuse, result in trauma. This loss and trauma has been described as being (Wesley-Esquimaux & Smolewski, 2004)

> "imprinted upon Indigenous people's collective (non-) remembering consciousness, constitute(ing) the nucleus of traumatic memory. This nucleus is so condensed with sadness, so pregnant with loss, so heavy with grief that its very weight constitutes a good reason why people often do not talk about it or, as one Aboriginal woman said, "it is probably too horrible to turn our gaze in that direction." Probably, "it" is so horrible because the trauma is now on the inside, as its images and grief became an unspoken internalized narrative of Aboriginal people."

Trauma persists from a time of impact or multiple impacts across generations into the future. Trauma transmits horizontally between people, families, and within communities and cultures as well as vertically across generations (Aboriginal Healing Foundation, 1999):

> "Intergenerational or multi-generational trauma happens when the effects of trauma are not resolved in one generation. When trauma is ignored and there is no support for dealing with it, the trauma will be passed from one generation to the next. What we learn to see as "normal", when we are children, we pass on to our own children. Children who learn that physical and sexual abuse is "normal", and who have never dealt with the feelings that come from this, may inflict physical abuse and sexual abuse on their own children. The unhealthy ways of behaving that people use to protect themselves can be passed on to children, without them even knowing they are doing so"

The combination of loss, abuse, and trauma interact and associate together to create the foundation and base of the iceberg. Sadly, what is visible from a media, health, and statistical perspective are the social challenges facing First Nations communities. The origins and context of these issues does not receive the same attention, visibility, or understanding. Prevention that focuses only on the tip of the iceberg in a focus on addictive behaviors perpetuates the injustice of this misplaced focus, and has little if any lasting impact or change for individuals or communities.



Effective prevention needs to be designed around the root causes of addictive behaviors, specifically colonization and its resulting psychological/historical trauma.

1.5 The Complexity of Chronic Disease

Infectious diseases have had a devastating historical impact on First Nations. However, infectious diseases are no longer so pressing a concern. As summarized by the World Health Organization

> "The great epidemics of tomorrow are unlikely to resemble those that have previously swept the world, thanks to progress in infectious disease control. The risk of outbreaks – a new influenza pandemic, for example – will require constant vigilance. But it is the looming epidemics of heart disease, stroke, cancer and other chronic diseases that for the foreseeable future will take the greatest toll in deaths and disability." (World Health Organization, 2005)

Explanatory models for chronic disease such as the web of causation (Krieger, 1994) recognize that (i) there is no single cause and effect (ii) causes interact and effect each other, and (iii) chronic diseases also interact with and effect each other. An example of the complexity of these interactions can be found in a recent study on cancer risk in Canada's Indigenous population (Elias et al., 2011):

> "Smoking (and smoking duration)…increase the risk for trachea, bronchus, lung, and larynx cancers. Smoking has also been associated with gastrointestinal and urinary cancers... Heavy drinking, depending on the quantity of beer or spirits (vs wine) consumed, may also put drinkers at greater risk for oral cavity, pharynx, stomach cancers, large bowel, or pancreatic cancer. Diabetes mellitus may increase the risk of several cancers, such as pancreatic, liver, bladder, colon, prostate, breast, and endometrial. Research has shown that cancer patients with pre-existing diabetes tend to have a higher risk of all-cause mortality than individuals without diabetes. A direct association between the pathogenesis of hypertension and cancer has been prospectively demonstrated, as these disorders share epidemiological factors and pathophysiological pathways, tend to increase with ageing, and are influenced by alcohol consumption, smoking, and obesity (ie, elevating blood pressure and malignancy)."

In summary, while smoking is linked to many forms of cancer, heavy drinking and diabetes can also increase the risk of cancer and the mortality from cancer. Heart disease is also linked to cancer given their shared risk factors.

A PATIENT WITH A HISTORY OF SMOKING, DRINKING, AND OBESITY COULD HAVE ANY, OR A COMBINATION OF, DIABETES, HEART DISEASE, AND CANCER

Or in other words, a patient with a history of smoking, drinking, and obesity could present with any, or a combination of, diabetes, heart disease, and cancer and conversely,

a patient with heart disease, diabetes, and/or cancer likely has a history of some combination of smoking, alcohol use, unhealthy eating, and physical inactivity. These interactions and interrelations present a complex picture for both treatment and prevention.

Another description of the complexity of chronic disease is (Weeramanthri et al., 2003)

> "the onset is often gradual (indeed the patient may be asymptomatic at time of diagnosis), the possible causes are multiple with many far in the past, and the duration is lifelong. Prognosis is uncertain, and cure impossible."

The complexity of chronic disease is not well suited to our health care system which was designed to treat acute sicknesses and injuries. A different approach and system is needed.

1.6 The Challenge of Chronic Disease Patient Care

In 2014, Alberta's Auditor General conducted an audit of Alberta's system of Chronic Disease Management (CDM). Their specific objective was to "examine whether the Ministry of Health has adequate systems to deliver CDM services effectively".

The findings from the Auditor General's report demonstrate both the complexity of chronic disease care and identify recommended strategies for improving outcomes for the care of patients with chronic disease. Highlights from this report include (Auditor General of Alberta, 2014):

- "Chronic diseases are arguably the largest challenge facing our healthcare system. More than any other health problem, chronic diseases shorten people's lives and make their lives more difficult."
- "Chronic diseases are also the largest drivers of health care costs – they are the most common cause of hospitalizations and emergency department visits, and the most common reason for family physician visits. The burden of chronic disease will increase as our population grows and ages, and unhealthy lifestyle factors lead to higher rates of new cases of chronic disease. Effective management of chronic diseases is therefore critical to the health of Albertans and the long-term sustainability of our public healthcare system."
- "There is an overarching need for purposeful, province-wide action to manage the growing burden of chronic disease. New actions must be

TO MANAGE THE GROWING BURDEN OF CHRONIC DISEASE, NEW ACTIONS MUST BE DRAMATIC. SMALL, INCREMENTAL IMPROVEMENTS COULD BE OVERWHELMED BY RISING CHRONIC DISEASE NUMBERS

dramatic. Small, incremental improvements could be overwhelmed by rising chronic disease numbers."

- "We were consistently impressed with the skills, resourcefulness and dedication of the people we met in all the entities we contacted. We noted many good practices, several of which we refer to in this report because we believe the healthcare system needs to build on such successes rapidly, without reinventing them."

THE HEALTHCARE COMMUNITY HAS IDENTIFIED WAYS TO MANAGE CHRONIC DISEASE EFFECTIVELY. THE CHALLENGE IS TO BUILD A HEALTHCARE SYSTEM WITH THOSE PRACTICES AT ITS CORE.

- "The healthcare community has identified ways to manage chronic disease effectively. The challenge is to build a healthcare system with those practices at its core."
- "Our overall conclusion is that Alberta provides some excellent care for individuals with chronic diseases. However, that care tends to be fragmented. No entity has overall responsibility for ensuring that all the parts work together well, that all patients receive the same level of care, or that providers are making good use of available resources to understand chronic diseases and manage patient care."
- Recommendations from this audit include:
    - Recommendations to the Department of Health in year 1 to
        - Set expectations for CDM services to be provide by physicians, AHS and Primary Care Networks
        - Strengthen CDM supports to family physicians
        - Facilitate secure sharing of patient healthcare information among providers
        - Support all family physicians in identifying who their patients are and which patients have chronic disease
        - Set expectations for care plan delivery and strengthen the administration of care plan billings
        - Support family physicians and care teams in implementing better electronic medical record systems
    - Recommendations to Alberta Health Services in year 1 to
        - Develop a system to assess demand for CDM services across the province
        - Set provincial objectives and standards for its CDM services
        - Identify and provide care to patients who do not have a family physician until they can be linked with one
    - Recommendations to the Department of Health in years 2-3 to

- Request physicians to provide comprehensive team-based care to patients with chronic disease
- Establish processes to assess the effectiveness of CDM services delivered by the providers it funds
- Determine what it considers to be an effective care team size and composition, and work with family physicians, Primary Care Networks and other providers to help build teams to this level
- Establish a formal process to integrate patient care plans prepared by physicians and pharmacists
- Evaluate the effectiveness of care plans on an ongoing basis
- Provide personal healthcare information to individuals with chronic disease, including their medical history and care plan

- Recommendations to Alberta Health Services to:
  - Integrate its CDM services with those provided by physicians, Primary Care Networks and Family Care Clinics to avoid gaps and duplication
  - Coordinate its CDM services with patients' care plans
  - Establish systems to measure and report the effectiveness of its CDM services

In preparing an Action Plan for CDM for Alberta's First Nations, it is helpful to reflect that Alberta's health care system for individuals living off-reserve faces significant pressures and challenges when if comes to chronic disease management. Given this situation, it is not unexpected that health care on-reserve, with less funding and resources than is found in the off-reserve system, would face even more significant challenges.

The Auditor General's recommendations to Alberta Health and Alberta Health Services do suggest areas of focus for the strengthening of chronic disease management on-reserve.

Recommendations Adapted from the Auditor General Report on CDM in Alberta
• Set regional objectives and standards for Chronic Disease Management services to be provided on-reserve • Strengthen supports, staffing, and funding in health centers so that CDM services can be provided • Facilitate the sharing of health information among providers and with the patient themselves • Evaluate the effectiveness of existing medical record systems and create a plan to improve medical record systems in health centers • Develop the capacity to assess demand for CDM services across the region • Quantify the reach of family physician coverage on-reserve, and develop a plan to increase coverage and for the provision of care to patients who do not have a family physician • Work with Health Directors and staff to support comprehensive team-based care to patients with chronic disease • Establish systems and processes to measure and report the effectiveness of CDM services

1.7 The Challenge of Health Care in First Nations Communities

In Alberta First Nations communities, as reported by the First Nations Regional Health Survey (Pace et al., 2012):

- 31.2% believed that they had less health services available to them compared to Canadians generally
- The top barriers to health care included:
    - long waiting lists (32.1%)
    - services not covered by Non-Insured Health Benefits (27.0%)
    - felt that health care provided was inadequate (20.7%)
    - prior approval for services under NIHB was denied (20.4%)
    - unable to arrange transportation (19.7%)
    - could not afford direct cost of care, service (18.5%)
    - felt service was not culturally appropriate (18.2%)
    - could not afford transportation costs (16.5%)
    - doctor or nurse not available in my area (15.4%)
- 40% of adults stated that they had difficulty accessing NIHB services. Medication was most often quoted at 19.0%, dental care difficulties at 16.8%, and vision care at 8.6%

Health care in First Nations communities must deal with all the challenges and issues seen in all health systems, including the prioritization of programs in a climate of scarce resources, accommodating wage increases of the workforce, rationalizing services to achieve workable

economies of scale, and shifting from a disease model to one that is based on health promotion and disease prevention.

In addition, there are a set of challenges in the environment that make health care in a First Nations context uniquely challenging (Lemchuk-Favel & Jock, 2004):

- health status
- community size
- remoteness
- human resources
- aboriginal health professionals
- demographics
- funding
- jurisdiction

A few key points in their discussion of these unique challenges include (Lemchuk-Favel & Jock, 2004):

- The health status profile of First Nations measures a disproportionate measure of illness, mortality, injury, addictions, and family violence. There are also over- crowded conditions, often inadequate housing and community infrastructure (water and sewage), with lower levels of employment, average income, and education. Simply put, Aboriginal Peoples rate significantly lower on virtually every measure of health and well-being when compared to the general Canadian population. Thus there is a greater need for health care services in First Nations communities.
- Aboriginal communities tend to be small. For example, 30 per cent of First Nations communities in Alberta have populations of 400 or less. A further 25 per cent have populations between 401 and 1,000 (HCOM Health Co-Management Secretariat, 2010). In today's fiscal environment, economies of scale are necessary considerations in creating program efficiencies. This would suggest that communities, particularly small ones, must work together to share re- sources. In some areas, co-ordinating services can impose additional costs to the system, such as in re- mote environments that have fly-in-only access. There, multi-community co-ordination faces challenges such as securing sufficient transportation resources for travel of health professionals to multiple communities.
- For the majority of the Aboriginal population, the mainstream Canadian health system has often been inaccessible in physical terms (due to distance and jurisdictional divisions between federal and provincial governments) and also in cultural and psychological terms. One effect of this is that health needs may be ignored until they become so serious as to require emergency attention

- Staff turnover and recruitment of qualified personnel are major issues for small or remote communities. Working conditions can be burdensome, particularly if there are no back-up systems for staff. Achieving equity with provincial wages has been a perennial issue for health systems operating on fixed budgets.

Another challenge is that from a system perspective (National Collaborating Centre for Aboriginal Health (NCCAH), 2013)

> "the provision of health care services to Aboriginal peoples in Canada is in a constant state of flux. In recent years, FNIHB has been working with communities to transfer responsibility for provision of on-reserve health care services to communities and tribal councils…multiple levels of authority and responsibility are involved in the provision of services to Aboriginal communities, with a general tendency towards delegating responsibility to local levels. In the absence of a clear national Aboriginal health policy, jurisdictional gaps and inconsistent levels of funding continue to create barriers for many Aboriginal communities."

In order to provide effective Chronic Disease Management, there is a need to strengthen the capacity of the health care system in First Nations Communities.

Recommendations to Strengthen Health Care Delivery in First Nations Communities
• We recommend that transportation services in First Nations communities be viewed as an integral part of the health care delivery system and be funded accordingly • We recommend that waiting lists be analyzed to identify areas of high demand and a plan be created to reduce waiting lists for health care services • We recommend that assistance be provided to help patients navigate and access NIHB services • We recommend that support be provided for the regional coordination of health care when there are clusters of communities who wish to partner and are able to do so • We recommend that health care providers and systems be culturally grounded and appropriate • We recommend that a human resources strategy be developed to address recruitment and retention and that staffing be linked to health status on-reserve and the demand for health care services, with funding to pay staff equitably in comparison to their counterparts in the provincial system and to add staff to build capacity to meet demand • We recommend that agreements and guidelines be developed to clarify jurisdictional responsibilities and to reduce and eliminate gaps between health care provided on and off reserve, including regarding the flow of information

1.8 The Need for a Chronic Disease Prevention and Management Action Plan

Alberta First Nations are faced with the convergence of:

- Rising rates of chronic disease
- A shortage of staff, systems, and resources with which to address chronic disease
- The continuing impacts of historical trauma and colonialism which give rise to both community crisis and risky behaviors (i.e. heavy drinking, unhealthy eating) associated with increasing chronic disease
- Insufficient support and resources for the healing work that is necessary to address the root causes of behavior risk factors and chronic disease

This action plan is intended to serve as a resource for Alberta First Nations identifying best and promising practices that can guide their efforts to prevent chronic disease in their communities and provide effective chronic disease management for their people. It also makes recommendations that can strengthen the capacity of the system in order to be able to provide effective chronic disease management and prevention.

2.0 Methodology

The methodology for the creation of this Action Plan consisted of:

4. Research into best practices and models for chronic disease prevention and management with a particular focus on First Nations and the risk factors of alcohol use, tobacco use, unhealthy eating, and physical inactivity
5. A series of stakeholder consultations with key organizations and personnel in Alberta and beyond who work in areas related to chronic disease management and prevention with the same focus on the risk factors of alcohol use, tobacco use, unhealthy eating, and physical inactivity
6. A series of community consultations with a sampling of First Nations communities in Alberta

2.1 Research into Best Practices and Models

The Prevention Sub-Committee identified a number of key documents to help shape and inform this project, including:

- Barr, V. J., Robinson, S., Marin-Link, B., Underhill, L., Dotts, A., Ravensdale, D., & Salivaras, S. (2003). The expanded Chronic Care Model: an integration of concepts and strategies from population health promotion and the Chronic Care Model. Hospital Quarterly, 7(November 2003), 73–82. doi:10.12927/hcq.2003.16763
- Curry, K., & Coulter, D. (2010). Chronic Disease Prevention and Management Resource Toolkit. Ottawa, ON. Retrieved from http://von.ca/special_projects/ahi_Chronic Disease Management.aspx
- Davachi, S. (2012). Targeted Chronic Disease Prevention and Management Approaches for Diverse and Vulnerable Populations in Alberta. Retrieved from http://www.albertahealthservices.ca/hp/if-hp-ed-cdm-gen-div-prov-frame-diverse-vuln-pop.pdf
- FNIHB. (2015). Draft Framework - Preventing and Managing Chronic Disease in First Nations Communities. Retrieved from http://www.health.gov.on.ca/en/pro/programs/cdpm/
- Smith, C. (2012). Chronic Illness Prevention and Management Framework for Alberta Region.

In addition to these documents, additional key resources were identified and reviewed for this project on the themes of chronic disease prevention, chronic disease management, trauma and healing in Aboriginal communities, decolonization, systems change, addiction, and complexity including:

- Abadian, S. (1999). From Wasteland to Homeland: Trauma and the Renewal of Indigenous Peoples and Their Communities. Harvard University.
- Archibald, L. (2006). Decolonization and Healing : Indigenous Experiences in the United States , New Zealand , Australia, and Greenland. Ottawa, ON: The Aboriginal Healing Foundation. Retrieved from http://www.ahf.ca/downloads/ibpengweb.pdf
- Auditor General of Alberta. (2014). Report of the Auditor General of Alberta: Health - Chronic Disease Management. Edmonton, Alberta.
- Chansonneuve, D. (2005). Reclaiming Connections: Understanding Residential School Trauma Among Aboriginal People. Ottawa, ON. Retrieved from http://www.ahf.ca/downloads/healing-trauma-web-eng.pdf
- Chansonneuve, D. (2007). Addictive Behaviours Among Aboriginal People in Canada. Ottawa, ON. Retrieved from http://www.ahf.ca/downloads/addictive-behaviours.pdf
- Earle, L. (2013). Understanding chronic disease and the role for traditional approaches in Aboriginal communities. P. doi:10.1377/hlthaff.2013.1102
- Lane, P., Bopp, M., Bopp, J., & Norris, J. (2002). Mapping the Healing Journey - The final report of a First Nation Research Project on Healing in Canadian Aboriginal Communities. Ottawa, ON. Retrieved from http://www.publicsafety.gc.ca/cnt/rsrcs/pblctns/mppng-hlng/index-eng.aspx
- Lavoie, J. G., & Gervais, L. (2011). Access to Primary Health Care in Rural and Remote Aboriginal Communities: Progress, Challenges and Policy Directions. Rural Health: A Canadian Perspective, (June).
- Morrin, L., & Jorgensen, L. (2010). Integrated, Community-Based Chronic Disease Management Program: A Proposed Model for Alberta. Retrieved from http://www.albertahealthservices.ca/if-hp-ed-cdm-ahlp-ic-cdm.pdf
- Reading, J. (2009). The Crisis of Chronic Disease among Aboriginal Peoples: A Challenge for Public Health, Population Health and Social Policy. Victoria, BC.
- Truth and Reconciliation Commission of Canada. (2015). Honouring the Truth, Reconciling for the Future Summary of the Final Report of the Truth and Reconciliation Commission of Canada.
- Wesley-Esquimaux, C. C., & Smolewski, M. (2004). Historic Trauma and Aboriginal Healing. Ottawa, ON. Retrieved from http://www.ahf.ca/downloads/historic-trauma.pdf

Research was also conducted in key journals such as Health Affairs and in scholarly databases on keywords related to:

- Chronic disease management
- Chronic disease prevention
- Alcohol prevention
- Tobacco prevention
- Physical inactivity
- Unhealthy eating
- First Nations health

The information from this research was incorporated both into the design and process of our community consultations and into the creation of this Action Plan. A full bibliography is available at the conclusion of this report.

2.2 Stakeholder Consultations

In addition to research, an effort was made to connect with a variety of stakeholders whose work could complement or inform this Action Plan.

Every Health Director in Alberta First Nations communities who were not participating in our community consultations was contacted to ask if they wished to share their community efforts and successes in the areas of chronic disease prevention and management.

Other stakeholders in the areas of chronic disease management, chronic disease prevention, and Aboriginal Health were also contacted and invited to participate in this stakeholder consultation. Stakeholder Consultations were held with:

- Action on Smoking on Health
- Alberta Health Services (multiple departments including Aboriginal Health and Chronic Disease Management)
- Alberta Recreation and Parks Association
- Alberta Community and Cooperative Association
- Alberta Health (multiple departments)
- MacColl Center for Health Care Innovation
- FORGE AHEAD (Transformation of Indigenous Primary Healthcare Delivery)

Some of the themes emerging from these consultations that helped inform our strategy include:

- There are large gaps in continuity of care when patients move between off-reserve and on-reserve systems. Chronic disease management is a mix of two systems at present and is not patient-centered.
- There is a discrepancy between the federal and provincial standard for services (i.e. medication coverage)
- The federal government has an interpretation of the "medicine chest" provision in the Treaties that is different from how First Nations communities interpret it
- There are challenges with access to diagnostic services on-reserve
- Food security and transportation are big challenges to prevention initiatives around chronic disease prevention

Recommendations from our Stakeholder Consultations
• We recommend the development of protocols and guidelines for patient-centered care that follows First Nations people from on-reserve to off-reserve and return as they access services • We recommend a review of coverages for medications with the intent of ensuring alignment with provincial standards. We also recommend that other areas of medical care be examined to ensure they are up to the same standards as exists in the provincial system in order to eliminate disparities in the quality of care between the two systems • We recommend a review of access to diagnostic services and the establishment of standards for access for First Nations communities • We recommend continued support for food security initiatives as a foundational component of chronic disease prevention. We also recommend that transportation systems and infrastructure on-reserve be reviewed and recommendations made for improvement with an emphasis on how transportation infrastructure, or the lack thereof, contributes to patient care, prevention, and healthy living.

2.3 Community Consultations

As this Action Plan is intended to be community-driven, the Community Consultations formed a key component of the methodology.

The CDPM Working Group helped identify sites for community consultations across the three Treaty areas in the Alberta Region: Treaty 6, Treaty 7, and Treaty 8. Six community consultations were held across the region with two in each treaty area. A mix of urban and rural/remote and large and small communities were selected for these consultations.

Out of respect for these community's confidentiality, they will not be identified in this Action Plan.

Our six community consultations had a combined total of 58 participants including Elders, community members, and various health care and community workers such as Health Directors, dietitians, community health nurses, home care nurses, FCSS program directors, youth workers, and parks and recreation workers.

The community consultations followed a design thinking methodology intended to walk participants through a process of describing their own unique community context, digging deep to identify key influences on chronic disease, and designing and prioritizing potential strategies for chronic disease prevention and/or management. The strength of this process was involving the participants themselves in the analysis process of deciding what was most useful and important for their community.

Key messages from these community consultations that helped inform our strategy include:

- Change happens at the speed of trust. This trust operates at and across multiple levels including an individual's trust in themselves, between patient and provider, between community members, between community members and their leadership and government, between organizations and community leadership and government, and between the health care system and community leadership and government.

CHANGE HAPPENS AT THE SPEED OF TRUST

- If a community doesn't have a cohesive health centre team, then nothing else matters. The importance of good leadership and a positive culture of teamwork and collaboration is crucial to any sustained success in chronic disease prevention and management for a health centre.
- 100% of chronic disease management is psychosocial. Chronic disease both affects and shares common risk factors with mental well-being. Many providers who work with patients with chronic disease find that in doing so, they are also working with the mental, emotional, and spiritual aspects of a patient's wellness. There is also a broader context in the social determinants of health. The social determinants of health, including poverty, have a large and lasting impact on First Nations health.
- Healing/wellness has to come from community. Healing and wellness is not a program that can be implemented or offered in a facility or community. It is a journey, a process of change, that a community has to believe in and be willing to engage with. It has to start with community and be directed by the community.

- Chronic disease is embedded in layers of historical trauma. If we ask where chronic diseases come from and why risk factors affect so many people or are deeply embedded in some communities, it does not take long before the conversation includes topics such as historical trauma in the form of residential school and other government policies that have taken control of community life away from the community and caused harm to individual, family, and social structures and ways of life.

CHRONIC DISEASE IS EMBEDDED IN LAYERS OF HISTORICAL TRAUMA

- Emphasis needed on role/influence of women. Traditionally, prior to colonization, women had a much larger influence in First Nations society. Today, society is largely patriarchal. One of the indicators on the journey of wellness and healing is the return of women's influence to a more prominent role in First Nations communities.

- Boundaries, jurisdictions, lines. Both First Nations communities and the systems that provide them with health care are challenged by jurisdictional boundaries that result in gaps in services, delays, suspicion, frustration, and inequities in services.

- The larger challenge is not a lack of programs or information; it's people coming. Many quality programs are offered in communities. More could be done to offer programs where there are needs. But the larger issue is increasing participation rates in programming - whether existing or new.

  Low rates of participation often reflect a dissonance between the program and the people it is intended to serve. While a program may be designed to address a problem that exists in a group of people, there is a strong difference between a program designed for people and a program designed with people.

- When a traditional healer is in the community, they are booked solid whereas programs offered as part of the health care system are hard to get people to. People in community do engage with healing that comes in a form they trust and which honors their way of being. Rupert Ross enlarges on this theme in a discussion between a counsellor and a medical anthropologist in his book Indigenous Healing (Ross, 2014):

  > "I have discovered that Aboriginal clients look for Aboriginal thinking, feeling, and the Aboriginal spirit in the person they are talking to, and if they don't find it, they close off just as quickly if that person's face is brown or white or green."

  Absent a healer or healing program that resonates with their culture, First Nations people tend to opt-out of health care. The converse is also true. When a healer or healing program reflects their culture and traditions, they tend to be embraced.

The role of a healer in the community was described in a report for the Aboriginal Healing Foundation as (Archibald, 2006)

- including herbalist, diagnosis specialist, medicine man/woman, healer, and midwife
- a gifted individual who may heal in a variety of ways: spiritually, using indigenous plants and fauna, through ritual, prayer and ceremony, and using the “gift” of touch or energy work
- focused on the spiritual realm
- working in the language of the community, he receives everyone who seeks healing

- Is it necessary to go off-reserve to become healthy? Many community members find they must leave their reserve to find a new environment to escape addiction or chart a new life path. A vision for healing includes changing the odds on reserve so it is not a place one feels they must leave in order to become healthy.

Recommendations from our Community Consultations
• We recommend that a guiding principle of regional and community chronic disease initiatives be trust • We recommend that emphasis be given to supporting and developing health centre teams and health centre leadership – building effective teams, learning effective leadership practices, etc. • We recommend that chronic disease work and workers be sensitized to trauma and mental health work, and that chronic disease be more tightly integrated with mental health • We recommend that all chronic disease work be community-driven, with needs identified by the community, projects implemented under the control of communities, and with adequate resources and organizational supports provided to communities who undertake this work • We recommend that emphasis be given to the role of women in First Nations society as a key component of community healing and change • We recommend that community programs be designed and offered in partnership with community members so that participation rates can increase • We recommend that traditional healers be incorporated into chronic disease care and mental health care and that supports and processes be put into place to facilitate their inclusion in these systems

3.0 A Chronic Disease Prevention and Management Action Plan

The mandate for this Action Plan was to provide Alberta First Nations communities with a comprehensive approach that "when implemented will help to achieve coordinated and community-engaged delivery of chronic disease prevention and management health care within the Alberta Region that supports FN communities and existing programming." ("Terms of Reference - Chronic Disease Prevention and Management Working Group," 2015)

The Action Plan is designed conscious of the fact that many reports and their recommendations end up on the office shelf and have limited reach and impact in the community or with stakeholders. In an attempt to avoid this fate, this Action Plan focuses both on content recommendations as well as process recommendations. In other words, it is not enough to know what to do. Knowledge by itself rarely if ever changes behavior or the systems which constrain and shape our living conditions and future opportunities. What is also needed is evidence and recommendations about how to support the change process and the development of new infrastructures, supports, and systems for treating patients with chronic disease and for promoting healing and wellness in the community.

MANY REPORTS AND THEIR RECOMMENDATIONS END UP ON THE OFFICE SHELF AND HAVE LIMITED REACH AND IMPACT IN THE COMMUNITY OR WITH STAKEHOLDERS

This Action Plan is organized in the following sections:

5. Best Practices for Chronic Disease Prevention
6. Best Practices for Community Healing and Trauma Recovery
7. Best Practices for Chronic Disease Management
8. Summary of Recommendations

4.0 Best Practices for Chronic Disease Prevention

As stated earlier, up to 80% of heart disease, stroke, and type 2 diabetes and over a third of cancers could be prevented by eliminating the shared risk factors of unhealthy weight (overweight/obesity), physical inactivity, unhealthy eating, tobacco use, and harmful alcohol use. (World Health Organization, 2008)

As summarized by the US Centers for Disease Control, the following examples show what targeted investments in prevention can achieve (CDC, 2009):

ONE YEAR AFTER QUITTING, EXCESS RISK FOR HEART DISEASE IS REDUCED BY HALF, AND 10 YEARS AFTER QUITTING, THE LUNG CANCER DEATH RATE IS ABOUT HALF THAT OF A CURRENT SMOKER

- The health benefits of quitting smoking are numerous, and many are experienced rapidly. Within 2 weeks to 3 months after quitting, heart attack risk begins to drop and lung function begins to improve. One year after quitting, excess risk for heart disease is reduced by half, and 10 years after quitting, the lung cancer death rate is about half that of a current smoker. Fifteen years after quitting, an ex-smoker's risk for heart disease is about the same as that of a lifelong nonsmoker.
- Lifestyle changes in diet and exercise, including a 5%–7% maintained weight loss and at least 150 minutes per week in physical activity, can prevent or delay the onset of type 2 diabetes for Americans at high risk for the disease. Participants in a major clinical trial group exercised at moderate intensity, usually by walking an average of 30 minutes a day, 5 days a week, and lowered their intake of fat and calories. Their efforts resulted in a sustained weight loss of about 10 to 15 pounds, reducing their risk of getting diabetes by 58%
- An adult with healthy blood pressure and healthy blood cholesterol levels has a greatly reduced risk for cardiovascular disease. A 12- to 13-point reduction in systolic blood pressure can reduce cardiovascular disease deaths by 25%, and a 10% decrease in total cholesterol levels reduces the risk for coronary heart disease by 30%
- Instilling healthy behaviors and practices during youth, particularly in school settings, is far more cost-effective than waiting until unhealthy behaviors are entrenched. A study of the Toward No Tobacco program, which was designed to prevent cigarette use among middle and high school students, found that for every dollar invested in school tobacco prevention programs, almost $20 in future medical care costs would be saved.

- Regular screening for colorectal cancer can reduce the number of people who die from this disease. When colorectal cancer is found early and treated, the 5-year relative survival rate is 90%.
- Improved glycemic control benefits people with either type 1 or type 2 diabetes. In general, every percentage point drop in A1c blood test results (e.g., from 8.0% to 7.0%) can reduce the risk of microvascular complications (eye, kidney, and nerve diseases) by 40%. Among people with diabetes, annual eye and foot exams can reduce vision loss and lower-extremity amputations. Detecting and treating diabetic eye disease with laser therapy can reduce the development of severe vision loss by an estimated 50% to 60%. Comprehensive foot care programs can reduce amputation rates by 45% to 85%.

In addition to these examples, there is good evidence for the potential impact of prevention for tobacco use, physical inactivity, unhealthy diet, and alcohol misuse.

4.1 Tobacco Prevention

The First Nations and Inuit Health Committee of the Canadian Paediatric Society reviewed the effects of the changes in the use of tobacco by Aboriginal peoples over time, and made the following recommendations based on their review of best-practices (Wong, 2006) :

- Aboriginal communities should adopt a minimum age for the sale of cigarettes
- Aboriginal communities should encourage dialogue in the community to help change attitudes toward the acceptability of recreational tobacco use
- Aboriginal communities should continue to discourage smoking in the workplace and institute bans of non-traditional use of tobacco in public places such as restaurants, recreational facilities, bingo halls and casinos
- First Nations reserves should focus on continuing to educate retailers on-reserve about the Tobacco Act and discourage the sale of tax-free tobacco products, especially to non-Aboriginals
- Because cost influences tobacco use, Aboriginal communities should be encouraged to place their own surcharge on tobacco products (when purchased for non-traditional use) to increase the price to match off-reserve prices; the increased revenue should then be directed to smoking prevention programs in the community
- A well-defined system should be established within a community to enforce all tobacco laws. The consequences of breaking these laws should be well defined
- Cigarettes and other tobacco products should remain behind counters and out of sight in all stores
- Aboriginal communities should encourage community members to establish smoke-free homes to diminish exposure of children to second-hand smoke
- Nicotine replacements such as the ‘patch’ and nicotine-free tablets such as bupropion should be encouraged as part of a smoke cessation program. While at present there is

limited availability of these drugs under the Non-Insured Health Benefits Program, it is recommended that these drugs be readily available when clinically appropriate
- Physicians and health care workers should use the opportunity afforded by clinic visits to explore smoking and tobacco use habits, to educate about the dangers to individuals directly or through second-hand smoke, and to introduce smoking-cessation strategies
- All Aboriginal communities should discourage non-traditional use of tobacco products

Additional insights into tobacco prevention come from the US Center for Disease Control. A recent update of their tobacco prevention evidence has the following recommendations (Centre for Disease Control, 2014):

- Increase the unit price of tobacco products
- Conduct mass-media education campaigns in combination with other community interventions
- Mobilize the community to restrict minors’ access to tobacco products in combination with additional interventions (stronger local laws directed at retailers, active enforcement of retailer sales laws, and retailer education with reinforcement)
- Clean indoor air legislation prohibiting tobacco use in indoor public and private workplaces
- Federal, provincial, and local efforts to increase tobacco product excise taxes as an effective public health intervention to promote tobacco use cessation and to reduce the initiation of tobacco use among youth
- Funding and implementing long-term, high-intensity, mass-media campaigns using paid broadcast times and media messages developed through formative research
- Proactive telephone cessation support services (quitlines)
- Reduced or eliminated copayments for effective cessation therapies
- Reminder systems for health care providers
- Combinations of efforts to mobilize communities to identify and reduce the commercial availability of tobacco products to youth

4.2 Physical Inactivity Prevention

Physical activity has a unique cultural component. A review of physical activity among Indigenous people from Australia commented (Gray, Macniven, & Thomson, 2013)

> "Physical activity (including activities like group fitness classes or walking groups) continues to not be seen by many Indigenous people as a separate, measurable concept in the same way as it is by non-Indigenous people...Interventions targeting physical activity for Indigenous people risk failure if they are based on westernised views of physical activity rather than taking account of Indigenous concepts of physical activity… For some Indigenous people, the concept of physical activity is not understood in the same way as other Australians. The activities of the traditional Indigenous lifestyle, involving hunting, gathering, and participation in other customary activities, were vital, interwoven aspects of life. These historical roots form part of the contemporary values of many Indigenous people; from this, it can be seen why engaging in an individual activity, such as physical activity, to benefit only oneself and in isolation from family or community, may be seen as inappropriate."

Keeping this in mind, a number of systematic reviews have looked at evidence for increasing physical activity.

A review of intervention components associated with increased effectiveness in dietary and physical activity interventions found that (Greaves et al., 2011):

- adding social support to interventions (usually from family members) provided an additional weight loss of 3.0 kg at up to 12 months (compared with the same intervention with no social support element)
- brief advice, which usually included goal-setting, led to an increase in walking activity (27 mins/week walking at 12 months of follow up)
- pedometer based interventions increase walking activity (mean increase of 2004 steps per day at a median 11 weeks; median increase in time walking of +54 min per week at a median 13 weeks). It must be noted that the vast majority of the interventions included in these meta-analyses included either step-goals or step diaries (or both) alongside the use of pedometers, so the evidence does not support the use of pedometers in isolation from these additional techniques.

ADDING SOCIAL SUPPORT TO INTERVENTIONS PROVIDED AN ADDITIONAL WEIGHT LOSS OF 3KG

- interventions which targeted *both* physical activity and diet rather than only one of these behaviours produced higher weight change (additional weight loss around 2-3 kg at up to 12 months)
- a wide range of providers (with appropriate training) including doctors, nurses, dieticians/nutritionists, exercise specialists and lay people, can deliver effective interventions for changing diet and/or physical activity
- more intensive interventions (those including more behaviour change techniques, more contact time or a longer duration of intervention) generated significantly more weight loss than less intensive interventions (an additional 2.3 kg at a median seven months follow up)

A Lancet review of effective, promising, or emerging physical activity interventions from across the world found that (Heath et al., 2012):

- communities increase their effectiveness in promoting physical activity where health agencies partner and coordinate efforts with community organizations, including schools, businesses, planning and transport agencies, healthcare organizations, and recreation agencies
- campaign and informational approaches to promoting physical activity that are effective include community-wide campaigns, mass media campaigns, and short physical activity messages targeting key community sites
- physical activity promotion efforts that involve increasing social support for physical activity within communities, specific neighborhoods, and worksites are effective in increasing levels of physical activity among community residents
- school-based strategies that encompass physical education, classroom activities, after school sports, and active transport provide evidence for promoting physical activity among school-aged children and youth
- environmental and policy approaches provide evidence for increasing physical activity across many global communities through: creating/enhancing access to places for physical activity with outreach activities; infrastructural interventions such as community and street-scale urban design land use/planning; active transport policy/practices; and community-wide policies and planning
- from an international evidence-based perspective, while there is a place for informing and motivating individuals to adopt physical activity, the public-health protection and promotion role in ensuring that environments are safe and supportive of health and wellbeing should be the priority for promoting physical activity

4.3 Unhealthy Diet Prevention

As summarized by the National Collaborating Centre for Aboriginal Health (Lynda Earle, 2013)

> "The traditional diets and associated physical activities of Aboriginal peoples have been replaced with patterns of consumption that increase the risk of developing cardiovascular disease, diabetes and cancer. However, traditional foods remain important from both cultural and nutritional perspectives, and are associated particularly with beneficial fat, carbohydrate and nutrient profiles. Despite challenges such as food insecurity and biocontamination, traditional foods remain important for chronic disease prevention and their use can be successfully promoted in Aboriginal communities."

An international review of food system interventions for Indigenous peoples found that (Kuhnlein, 2013):

- Broadly speaking, to improve the quality of food available in poor communities, including those of Indigenous Peoples and in both developed and developing countries, it makes sense to:
  - i) improve access to traditional local foods
  - ii) reduce the prices of healthy foods, with government enforcement
  - iii) increase education in and demand for "good" food, and understanding of the impact of poor diet on health; and
  - iv) increase the prices of "junk food" (nutrient-poor, high-energy, sweet or fatty foods and drinks), perhaps through increased taxes.
- Indigenous communities' attention to their food systems may be increased if interventions are based on communities' own knowledge bases, especially if there is limited use of market food and ensured access to traditional food
- Programmes must reflect communities' own world views, allowing them to accomplish goals that are within their own priorities and to recognize the values within their own environments.
- Interventions based on local cultural knowledge and focusing on children's health, and food for women and children have universal appeal

The US Centers for Disease Control reviewed evidence on obesity prevention and published the following community recommendations (Keener, Goodman, Lowry, Zaro, & Kettel Khan, 2009):

- Increase availability of healthier food and beverage choices in public service venues – "Public service venues, such as schools, child care centers, city and county buildings, prisons, and juvenile detention centers, are key venues for increasing the availability of healthier foods. Improving the availability of healthier food and beverage choices (e.g., fruits, vegetables, and water) may increase the consumption of healthier foods."

- Improve availability of affordable healthier food and beverage choices in public service venues – “Public schools and local governments can improve the affordability of healthier foods and beverages sold in public service venues by establishing policies that lower prices of healthier foods and beverages relative to the cost of less healthy foods sold in vending machines, cafeterias, and concession stands in schools and local government facilities. Other strategies to make healthy food more affordable include offering coupons or vouchers redeemable for healthier foods and incentives or bonuses for the purchase of healthier foods.”
- Improve geographic availability of supermarkets in underserved areas – “Increasing the number of supermarkets in areas where they are currently unavailable or where availability is limited is one way to increase access to healthy foods, particularly for economically disadvantaged populations.”
- Provide incentives to food retailers to locate in and/or offer healthier food and beverage choices in underserved areas – “Local governments can offer financial and nonfinancial incentives to food retailers (e.g., grocery stores) to open new stores and/or to offer healthier food and beverage choices in areas with few healthy food options. Financial incentives include, but are not limited to, tax breaks, tax credits, loans, loan guarantees, and grants to cover start-up and investment costs. Nonfinancial incentives include supportive zoning, negotiation assistance, and capacity building for small businesses that want to initiate sales of healthier foods and beverages.”
- Improve availability of mechanisms for purchasing foods from farms – “Farmers markets, farm stands, community-supported agriculture (CSA), pick your own, and farm-to-school initiatives are all ways to purchase food from farms. Increasing the availability of such mechanisms for purchasing foods from farms may reduce costs of fresh foods through direct sales, increase the availability of fresh foods in areas without supermarkets, and improve the nutritional value and taste of fresh foods by harvesting produce at ripeness rather than at a time conducive to shipping”
- Provide incentives for the production, distribution, and procurement of foods from local farms
- Restrict availability of less healthy foods and beverages in public service venues – “Research has shown that the availability of less healthy foods in schools is inversely associated with fruit and vegetable consumption and is positively associated with fat intake among students. Schools can restrict the availability of less healthy foods by setting standards for the types of foods sold, restricting access to vending machines, banning snack foods and food as rewards in classrooms, or prohibiting food sales at certain times of the school day. Other public service venues that can restrict the availability of less healthy foods include afterschool programs, regulated child care centers, community recreational facilities (e.g., parks, swimming pools), city and county buildings, and prisons and juvenile detention centers.”

- Institute smaller portion size options in public service venues – “Research has documented a relationship between food portion sizes and energy intake. Portion size is the amount (e.g., weight, calorie content, or volume) of a single food item served in a single eating occasion. Local governments can regulate food portion sizes served within public service venues such as regulated child care centers, community recreational facilities (e.g., parks, recreation centers, playgrounds, and swimming pools), city and county buildings, and prisons and juvenile detention centers.”
- Limit advertisements of less healthy foods and beverages – “Television advertising influences children to prefer and request high-calorie and low-nutrient foods and beverages and influences consumption among children between the ages of 2 and 11 years. Legislation to limit advertising of less healthy foods and beverages is usually introduced at the Federal or State level. However, local governing bodies, such as district-level school boards, might have the authority to limit advertisements of less healthy foods and beverages in areas within their jurisdiction”
- Discourage consumption of sugar-sweetened beverages – “Consumption of sugar-sweetened beverages (e.g., carbonated soft drinks, sports drinks, flavored/sweetened milk, and fruit drinks) among children has increased dramatically since the 1970s and is associated with higher daily caloric intake and greater risk of obesity among children and adolescents. Schools and group day care centers contribute to the problem by serving and/or allowing children to purchase sugar-sweetened beverages. Policies that restrict the availability of sugar-sweetened beverages and 100% fruit juice in schools and group day care centers may discourage the consumption of sugar-sweetened beverages among children.”

4.4 Alcohol Prevention

The Community Guide lists a number of effective preventive interventions for alcohol misuse (The Guide to Community Preventive Services, 2015) :

- Dram shop liability
- Electronic screening and brief intervention (e-SBI)
- Increasing alcohol taxes
- Maintaining limits on days of sale
- Maintaining limits on hours of sale
- Privatization of retail alcohol sales
- Regulation of alcohol outlet density
- Enhanced enforcement of laws prohibiting sales to minors

4.4.1 Dram Shop Liability

Dram shop liability holds the owner or server(s) at a bar, restaurant, or other location where a patron, adult or underage, consumed his or her last alcoholic beverage responsible for harms subsequently inflicted by the patron on others. Eleven studies of dram shop liability consistently found that this intervention reduced motor vehicle crash deaths in general and alcohol-related crash deaths in particular. Strong evidence indicated that dram shop liability is an effective intervention for reducing alcohol-related harms, as indicated by reduced motor vehicle crashes (Rammohan et al., 2011) .

4.4.2 Electronic Screening and Brief Intervention (e-SBI)

E-SBI uses electronic devices to screen individuals for excessive drinking and deliver a brief intervention in the form of personalized feedback about the risks and consequences of excessive drinking. Delivery of personalized feedback can range from being fully automated (e.g., computer-based) to interactive (e.g., provided by a person over the telephone). At least one part of the brief intervention must be delivered by an electronic device. A systematic review of 31 studies found the following median reductions in alcohol consumption following the use of e-SBI (The Guide to Community Preventive Services, 2012a):

- in binge drinking frequency of 16.5% for excessive drinkers 1.8% for all participants
- in drinking intensity (i.e. average number of drinks per occasion or estimated blood alcohol concentration) of 5.5% for excessive drinkers and 13.5% for all participants
- in peak consumption per occasion (i.e. maximum number of drinks per occasion or estimated peak BAC) of 23.9% for excessive drinkers and 19.1% for all participants
- in frequency of alcohol consumption per month (i.e. number of days per month when any amount of alcohol was consumed) of 11.5% for excessive drinkers and 14.4% for all participants
- in mean number of drinks consumed per month of 13.8% for excessive drinkers and 16.2% for all participants

4.4.3 Increasing Alcohol Taxes

A review of seventy-three studies (Elder et al., 2010) found that for every 1% increase in the price of alcohol:

- Beer consumption reduced by 0.50%
- Wine consumption reduced by 0.64%
- Spirits consumption reduced by 0.79%
- Total alcohol (ethanol) consumption reduced by 0.77%

Higher alcohol prices or taxes were also consistently related to:

- Fewer motor vehicle crashes and fatalities
- Less alcohol-impaired driving
- Less mortality from liver cirrhosis
- Less all-cause mortality

4.4.4 Maintaining limits on days of sale

Limiting the days when alcohol can be sold is intended to prevent excessive alcohol consumption and related harms by regulating access to alcohol. Most policies limiting days of sale target weekend days (usually Sundays). They may apply to alcohol outlets in which alcohol may be legally sold for the buyer to drink at the place of purchase (on-premises outlets, such as bars or restaurants) or elsewhere (off-premises outlets, such as liquor stores) (The Guide to Community Preventive Services, 2010).

A review of fourteen studies found strong and consistent evidence that (Middleton et al., 2010)

> "increasing days of sale by allowing previously banned alcohol sales on either Saturdays or Sundays increased excessive alcohol consumption and related harms, including motor vehicle crashes, incidents of DUI, police interventions against intoxicated people, and, in some cases, assaults and domestic disturbances. Thus, *maintaining* existing limits on Saturday or Sunday sales—the control condition in these studies— can prevent alcohol-related harms that would be associated with increased days of sale."

4.4.5 Maintaining limits on hours of sale

One strategy to prevent excessive alcohol consumption and related harms is to limit access by regulating the hours during which alcohol can legally be sold. A review of ten studies found that (R. A. Hahn et al., 2010)

> "increasing the hours when alcohol may be sold by ≥2 hours increased alcohol-related harms…these findings provided sufficient evidence for the effectiveness of maintaining limits on hours of sale for the reduction of alcohol-related harms when efforts are made to increase hours by ≥2. Because no qualifying study assessed the effects of reducing hours of sale, the only direct inference that can be made is that reducing hours of sale by ≥2 is likely to avert alcohol-related harms."

4.4.6 Privatization of retail alcohol sales

The privatization of retail alcohol sales is the repeal of government (i.e., nation, state, county, city, or other geo-political unit) control over the retail sales of one or more types of alcoholic beverages, thus allowing commercial retailing of those beverages (The Guide to Community Preventive Services, 2012b).

A review of 17 studies (R. a. Hahn et al., 2012) assessed the impact of privatizing retail alcohol sales on the per capita alcohol consumption, a well-established proxy for excessive alcohol consumption…found strong evidence that privatization of retail alcohol sales leads to increases in excessive alcohol consumption. They found

> "a 44.4% median increase in the per capita sales of privatized beverages in locations that privatized retail alcohol sales. During the same time period, sales of nonprivatized alcoholic beverages decreased by a median of 2.2%. Privatizing the sale of MSB in Finland was associated with a mean increase in alcohol consumption of 1.7 liters of pure alcohol per person per year. Re-monopolization of the sale of MSB in Sweden was associated with a general reduction in alcohol-related harms."

4.4.7 Regulation of alcohol outlet density

Alcohol outlet density regulation is defined as applying regulatory authority to reduce alcoholic beverage outlet density or to limit the increase of alcoholic beverage outlet density. Regulation is often implemented through licensing or zoning processes (The Guide to Community Preventive Services, 2009).

A review of eighty-eight studies found that (Campbell et al., 2009)

> "greater outlet density is associated with increased alcohol consumption and related harms, including medical harms, injuries, crime, and violence. This convergent evidence comes both from studies that directly evaluated outlet density (or changes in outlet density) and those that evaluated the effects of policy changes that had a substantial impact on outlet density, including studies of privatization, remonopolization, bans on alcohol sales and the removal of bans, and changes in density from known policy interventions and from unknown causes."

4.4.8 Enhanced enforcement of laws prohibiting sales to minors

Enhanced enforcement programs initiate or increase the frequency of retailer compliance checks for laws against the sale of alcohol to minors in a community. Retailer compliance checks, or "sting operations," are conducted by, or coordinated with local law enforcement or alcohol beverage control (ABC) agencies, and violators receive legal or administrative sanction (The Guide to Community Preventive Services, 2007).

A review of eight studies found (Elder et al., 2007)

> "that enhanced enforcement programs are consistently associated with a substantially lower probability that retailers will provide alcohol to minors. These changes in retailer behavior appear to persist during the period in which enforcement efforts are maintained. In contrast, the intervention effects diminish rapidly in the absence of continued enforcement"

and that

> "enhanced enforcement programs are associated with beneficial changes in underage alcohol consumption. However, these results should be interpreted cautiously due to the small number of studies, the variability in effect magnitude, the incomplete implementation of enhanced enforcement in the community mobilization studies, and the difficulty in attributing the results to enhanced enforcement alone."

4.4.9 Best Practices for Addictions Interventions in a First Nations Context

Beyond these ideas, in a First Nations context the importance of culture in breaking the cycle of addictions is described in a report for the Aboriginal Healing Foundation (Chansonneuve, 2007), which identified a number of promising practices:

1. Program environments are places of belonging for children and youth to engage in socially healthy, fun ways with their families and Elders, as well as their peers
2. Programming provides opportunities for fun, experiential, skill-based learning such as growing plants, making crafts, or hunting
3. Youth services include diversion programs to reduce the number of youth in conflict with the law
4. Education support is provided for children and youth through Head Start and stay-in school programs as addictions prevention strategies
5. Intergenerational activities bridge youth to Elders in planning and developing program materials and resources

6. Parents are supported in gaining the skills needed to meet the needs and challenges of the adolescent stage in the life cycle
7. All adults are aware that their role in programs is to model healthy, respectful adult relationships and problem-solving, especially among groups that have historically been in conflict
8. Program activities tap into the creativity of youth and their need for meaning and purpose by allowing them to contribute in visible ways to their community
9. Program activities provide opportunities for youth to meet their needs for self-esteem, challenge, and self-mastery in healthy ways

A NNADAP review of effective interventions in addictions prevention highlighted a number of approaches, including (Gifford, 2009):

- Studies of youth substance abuse programs indicate that offering strong content for behavioural life-skills development; emphasizing team-building and interpersonal delivery methods, including self reflection approaches; and providing intense contact with youth can produce consistent and lasting reductions in substance use
- unsupervised after-school recreational facilities, a range of community activities and student organizations were all associated with reduced cigarette smoking and alcohol abuse
- There is a large and growing base of empirical evidence demonstrating that alcohol supply control is an effective deterrent to alcohol abuse in North America; however, in its extreme form —complete prohibition — it is an ineffective policy for reducing alcohol problems in Aboriginal communities. The exception to this evidence is prohibition in remote communities, which is shown to have some success at reducing harm

Health Canada’s Renewed Framework to Address Substance Use Issues Among First Nations People in Canada (Assembly of First Nations, National Native Addictions Partnership Foundation, & Health Canada, 2009) identified key components of a strategy for universal prevention and health promotion, including:

- focus on preventing/reducing possible substance use issues through a whole community/multilevel approach, within a broader public health framework;
- prevent multiple problem outcomes (e.g., substance use issues, suicide, and mental health issues) through a multi-component, community wellness-based approach (e.g., as school, policy, parent, and media programs or self-care/management tools);
- reduce developmental risk factors and strengthen protective factors;
- include a range of health promotion activities that seek to build healthy public policy, create supportive environments, strengthen community actions, develop personal skills, and, where appropriate, re-orient health services;

- include a focus on addressing and de-normalizing the inherited effects of colonialism—lateral or community violence, guilt, shame, etc.—in fostering a transition to healthier lifestyles built on a strong cultural foundation;
- draw on mainstream and Indigenous knowledge;
- build capacity within communities, with an emphasis on supporting communities in need through shared learning and mentorship;
- opportunities for communities to dialogue on effective strategies for prevention and health promotion;
- harmonize or link existing addiction, prevention—related, and mental health promotion—based services and funding;
- prioritize the health and well-being of children and youth;
- target prevention activities for high-risk groups; and
- include secondary risk reduction services and supports to people who are actively using alcohol and other drugs.

4.5 The Cost-Effectiveness of Prevention

Prevention operates in a system of scarcity, competing for resources in a health care climate facing significant cost pressures and scrutiny. This requires careful choices to be made about where to place emphasis by investing in prevention.

A longitudinal analysis of the cost-effectiveness of preventive interventions using Australian population data identified a number of interventions that both improved health and resulted in net cost savings (Vos et al., 2010). These interventions “should only be ignored if decision-makers have very serious reservations about the evidence base or are facing insurmountable problems in relation to stakeholder acceptability or feasibility of implementation” (Vos et al., 2010).

These interventions included:

(Legend: +++ Large; ++ Medium; + Small)

Topic Area	Intervention	Lifetime health impact	Annual intervention costs	Strength of evidence
Alcohol	Volumetric tax	++	+	Likely
	Tax increase 30%	+++	+	Likely
	Advertising bans	+	+	Limited
	Raise minimum legal drinking age to 21	+	+	Limited
Tobacco	Tax increase 30%	+++	+	Likely

Physical Activity	Pedometers	++	++	Sufficient
	Mass media	++	++	Inconclusive
Nutrition	Community fruit and vegetable intake promotion	+	++	May be effective
	Voluntary salt limits	+	+	Likely
	Mandatory salt limits	+++	+	Likely
Body mass	10% tax on unhealthy food	+++	+	May be effective
Blood pressure and cholesterol	Community heart health program	++	+	May be effective
	Polypill $200 for >5% CVD risk	+++	+++	Likely

Even in these categories, not all interventions are created equal. For example, the health impact of raising the legal drinking age to 21 is very modest compared to the large health gain expected from alcohol tax increases and taxation reform.

The World Health Organization has identified what it calls “Best Buys” - interventions that have significant public health impact, and are highly cost-effective, inexpensive and feasible to implement. These include (World Health Organization, 2011b) :

Risk factor/disease	Interventions
Tobacco Use	• Raise taxes on tobacco • Protect people from tobacco smoke • Warn about the dangers of tobacco • Enforce bans on tobacco advertising
Harmful use of alcohol	• Raise taxes on alcohol • Restrict access to retail alcohol • Enforce bans on alcohol advertising
Unhealthy diet and physical inactivity	• Reduce salt intake in food • Replace trans fat with polyunsaturated fat • Promote public awareness about diet and physical activity (via mass media)
Cardiovascular disease (CVD) and diabetes	• Provide counselling and multi-drug therapy (including blood sugar control for diabetes mellitus) for people with medium-high risk of developing heart attacks and strokes (including those who have established CVD) • Treat heart attacks (myocardial infarction) with aspirin

Cancer	• Hepatitis B immunization beginning at birth to prevent liver cancer • Screening and treatment of pre-cancerous lesions to prevent cervical cancer

Analysis of the cost of implementing the full set of "best buy" interventions in Low and Middle-Income Countries found (World Health Organization, 2011a) :

- Under a "business as usual" scenario where intervention efforts remain static and rates of NCDs continue to increase as populations grow and age…yearly loss is equivalent to approximately 4% of these countries' current annual output. On a per-person basis, the annual losses amount to an average of US $25 in low-income countries, US$ 50 in lower middle-income countries and US$ 139 in upper middle-income countries.
- the total cost of implementing the full set of "best buy" interventions…amounted to an annual per capita investment of under US$ 1 in low-income countries, US$ 1.50 in lower middle-income and US$ 3 in upper middle-income countries.
- When considered in terms of overall health spending, these costs constitute only a tiny portion of total health spending – 4% in low-income countries, 2% in lower middle-income countries and less than 1% in upper middle-income countries
- population-based measures that address tobacco and harmful alcohol use, as well as unhealthy diet and physical inactivity, account for a very small fraction of the total price tag (less than US$ 0.40 per person)

While these numbers are not completely transferable to a North American First Nations context, they do give some indication of the relative cost-benefit of implementing these interventions, especially those that address tobacco, harmful alcohol use, unhealthy diet and physical activity.

Recommendations from Best Practices in Prevention
• First Nations communities be supported in applying evidence for effective prevention in their priority areas related to tobacco reduction, physical inactivity, unhealthy eating, alcohol prevention. • First Nations communities be supported in prioritizing cost-saving preventive interventions

5.0 Best Practices for Community Healing and Trauma Recovery

As discussed earlier, best practices focused on risk factors is not enough. Years of effort with the risk factor approach have had limited success (J. Reading, 2009). We also need best practices focused on the process of change and healing that can guide communities along their journey of wellness.

This latter type of best practice is designed to more effectively reduce chronic disease risk factors by emphasizing their root causes - including social, cultural, political, and historical determinants – and the process of community healing and change.

This shift in focus is crucial. As summarized by the National Collaborating Centre for Aboriginal Health (C. L. Reading & Wien, 2009) :

> "the evidence is clear that social determinants…influence health in complex and dynamic ways. The individual and cumulative effects of inequitable social determinants of health are evident in diminished physical, mental, and emotional health experienced by many Aboriginal peoples…Beginning in early childhood, social determinants establish a potential trajectory that is only moderately mutable in the current social and economic context within which many Aboriginal children live."

Important in this discussion is the complex and dynamic way in which social determinants influence health – an influence so strong that the health trajectories beginning in childhood in this environment are only moderately mutable without changes to the environment.

Given the complex and dynamic influence of the social environment, the solution must also be complex and dynamic. A static program in a dynamic environment runs the risk having its target topic and audience run away from it. Or in other words "there is no single formula or recipe for applying knowledge to specific problems…solutions need to emerge and adapt over time based on feedback and evaluation"(Riley et al., 2015).

The key to the emergence and adaptation of solutions over time is to create a process of community change and learning guided by a comprehensive plan that creates a vision of, and priorities for, change.

5.1 The Community Change and Healing Process

The community healing process has been analyzed and described in detail (Abadian, 1999; P. J. Lane et al., 2002). Key elements include:

- A core group of people committed to healing and change
- A comprehensive community plan
- Community safety and stability
- Supportive leadership
- Understanding the community change and healing process
- Technical support

5.1.1 A Core Group of People Committed to Healing and Change

Change begins with a core group of committed people. This group does not have to be large in the beginning. In the well-known story of Alkali Lake, the community's transformation from a place "strewn with years of accumulated garbage and broken-down cars" began with two people becoming sober (Bopp, Bopp, & Lane, 1998):

> "In June of 1972, a seven year old girl told her mother, "I don't want to live with you anymore." The girl was Ivy Chelsea, daughter of Phyllis and Andy Chelsea. Both Andy and Phyllis had been drinking since childhood. The family had recently moved back to the Reserve from a nearby town. Andy and Phyllis often "partied" for the entire weekend. On this occasion they had left little Ivy in the care of Phyllis's mother. When Phyllis returned (hung over) to retrieve Ivy, the little girl refused to go home with her until both her parents quit drinking. Phyllis promised she would, and she did. She tells of going home and pouring all the booze in the house down the kitchen sink. Four days later, Andy also quit drinking. At that time, Andy and Phyllis were the only two non-drinking people in the entire community."

These two people led what became a community-wide transformation into a sober community.

In any community where change is desired, a core group of people is needed to challenge the status quo and drive the change process. This could include spreading the conversation about change, recruiting allies and experts to help with the change process, engaging with programs that can help with healing and change, talking to Elders and key community members, and working on their own personal journey of healing and change.

This core group may start small, but as a stone dropped in a pond, without the first stone landing in the water no ripple effects are possible.

As this group solidifies and grows, and the momentum for healing and change grows in the community, a formal community planning process is useful.

5.1.2 A Comprehensive Community Plan

A core group of people seeking to embark on a healing journey for themselves and their community benefit from a comprehensive community plan.

The process for developing a comprehensive community plan follows a number of steps:

- establishing a Steering Committee to guide the development of the plan
- Conducting a community-based needs assessment and situation analysis, which produces reports such as:
    - A rapid program review – working with entities, programs, and departments to describe the current state of programs and services, challenges and barriers to program effectiveness, community needs analysis, and program capacity assessment.
    - A youth report – a summary of discussions with middle and high school students exploring what life is like now, what life would be like in an ideal future, and steps for creating the desired future with emphasis on the role children and youth can play
    - The community story - the story of what has happened to people in the past and what is happening today coupled with a discussion of the future we want. A community story explores these perspectives in a number of topic areas such as children, youth, women, men, elders, family life, economic life, social life, spiritual and cultural life, political life, land selection and management, and infrastructure development.
- A planning stage – using the foundation of the community story, mapping out the key areas for planning and beginning the work of identifying the community's vision, goals, and strategies for each area of focus.

For a plan to be effective, it needs a strong sense of ownership from a core group of people who are engaged in the process of making the plan as well as implementing it. This group ideally has representation from Chief and Council, the sponsoring organization, and key departments and agencies. It also needs to include the voice of Elders, youth, women, and men – including community members living off-reserve.

A key aspect of the plan is its monitoring and evaluation process, which needs to provide useful feedback and information about how well each of the focus areas are progressing towards their goals, the challenges they are facing, and help adjust strategies as needed to continue the

journey ahead. The development of a monitoring and evaluation process is part of the development of the comprehensive community plan.

Often, technical consultants are useful in the facilitation and development of this plan. The key is for consultants to facilitate community ownership of the plan throughout this process – that it reflects community realities, priorities, and vision.

5.1.3 Community Safety and Stability

The process of healing and change works best in conditions of safety and stability. When individuals and communities face consistent threats in various forms, it is hard for healing to gain a foothold. As described by Sousan Abadian (Abadian, 1999):

> "In cases of collective trauma, the initial task requires generating a holding environment strong enough to hold a community through a recovery and revitalization process. This in turn requires reconstituting the components of the holding environment that have atrophied or fallen into disrepute – namely, recreating productive and life-enhancing formal and informal institutions, including structures of authority, and reinvigorating constructive sources of social cohesion, including imparting the collectivity with a positive sense of itself"

A positive sense of self comes with cultural renewal. This strengthens the holding environment and aids the healing process. As described in a report for the Aboriginal Healing Foundation (Chansonneuve, 2007):

> "traditional Aboriginal teachings are especially important to addictions and trauma recovery as they are the very opposite of what Aboriginal children were taught at residential schools:
>
> > 'There they were not permitted to take personal responsibility. They were taught they were savage and incapable of responsibility in order to justify having the values and beliefs of others who were supposedly more worthy, imposed on them. These teachings aren't intellectual; they're experiential. How do we teach and live them in a way that is meaningful? How can we provide an experience that will illustrate each teaching? People who are suffering need to learn these teachings experientially. That's how we learn. What does this mean for programs?'
>
> Traditional teachings counter the residential school legacy by replacing the shame-based beliefs that children were taught about Aboriginal cultures with beliefs that are

> life-sustaining. Whether from Inuit, Métis, or First Nation traditions, traditional teachings have in common the capacity to promote and restore:
>
> • self-respect, self-care, and self-responsibility; and
> • respect and responsibility for the family, the community, the nation, and the environment"

Cultural renewal is an important component of a stable holding environment. Additional components include crisis response, economic development, capacity building, and leadership.

5.1.4 The Importance of Leadership in Community Change and Healing

A generally accepted expectation of leadership is guidance through a crisis and through processes of development, change, and growth. While the responsibility of leadership, it is not a task they can do alone – especially in times of crisis.

> "During times of crisis, individuals tend to actively seek authority figures to restore equilibrium – to come up with some solution – to provide 'decisive direction, protection, orientation, control of conflict, and the restoration of norms'. This is a relatively easy task for authorities when their communities are confronted with routine or technical problems – problems that have a clear problem-definition and solution, and where solutions are easily provided by appropriate 'experts'. However, those in authority are faced with a predicament when the social system is confronted with adaptive problems – when the problem-definition and/or solution is unclear and cannot be resolved by experts because the problem lies in the values, habits, and behavior of constituents, and requires them to do the work of changing their beliefs and behavior. That is, 'the problem cannot be abstracted from the people with the problem, and therefore, their responsibility-taking and learning become necessary to progress'." (Abadian, 1999)

In times of crisis and change, leaders are looked to for a sense of equilibrium – that things can either be restored to their previous balance or grow in a good way towards a new way of living and being. In the case of technical problems, systems, procedures, stakeholders, and partners can be called on to assist. In the case of adaptive problems, such as community crisis, the problem is embedded in the community. The role of leadership then lies in helping guide a community through a change and healing process that includes changing beliefs and behavior, taking responsibility for current actions and outcomes, and learning as the key to growth.

Community leadership is also required to set an example of health and healing.

> "In situations where whole communities have experienced various degrees of trauma, and thus, the community is confronted with the adaptive work of recovery from trauma, individuals in positions of authority face a particularly difficult set of challenges. Not

> only must they be relatively "healthy" – even if it is one step ahead of their community in their recovery – or at least be able to model a degree of health (despite the possible impact of trauma on them as individuals inside the affected social system), but also, they must have the vision and the skills to know how to pace and manage social learning processes (e.g., be aware of the nuances of the community's processes, the work of recovery and the social and individual defenses against this work, how to utilize their authority, and the community's resilience and adaptability); and further, they must walk the razor's edge of legitimacy." (Abadian, 1999)

Social learning processes include the development, change, and healing of community. Leading and facilitating this process requires understanding its mechanics.

5.1.5 Understanding the Community Change and Healing Process

After reviewing a number of successful community examples such as Alkali Lake, Eskasoni, and others, ten key characteristics were identified that define a uniquely Aboriginal approach to addictions prevention and intervention (Chansonneuve, 2007) :

1. An Aboriginal approach identifies and addresses the underlying causes of addictive behaviours unique to the historical experiences of Aboriginal people in Canada
2. The wisdom of Aboriginal cultures and spirituality is at the very heart of healing and recovery
3. The relationship among suffering, resilience, experiential knowledge, and spiritual growth is acknowledged and honoured
4. The interconnectedness among individuals, families, and communities is strengthened
5. The differing pace at which individuals, families, and communities move through the stages of healing is understood and respected
6. Healing encompasses a range of traditional and contemporary activities with an equally valued role for everyone in the circle of care
7. Community health and community development are inseparable
8. Culture is healing
9. Legacy education is healing
10. Healing is a lifelong journey of growth and change

The scope of these characteristics encompasses aspects of cultural, community, religious, and family life. This presents healing as a complex picture - and process of inter-connected domains that have interacted over time in a harmful way and now begin a process of acting together in a healthy way.

How does this process work? As described by the Aboriginal Healing Foundation (Wesley-Esquimaux & Smolewski, 2004)

> "Healing from historic trauma begins with creating a personally and culturally safe environment where the impacts of history, including the legacy of abuse in residential and boarding schools, can be safely explored. Reconnecting with culture plays a significant role in this process. The second stage involves remembering and mourning personal losses, as well as those of parents, grandparents and ancestors. The final three stages are dreaming, building and rebuilding healthy relationships and giving back to family and community in the spirit of self-determination."

The stages and process of healing have been described in clear and comprehensive detail in a research study jointly sponsored by the Solicitor General Canada and the Aboriginal Healing Foundation: Mapping the Healing Journey: The final report of a First Nation Research Project on Healing in Aboriginal Communities. This report, based on the analysis of a number of models and best practices in First Nations communities, presents "a clear and comprehensive articulation of what is meant by individual and community healing in the context of Aboriginal communities, how healing is related to the development of well-being and prosperity and how healing and development efforts can best be nurtured and supported." (P. Lane, Bopp, Bopp, & Norris, 2002)

This report describes the process of community healing using the metaphor of a journey along the Medicine Wheel from Winter through to Fall:

> "Stage 1: The Journey Begins (Thawing from the long winter)
> Stage 2: Gathering Momentum (Spring)
> Stage 3: Hitting the Wall (Summer)
> Stage 4: From Healing to Transformation (Fall)
>
> Taken together, these stages form one type of "map" of the healing process, which can be useful both for understanding the current dynamics of the community process and determining future actions and priorities. It must be stressed at the outset that these stages are only approximate models of complex real-life events. They are not "the truth" although there is truth in them. They also do not take place in a linear way. They are more like ripples unfolding in a pool, where each new circle contains the previous ones.
>
> As each stage progresses, those involved further develop their understanding and power to transform existing conditions. This development is primarily driven by a dynamic cycle of action and reflection that generates learning."

Stage 1: The Journey Begins (Thawing from the long winter)

> "This stage describes the experience of crisis or paralysis that grips a community. The majority of the community's energy is locked up in the

maintenance of destructive patterns. The dysfunctional behaviors that arise from internalized oppression and trauma are endemic in the community and there may be an unspoken acceptance by the community that this state is somehow “normal”.

Within this scenario one of two things may happen:

1. Key individuals begin to question and challenge the status quo, often making significant shifts in their own lives. Their personal journey is often characterized by service to their community as they begin to reach out to other individuals to provide mutual support and initiate healing and crisis intervention activities. These activities often are undertaken at great personal sacrifice and they frequently encounter intense and very real opposition from within the community.
2. Another starting point is the program route, in which existing programs and agencies, often frustrated with their inability to affect the scale of the crisis they find themselves dealing with, begin to work closely with other allies in the community to develop a wider strategy. Often interagency groups are formed and begin planning collaborative interventions and initiatives.

Both starting points lead to similar effects. “Healing” begins to make it onto the community agenda. Core groups begin to form that are oriented around health, healing, sobriety, wellness, etc. and these groups begin to lay the foundation of an alternative reality, often with significant support from outside the community in the early stages. Another key source of support and inspiration at this stage are key elders who have kept the cultural ways alive.”

Stage 2: Gathering Momentum (Spring)

“This stage is like a thaw, where significant amounts of energy are released and visible, positive shifts occur. A critical mass seems to have been reached and the trickle becomes a rush as groups of people begin to go through the healing journey together which was pioneered by the key individuals in Stage One. These are frequently exciting times. Momentum grows and there is often significant networking, learning and training. The spirit is strong.

New patterns of organization begin to emerge. A recognizable network oriented around healing begins to develop which is legitimized by the community, often with political support. The healing process begins to take visible form as programs and organizations. There is often a lot of volunteer energy at this stage, but professional organizations are also beginning to emerge. The way the “problem” is seen also begins to change. There is

a gradual shift from a sickness to a wellness model and the focus begins to move from presenting problems to the underlying core issues and traumas.

There is great hope and optimism at this stage. People have the sense that if enough individuals and families can begin the healing journey, then the "problem" will be "solved". Those driving and involved in the process invest huge amounts of time and energy into the community healing movement. There is still opposition but it is generally overshadowed by the enthusiasm of the healing movement."

Stage 3: Hitting the Wall (Summer)

"At this stage there is the feeling that the healing movement has hit the wall. Front-line workers are often deeply tired, despondent or burned out. The healing process seems to be stalled. While there are many people who have done healing work, there are many more who seem left behind. There is the growing realization that it is not only individuals, but also whole systems that need healing. There may already be some new initiatives in these systems (education, governance, economics, justice, etc.). In some cases these initiatives appear to become institutionalized and to lose the sense of spark and hope that characterized them in Stage Two. In other cases, while awareness has begun to shift, old patterns of working persist for lack of new (and culturally relevant) models and strategies. The honeymoon stage is over as the community begins the difficult work of transforming deeply entrenched patterns and reconstructing a community identity that was forged in oppression and dysfunction.

There are often a series of paradoxes at Stage Three:

1. Relations with organizations, agencies and forces outside the community are being transformed. There is often far more openness and the prevailing climate has shifted. The availability of outside support is much greater than in the past. At the same time, support and collaboration within the community itself may have actually decreased, as old patterns begin to re-establish themselves and a "healing fatigue" sets in.
2. Just when a significant number of adults seem to have sobered up and regained control over their lives, a new and seemingly worse crisis seems to be breaking out amongst the youth. Youth crime is on the increase. Alcohol use is replaced or augmented by drug use.
3. Many adults seem to have gained new addictive patterns to replace alcohol abuse. Gambling is becoming a serious social issue, along with prescription drug abuse and other self-medicating behaviours. It also becomes apparent that drinking covered up many other things and community secrets begin to emerge. Despite increased sobriety, things actually seem to get worse

4. To those on the frontlines it may seem as if a lot of people have "dropped out" of the healing movement. Many people don't get involved or show up like they used to. At the same time there may be the emergence of a relatively healthy group of people within the community whose energy is focused on their own lives and the lives of the families. No longer engaging in the "culture of addiction" they would rather spend time on family activities and live their lives than be actively involved in the "culture of recovery".

What appears to have been a wall may in fact be a long plateau. One of the characteristics of a plateau is that not much seems to be happening and you don't seem to be going anywhere, but it is actually where the foundation for all future advances are being laid. On reflection, it is clear that there have been significant gains during this stage. The community norms have shifted; "bad" isn't as bad as it used to be. More people are engaged in positive activities. Capacity is growing within the community as more people access training, education and employment. There is often a cultural and spiritual revitalization that has developed parallel with the healing process, both shaping and being shaped by it.

As Stage Three develops, a new analysis emerges. There is the dawning realization that "healing" alone is not enough and never will be. Healing from the hurts of the past does not build the future. There is growing awareness of the need for decolonization (of thought patterns and structures) and the need to address structural obstacles to development, such as Indian and Northern Affairs Canada rules, racism, poverty, etc. The realities of the economy of scale become apparent. There is only so much you can do as a small community to address such things by yourself."

Stage 4: From Healing to Transformation (Fall)

"In Stage Four a significant change in consciousness takes place. There is a shift from healing as "fixing" to healing as "building" as well as from healing individuals and groups to transforming systems. The sense of ownership for your own systems grows and the skill and capacity to negotiate effective external, reciprocal relationships develop. Healing becomes a strand in the nation-building process. Civil society emerges within communities and the Aboriginal community at large and a shift of responsibility begins to take place. The impetus for healing moves from programs and government to civil society.

The leaders of the healing movement in Stage Two are now entering a new stage in their own lives. They are approaching elderhood and their analysis and vision has matured and deepened. They have shifted their focus from putting out fires to building new and healthy patterns of life and their own families and networks often begin to

significantly reflect such new patterns. A search begins for new partnerships, alliances and support for addressing larger scale issues."

5.1.6 Technical Support

Communities benefit from working with external partners to provide technical expertise in the processes of community healing and change and in evaluation and learning.

Technical support can assist with:

- Developing the comprehensive community plan
- Training and capacity building for community members, leadership, and members of the core group
- Facilitating the community healing process and journey
- Quarterly reflective evaluations that guide the community on its healing journey
- Ongoing coaching and assistance on an as-needed basis

5.2 Promising Healing Practices

The Aboriginal Healing Foundation's Final Report on Promising Healing Practices in Aboriginal Communities (Archibald, 2006) identified a number of key characteristics of promising healing practices as well as success factors related to the healing process.

5.2.1 Key Characteristics of Promising Healing Practices

Promising healing practices were found to share a number of key characteristics, including:

- values and guiding principles that reflect an Aboriginal worldview;
- a healing environment that is personally and culturally safe;
- a capacity to heal represented by skilled healers and healing teams;
- an historical component, including education about residential schools and their impacts;
- cultural interventions and activities; and
- a diverse range and combination of traditional and contemporary therapeutic interventions.

These characteristics were described in more detail in the report as follows:

- Successful healing programs reflect the values, underlying philosophy and worldview of the people who design them. For healing programs designed by and for Aboriginal people, this includes values of wholeness, balance, harmony, relationship, connection to the land and environment, and a view of healing as a process and lifelong journey.

- Establishing safety is a prerequisite to healing from trauma. Promising healing practices ensure the physical and emotional security of participants. Moreover, for Aboriginal people whose cultures and beliefs have been under attack, creating safety extends beyond establishing physical and emotional security to building a culturally welcoming healing environment. Cultural safety includes providing services consistent with and responsive to Aboriginal values, beliefs and practices, as well as creating a physical setting that reflects and reinforces the culture and values of participants.
- Promising healing practices are guided by skilled healers, therapists, Elders and volunteers. A strong link was observed between the promising healing practices identified by organizations and the high regard they placed on the skills, dedication and capabilities of their healing teams. This is consistent with the best practice literature, which consistently identifies committed, skilled staff and volunteers as a characteristic of successful projects.
- The historical component includes learning about the residential school system, its policy goals and objectives, and its impacts on individuals, families and communities. This also includes delving into family and community histories, as well as Canadian history from an Aboriginal perspective. The process allows personal trauma to be understood within a social context and serves to reduce self-blame, denial, guilt and isolation. Understanding history can be both a catalyst for healing as well as pave the way for mourning what was lost—a recognized stage in the trauma recovery process.
- Cultural interventions include activities that engage people in a process of recovering and reconnecting with their culture, language, history, spirituality, traditions and ceremonies to reinforce self-esteem and a positive cultural identity.
- A broad range of traditional therapies are used, often in combination with western or alternative therapies. The approaches chosen are holistic and culturally relevant and they recognize that healing from severe trauma, especially sexual abuse, can be a long-term undertaking.

5.2.2 Success Factors Related to the Healing Process

As part of identifying promising healing practices, the Aboriginal Healing Foundation reviewed programs across Canada and asked them "What helped make this healing practice or program successful?" The most frequently identified success factors included:

- the quality of the healing teams (staff and volunteers, Elders and board members)
- factors related to the chosen therapy and healing methods
- safety

A number of personal qualities of healers and counsellors were identified as being important including: being non-judgemental; knowledge about residential school impacts, traditional roles and ceremonies; hardworking, trained and professional; sensitive, caring and supportive; sober; on their own healing path; Aboriginal; Survivors that speak the language; proud of their heritage; know the community; know their strengths and limitations; good interpersonal skills;

do not put themselves above others; and well-known and respected in the community. In addition to these personal qualities, counsellors who matched the target group in age, gender and life experience, and who had gone through the therapy being used, were appreciated.

Factors related to the chosen therapy included both formal and informal activities (e.g., tea and bannock lunches for Elders, socializing, cultural activities). Traditional healing, ceremonies and the inclusion of culture in the healing program were frequently mentioned, as well as the combination of traditional and Western or traditional and alternative therapies. Additional factors included having a wide range of participants (i.e. mixed generations), a high level of engagement and commitment by participants beginning with planning and continuing to implementation, and the long-term nature of programs.

Safety including references to establishing a safe environment, ensuring confidentiality, building trust and developing guidelines to ensure participants' safety. Another element of safety was the importance of the physical environment: the role of quiet, warm, comfortable surroundings; a place for counselling or meeting without interruptions, often in a separate building or in a natural on-the-land setting; cleansing the healing centre on a regular basis; working in a place that has been decorated in a traditional manner; and counselling away from the office.

Recommendations for Community Healing and Trauma Recovery
• Regional prevention activities for chronic disease prioritize focusing on its root causes and focus on the community healing and change process • Communities that wish to be supported in a long-term comprehensive community healing and recovery process receive funding to build their internal capacity and receive external technical support in order to be able to sustain this work over a 10+ year period • Communities be supported in the development of comprehensive community plans and their subsequent implementation as a first step in systems and community change • Communities receive ongoing funding, support, and assistance as they work to implement and learn from their comprehensive community plans

6.0 Best Practices in Chronic Disease Management

Successful disease management is designed around a number of different ingredients needed to change the system of care and improve the quality of chronic illness care (Improving Chronic Illness Care, 2007):

1) there has to be a clear understanding of the clinical interventions that make a difference, usually in the form of evidence-based guidelines
2) there has to be ideas for changing the system such as the Chronic Care Model that increases the likelihood that the evidence-based guidelines are followed and clinical changes happen
3) because change is extremely difficult, there has to be a process for changing systems and a learning model that guides the application of evidence in practice

6.1 Chronic Disease Management Evidence and Guidelines

Evidence-based guidelines and position statements have been created for diabetes, heart disease, cancer, and their related risk factors, including as examples:

- Type 2 diabetes in Aboriginal peoples (S. B. Harris, Bhattacharyya, Dyck, Hayward, & Toth, 2013)
- Reducing the risk of developing diabetes (Ransom, Goldenberg, Mikalachki, Prebtani, & Punthakee, 2013)
- Organization of diabetes care (Clement, Harvey, Rabi, Roscoe, & Sherifali, 2013)
- Physical activity and diabetes (Sigal et al., 2013)
- Diabetes in the Elderly (Foote, Giuseffi, & Munshi, 2010)
- Smoking cessation and the cardiovascular specialist (Pipe et al., 2011)
- Obesity in children (Canadian Task Force on Preventive Health Care, 2015)
- Health behaviour interventions and cardiovascular disease risk factor modification (Canadian Association of Cardiovascular Prevention and Rehabilitation, 2009)
- Community design, physical activity, heart disease and stroke (Heart and Stroke Foundation of Canada, 2011)

Research has identified gaps between evidence-based guidelines and the care patients receive in medical practice (Bryant et al., 2014; Burch, 2014; Canadia Institute for Health Information, 2009). For this reason, ideas for changing the system such as the Chronic Care Model and Expanded Chronic Care Model are helpful in increasing the likelihood that evidence-based

guidelines are followed and clinical changes happen. Organizations and systems are guided in this effort through utilizing the Model for Improvement and Breakthrough Series Collaborative.

6.2 The Chronic Care Model and the Expanded Chronic Care Model

6.2.1. The Chronic Care Model

The care of patients with chronic disease is complex. Research has found that for patients with more than one chronic condition, that the presence of 1 chronic condition decreases the likelihood that another chronic condition would be treated (Redelmeier, Tan, & Booth, 1998). In other words, health care is well-suited to treating a single, presenting issue but less able to treat multiple conditions simultaneously or over a long period of time and to manage care for chronic conditions. Institutional approaches that do seek to treat multiple conditions simultaneously and manage care for complex chronic conditions have reduced hospital admissions by 60 per cent and the number of days spent in hospital for patients who are admitted by 90 per cent (Alberta Health Services, 2011).

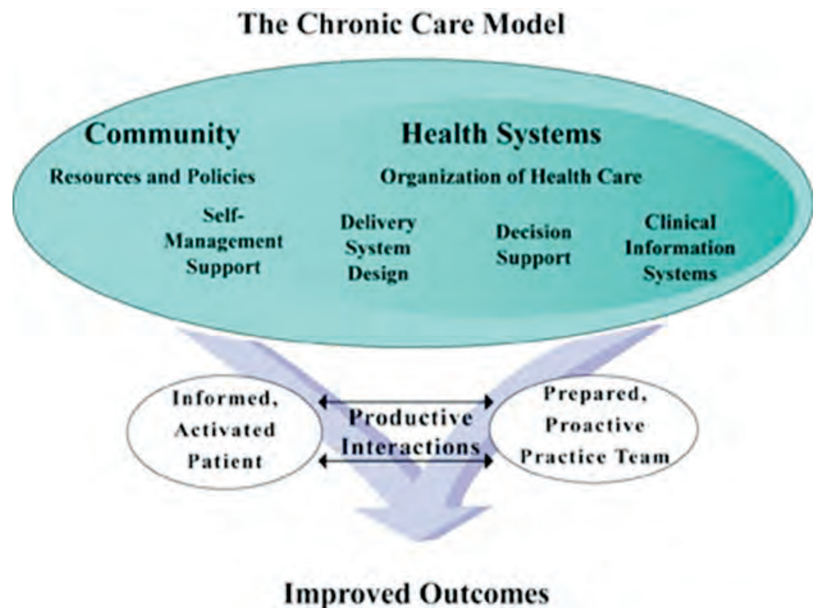
Despite advances in our understanding of chronic disease care and in the effectiveness of treatment, research shows that there is a gap between evidence and practice (S. Harris et al., 2005)(Braga et al., 2010) and that patients frequently do not get the care they want or need (McGlynn et al., 2003). Analysis by the Canadian Institute for Health Information on gaps in diabetes care found in a study population where 96% of people had a regular doctor (Canadia Institute for Health Information, 2009) that:

> "Adults with diabetes are receiving less care than is recommended, including HbA1c tests, urine protein tests, dilated eye exams, foot exams, influenza immunizations and self-managed care. In Canada:
> - 81% of the adult population with diabetes received an HbA1c test
> - 74% received a urine protein test
> - 66% received a dilated eye exam within the past two years
> - 51% had their feet checked by a health professional
> - only 32% had all four of these recommended care components"

In recognition of, and response to, gaps such as these in care between clinical practice and evidence-based guidelines, models such as the Chronic Care Model have been developed and adopted to help transform the care of patients with chronic disease from acute and reactive to proactive, planned and population based.

The Chronic Care Model (see Appendix A) consists of six elements that work together to strengthen the provider-patient relationship and improve health outcomes:

1) delivery systems design
2) self-management support
3) decision support
4) clinical information systems
5) the community
6) health systems



A review of almost 1,000 published articles looked at empirical evaluation(s) of CCM-based interventions and observational studies examining the relationship between the presence of CCM elements and health or financial outcomes (Coleman, Austin, Brach, & Wagner, 2009). Their findings include:

- A review of fifty-one organizations participating in four collaboratives made an average of forty-eight practice changes across all six CCM elements with three-fourths of practices sustaining these changes one year later, and about the same proportion spreading the CCM to new sites or conditions.
- Patients of intervention practices received improved care. Compared to patients in control practices, patients of providers actively participating in a congestive heart failure (CHF) collaborative were more knowledgeable, used recommended therapies such as lipid-lowering and angioten-sin-converting enzyme (ACE) inhibition therapy more often, visited the emergency department (ED) less often, and experienced 35 percent fewer days in the hospital. When their practices redesigned care according to the CCM, patients with asthma were more likely than patients whose practices did not redesign care to monitor their peak flows and have a written action plan, and their quality of life improved. Also, diabetic patients experienced reduced risk of cardiovascular disease; for every forty-eight patients who received care from a redesigned practice, risk declined by one cardiovascular disease event.
- A study of nineteen midwestern community health centers (CHCs) involved in diabetes collaboratives found that based on medical record data taken during the collaborative,

there were significant improvements in the processes of care, but not yet in intermediate outcomes.

- A three-year follow-up study of thirty-four organizations participating in collaboratives found that only process improvements were detected immediately after the collaborative, but that two years later there were significant improvements in intermediate outcomes such as HbA1c and low-density lipoprotein (LDL) levels.
- There are suggestions that the CCM can lower health care costs. One study found that interventions that focus on clinical meetings and registries for diabetes or heart disease care are associated with lower future costs. Another study found that reduced risk of blindness, end-stage renal disease, and coronary artery disease resulted in an increase in quality-adjusted life-years (QALYs) at a price that was cost-effective. However, it should be noted that cost savings take time to materialize and that in the short-term, there may even be increased costs as organizations work to implement the CCM and redesign their practices

6.2.2 The Expanded Chronic Care Model

The success of the Chronic Care Model is a leading best practice for chronic disease management. However, as systems move towards becoming more patient-centric, it is increasingly recognized that

> "clinical efforts will not succeed without complementary community systems that make healthier choices the default or easier option. For example, patients cannot make healthful food choices without access to healthful food; nor can they become physically active without access to safe places for physical activity." (Dietz et al., 2015)

This resonates with the situation summarized earlier where

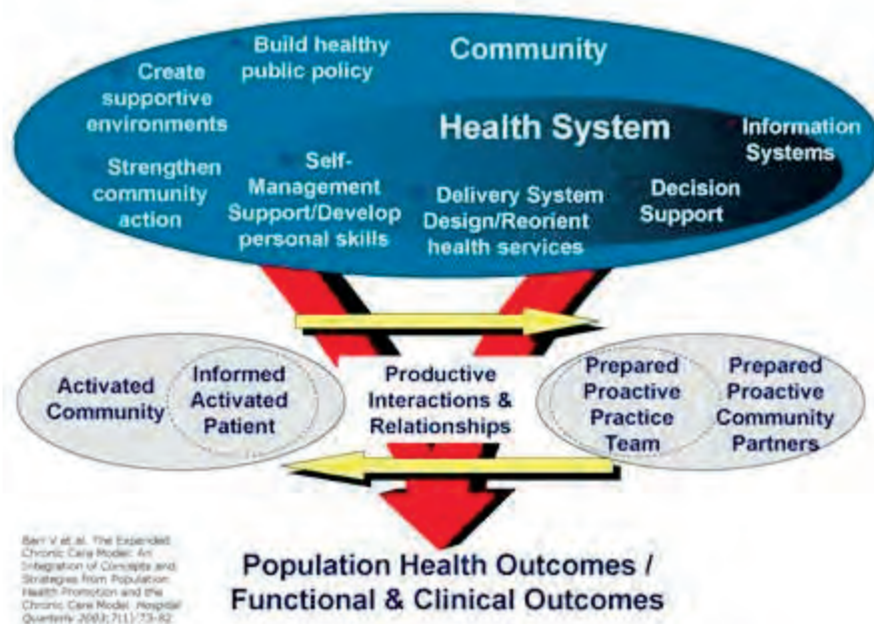
> "the next generation will grow up in the same conditions that have fostered the development and onset of chronic disease in their parents. When these conditions are grounded in poor socioeconomic status, the disease risk is increased and the applications of an adult lifestyle approach to chronic disease is ineffective. Social disparities and inequities in health documented in Aboriginal communities across the country suggest that an adult risk factors approach alone is not enough." (J. Reading, 2009)

The need to link community prevention and clinical care in a more comprehensive approach to chronic disease prevention and management is clear.

The Expanded Chronic Care Model in one effort to integrate preventive efforts in the community and the management of chronic disease. By doing so, it seeks to direct "additional efforts to reducing the burden of chronic disease, not just by reducing the impact on those who have a disease but also by supporting people and communities to be healthy. This strategy requires action on the determinants of health as well as delivering high quality healthcare services." (Barr et al., 2003)

This model integrates the five strategies of Health Promotion articulated in the Ottawa Charter (build healthy public policy, create supportive environments, strengthen community action, develop personal skills, and reorient health services (World Health Organization, 1986)) and an activated community and community partners with the original Chronic Care Model's focus on the key elements of CDM (self-management support, delivery system design, decision support, and information systems) – as depicted in Figure 1.

Figure 1 – Expanded Chronic Care Model ("The Expanded Chronic Care Model: Integrating Population Health Promotion," 2015)



This model speaks to the tighter integration needed between community and clinical care. It envisions

> "community participation in planning, implementation and evaluation of programming and policy development…In real-life situations, the results include broader, interdisciplinary, and inclusive teams that work directly with community supports and leadership to deal with a client's current health concerns by addressing those issues that may lie at the root of some of these problems and are presenting barriers to his or her improvement. As well, the team may use the knowledge of those barriers to support the community in addressing issues, such as food security, social isolation or transportation. By working on both the prevention and treatment ends of the continuum from such a broad perspective, healthcare and other teams represent the best potential for improved health outcomes in the long term. It is this combined approach of effective population health promotion and improved treatment of disease, as suggested by the Expanded CCM, that will be our best weapon against the mounting burden of chronic disease." (Barr et al., 2003)

The synergies in improved health that come from working on both prevention and treatment come by applying best practices in both areas and engaging community and clinical teams in these efforts.

As stated earlier, chronic disease management is complex work and challenges the best health care systems in the world to make effective progress. In fact, despite the attention and effort worldwide spent on chronic diseases, as summarized in a recent article in the journal Health Affairs, no model or approach has yet to deliver "the simultaneous improvement of patient experience, population health, and reduced cost of care." (Dietz et al., 2015)

6.3 The Model for Improvement and Breakthrough Series Collaborative

Because clinical changes are extremely difficult, there has to be a process to support changing systems, such as the Model for Improvement (see Appendix B) used by the Institute for Healthcare Improvement. The Model promotes a structured approach to quality improvement teaching teams to develop detailed aim statements and measurement strategies around an evidence-based change package. System changes are tested in a rapid fashion on a small scale using Plan-Do-Study-Act cycles (PDSA) to build knowledge rather than jumping to implementation. Complementing this is a learning model that permits busy clinical practices to take the intellectual foundation of evidence, the Chronic Care Model, and the Model for Improvement and make the aims and ideas real, the Breakthrough Series Collaborative (see Appendix C) - an action-oriented learning model employing adult learning principles.

The Model for Improvement and Breakthrough Series Collaborative integrate together to form a structure and process for clinical improvements in chronic disease management:

- The process begins with an organization deciding to take on the role of sponsoring organization
- The sponsoring organization hires a few key personnel to do the pre-work associated with a Breakthrough Series Collaborative and funds the Collaborative. The pre-work phase typically lasts 3-5 months, and has as its purpose (Institute for Healthcare Improvement, 2003):
  - (i) Topic Selection – identifying a disease or issue in health care for which there is evidence for action and a gap in practice
  - (ii) Expert Panel – Recruit an expert panel to develop a change package based on the Chronic Care Model but tailored to First Nations. Part of this is identifying the high leverage changes for First Nations from the menu of possible changes that exists.
  - (iii) Faculty Recruitment – identifying experts in the relevant disciplines, including international subject matter experts as well as application experts (individual clinicians who have demonstrated breakthrough performance in their own practice)
  - (iv) Enrollment of Participating Organizations and Teams - Organizations elect to join a Collaborative through an application process. Senior leaders from participating organizations are expected to guide, support, and encourage the improvement teams, and to bear responsibility for the sustainability of the teams' effective changes. To help teams prepare for the start of the Collaborative, prework conference calls are held to clarify the Collaborative processes, roles, and expectations of organization leaders and team members. Traditionally, all applicants who agree to commit to these expectations are accepted. The Collaborative Team typically is composed of a range of professionals including MD, RN, LPN, Pharmacist, Front Office, IT, and any QI people. Regardless of the team structure, the physician must be engaged in the Learning Sessions. Without their participation, change efforts are likely to fail.
  - (v) Developing the Collaborative framework – identifying the population of focus (i.e. patients at risk, patients with multiple co-morbid conditions, community members, etc), assessing baseline dat,a and developing data/indicator measurement and reporting processes
- After the pre-work is completed, the Breakthrough Series follows a format of alternating learning sessions and action periods. Learning sessions, typically face-to-face although

other formats are possible[1], are held quarterly for one-two days and are designed to help participating organizations explore "proven strategies for improving care and refine plans for incorporating these strategies within their organizations" ("BTS Collaborative Training and Materials - Getting Started," 2015). In-between learning sessions are action periods, where teams work to implement their system change plans with the support of collaborative faculty and staff. A Breakthrough Series Collaborative can last anywhere from six to fifteen months.

- Learning sessions and action periods follow the Improvement Model, which leads organizations to ask three fundamental questions, which can be asked in any order:
  - (i) What are we trying to accomplish?
  - (ii) How will we know that a change is an improvement?
  - (iii) What changes can we make that will result in improvement?

  As learning focuses on these questions, planning and action follow the Plan-Do-Study-Act (PDSA) cycle format to rapidly test changes in real work settings and learn and make adjustments as necessary to avoid "failures" during implementation.

- Collaboratives culminate in a closing event, designed to showcase results and promote expansion of the chronic care strategy to other key stakeholders.
- Expansion can both recruit new organizations to join the Collaborative and add new teams from within participating organizations to apply the Collaborative process to new target issues.
- In the first year, Collaboratives can be successful with process changes in clinical care. Improvements in patient outcomes usually take longer. For this reason, the best results are obtained when the Collaborative process is supported and continues across multiple years and cycles.

[1] Although teleconference and telehealth are possible, it is helpful to have at least one face-to-face session to start a Collaborative so participants have a chance to bond and relate

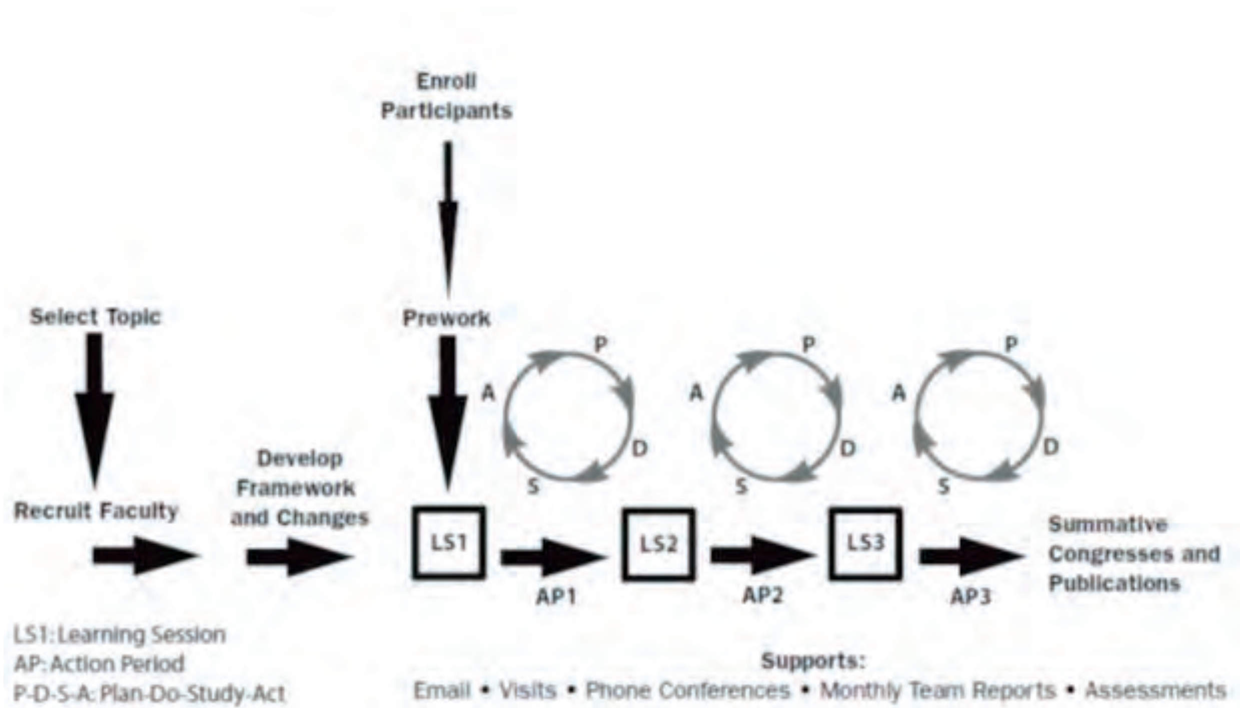


Figure 2: Breakthrough Series Model (Institute for Healthcare Improvement, 2003)

6.3.1 Principles for Successful Chronic Disease Collaboratives

One of our stakeholder consultations included Mr. Mike Hindmarsh who has led and consulted numerous chronic disease management collaboratives in Canada, the USA and internationally. His advice for successful collaboratives included:

- The #1 principle for successful collaborations is voluntary participation. Change is implicit in the quality improvements efforts and is integral to improved clinical care and patient outcomes. Some changes take longer to achieve and are more complex in nature, such as changes resulting in clinical outcomes, whereas others are more achievable in the short-term, such as changes resulting in process outcomes. Either way, change is difficult and tends to meet resistance in various forms. Having staff and teams that are committed to the process and able to persevere through change to improved outcomes happens best when participation is voluntary and based on buy-in for the process of change and the vision for change.
- Quality improvement is an ongoing process, not a project finite in time. Teams that are supported after the initial Collaborative to continue meeting, measuring, and testing are much more likely to achieve transformations in the care system which is a multi-year endeavor. The change and learning that can happen in an organization and its people increases as they participate in a collaborative over a longer period of time.

- As participation is voluntary, focus is also self-determined. Guided by a Collaborative Charter and measurement strategy developed by the Collaborative Planning Team, each team creates their own goals, priorities, and pace for change and benchmarks their own success. The role of the collaborative is to provide technical expertise and support that can help successful change happen.

Additional factors influencing the successful implementation of chronic care models were identified in a systematic review and focused on four themes related to implementation within a primary healthcare setting (Davy et al., 2015):

1. the acceptability of the intervention for healthcare providers
2. a need to prepare healthcare providers for the implementation of a CCM
3. a need to support patients as the way in which they receive care changes
4. ensuring appropriate resources to support implementation and sustainability

The review found high levels of acceptability for the implementation of CCM elements from health care providers because:

- they found the CCM elements to be helpful to their work
- they believed the CCM elements would make a positive impact on the health of their patients
- they found greater work satisfaction and had access to additional resources as a result of implementation

The review found the need to prepare healthcare providers for the implementation of a CCM, specifically:

- a well thought out and articulated argument for change. Quality Improvement initiatives work best when they focus on clearly identified gaps in care and where the goal can be clearly recognised as improvements to patient care rather than change for change's sake. Managers play an important role in leading staff through the change process, including measuring and rewarding success.
- ensuring that staff have the necessary knowledge, skills, and experience to take on new roles and responsibilities prior to implementing a CCM. If, for example, the model included community or family support, it would be helpful for staff to know about relevant community resources. Additional training and on the job support for staff taking on new responsibilities was also helpful.
- providing clearly articulated concepts and examples of how a CCM could work once implemented
- providing structured learning sessions with opportunities for staff to ask questions and raise concerns to help prevent any resistance to change
- In addition to physicians, sufficient nurses, management, and administrative support staff dedicated to chronic disease programs

The review found a number of factors that influenced whether patients were willing and able to engage with the CCM, including:

- providing understandable information about their health, as well as support groups that motivated them to reach their own goals
- Understanding that not all patients were ready or able to take on greater responsibility for their own healthcare. In particular, poor psychological health (health beliefs, motivation and self-efficacy), lower levels of education (poor knowledge or awareness of education services), and other social determinants of health (finance, transport), as well as psychosocial factors (discrimination due to having diabetes, lack of support from family, friends or the community and inappropriate cultural messages), can all act as barriers to self-management
- Personalizing advice to the patient. A client- or patient-centred approach with individualized self-management plans was effective in supporting patients to take responsibility for their own health
- Ensuring that programs were tailored to the needs of the community, including, for example, multilingual staff, adapting and translating materials, redesigning educational handouts towards a pictorial focus, and using interpreters

The review also identified key elements related to the provision of appropriate resources to support the implementation and sustainability of a CCM, including:

- the need to maintain realistic expectations regarding the time required to implement a CCM, including time for patients and providers to trust the process, allowing time for cultural shifts, and not introducing too many simultaneous changes
- Appropriate information and communication systems as tools for identifying and keeping track of patients with chronic disease, monitoring healthcare against service standards, identifying gaps in services, and documenting successes. There were cautions related to information systems including inappropriate design, poor functioning, replicating manual systems, time requirements. There was also strong caution against implementing an electronic medical record system while at the same time working on changes to health care delivery. Information and communication systems need to facilitate, not hinder, the implementation and sustainability of a CCM.
- sufficient funding for all necessary aspects of the CCM
- ongoing monitoring and evaluation, requiring a process for clinical data collection

Recommendations for Evidence-Based Chronic Disease Management
• First Nations communities be supported in adopting elements of the Chronic Care Model and Expanded Chronic Care Model to improve patient care and reduce gaps between evidence and practice in the provision of chronic disease management • A Chronic Disease Collaborative be established for First Nations communities to support their systems and practice changes in chronic disease management

6.3.2 Developing A First Nations Chronic Disease Management Collaborative

Westernized health care has a checkered reputation in First Nations communities, as evidenced by low rates of trust, engagement, and utilization. As described by the National Collaborating Centre for Aboriginal Health (C. Reading, 2014)

> "Several researchers have discovered a long history of Canadian health services and providers that often fail to create 'culturally safe' environments in which Aboriginal people can access care (Browne & Fiske, 2001; Davidhizar, & Newman Giger, 2000; Fontaine & Health Council of Canada, 2012; O'Sullivan, 2013; Shah & Reeves, 2012). Reports suggest that health professionals are sometimes influenced by racial biases and stereotypes when providing services to Aboriginal peoples (Fontaine & Health Council of Canada, 2012; Shah & Reeves, 2012). Ultimately, a lack of culturally sensitive care as well as a shortage of Aboriginal health care providers often limits the comfort Aboriginal people feel about accessing health services (Ibid)."

A Chronic Disease Management Collaborative in the Alberta Region needs to be designed and operate in a way that is decolonizing, specifically:

- embracing First Nations values and traditions
- recognizing First Nations traditional healers and healing modalities
- adapting clinical evidence and priorities to a First Nations worldview

Evidence and best practices from chronic disease management in Indigenous contexts around the world offers lessons to help shape the Collaborative.

A case study from Queensland, Australia identified strategies that grew a community health centre's Indigenous clients from only 12 in one year up to 900 in the next year with continuing growth in subsequent years (Hayman, White, & Spurling, 2009). Reasons Indigenous clients gave for not attending at the clinic included:

- No Indigenous person working within the centre
- Staff perceived as unfriendly and uncaring
- Staff talk down to you, "make you feel shamed"

- Staff body language, as interpreted by Indigenous people, suggested they were not wanted at the centre
- Treated poorly at reception, eg, "Why are you coming in at 4:30pm, we close at 5:00pm? Go home and come back tomorrow"
- Staff showed low tolerance to Indigenous child behaviour: "Keep them quiet"
- Long wait to see doctor
- There is "nothing" at the centre that Indigenous people can identify with

After a community consultation process, five key strategies were identified to guide changes to services to increase access by Indigenous people:

1. More Indigenous staff — employ an Indigenous person as health worker, receptionist or liaison officer for the centre.
2. Culturally appropriate waiting room
    - Purchase or acquire culturally appropriate health posters and artefacts for the centre to help make Aboriginal and Torres Strait Islander people "feel more at home".
    - Play Aboriginal radio station AAA Murri Country on occasions to help Indigenous people identify with the centre.
3. Cultural awareness — provide cultural awareness talks to all staff within the centre.
4. Inform the Indigenous community — disseminate information into the Indigenous community about services available at the centre.
5. Promote intersectoral collaboration
    - Liaise with ACCHSs in the Brisbane area.
    - Liaise with the Inala Aboriginal and Torres Strait Islander Women's Health Support Group.
    - Attend Aboriginal and Torres Strait Islander interagency network meetings.

A case study of the development of a chronic disease strategy in the Northern Territory in Australia identified key elements to creating a strategy that would be relevant to the regions large Aboriginal population (Weeramanthri et al., 2003). This included:

- When looking at the range of possible preventive and management interventions for chronic disease across the life course, finding the right balance between these interventions required a synthesis of evidence and experience, and consideration of local values, demographics and cost effectiveness data. This process was undertaken by community practitioners.
- Explicitly avoiding any appearance of victim-blaming in discussing 'lifestyle' choices since in lower socio-economic groups 'lifestyle' choices are often reflective of unrelenting environmental constraints rather than personal preferences. For example, structural determinants of fresh food availability in remote settings are more important factors than personal choice in determining food intake.

- With respect to Indigenous people, providers recognise that service delivery is complicated by issues of poverty, culture, geographical remoteness and inadequate resource allocation relative to need.
- The special socio-cultural context of chronic disease needs to be understood. Diabetes, for example, is not simply a lifestyle disease, but rather it is seen as resulting directly from colonisation, and bound up with what is often perceived as a 'loss of culture' and a move towards Western patterns of living. In response the focus emphasized creating capacity in local communities so that social relationships and cultural understanding can be developed and systematically incorporated into programs.

A case study of the application of Continuous Quality Improvement principles in primary care services for Aboriginal and Torres Strait Islander peoples identified ways that the CQI process and principles could adhere to the principles and values of Indigenous health research and service delivery. These included (Bailie, Si, O'Donoghue, & Dowden, 2007):

- The participatory approach and the customer focus of CQI, and the combination of scientific and humanistic professional values adhere to the principles and values of Aboriginal and Torres Strait Islander peoples
- the emphasis given to tackling underlying causes (eg, human resource capacity and social conditions, including unemployment), to capacity building (including, specifically, community capacity to understand and use data), and to improving outcomes is also central to CQI as is the development of positive models and a culture of self-evaluation rather than blame.
- Comments by stakeholders evidence the acceptability of CQI approaches in Indigenous primary care services, including:
    - Aboriginal Health Worker "[Generally] when programs come into the organisation, the information goes to management levels [which] have always been responsible for collecting [data collection] and providing the information required. Whereas, the H4L [Healthy for Life] and ABCD processes involved all staff perspectives — all the way from drivers, clinical staff, management and executive — and having input in all stages of the project activities. The project gave all staff the opportunity to have involvement and participation into a different field of work . . . the way we do our work. . . opening up our eyes to different evaluations when entering data, and to see the results . . . what is happening and where the changes can be made."
    - Health Centre Manager "The project has been able to give us a gentle nudge to look at the work protocols and practice in the clinic. Each year the audit feedback showed where our areas of practice were working well and not working so well, and where to set goals/targets for improvements in areas needing more attention to improve services for our clients."

The National Collaborating Centre for Aboriginal Health discussed the need for traditional approaches to chronic disease. Their comments include (Linda Earle, 2013) :

- "Western medical models, which view disease as arising from the body and its components, do not account for the physical, emotional, intellectual and spiritual elements of Aboriginal conceptions of life, health and well-being. This understanding is an integral part of traditional knowledge, which is transmitted intergenerationally through mechanisms such as storytelling, ceremonies, values, medicines and traditional ways of living. Holistic approaches to health and well-being consider physical, emotional, intellectual and spiritual elements, as well as the environment and social institutions such as family and community."
- "Increasingly, traditional and holistic Aboriginal approaches are being used in chronic disease prevention. Considered here in a broad sense, utilizing 'traditional and holistic Aboriginal approaches' may range from integrating Aboriginal knowledge, values and perspectives into existing programs to ensure cultural safety, to developing new prevention programs in collaboration with communities using decolonizing methodologies, to promoting the health benefits of traditional activities, practices, healing and diets through programs or broader policy initiatives."
- "The holistic nature of the Aboriginal world-view suggests an imbalanced focus on the physical elements of disease and risk factors may be less relevant for Aboriginal peoples, and may even cause stress. Additionally, determinants of health beyond personal health practices may be more pressing. Research on the leisure-like pursuits of urban First Nations and Métis diabetics in Winnipeg revealed that for most, diabetes was not their central concern. Instead racism, the legacy of loss, abuse, and the challenges of finding housing, employment and income figured prominently. Leisure activities were culturally based and the goals of these activities included fostering the development of pride, identity and meaning."
- "the explicit incorporation of Aboriginal traditions and culture into programs contributes to the recovery of indigenous knowledge and culture that is an important part of the decolonizing process. Being able to live one's cultural values may be important in supporting healthy behaviours, as these traditional values serve as a basis for decision-making."
- "The use of participatory research in designing interventions is a way to increase ownership and control, important aspects of community empowerment. Community capacity building and empowerment are recognized as important in disparity reduction."
- "Incorporating traditional and holistic approaches will also influence access and utilization of health services, in part by increasing their cultural relevance and value. For example, some of the best-attended components of a diabetic intervention program among the Haida were traditional diet and herbal medicine trials. It has

> been suggested that utilization of health services such as smoking cessation interventions might improve with increased cultural congruence, which traditional healers might be best positioned to provide."

A case study of a systems-focussed and collaborative approach to chronic disease prevention among urban Aboriginals in Canada suggests "unique considerations for implementing and evaluating such interventions in an urban Aboriginal context" (Wilk & Cooke, 2015) . These include:

- The complexity of relationships within mixed urban Aboriginal communities, including cultural differences and political histories, may present barriers to concerted efforts by the local community.
- Colonial history has resulted in what can be deep mistrust of universal organizations by Aboriginal communities and Aboriginal organizations. "Collaboration" with universal organizations may be seen by Aboriginal organizations as attempts to control, and they may feel that self-determination and autonomy are threatened.
- Funding models that are based on client numbers may also exacerbate tensions among Aboriginal organizations, particularly in the context of limited financial resources.
- Projects attempting to improve collaboration within this system should begin by accepting that the existing set of relationships have been shaped by broader political and social forces, acknowledging that this is the context in which they are trying to promote new collaborations.
- Collecting data with sufficient power and controls to identify individual reductions in risk is difficult and expensive, and those changes may take a long time to manifest. Evaluations should identify systems-level change. These could include measures of community capacity or the presence of infrastructure, as well as changes to organizational policies or behaviour. It is these changes that are generally hypothesized to be the intermediate mechanisms that will ultimately affect individual health behaviour and health outcomes, so attention to these levels is important, and such change may be more likely to be seen within the length of a typical evaluation project.
- The evaluation of these projects should focus as much on understanding what works to promote collaboration and in what circumstances, as on ultimate outcomes.
- The complexity of local health systems serving Aboriginal peoples indicates to us that there is unlikely to be any single best approach to improving collaboration among system actors.

The First Nations Health Authority in BC developed a Traditional Wellness Strategic Framework "to outline key objectives and strategies for the promotion, incorporation and protection of traditional medicines and practices" (First Nations Health Authority, 2014) . Their research identified "a number of studies and reports that suggest incorporating holistic wellness into health services for First Nations communities will improve health and wellness. Holistic wellness

is believed to lead to better long term results, not just for the health system but also for communities. A scan of the literature on this topic suggests that:

- Traditional healers are an important entry point on the pathway to care for people who use traditional health services.
- Traditional medicine practices provide more health care alternatives to communities, and this may help in meeting the needs of community members and increasing their access to health care. It follows that increasing access to traditional medicines may decrease the need for acute care services because community members would have the opportunity to access health care options that they desire and feel comfortable with, which in turn increases their compliance to treatment and follow up management care.
- Where there are integrated approaches to health care, i.e. where traditional wellness is combined with mainstream approaches to health, there appear to be positive results. In an integrated model, health care practitioners, medical and traditional, can work together by inter-referring to each other and co-managing patients, and they can share the responsibilities of providing health care."

Another case study from Australia analyzed the acceptability and appropriateness of a care model for Aboriginal and Torres Strait Islander peoples given the need for models of care "that simultaneously deliver evidence based, best practice care and privilege Aboriginal and Torres Strait Islander peoples' understanding of health and health care needs." (Askew et al., 2015)

This model was designed around Case Management combined with patient advocacy and care coordination. A six-month follow-up study found the following results:

- Patient participants became more involved in their primary health care
- Self-rated health status improved
- Rates of depression decreased from around two thirds to one third of participants
- Significant improvements in key clinical indicators (HbA1c, systolic and diastolic blood pressure)
- The rates of hospitalisation decreased
- The ratio of GP consultations for acute care compared with preventive care decreased

A cross-cultural collaboration designed to screen for Chronic Kidney Disease among Canada First Nations used a partnership approach where (Ashton & Duffie, 2011)

> "meetings were held on a monthly basis, with host locations shared by each of the First Nations communities. In order to allow maximal input by all stakeholders, an air of formality with minimal cross-talk was encouraged by the chairperson. Our previous experience in First Nations healthcare had taught us that the most effective method of encouraging discussion and dialogue was for all meeting participants to be given the opportunity to address all members uninterrupted."

This project was the first "to produce prevalence data for CKD, stages two and above, for Canadian First Nations people through direct community population screening of clients". The project found that "over the course of nine months, the project succeeded in screening 83% of all community members over the age of 19 years; 30% of clients were found to have CKD stage two or greater."

Recommendations for the Development of a First Nations Chronic Disease Collaborative
• A Chronic Disease Collaborative needs to establish a culturally safe environment
• The design of a Chronic Disease Collaborative needs to find a balance between interventions based on a synthesis of evidence and experience, and consideration of local values, demographics and cost effectiveness data.
• A Chronic Disease Collaborative needs to explicitly avoid any appearance of victim-blaming in discussing 'lifestyle' choices since in lower socio-economic groups 'lifestyle' choices are often reflective of unrelenting environmental constraints rather than personal preferences. For example, structural determinants of fresh food availability in remote settings are more important factors than personal choice in determining food intake.
• A Chronic Disease Collaborative needs to understand the special socio-cultural context of chronic disease. Diabetes, for example, is not simply a lifestyle disease, but rather it is seen as resulting directly from colonisation, and bound up with what is often perceived as a 'loss of culture' and a move towards Western patterns of living. In response the focus emphasized creating capacity in local communities so that social relationships and cultural understanding can be developed and systematically incorporated into programs.
• A Chronic Disease Collaborative needs to incorporate Aboriginal traditions and culture into its programs to contribute to the recovery of indigenous knowledge and culture that is an important part of the decolonizing process.
• A Chronic Disease Collaborative working to improve collaboration within this system should begin by accepting that the existing set of relationships have been shaped by broader political and social forces, acknowledging that this is the context in which they are trying to promote new collaborations.
• A Chronic Disease Collaborative needs to evaluate systems-level change. These could include measures of community capacity or the presence of infrastructure, as well as changes to organizational policies or behaviour.
• A Chronic Disease Collaborative needs to include and prioritize traditional healers as an important entry point and component of chronic disease management

7.0 Summary of Recommendations

Alberta First Nations are faced with the convergence of:

- Rising rates of chronic disease
- A shortage of staff, systems, and resources with which to address chronic disease
- The continuing impacts of historical trauma and colonialism which give rise to both community crisis and risky behaviors (i.e. heavy drinking, unhealthy eating) associated with increasing chronic disease
- Insufficient support and resources for the healing work that is necessary to address the root causes of behavior risk factors and chronic disease

This action plan is intended to serve as a resource for Alberta First Nations identifying best and promising practices that can guide their efforts to prevent chronic disease in their communities and provide effective chronic disease management for their people.

It also makes recommendations that can strengthen the capacity of the system in order to be able to provide effective chronic disease management and prevention. These recommendations can be considered at a community, tribal council, and regional level as ways of strengthening chronic disease prevention and management are being considered.

The recommendations made throughout the document are summarized here as follows:

1. Recommendations Adapted from the Auditor General Report on CDM in Alberta
1.1 Set regional objectives and standards for Chronic Disease Management services to be provided on-reserve 1.2 Strengthen supports, staffing, and funding in health centers so that CDM services can be provided 1.3 Facilitate the sharing of health information among providers and with the patient themselves 1.4 Evaluate the effectiveness of existing medical record systems and create a plan to improve medical record systems in health centers 1.5 Develop the capacity to assess demand for CDM services across the region 1.6 Quantify the reach of family physician coverage on-reserve, and develop a plan to increase coverage and for the provision of care to patients who do not have a family physician 1.7 Work with Health Directors and staff to support comprehensive team-based care to patients with chronic disease 1.8 Establish systems and processes to measure and report the effectiveness of CDM services

2. Recommendations to Strengthen Health Care Delivery in First Nations Communities
2.1. We recommend that transportation services in First Nations communities be viewed as an integral part of the health care delivery system and be funded accordingly 2.2. We recommend that waiting lists be analyzed to identify areas of high demand and a plan be created to reduce waiting lists for health care services 2.3. We recommend that assistance be provided to help patients navigate and access NIHB services 2.4. We recommend that support be provided for the regional coordination of health care when there are clusters of communities who wish to partner and are able to do so 2.5. We recommend that health care providers and systems be culturally grounded and appropriate 2.6. We recommend that a human resources strategy be developed to address recruitment and retention and that staffing be linked to health status on-reserve and the demand for health care services, with funding to pay staff equitably in comparison to their counterparts in the provincial system and to add staff to build capacity to meet demand 2.7. We recommend that agreements and guidelines be developed to clarify jurisdictional responsibilities and to reduce and eliminate gaps between health care provided on and off reserve, including regarding the flow of information
3. Recommendations from our Stakeholder Consultations
3.1 We recommend the development of protocols and guidelines for patient-centered care that follows First Nations people from on-reserve to off-reserve and return as they access services 3.2 We recommend a review of coverages for medications with the intent of ensuring alignment with provincial standards. We also recommend that other areas of medical care be examined to ensure they are up to the same standards as exists in the provincial system in order to eliminate disparities in the quality of care between the two systems 3.3 We recommend a review of access to diagnostic services and the establishment of standards for access for First Nations communities 3.4 We recommend continued support for food security initiatives as a foundational component of chronic disease prevention. We also recommend that transportation systems and infrastructure on-reserve be reviewed and recommendations made for improvement with an emphasis on how transportation infrastructure, or the lack thereof, contributes to patient care, prevention, and healthy living.

4. Recommendations from our Community Consultations
4.1 We recommend that a guiding principle of regional and community chronic disease initiatives be trust 4.2 We recommend that emphasis be given to supporting and developing health centre teams and health centre leadership – building effective teams, learning effective leadership practices, etc. 4.3 We recommend that chronic disease work and workers be sensitized to trauma and mental health work, and that chronic disease be more tightly integrated with mental health 4.4 We recommend that all chronic disease work be community-driven, with needs identified by the community, projects implemented under the control of communities, and with adequate resources and organizational supports provided to communities who undertake this work 4.5 We recommend that emphasis be given to the role of women in First Nations society as a key component of community healing and change 4.6 We recommend that community programs be designed and offered in partnership with community members so that participation rates can increase 4.7 We recommend that traditional healers be incorporated into chronic disease care and mental health care and that supports and processes be put into place to facilitate their inclusion in these systems
5. Recommendations from Best Practices in Prevention
5.1 First Nations communities be supported in applying evidence for effective prevention in their priority areas related to tobacco reduction, physical inactivity, unhealthy eating, alcohol prevention. 5.2 First Nations communities be supported in prioritizing cost-saving preventive interventions
6. Recommendations for Community Healing and Trauma Recovery
6.1 Regional prevention activities for chronic disease prioritize focusing on its root causes and focus on the community healing and change process 6.2 Communities that wish to be supported in a long-term comprehensive community healing and recovery process receive funding to build their internal capacity and receive external technical support in order to be able to sustain this work over a 10+ year period 6.3 Communities be supported in the development of comprehensive community plans and their subsequent implementation as a first step in systems and community change 6.4 Communities receive ongoing funding, support, and assistance as they work to implement and learn from their comprehensive community plans

7. Recommendations for Evidence-Based Chronic Disease Management
7.1 First Nations communities be supported in adopting elements of the Chronic Care Model and Expanded Chronic Care Model to improve patient care and reduce gaps between evidence and practice in the provision of chronic disease management 7.2 A Chronic Disease Collaborative be established for First Nations communities to support their systems and practice changes in chronic disease management

8 Recommendations for the Development of a First Nations Chronic Disease Collaborative
8.1 A Chronic Disease Collaborative needs to establish a culturally safe environment 8.2 The design of a Chronic Disease Collaborative needs to find a balance between interventions based on a synthesis of evidence and experience, and consideration of local values, demographics and cost effectiveness data. 8.3 A Chronic Disease Collaborative needs to explicitly avoid any appearance of victim-blaming in discussing 'lifestyle' choices since in lower socio-economic groups 'lifestyle' choices are often reflective of unrelenting environmental constraints rather than personal preferences. For example, structural determinants of fresh food availability in remote settings are more important factors than personal choice in determining food intake. 8.4 A Chronic Disease Collaborative needs to understand the special socio-cultural context of chronic disease. Diabetes, for example, is not simply a lifestyle disease, but rather it is seen as resulting directly from colonisation, and bound up with what is often perceived as a 'loss of culture' and a move towards Western patterns of living. In response the focus emphasized creating capacity in local communities so that social relationships and cultural understanding can be developed and systematically incorporated into programs. 8.5 A Chronic Disease Collaborative needs to incorporate Aboriginal traditions and culture into its programs to contribute to the recovery of indigenous knowledge and culture that is an important part of the decolonizing process. 8.6 A Chronic Disease Collaborative working to improve collaboration within this system should begin by accepting that the existing set of relationships have been shaped by broader political and social forces, acknowledging that this is the context in which they are trying to promote new collaborations. 8.7 A Chronic Disease Collaborative needs to evaluate systems-level change. These could include measures of community capacity or the presence of infrastructure, as well as changes to organizational policies or behaviour. 8.8 A Chronic Disease Collaborative needs to include and prioritize traditional healers as an important entry point and component of chronic disease management

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Appendix A – Elements of the Chronic Care Model

Improving Chronic Illness Care, a national program of the Robert Wood Johnson Foundation, developed the Chronic Care Model in the late 1990s. The CCM is summarized on their website (http://www.improvingchroniccare.org/index.php?p=Model_Elements&s=18) and presented in this Appendix.

The Chronic Care Model (CCM) identifies the essential elements of a health care system that encourage high-quality chronic disease care. These elements are:

1) the community
2) the health system
3) self-management support
4) delivery system design
5) decision support
6) clinical information systems.

Evidence-based change concepts under each element, in combination, foster productive interactions between informed patients who take an active part in their care and providers with resources and expertise.

The Model can be applied to a variety of chronic illnesses, health care settings and target populations. The bottom line is healthier patients, more satisfied providers, and cost savings.

The Community

Mobilize community resources to meet needs of patients

- Encourage patients to participate in effective community programs
- Form partnerships with community organizations to support and develop interventions that fill gaps in needed services
- Advocate for policies to improve patient care *(2003 update)*

By looking outside of itself, the health care system can enhance care for its patients and avoid duplicating effort. Community programs can support or expand a health system's care for chronically ill patients, but systems often don't make the most of such resources. A health system might form a partnership with a local senior center that provides exercise classes as an option for elderly patients. State departments of health and other agencies often have a wealth of helpful material available for the asking - wallet cards with tips for controlling diabetes, for example. National patient organizations such as the American Diabetes Association can help by promoting self-help strategies.

Local and state health policies, insurance benefits, civil rights laws for persons with disabilities, and other health-related regulations also play a critical role in chronic illness care. Advocacy by medical organizations on behalf of their patients can make a difference.

Health System

Create a culture, organization and mechanisms that promote safe, high quality care

- Visibly support improvement at all levels of the organization, beginning with the senior leader
- Promote effective improvement strategies aimed at comprehensive system change
- Encourage open and systematic handling of errors and quality problems to improve care *(2003 update)*
- Provide incentives based on quality of care
- Develop agreements that facilitate care coordination within and across organizations *(2003 update)*

A system seeking to improve chronic illness care must be motivated and prepared for change throughout the organization. Senior leadership must identify care improvement as important work, and translate it into clear improvement goals and policies that are addressed through application of effective improvement strategies, including use of incentives, that encourage comprehensive system change. Effective organizations try to prevent errors and care problems by reporting and studying mistakes and making appropriate changes to their systems. Breakdowns in communication and care coordination can be prevented through agreements that facilitate communication and data-sharing as patients navigate across settings and providers.

Self-Management Support

Empower and prepare patients to manage their health and health care

- Emphasize the patient's central role in managing their health
- Use effective self-management support strategies that include assessment, goal-setting, action planning, problem-solving and follow-up
- Organize internal and community resources to provide ongoing self-management support to patients

All patients with chronic illness make decisions and engage in behaviors that affect their health (self-management). Disease control and outcomes depend to a significant degree on the effectiveness of self-management.

Effective self-management support means more than telling patients what to do. It means acknowledging the patients' central role in their care, one that fosters a sense of responsibility

for their own health. It includes the use of proven programs that provide basic information, emotional support, and strategies for living with chronic illness. Self-management support can't begin and end with a class. Using a collaborative approach, providers and patients work together to define problems, set priorities, establish goals, create treatment plans and solve problems along the way.9

Delivery System Design

Assure the delivery of effective, efficient clinical care and self-management support

- Define roles and distribute tasks among team members
- Use planned interactions to support evidence-based care
- Provide clinical case management services for complex patients *(2003 update)*
- Ensure regular follow-up by the care team
- Give care that patients understand and that fits with their cultural background *(2003 update)*

Improving the health of people with chronic illness requires transforming a system that is essentially reactive - responding mainly when a person is sick - to one that is proactive and focused on keeping a person as healthy as possible. That requires not only determining what care is needed, but spelling out roles and tasks for ensuring the patient gets care using structured, planned interactions. And it requires making follow-up a part of standard procedure, so patients aren't left on their own once they leave the doctor's office. More complex patients may need more intensive management (care or case management) for a period of time to optimize clinic care and self-management. Health literacy and cultural sensitivity are two important emerging concepts in health care. Providers are increasingly being called upon to respond effectively to the diverse cultural and linguistic needs of patients.

Decision Support

Promote clinical care that is consistent with scientific evidence and patient preferences

- Embed evidence-based guidelines into daily clinical practice
- Share evidence-based guidelines and information with patients to encourage their participation
- Use proven provider education methods
- Integrate specialist expertise and primary care

Treatment decisions need to be based on explicit, proven guidelines supported by clinical research. Guidelines should also be discussed with patients, so they can understand the principles behind their care. Those who make treatment decisions need ongoing training to stay up-to-date on the latest evidence, using new models of provider education that improve upon traditional continuing medical education. To change practice, guidelines must be integrated

through timely reminders, feedback, standing orders and other methods that increase their visibility at the time that clinical decisions are made. The involvement of supportive specialists in the primary care of more complex patients is an important educational modality.

Clinical Information Systems

Organize patient and population data to facilitate efficient and effective care

- Provide timely reminders for providers and patients
- Identify relevant subpopulations for proactive care
- Facilitate individual patient care planning
- Share information with patients and providers to coordinate care *(2003 update)*
- Monitor performance of practice team and care system

Effective chronic illness care is virtually impossible without information systems that assure ready access to key data on individual patients as well as populations of patients. A comprehensive clinical information system can enhance the care of individual patients by providing timely reminders for needed services, with the summarized data helping to track and plan care. At the practice population level, an information system can identify groups of patients needing additional care as well as facilitate performance monitoring and quality improvement efforts.

Appendix B – Institute for Healthcare Improvement's Model for Improvement

As described by the Institute for Healthcare Improvement (http://www.ihi.org/resources/Pages/HowtoImprove/default.aspx), the Model for Improvement is a simple yet powerful tool for accelerating improvement. The model is not meant to replace change models that organizations may already be using, but rather to accelerate improvement. This model has been used very successfully by hundreds of health care organizations in many countries to improve many different health care processes and outcomes.

The model has two parts:

- Three fundamental questions, which can be addressed in any order
  1) What are we trying to accomplish?
  2) How will we know that a change is an improvement?
  3) What changes can we make that will result in improvement?
- The Plan-Do-Study-Act (PDSA) cycle to test changes in real work settings. The PDSA cycle guides the test of a change to determine if the change is an improvement.

The process for implementing these two parts includes:

- **Forming the Team** - Including the right people on a process improvement team is critical to a successful improvement effort. Teams vary in size and composition. Each organization builds teams to suit its own needs.
- **Setting Aims -** Improvement requires setting aims. The aim should be time-specific and measurable; it should also define the specific population of patients or other system that will be affected.
- **Establishing Measures** - Teams use quantitative measures to determine if a specific change actually leads to an improvement.
- **Selecting Changes** - Ideas for change may come from the insights of those who work in the system, from change concepts or other creative thinking techniques, or by borrowing from the experience of others who have successfully improved.
- **Testing Changes** - The Plan-Do-Study-Act (PDSA) cycle is shorthand for testing a change in the real work setting — by planning it, trying it, observing the results, and acting on what is learned. This is the scientific method adapted for action-oriented learning.
- **Implementing Changes** - After testing a change on a small scale, learning from each test, and refining the change through several PDSA cycles, the team may implement the

change on a broader scale — for example, for an entire pilot population or on an entire unit.

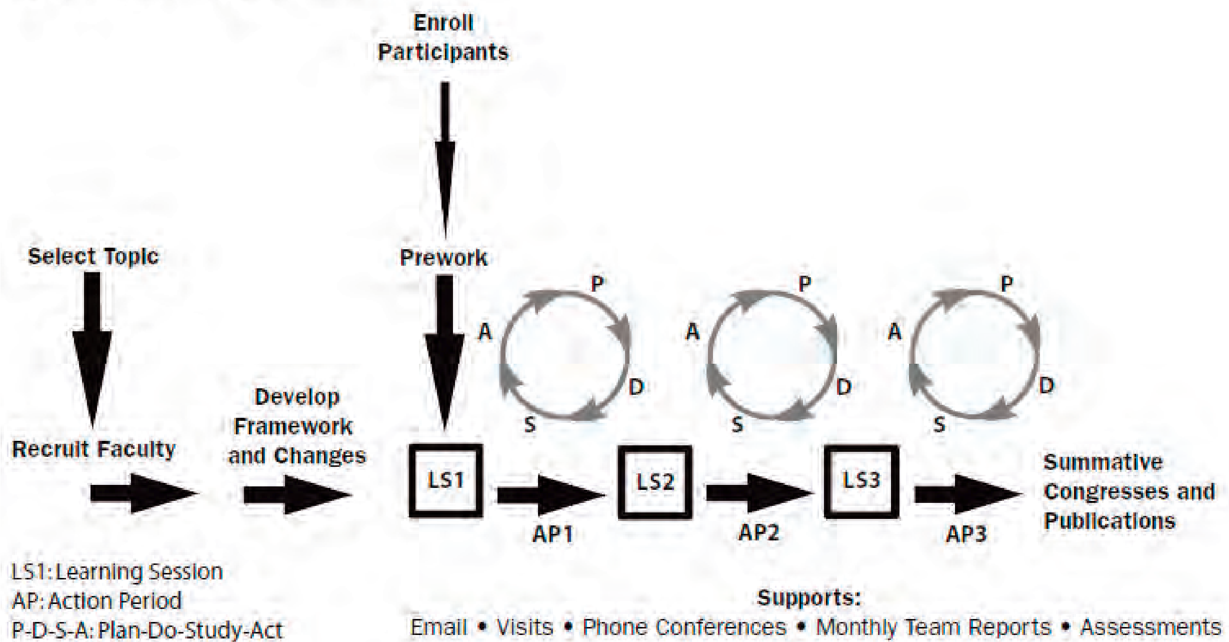
- **Spreading Changes** - After successful implementation of a change or package of changes for a pilot population or an entire unit, the team can spread the changes to other parts of the organization or in other organizations.

Appendix C – Institute for Healthcare Improvement's Breakthrough Series

The following is an excerpt from the IHI Whitepaper: The Breakthrough Series - IHI's Collaborative Model for Achieving Breakthrough Improvement (Institute for Healthcare Improvement, 2003)

The Institute for Healthcare Improvement developed the Breakthrough Series to help health care organizations make "breakthrough" improvements in quality while reducing costs. The driving vision behind the Breakthrough Series is this: sound science exists on the basis of which the costs and outcomes of current health care practices can be greatly improved, but much of this science lies fallow and unused in daily work. There is a gap between what we know and what we do.

The Breakthrough Series is designed to help organizations close that gap by creating a structure in which interested organizations can easily learn from each other and from recognized experts in topic areas where they want to make improvements. A Breakthrough Series Collaborative is a short-term (6- to 15-month) learning system that brings together a large number of teams from hospitals or clinics to seek improvement in a focused topic area. Since 1995, IHI has sponsored over 50 such Collaborative projects on several dozen topics involving over 2,000 teams from 1,000 health care organizations. Collaboratives range in size from 12 to 160 teams. Each team typically sends three of its members to attend Learning Sessions (three face-to-face meetings over the course of the Collaborative), with additional members working on improvements in the local organization. Teams in such Collaboratives have achieved dramatic results, including reducing waiting times by 50 percent, reducing worker absenteeism by 25 percent, reducing ICU costs by 25 percent, and reducing hospitalizations for patients with congestive heart failure by 50 percent.



Key elements of the Breakthrough Series include the following:

Topic Selection: IHI leaders identify a particular area or issue in health care that is ripe for improvement:

- existing knowledge is sound but not widely used
- better results have been demonstrated in real-world settings
- current defect rates affect many patients somewhat, or at least a few patients profoundly.

Faculty Recruitment: IHI identifies 5 to 15 experts in the relevant disciplines, including international subject matter experts as well as application experts, individual clinicians who have demonstrated breakthrough performance in their own practice. One expert is asked to chair the Collaborative and is responsible for establishing the vision of a new system of care, providing faculty leadership, and teaching and coaching the participating teams. Typically, chairs devote one or two days per week for the duration of the Collaborative. The chair and the expert faculty assist IHI in creating the specific content for the Collaborative, including appropriate aims, measurement strategies, and a list of evidence-based changes. An Improvement Advisor teaches and coaches teams on improvement methods and how to apply them in local settings.

Enrollment of Participating Organizations and Teams: Organizations elect to join a Collaborative through an application process, appointing multidisciplinary teams within the organization charged to learn from the Collaborative process, conduct small-scale tests of change, and help successful changes become standard practices. Senior leaders from participating organizations are expected to guide, support, and encourage the improvement teams, and to bear responsibility for the sustainability of the teams' effective changes. To help teams prepare for the start of the Collaborative, IHI conducts pre-work conference calls to clarify the Collaborative processes, roles, and expectations of organization leaders and team members. IHI traditionally accepts all applicants who agree to commit to these expectations.

Learning Sessions: Traditional Learning Sessions are face-to-face meetings, usually three of which are conducted during a typical Collaborative, bringing together multidisciplinary teams from each organization and the expert faculty to exchange ideas. At the first Learning Session, expert faculty present a vision for ideal care in the topic area and specific changes, called a Change Package, that when applied locally will improve significantly the system's performance. Teams learn from an Improvement Advisor the Model for Improvement (described below) that enables teams to test these powerful change ideas locally, and then reflect, learn, and refine these tests. At the second and third Learning Sessions, team members learn even more from one another as they report on successes, barriers, and lessons learned in general sessions, workshops, storyboard presentations, and informal dialogue and exchange. Formal academic knowledge is bolstered by the practical voices of peers who can say, "I had the same problem; let me tell you how I solved it."

Action Periods: During Action Periods between the Learning Sessions, teams test and implement changes in their local settings—and collect data to measure the impact of the changes. They submit monthly progress reports for the entire Collaborative to review, and are supported by conference calls, peer site visits, and Web-based discussions that enable them to share information and learn from national experts and other health care organizations. The aim is to build collaboration and support the organizations as they try out new ideas, even at a distance.

The Model for Improvement: To apply changes in their local settings, Collaborative participants learn an approach for organizing and carrying out their improvement work, called the Model for Improvement (Figure 3). This model, developed by Associates in Process Improvement (*The Improvement Guide*, Jossey-Bass, 1996), identifies four key elements of successful process improvement: specific and measurable aims, measures of improvement that are tracked over time, key changes that will result in the desired improvement, and a series of testing "cycles" during which teams learn how to apply key change ideas to their own organizations.

Summative Congresses and Publications: Once the Collaborative is complete, the work is documented and teams present their results and lessons learned to individuals from non-participating organizations at national and international conferences and meetings.

Measurement and Evaluation: Collaboratives involve regular measurement and assessment. All teams are required to maintain run charts tracking their system measures over time and key faculty members review each team's monthly report to assess the overall progress of the Collaborative.

Appendix D –Recommendations for Communities in the Community Development and Healing Process

The following is excerpted from Mapping the Healing Journey (P. Lane et al., 2002):

- Recommendation 1 - Shift Toward Building Volunteer Capacity. We recommend that what is needed is a conscious shift toward building the capacity of community people (i.e. volunteers) to lead and sustain the healing work. This requires a shift in professional program focus from professionals as the sole providers of healing services, to professionals as capacity builders of key community volunteers and as providers of support and backup to volunteer counsellors, especially related to difficult or advanced healing problems.

- Recommendation 2 - From Crisis Response to Building New Patterns of Life. We recommend that Aboriginal communities in recovery consciously shift a significant portion of what professional community workers do every day from responding to crises and guiding recovery to community development (i.e. to the work of building new patterns of life that people in recovery can enter into).

- Recommendation 3 - Comprehensive Community Healing and Development Plan. We recommend that every community in recovery make a comprehensive (5 to 10 year) community healing and development plan. There are many tools and frameworks that can be used, such as participatory rapid appraisal (PRA). The framework we recommend is called the Community Story Framework, which is based on the Medicine Wheel. This tool has been used in many community-planning processes across North America and around the world and has proven itself to be extremely effective in the Aboriginal context.

- Recommendation 4 - Community Wellness Report Cards. We recommend that all community healing and wellness programs develop and use some form of community wellness report card, and that helping agencies and funders' work with selected communities to develop appropriate measures and tools to assist communities to prepare accurate and effective report cards.

- Recommendation 5 - Measuring Progress and Reporting to "Stakeholders". We strongly recommend that wellness teams take the time (i.e. schedule it in) at least a day a month and an annual retreat for the team, as well as four community consultations a year to assess how the wellness work is progressing and to discuss new ideas and next steps.

- Recommendation 6 - Position Healing Within Other Programmatic Frameworks. We recommend that healing activities be incorporated across many programs (such as youth development, elder-health, community justice, school curriculum, adult education and training, etc.) it is possible to greatly multiply the number of people who are impacted by a community wellness effort and also greatly multiply the impact of wellness related funding. For some people, the very idea that they need “healing” is rejected and they studiously avoid anything with that “healing” label attached to it. However, these same people are often willing to participate in training related to communication or employment readiness or “life skills”. Peacemaking in schools is healing. Family development and parenting are about healing (i.e. learning new, healthier patterns of living). All of these things have healing work embedded in them.

- Recommendation 7 - Develop Special Programs to Address Children and Youth in Crisis. We recommend that communities in recovery and the agencies that support and fund wellness work, take immediate steps to develop comprehensive healing and wellness programs addressed to Aboriginal children and youth. These programs will only work if they are year round, long-term (5 years or more) and sufficiently funded to ensure that every child and youth is “wrapped in a blanket” of love, healing, learning and support. In this there can be no short cuts or half measures if we care about the future of our Nations. (Note: Thanks to the Squamish Nation Crisis Centre program for this metaphor.)

- Recommendation 8 - Establishing Legal Non-Profit Community Organizations. We recommend that Aboriginal communities in recovery build a “firewall” between politics and ongoing community healing and development programs and develop ways and means of funding healing and social development out of the proceeds of community enterprises.

- Recommendation 9 - Establish a Formal Structure and Process for Interagency Collaboration. We recommend the establishment of formal structure and processes to facilitate interagency collaboration. Following are a few suggestions related to how this might work:
    1. A formal structure is needed which involves regularly scheduled meetings and somebody assigned the task of acting as communications hub and as a convener. Without someone working as a "go-between", agencies tend to stay in their own corners.
    2. You can't really have a common inter-agency approach unless you have a common vision and a common plan. The creation of a comprehensive community development plan (see Recommendation 3 above) is an essential part of what is needed. But a simple way to start is to develop an "integrated services and response plan". Most professional agencies respond to needs and crisis (that's basically all that many agencies do). Planning how to support each other, how to share vital information, to consult on the needs of "clients" being served by more than one agency and working to ensure that serious gaps in response and service will produce a much more effective and coherent inter-related and effective array of community programs.
    3. Effective inter-agency collaboration won't happen by itself. Simply calling meetings of agency representatives is often seen as a "waste of time" better spent "doing our own work". Leadership can make a big difference. If chief and council or the leadership of several of the larger agencies call agencies together and challenge them (even require them) to work collectively to maximize the impact of funding to share training opportunities and to improve the quality and the scope of services, most professionals will respond positively to the opportunity to make a difference.
    4. If chief and council were to take 30% of everyone's budget and put it in a common pool to be managed collectively through interagency collaboration, based on a common plan which "the collaborative" (i.e. the interagency team) was required to produce, chances of seeing meaningful and sustained participation by front-line agencies will be greatly increased.

- Recommendation 10 - Managing Outside Help. Many Aboriginal communities do not have the human resources they require to carry out all aspects of the needed healing and wellness development work so, naturally, it is common practice to look for outside help. Unfortunately, it is very different for most communities to find the help they need and not at all uncommon to end up with consultants or employees who simply do not have the training, orientation and experience to do what is required. Indeed, it is not unusual for communities to bring in an employee or a consultant at prices that are far too high for their budgets, only to discover that the person is actually causing problems, rather than solving them. In planning agreements for help from the outside, the following principles should be considered carefully.
  - a) The long view - Healing is not an event; it is a long-term process. How will this work survive this long-term process?
  - b) Building capacity - Outside helpers bring capacity the community doesn't now have. How can at least some of that capacity be transferred to the community as a part of this working relationship with an outside helper?
  - c) Working within a framework - The best use of outside helpers occurs when the community has a plan, a defined process and clear goals that the outside resource is brought in to serve. It's difficult to manage outside help if you are not very clear about how that help can fit in to your plans.
  - d) The morning after - Plan in advance for the time after the outside resource leaves. How will the community be stronger and more able to carry on the healing work?

Appendix E – Recommendations for Supporters and Funders in the Community Development and Healing Process

The following is excerpted from Mapping the Healing Journey (P. Lane et al., 2002):

- Recommendation 11 - Support Mobile Technical Assistance Teams. We recommend that the supporters and funders of community healing work together to create regional technical assistance and facilitative leadership teams. These teams should be small, mobile and sufficiently funded so that they can provide services to community healing programs on a cost-recovery basis (i.e. consulting fees/salaries are paid by the funders, but travel and accommodation costs are covered by the recipient community).

- Recommendation 12 - Cultivate Catalytic Leaders of Community Healing and Coaches of Community Development. We recommend that:
  1. A national clearinghouse service be established to help communities to find and secure human resources for work in community healing and development pro-grams.
  2. A consortium of colleges and universities be assisted to develop and offer world-class training programs that can be delivered regularly across Canada to prepare community and program leaders to work in the field of community healing and development. This training will need to be largely community- based, oriented to practice (as opposed to a theory-centered approach) and integrated into ongoing healing and development efforts.

- Recommendation 13 - Networking and Sharing Innovations that Work. We recommend that the supporters and funders of community healing work with select host communities to facilitate the holding of periodic regional and national sharing and networking conferences. These gatherings should focus on letting community program people talk with each other, rather than on the usual conference agenda filled with professional presentations. In addition to conferences, other formats can be used that will accomplish a similar purpose, including summer institutes, think tanks focused on a particular problem or issue and regional and national reflection meetings in support of new research and program initiatives.

- Recommendation 14 - Provide Core Funding to Proven Programs. We recommend that new funding arrangements be developed by a national network of funders and supporters of Aboriginal community healing that focuses on providing community programs with a proven track record core funding of three to five years duration, and the ability to renew that support based on continued program excellence.

- Recommendation 15 - Invest in Building the Capacity of Groups of Elders to Provide Leadership in Community Healing. We recommend that funders and supporters of Aboriginal community healing work with selected communities to develop and test mechanisms to assist local groups of elders to become leaders in their own community healing process.

- Recommendation 16 - A New Kind of Front-Line Professional. We recommend that:
    - Those funding and supporting Aboriginal community healing and development support the development of a new professional designation in Aboriginal communities called (something like) "Community Development Facilitator".
    - This program be pilot tested in several tribal council areas, thus allowing front-line workers to form a learning and action support circle.
    - National training and mentoring components be created to provide both basic training in community healing and development theory and practice and ongoing coaching and technical support.

  We envision two levels of this type of professional: a front-line level practitioner and regional or national coaches. Training is needed in both of these levels.

- Recommendation 17 - Develop Tools and Processes to Measure Outcomes in Healing and Development Work. We recommend that the funders and supporters of community healing, in partnership with selected communities in recovery, undertake a "measuring healing outcomes" research and development project. The goals of this project should be to produce reliable measurement indicators, strategies and tools that communities can use for gauging the progress of community healing in general, and the specific outcomes of healing strategies methods and initiatives in particular.

- Recommendation 18 - "Support" Requires Building Personal Relationships. We recommend that funders and outside helpers to community healing processes find ways of building in the time and costs involved in making the personal connections that are required to make "support" real and effective. This is an investment that will greatly enhance the quality of service professionals and their agencies are able to offer.

- Recommendation 19 - Invest in Key Individuals (not just program initiatives). We recommend that funders and supporters of Aboriginal community healing develop lines of action that directly support key individuals who are the demonstrated leaders and innovators of community healing.

Appendix F – Best Practices in Alcohol Prevention from the PHAC Best Practices Portal

Best Practice Interventions were selected from the Best Practices Portal as they were relevant to a priority area and if they included information on the impact or evaluation of the intervention. A URL to the program site or mention in the portal is included for more information if desired.

School Health and Alcohol Harm Reduction Project (SHAHRP)

The School Health and Alcohol Harm Reduction Project (SHAHRP) intervention targets students aged 13-14 in 14 schools in Perth, Australia. It adopts a harm minimisation approach by providing three phases of alcohol harm reduction lessons during secondary school and aiming to reduce the level of alcohol related harms in students who drink alcohol, and to reduce the harms experienced by those students who do not drink alcohol but interact with others who do drink. The lessons (skills-based activities) are conducted in three phases with eight lessons in the first year of the program, five booster lessons in the following year during phase two and four additional booster lessons in phase three, two years later. Activities incorporate delivery of information, skill rehearsal, individual and small group decision-making, discussion based on scenarios. A teacher manual and teacher training support the delivery of SHAHRP lessons and a student workbook in phase one and phase two of the program support the activities conducted during the program.

SHAHRP had a statistically significant impact on alcohol related knowledge, attitudes and behaviours early in the programs with some maintenance of impact one year after the second phase of the program had been completed. SHAHRP students had: greater alcohol related knowledge, lower level of total and risky consumption; and lower levels of harm associated with alcohol use.

http://ndri.curtin.edu.au/research/shahrp/index.cfm

Check Your Drinking screener

The Check Your Drinking program is a self-administered, internet-based alcohol behaviour change intervention. The program was built primarily to target problem drinkers who do not seek traditional treatment programs, but it was created in such a way that non-problem drinkers also find it informative and applicable.

The intervention consists of a survey about alcohol consumption behaviours that the participants must fill out. This survey assesses the amount of alcohol consumed by the participant, and the severity of the consequences of drinking that the participant is experiencing. It also collects demographic data, such age, gender, weight, and country of origin. The drinking data is collected in two formats: 10 items make up the Alcohol Use

Disorders Identification Test (AUDIT), and the respondents' drinking is also assessed using a period-specific normal week approach.

Once the survey has been completed, the program generates a personalized assessment feedback form, called "Your Personalized Drinking Profile". This profile displays a summary of the respondent's drinking behaviour, including a pie chart that shows the heaviness of their drinking in relation to national norms for their gender and age group, in addition to information about the likelihood of them experiencing negative consequences due to their drinking, and results of the AUDIT. The profile continues with information about the time it takes for the respondent (determined by gender and weight) to metabolise alcohol, and the number of hours in the last year that the respondent spent under the influence of alcohol. Finally, the profile is concluded with suggestions for safe drinking.

A 12-month randomized controlled trial showed that the CYD was beneficial in the short-term, with reductions in AUDIT scores and weekly drinking lasting up to 6 months after the intervention was administered. However, the intervention effects were no longer apparent in the study population after one year (12 months) had passed.

http://www.checkyourdrinking.net/CYD/CYDScreenerP1_0.aspx

Project Northland

Project Northland is a multilevel intervention conducted in 24 school districts and adjacent communities in northeastern Minnesota beginning 1991. The intervention targeted the class of 1998 (sixth-grade students in 1991) and was been implemented for 3 school years (1991 to 1994). It involved students, peers, parents, and community in programs designed to delay the age at which adolescents begin drinking, reduce alcohol use among those already drinking, and limit the number of alcohol-related problems among young drinkers. Administered to adolescents in grades 6-8 on a weekly basis, the program has a specific theme within each grade level that is incorporated into the parent, peer, and community components. The 6th-grade home-based program targets communication about adolescent alcohol use utilizing student-parent homework assignments, in-class group discussions, and a communitywide task force. The 7th-grade peer- and teacher-led curriculum focuses on resistance skills and normative expectations regarding teen alcohol use, and is implemented through discussions, games, problem-solving tasks, and role-plays. During the first half of the 8th-grade Powerlines peer-led program, students learn about community dynamics related to alcohol use prevention through small group and classroom interactive activities. During the second half, they work on community-based projects and hold a mock town meeting to make community policy recommendations to prevent teen alcohol use.

At the end of 3 years, students in the intervention school districts reported less onset and prevalence of alcohol use than students in the reference districts. The differences were particularly notable among those who were non-users at baseline. Intervention students were less likely to drink alcohol and fewer students reported any alcohol use. Peer influence was shown to have a statistically significant effect on the tendency to use alcohol. Project

Northland increased “functional meanings” that supported non-use and also increased parent-child communication around alcohol use that was found to be specifically effective on tendency to use alcohol.

http://www.epi.umn.edu/projectnorthland/Schoolba.html

Protecting You/Protecting Me

This is a program by Mother’s Against Drunk Drivers in the U.S. for children in grades 1 through 5. It is a classroom-based alcohol prevention and vehicle safety program. Eight lessons are taught each year for 5 years, totaling 40 lessons. Lessons focus on brain development, media awareness, and making decisions. A quasi-experimental design was used to test the program in 2003 and 2004. It found that the program resulted in positive changes in attitudes and knowledge for the children in the program compared to those in the control group, including perception of harm from drinking when underage. Children in the program were also less likely to report riding with an impaired driver and intention to use alcohol, but there was no difference in 30-day alcohol use between the control group and the program group.

http://www.hazelden.org/web/go/pypm

Appendix G – Best Practices in Tobacco Prevention from the PHAC Best Practices Portal

Best Practice Interventions were selected from the Best Practices Portal as they were relevant to a priority area and if they included information on the impact or evaluation of the intervention. A URL to the program site or mention in the portal is included for more information if desired.

Enhancing Tobacco Control Policies in Northwest Indian Tribes

The aim of this program is to work with tribes to develop their own culturally appropriate tobacco use policies.

In the original project, two American-Indian staff members of the Northwest Portland Area Indian Health Board delivered the intervention. Tribal representatives were invited to one of four regional workshops that included an overview of the project, a presentation on the health risks of smoking and environmental tobacco smoke, and an introduction to the Tribal Tobacco Policy Workbook. The regional meetings were followed by a visit to each tribe, where project staff typically worked with members of thetribal health committee or people designated by the tribal council chair. A tobacco policy resolution approved by the tribal council was the goal for each tribe.

http://rtips.cancer.gov/rtips/rtips_details.do?programid=8&topicid=1&co=N&cg=

Forever Free

Forever Free is a program to prevent smoking relapse. It is focused on ex-smokers, and involves 8 brochures being sent to the participants' home (either all at once or over time). A study found that those who had all 8 brochures mailed to them over time, or all at once, had lower rates of smoking relapse than those who had minimum contact.

http://rtips.cancer.gov/rtips/programDetails.do?programId=102985

Lifeskills Training (LST)

The LifeSkills Training program is a school-based program that aims to prevent tobacco, alcohol, and drug use in middle/junior high school students. The program is taught by classroom teachers using interactive teaching methods, such as group discussion, demonstration, and behavioural rehearsal, among others. The main purpose of the program is to facilitate the development of personal and social skills, with particular emphasis on the development of skills for coping with social influences to smoke, drink, or use drugs. The LST program teaches students cognitive-behavioural skills for building self-esteem, resisting advertising pressure, managing anxiety, communicating effectively, developing personal relationships, and asserting one's rights. Rather than provide information about the long-term

effects of tobacco, alcohol, and drug use, the LST program teaches students about the immediate negative consequences of use, the decreasing social acceptability of use, and actual prevalence rates, as this information has been shown to be more pertinent to adolescents.

The LST program has been evaluated a number of times since it began in the early 1980s, including two large-scale effectiveness trials. Evaluations have consistently shown reductions in smoking, alcohol use, and marijuana use in students receiving the LST program when compared with controls, as well as reductions in use of other illicit drugs and improvements in risk and protective factors for adolescent drug abuse.

In addition to the original LST program geared towards middle/junior high school students (grade 6-9), there are adaptations of the program available: the LST Elementary School Program for students in grades 3-6, LST High School Program for students in grade 9 or 10, LST Transitions Program for students in grades 11-12, as well as an LST Workplace Program and an LST Parent Program.

The LST program is one of the most extensively researched and effective prevention programs available and has been increasingly widely distributed in recent years.

http://www.lifeskillstraining.com/

Project ALERT

Project ALERT is a school-based prevention program for middle or junior high school students. It focuses on preventing nonusers from experimenting with alcohol, tobacco, and marijuana use and on preventing users from becoming more regular users or abusers. Based on the social influence model of prevention, the program is designed to help motivate young people to avoid using drugs and to teach them the skills they need to understand and resist pro-drug social influences. The curriculum is comprised of 11 lessons in the first year and 3 lessons in the second year. Lessons involve small-group activities, question-and-answer sessions, role-playing, and the rehearsal of new skills to stimulate students' interest and participation. The content focuses on helping students understand the consequences of drug use, recognize the benefits of non-use, build norms against use, and identify and resist pro-drug pressures.

Project Alert non-users of marijuana and tobacco at 7th grade, participants nearly 50% less likely than other students to become marijuana users by 8th grade, and 60% less likely after addition of booster sessions. Participants were 30% less likely than other students to begin using marijuana. Also reduced likelihood of alcohol use by 24% in revised Project ALERT schools as well as reduced likelihood of suffering alcohol-related consequences (e.g. fighting).

http://www.projectalert.com/

Project EX-4

Project EX-4 is classroom-based smoking cessation and smoking prevention program for youth. It involves 8 sessions (45 minutes each) over a 6 week time period. It uses engaging and motivating activities to prevent, reduce, or stop smoking among adolescents. The program also teaches self-control, anger management, mood management, and goal-setting techniques. A study in California of 12 high schools (approximately 1000 students) found the program to be effective in decreasing weekly and monthly smoking at both the 6 month and 12 month post-tests. Quit rates were also higher for those in the program compared to the control group.

http://rtips.cancer.gov/rtips/programDetails.do?programId=534937

Project Toward No Tobacco Use (TNT)

Project Toward No Tobacco Use (TNT) is a comprehensive, classroom-based curriculum designed to prevent or reduce tobacco use in youth 10 to 15 years old in grades five through ten. Upon completion of this program, students will be able to describe the course of tobacco addiction, the consequences of using tobacco, and the prevalence of tobacco use among peers.

Delivered in 10 core and 2 booster lessons, TNT is proven effective at helping youth to:

- Resist tobacco use and advocate no tobacco use
- Demonstrate effective communication, refusal, and cognitive coping skills
- Identify how the media and advertisers influence youth to use tobacco products
- Identify methods for building their own self esteem
- Describe strategies for advocating no tobacco use

Project TNT is designed to counteract several different causes of tobacco use simultaneously because the behavior is determined by multiple causes. This comprehensive approach works well for a wide variety of youth who may have different risk factors influencing their tobacco use.

http://minorityhealth.hhs.gov/npa/materials/ProjectTowardsNoTobaccoUse.pdf

SmokeChange

SmokeChange is an intervention to reduce pregnant women's exposure to smoking. A SmokeChange educator works with women and their families for up to one year to assist with making changes including smoking less, stopping smoking, and/or decreasing exposure to smoke in the home and car. Educators make between four and seven visits with the women. Visit one collects detailed information to develop a personalized plan for the woman. Steps to change focus on behaviour and cognitive strategies.

An evaluation of 149 women participating in the 'long' program saw 19% quit smoking by their last visit that they were pregnant, 17% tried to quit at least once and reduced smoking by 63% by the end of their pregnancy, and 64% of pregnant women who continued to smoke

reduced smoking by 40%. Pregnant women also made changes to smoking in their homes and cars.

http://cbpp-pcpe.phac-aspc.gc.ca/interventions/smokechange/

Tar Wars

Tar Wars is a school-based prevention education program, offered through the American Academy of Family Physicians, that targets students in grades 4 and 5 to prevent tobacco use. The program focuses on prevention through 3 main activities:

- a pre-activity by the teacher in the classroom to ensure that students understand that only a minority of people smoke tobacco
- a guest speaker (e.g. volunteer family physician or health educator) who focuses on the costs of tobacco, the short-term effects (e.g. bad breath, yellow teeth), the physical effect of less lung capacity and critical thinking about tobacco advertising
- a teacher-led contest where students create a poster on the benefits of not smoking

Pre- and post- tests with close to 3000 students in 68 schools in Colorado showed that students knowledge about tobacco (e.g. costs, short-term effects) increased following the Tar Wars presentation. Focus groups with students and semi-structured telephone interviews with presenters and teachers reported that they were satisfied with the program and that it resulted in new learning.

http://www.aafp.org/patient-care/public-health/tobacco-nicotine/tar-wars.html

The Ottawa Model for Smoking Cessation

The Ottawa Model for Smoking Cessation program is a hospital-based intervention intended to identify and treat tobacco users. It takes advantage of the increased receptivity to smoking cessation interventions that hospitalization may evoke in the patients.

This innovative strategy was originally developed at the University of Ottawa Heart Institute, and was geared toward patients with heart disease. It has since been implemented in hospitals all across Canada and is being used to assist all smoking patients, not just those with heart disease.

The program is based on the “5 A’s” approach to cessation (ask, advise, assess, assist, and arrange). There are six key components to the Ottawa Model for Smoking Cessation:

1. Smoking status is recorded for all patients on admission, and this is documented in their medical records.
2. Bedside counselling is given to all smoking patients; either brief intervention or more intensive may be given, depending on the patient's readiness to quit. If the patient is ready, a nurse counsellor helps them develop a quit plan.
3. Pharmacotherapy is encouraged for all smokers while they are being hospitalized in order to reduce the effects of withdrawal; for those ready to quit, a 10-week NRT pRogram is provided at discharge
4. Self-help manuals are given to all smoking patients, provided by the Canadian Cancer Society.
5. Patients are referred to community-based smoking cessation programs as needed.
6. Patients are all given the option of being contacted regularly (at 3, 14, 30, 60, 90, 120, 150 and 180 days after discharge) by automated Interactive voice response calls. If the patient indicates that they are smoking again or report low confidence that they will remain smoke-free, a nurse counsellor will call and discuss the options with them.

This program has been evaluated many times over the course of its development, with patients showing smoking cessation rates of 30% to 50% after 6 months.

http://ottawamodel.ottawaheart.ca/

Appendix H – Best Practices in Unhealthy Eating Prevention from the PHAC Best Practices Portal

Best Practice Interventions were selected from the Best Practices Portal as they were relevant to a priority area and if they included information on the impact or evaluation of the intervention. A URL to the program site or mention in the portal is included for more information if desired.

Healthy Options for Nutrition Environments in Schools (HEALTHY ones)

To prevent an increase in obesity rates in elementary school students in a low-income school district, the intervention aims are to: 1) eliminate unhealthy foods and beverages on campus; 2) develop nutrition services as the main source for healthful eating (HE), and promote school staff to model healthy eating. The intervention is a two-year quasi-experimental research project (not a natural experiment) that adapts a rapid improvement process and uses participatory principles in order to build school capacity and sustain change. A change team was created in each intervention school (n=4). Outcome measures were behavioral observation (reflects consumption of healthy and unhealthy foods) and BMI. Compared to control schools (n=4), the total outside food and beverage items per child per week decreased in intervention schools (of both healthy and unhealthy foods). No intervention effect was reported for obesity rates (which increased slightly in both intervention and control schools).

http://cbpp-pcpe.phac-aspc.gc.ca/healthy-options-nutrition-environments-schools-healthy-ones/

North Karelia Project (NKP)

The North Karelia Project (NKP) aimed to reduce high cardiovascular disease rates in adults by reducing serum cholesterol levels and saturated fat intake, and increasing vegetable, dietary fibre and polyunsaturated fat intake.

The components of the intervention were general information to the public regarding the dietary recommendations, services organization, and environmental changes.

The intervention included passing legislation banning tobacco advertising, the introduction of low-fat dairy and vegetable oil products, changes in farmers' payment schemes, and incentives for communities achieving the highest reduction in cholesterol levels. The cardiovascular disease related death rates among men have declined by 65%, and the life expectancy among men has increased by 7 years since the intervention began in the 1970s.

https://www.thl.fi/en/web/chronic-diseases/what-s-new/noncommunicable-disease-seminar-ncd-seminar-/north-karelia-project

Revised Supplemental Nutrition Program for Women, Infants and Children (WIC) Food Packages

The WIC (1974; piloted in 1972) is a U.S. federal program that provides supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five. In October 2009, the WIC was revised to better reflect dietary recommendations of the Institute of Medicine and promote healthier weights. The main changes included the provision of cash-value vouchers for fruits and vegetables, new whole-grain products, lower fat content of dairy foods, and reduced juice quantities.

A healthy food supply score (availability, price, and variety in a store) was used to measure access to healthier foods (food environment) before (March-June 2009) and after (April-June 2010) implemention in 33 WIC-authorized and 219 non-WIC convenience and non-chain grocery stores in Connecticut. The increase in the healthy food supply score was 16% in WIC-authorized stores in higher-income neighbourhoods and 39% in lower-income areas, which suggests that the gap in access to healthier foods between higher- and lower-income areas had narrowed (but not been eliminated). A smaller degree of increase (4%) was found in non-WIC stores. Whole grains foods were responsible for most of the increases in healthy food supply score. These findings suggest that the WIC revisions, which were designed to be cost-neutral, improved access to healthy foods for WIC participants.

http://www.fns.usda.gov/wic/women-infants-and-children-wic

The Basic Shelf Experience

The Basic Shelf Experience was offered through Kingston, Frontenac and Lennox & Addington (KFL&A) Public Health in Kingston, Ontario. The program was designed to improve participants' ability to feed themselves and their families by making better use of their food resources and make low-cost, simple and nutritious recipes from a core list of ingredients, plus a few fresh ingredients, using only basic kitchen equipment. The primary goal of The Basic Shelf Experience was to enhance food security by helping those living on a limited income to

- utilize limited food resources more effectively
- use group support to cope with stressors associated with limited income that influence food security
- take individual and collective action to improve their food access

Designed by public health and community groups, the program was administered by community food advisors. Participants met once a week for 6 weeks to discuss food-related issues, and plan and prepare meals using recipes from The Basic Shelf Cookbook, copies of which participants received.

Qualitative findings showed increased confidence, skills and knowledge development

http://cbpp-pcpe.phac-aspc.gc.ca/interventions/the-basic-shelf-experience/

Body & Soul

Body & Soul is a health program developed for African American churches, and was developed in partnership with the American Cancer Society, the University of North Carolina, the University of Michigan, and the National Cancer Institute. It combined two previously successful programs, which were "Black Churches United for Better Health" and "Eat for Life." The program encourages church members to eat a healthy diet rich in fruits and vegetables every day for better health. The program's web site indicates the program works by combining:

- Pastoral leadership
- Educational activities
- A church environment that supports healthy eating
- Peer counseling

The study found that intervention participants showed significantly greater fruit and vegetable intake compared to controls. Positive changes in fat intake, motivation to eat fruits and vegetables, social support, and efficacy to eat fruits and vegetables were also observed.

As a result of the pilot project, a large scale roll-out commenced. Currently there are multiple churches enrolled in the program across the United States. Body and Soul works by combining Pastoral leadership, educational activities, a church environment that supports healthy eating, and peer counseling. Body and Soul also has a spokesperson – Vickie Winans, a renowned gospel artist.

http://rtips.cancer.gov/rtips/programDetails.do?programId=257161&topicId=102266&cgId=

Food Skills for Families

Led by the Canadian Diabetes Association and the B.C. Healthy Living Alliance and funded by ActNow BC, Food Skills for Families is designed for low-income, Aboriginal, Punjabi or new immigrant families in British Columbia communities and offered at no charge. It can be held in school kitchens or similar facilities belonging to other organizations. Groups of 8 to 12 people meet weekly with a certified community facilitator for a maximum of 6 sessions. Participants cook and share meals together and learn about nutrition, safe food handling, meal planning and healthy snacks. The program also builds social support networks within groups.

Evaluation results indicate that participants practise what they have learned, modifying their cooking and eating patterns after completing of the program. The participants also claimed to have greater confidence reading nutrition labels and trying new recipes.

http://www.foodskillsforfamilies.ca/

Farm Stands in Low-Income Communities

The intervention involved introducing farm stands in communities with limited access to fresh and quality fruits and vegetables. One farm stand each was placed in two primarily urban, ethnically/racially diverse, low-income neighborhoods in East Austin, Texas both of which are designated as "food deserts" by the United States Department of Agriculture due to a lack of adequate access to grocery stores. The purpose of this longitudinal pilot study was to measure if introducing small farmers' markets only without any other intervention strategies in underserved communities increased fruit and vegetable (F&V) consumption among local adult residents who live within a walkable distance (.5 mile radius) of the farm stands. Two farm stands were placed outside two local community sites one day a week for 12 weeks. A variety of locally grown, culturally appropriate produce was sold at the stands. The farm stands were set up to accept SNAP (Supplemental Nutrition Assistance Program) benefits. Data on F&V intake, awareness and usage of farmers' markets, family behaviors, and importance of eating F&V were collected from individuals (n=61) before and after farm stands were placed in the two communities. Paired sample t-tests, chi-square and McNemar tests were used to evaluate the impact of the intervention on the outcome variables. Significant increases were found for participants' consumption of fruit, fruit juice, tomatoes, green salad, and other vegetables ($P<.05$). Participants also reported increases in mediating variables of F&V consumption (e.g. increased awareness & usage of farm stands, increased purchase of F&V). This study illustrates the potential of farmers' markets to increase F&V consumption through increasing F&V access in low-income, underserved communities.

http://cbpp-pcpe.phac-aspc.gc.ca/farm-stands-low-income-communities/

Fruit and Vegetable Subsidy Programme

A fruit and vegetable (F&V) subsidy program for disadvantaged Aboriginal children living in rural Australia. The program was instituted at three rural Aboriginal community-controlled health services. Low-income Aboriginal families with one or more children aged ≤ 17 years, whose children were identified as nutritionally at-risk, were invited to participate. The aims of the program were to improve the nutritional status of the children via fruit and vegetable consumption and to engage participants in a nutrition education program. The program involved the provision of a weekly $40 box (or $60 if five or more children in household) of subsidized fruits and vegetables with an individual contribution of five dollars. All families received nutrition information (including seasonal recipes) with the weekly produce boxes. Cooking classes and nutrition education were offered to participants (but were not mandatory). The program was also intended to provide preventive health activities; health assessments including dental and hearing checks, a diet assessment and a blood test, were undertaken for each child. After 12 months, results showed significant increases in the levels of biomarkers of fruit and vegetable consumption, as measured by an increase in plasma carotenoids and

vitamin C. In contrast to the changes in biomarker levels, there were no changes in the self-reported intake of fruits and vegetables.

http://cbpp-pcpe.phac-aspc.gc.ca/fruit-vegetable-subsidy-programme/

Appendix I – Best Practices in Physical Inactivity Prevention from the PHAC Best Practices Portal

Best Practice Interventions were selected from the Best Practices Portal as they were relevant to a priority area and if they included information on the impact or evaluation of the intervention. A URL to the program site or mention in the portal is included for more information if desired.

Youth Fit For Life

Youth Fit For Life is a 12-week after-school physical activity program for children aged 5-12 years who are already enrolled in some form of after-school care. The program is administered by trained after-school counselors with little or no prior PE delivery experience for the widest potential dissemination in the community. Youth Fit For Life meets three times per week for 45-minute sessions that include physical resistance training and cardiovascular exercise in the form of noncompetitive activities and cooperative games. A nutrition and health education component is provided for 5 minutes at each session, centered on a weekly theme. Once a week for 20 minutes, there is training around interactive, behavioral life skills (such as goal-setting, recruiting social support, and positive self-talk) presented in a conversational group format.

http://rtips.cancer.gov/rtips/rtips_details.do?programid=92&topicid=2&co=N&cg

The MEND (Mind, Exercise, Nutrition… Do It!) Program

The MEND (Mind, Exercise, Nutrition… Do It!) Program is a community intervention aimed to empower families of overweight and obese children to adopt and maintain healthy lifestyles. This program combines all the elements known to be important when treating and preventing overweight and obesity in children, including family involvement, behaviour change, practical education in nutrition, and increasing physical activity. MEND is not a diet, nor is designed for rapid weight loss. The purpose of the program is instead to bring about incremental and lasting improvements in families' dietary intake, fitness levels and overall health to help encourage healthy growth and weight management.

The MEND Program has two phases. The first is the intensive phase, during which families attend 20 biweekly sessions over the course of 10 weeks. Each session is 2 hours in length, and is divided into two hour-long parts. The first part of the session is based on theory and is delivered in a workshop-style lesson format to all parents and children. These lessons alternate between being "Mind" and "Nutrition" focused. They are designed to teach practical skills around nutrition, education about healthy food choices and behaviour change techniques to support the implementation of new habits. During the second portion of the

session, the children participate in fun land- or water-based physical activity, while the parents partake in an hour of guided discussion.

The second phase of the program is follow-up support to graduate families that lasts for two years. Families who participated in MEND have to option to continue to be motivated and supported by MEND World activities and resources, including the MEND World webpage, the MEND World passport and the quarterly MEND World magazine. There are also local MEND World activities, such as continued exercise sessions, discounts to local fitness centres, Healthy Growth Checks, anthropomorphic, fitness and psychosocial measurements.

The MEND Programme has undergone a feasibility trial and an RCT trial in the UK. Both studies showed positive results in the health of children and their families that were associated with MEND. Improvements to health included decreases in BMI and waist circumference, and differences were seen in cardiovascular fitness, physical activity, sedentary behaviours and self-esteem in the intervention group of the RCT when compared to the control group. The program also was shown to have a high mean attendance rate and a low attrition rate (79% and 8%, respectively, in the feasibility trial).

http://www.mendcentral.org/

Switch Play

The experimental intervention took place over one school year (10 months) at low SES schools in Australia. The primary aims were to prevent weight gain, reduce screen time, and maintain physical activity levels among ten-year-old students. Secondary objectives were to increase children’s enjoyment of physical activity, and to improve movement skills related to childhood games and sports.

Components were additional the standard curriculum, and consisted of behaviour modification alone; fundamental movement skills alone, and a combination of BM and FMS. The intervention consisted of 19 lessons (38 for the combined group), and was delivered in the school setting (classroom/outdoors) by trained physical education teachers supported by a detailed curriculum.

Both post-intervention and 12-year follow-up data show that the children who were exposed to both the BMS/FMS intervention were significantly less likely to be overweight. There were different results for boys and girls in relation to their overall enjoyment of and participation in PA, and their fundamental movement skills. (Source a: Salmon, Ball et al, 2008).

The intervention was tested again, under real-life conditions, as Switch-2-Activity, in fifteen schools from disadvantaged areas in Melbourne, with 9-12 year old children. The repeated intervention was abbreviated and the materials modified during implementation by the teachers. The intervention did not have any significant effect on children’s physical activity levels, although self-reported screen time for boys was slightly reduced and self-efficacy increased. (Source: Salmon et al, 2010).

http://cbpp-pcpe.phac-aspc.gc.ca/interventions/switch-play/

POWER – Preventing Obesity Without Eating like a Rabbit

Male blue-collar shift workers rarely have been targeted in health promotion interventions. Shift work is seen as a risk factor for developing work related morbidity. POWER (Preventing Obesity Without Eating like a Rabbit) was a weight reduction program for overweight and obese male shift workers. The program was implemented at a large aluminum industrial plant in Tomago, Australia in 2009.

The three-month weight-loss program consisted of:

- Information session: one face-to-face session (75 min) was delivered by one of the male researchers (PJM). The first 60 min of the session covered education about energy balance, the challenges of shift work relating to diet and physical activity, weight loss tips for men, and
  behaviour change strategies including self-monitoring, goal setting and social support.
- Study website: The second part of the information session was a 15 min technical orientation to familiarize and teach participants how to use a publicly accessible, free weight loss website (http://www.calorieking.com.au) utilized in the study. Men were asked to enter their weight once each week online and submit online daily eating and exercise diaries for the first 4 weeks, for 2 weeks in the second month and for 1 week in the third month. Each participant who provided diary entries received up to 7 individualized feedback documents via email over the 3 months from the research team. Each sheet gave feedback on a week of diary entries and suggested personalized strategies to address weight loss, reduce energy intake and increase energy expenditure. Men were able to email the research team with any questions, which were answered weekly by two research assistants with qualifications in health and physical education (ATC) or nutrition and dietetics (BB).
- Resources: Men in the Workplace Power (PW) intervention group were also provided with a weight loss handbook, a website user guide and a YamaxSW200 pedometer."

Monetary incentives were provided for crews achieving high weight loss. These incentives also were designed to encourage social support and motivation.

After the 14-week program men in the control group had lost significantly more weight (on average 4.3 kg) loosing about 5% of their baseline weight compared to controls. In addition, significant treatment effects were found for waist circumference, BMI, systolic blood pressure, resting heart rate and physical activity. Intervention effects were also found for cola

and soda/soft drink intake but not for alcohol risk score which remained high. There were no significant changes for other dietary intake (e.g., change in fruit and vegetable consumption).

Only 28% of the men in the intervention group complied with the online component of the intervention. Those who used the online intervention program had lost more weight than non-compliers and control group participants.

http://www.newcastleinnovationhealth.com.au/capabilities/workplace-power#.VlZUhnarTIW

Partnership for an Active Community Environment (PACE)

The goal of the built environment intervention is to increase physical activity in a low-income African American neighbourhood. The intervention has two components (separated by railroad tracks and analyzed separately) in one neighbourhood: 1) a new six-block walking path; and 2) a new school playground. The evaluation design is serial cross-sectional, with data collected in the intervention neighbourhood and two matched comparison neighbourhoods one year before (2006) and one year after (2008) the intervention (2007). Outcomes include behavioral observation of and self-reported physical activity. Observed moderate to vigorous physical activity was reported to have increased slightly in the area of the walking path (from 36.7% to 41% of people observed), but not in the area of the playground.

http://cbpp-pcpe.phac-aspc.gc.ca/partnership-active-community-environment-pace/

Okichitaw Indigenous Martial Arts Program

A culturally based and developed martial arts program offered to urban Aboriginal adults since 1997. The program, developed by a George Lépine, is based on Cree combat manoeuvres. The Okichitaw aims to empower students and strengthen mental and physical strength.

Positive outcomes was found in the following areas:

- Health and Behaviour
- Knowledge, Skills, Attitudes and Intentions
- Community and Social Level

http://www.nativemartialarts.ca/?page_id=90

Alberta Project Promoting Active Living and Healthy Eating in Schools (APPLE Schools)

The APPLE Schools is a comprehensive school health intervention implemented in selected schools from school jurisdictions in Alberta, in particular schools in socioeconomically disadvantaged neighbourhoods. The primary goals of the project are to improve health behaviours among children and to increase the capacity to promote health-related behaviours

in schools, with the long term goal of preventing overweight and reducing the risk for chronic disease.

The program engages all stakeholders, including parents, staff and community members. The role of the School Health Facilitators includes working with the school community to develop an action plan based on the needs of each community. Strategies implemented in the school are individualized for each school community. Sample activities include:

- supplementing the health curriculum, (e.g. taste-testing, cooking clubs),
- facilitating professional development
- organizing parent information nights,
- increase daily physical activity (example recess and after-school programs, DPA bins), and
- implementing monthly campaigns on a variety of topics from “Be a Sleep Star” to “Create a Rainbow Lunch”. Monthly campaigns include newsletters for parents, bulletin board displays in the school and morning announcements to all students and staff. Facilitators engage staff, students, parents and community members to develop action plans. Each school develops unique and targeted strategies based on their individual needs.

Over a two-year time period (2008 to 2010), students at the 10 participating APPLE schools had higher intakes of fruits and vegetables, lower caloric intakes, were more active and were less likely to be obese. These positive changes in health behaviours were also seen when compared to students elsewhere in the province. Nine of 10 schools implemented nutrition policies, and all 10 schools adopted daily physical activity policies.

As of September 2011, APPLE Schools projects have expanded to 40 schools, with another 17 schools implementing a modified version of APPLE using the same research tools for measurement (Healthy Schools-Healthy Future).

http://www.appleschools.ca/

Annapolis Valley Health Promoting Schools

Seven elementary and one middle school in the Annapolis Valley, Nova Scotia, participated in a 3-year comprehensive program to address risk factors for diabetes – nutrition and physical activity levels. The program followed a community development approach that facilitated partnership building among schools and other organizations and individuals. Programs were designed on the basis of community input and teamwork. Guiding principles of the Population Health Approach, Health Promotion, and Comprehensive School Health were followed. Changes in the schools included introducing healthier choices in cafeterias and vending machines, and increasing opportunities for physical activity.

Recognized as a leader, this project is now a provincial program and within the Annapolis Valley Regional School Board almost all schools are involved.

A study that compared schools with this comprehensive program with schools with a narrower nutrition education program only and to schools with no such programs found large differences in rates of obesity and overweight.

In a cost analysis of the program, the public costs to implement and maintain the program annually were modest, on average $7,830 (CAD) per school, or $22.67 per student.

http://www.avdha.nshealth.ca/sites/default/files/avh_promoting_school_project_0.pdf

Be Active Eat Well (BAEW)

BAEW was a multifaceted community capacity-building program promoting healthy eating and physical activity for children (aged 4-12 years) in the Australian town of Colac. The objective of the study was to evaluate the effects of BAEW on reducing children's unhealthy weight gain. A quasi-experimental, longitudinal design was employed and anthropometric and demographic data was collected from children in four preschools and six primary schools. The study concluded that building community capacity to promote healthy eating and physical activity appears to be an effective way to reduce unhealthy weight gain in children.

http://cbpp-pcpe.phac-aspc.gc.ca/interventions/be-active-eat-baew/

Football Fans in Training (FFIT)

This 12-week weight-loss program, targeting overweight men, was delivered free of charge to male football fans of Scottish professional football clubs. The program was delivered by community coaches employed by the clubs, in weekly sessions that included advice on healthy eating and weight loss, behaviour change motivation, and physical activity. The coaches received two-day training, including SMART goal setting, to support behaviour change and deliver a simple curriculum. The weekly group sessions were gender-sensitive in setting, content, and style of delivery. Peer support, pedometer-based walking program, varied and football-related in-stadium physical activities, and post-program weight management support were emphasized. A post-program weight maintenance phase consisted of e-mail prompts for nine months and a group reunion at six months. The intervention was effective in promoting significant weight loss in the participating group, maintained after 12 months, and also has been assessed as inexpensive and cost-effective to deliver (Gray et al., 2013, 2013b; Hunt et al., 2014).

http://cbpp-pcpe.phac-aspc.gc.ca/interventions/football-fans-training-ffit/

Group Exercise Programs for Long-Term Care Homes

The Functional Fitness for Long Term Care Program was designed to maintain range of motion, improve strength, balance, flexibility, mobility and function of older adults. It is tailored to meet the needs of both high and low mobility residents. Classes are conducted in groups of 4-10 residents by trained facility staff for 45 minutes, three times per week. Four months of exercise led to significant improvements in mobility, balance, flexibility, knee and

hip strength. With minimal training the program can be safely delivered at low cost by institutional staff and volunteers.

http://cbpp-pcpe.phac-aspc.gc.ca/interventions/group-exercise-programs-long-term-care-homes/

Aboriginal Ways Tried and True

Drop the Pop

Drop the Pop is an annual, month-long pan-territorial school-based initiative that encourages youth to reduce their consumption of sugar sweetened beverages and increase the consumption of healthy foods. Students create visual displays, participate in special activities, receive awards and incentives to encourage kids to drop the pop. The initiative started in Nunavut in 2003, and in 2011 was replicated in the Yukon and the Northwest Territories. It has also been adapted by at least one First Nation community (James Bay Cree).

URL: http://dropthepopnwt.hss.gov.nt.ca/resources.htm

Kahnawake School Diabetes Prevention Project

Community university partnership- school-based diabetes prevention program for 6-11 year olds; running since 1994; curriculum based health programming (10 -45 minute lessons per grade) for grades 1-6 along with supplementary community-wide activities. The long-term goal of the KSDPP is to decrease the future occurrence of NIDDM. The short-term goals are to reduce obesity, improve diets, increase physical activity among Kahnawake children ages 6 to 12 years.

Longitudinal data of 1994 to 1996 showed positive effects on skin fold measures compared to comparison communities, but not on BMI, physical activity, fitness or diet.

Repeat cross-sectional measures showed increases in skinfold thickness and BMI and showed positive trends in physical activity, fitness, and television and video watching reported over 1994 to 1999 that were not maintained in 2002. Consumption of high fat and high sugar food consumption decreased, as did fruit and vegetable consumption.

The number of children in any 1 of 3 healthy lifestyle categories (less TV, more physical activity, higher quality diet) increased from 84% in 1994 to 99% in 1998.

http://www.ksdpp.org/

Kainai – Ever Active Schools

The Kinai Board of Education and Ever Active Schools are working together to understand how to improve health and wellness among youth in the community. The project has led to daily physical activity opportunities within the high school, community-wide active living days and other community awareness campaigns. A photo voice project has been used to document

the project and the outcomes achieved to date. Students report better self confidence, health and motivation.

http://cbpp-pcpe.phac-aspc.gc.ca/aboriginalwtt/kainai-active-schools/

Little Salmon Carmacks First Nation Greenhouse & Farm

The Little Salmon Carmacks First Nations started this community garden project in 2000. The garden produces fresh foods which are distributed within community with priority given to members with diabetes, pregnant and nursing mothers, and a local school. The program also provides several employment opportunities for community members. Noted outcomes include: high demand for the produce and increasing number of members with their own backyard gardens, source of pride and media attention. They have been approached by other communities to learn about the model & practices.

http://cbpp-pcpe.phac-aspc.gc.ca/aboriginalwtt/little-salmon-carmacks-nation-greenhouse-farm-yk/

Nimi Icinohabi Program

This is an evidence-based substance abuse prevention program for Aboriginal children and youth (grades 3-9) reviewed and adapted by the Alexis Nakota Sioux to ensure that it incorporated their cultural beliefs, values, language, and visual images. The adapted program was delivered to students at Alexis Nakota Sioux Nation School and changes in student participants' knowledge, attitudes, refusal skills, and self-beliefs were measured. Benefits and challenges of adapting the program were documented. There were positive individual behaviour and community-level changes brought about by the program! A complementary parent program is now in development. Program will be expanded to other communities in Alberta.

http://www.alexised.ca/alexis-heritage-institute/nimi-icinohabi.aspx

Take A Kid Trapping/Harvesting

A land based program established in 2002 aims to provide Aboriginal school aged children with opportunities to participate in food harvesting activities and other traditional skills. The program is based on a need for younger generations to learn about and become able to trap. Each participating community is invited to apply for a cost-sharing program and adapt the programming to their own needs and traditions by incorporating local Elders and trappers. Children participate in camps and other activities where local community members teach students a number of traditional food based skills: building traps, hunting, trapping, preserving meat and other skills. In 2012, 2, 400 youth in NWT participated in the program.

http://cbpp-pcpe.phac-aspc.gc.ca/aboriginalwtt/take-kid-trappingharvesting/

Sandy Lake Health and Diabetes Project

A multifaceted diabetes prevention program implemented over the past 20 years in a remote fly-in First Nations community in northern Ontario. The intervention involves: a school-based diabetes curriculum for children in grades 3 and 4; a diabetes radio show; and community activities aimed at increasing awareness and prevention of diabetes. The program was developed and monitored through a collaborative partnership between the community and academic researchers. Pre-test/post-test evaluation findings report an increase in healthy eating intention, healthy dietary preference, knowledge of health and nutrition and curriculum material, self-efficacy to eat healthy food, increase in dietary fibre and a decrease in screen time. No difference was found in intake of dietary fats although participants had a better understanding of the consequences of high-fat diets.

http://cbpp-pcpe.phac-aspc.gc.ca/aboriginalwtt/sandy-lake-health-diabetes-project/