

# Addressing Rural Health Needs

## Development of a Rural Health Framework and Application for Program Service Planning and Delivery

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## 1.0 Abstract

The health status levels of rural populations differ from their urban counterparts (Fertman, C., Dotson, S., Mazzocco, G., and Reitz, S.M., 2005; Romanow, 2002). Variations in economics, environmental characteristics, demography, and culture affect health status more negatively in rural areas than in urban ones (Hart, Larson, Lishner, 2005). Moreover, chronic disease prevention programs developed by urban planners often apply more to urban than rural settings (Romanow, 2002).

Defining best practices in rural health for service planning and delivery is a major challenge for researchers and community planners alike. Program planning and delivery in a rural setting requires understanding the social determinants of health. To identify best practices, an environmental scan of chronic disease was conducted to explore effective rural health programs in relation to the social determinants of health.

From a population health approach, best practices identified in the literature define six key elements for rural health population program planning and delivery. These can be used as a guideline by rural health program planners. The six key aspects of the framework are to: 1) identify a rural community, 2) review the social determinants of health, 3) focus on a rural health issue, 4) integrate multiple levels of community support, 5) identify community rural health challenges and assets, and 6) address rural health challenges and maximize assets using good practices for rural program planning and delivery.

Unlike other health promotion frameworks, this one emphasizes the need to understand rural communities. Key aspects include rural health identification, social determinants of health, challenge identification, asset identification, and good practices for minimizing health challenges and maximizing assets. Our utilization of this framework demonstrated that it could be applied to any rural program, so adopting it will lead to promising rural health programs.

## CHAPTER ONE: INTRODUCTION

### 1.1 Introduction

Rural populations are understood to have different levels of health status than their urban counterparts (Fertman, C., Dotson, S., Mazzocco, G., and Reitz, S., 2005; Romanow, 2002). Variations in economics, environmental characteristics, demography, and culture in rural areas affect health status (Hart, Larson, Lishner, 2005). On average, rural areas have larger child and senior populations, higher unemployment, higher poverty, higher disability rates, shorter life expectancy, and higher infant mortality rates. They also have higher death rates, particularly due to injuries, circulatory diseases, respiratory diseases, diabetes, and suicide (Desmeules et al., 2006; Public Health Agency of Canada, 2008). Moreover, access to health-care services is limited by low population density, greater distances to travel, and low numbers of practitioners and specialists willing to practise in isolated areas (Romanow, 2002; Public Health Agency of Canada, 2008). Rural Canadians comprise 30.4% of the population; this is equivalent to more than nine million people. Rural areas constitute 95% of the land mass (Society of Rural Physicians of Canada, 2003; Public Health Agency of Canada, 2008). These challenges put rural Canadians at greater risk of having a poorer quality of life and poorer health than their urban counterparts (Romanow, 2002; Public Health Agency of Canada, 2008).

From an epidemiological perspective, rural health disparities and inequalities presented here do not tell the whole story (Hart, Larson, and Lishner, 2005). Population health data describe the health status of the population, but do not usually explore the social determinants of health and policies underpinning variations in rural and urban health (Hart, Larson, and Lishner, 2005). Despite an abundance of health-related data at the federal, provincial, and territorial levels, most do not include meaningful or purposeful rural data (Romanow, 2002).

The report, *How Healthy are Rural Canadi-*

*ans? An Assessment of their Health Status and Health Determinants*, was instrumental in addressing both the determinants of health in rural communities and the health status of those communities by using population health data (Desmeules et al., 2006). This required a pragmatic shift in thinking about population health. The health status of rural populations is determined by a wide range of factors such as income and social status, social support networks, education and literacy, employment/working conditions, social environments, physical environments, personal health practices and coping skills, healthy child development, biology and genetic endowment, health services, and gender (Public Health Agency of Canada, 2006; Romanow, 2002). This population-based health promotion response, which addresses comprehensive health and primary health care, is an effective approach to health-care reform in rural populations (Romanow, 2002). This broader way of thinking about rural health shifts from the “medical model” that encompasses evidence-based medicine to one of community capacity-building for health that also emphasizes a rural health promotion response (Kickbusch, 2003; Romanow, 2002).

### 1.2 Significance of the problem

Identifying best practices in rural health for service planning and delivery purposes is a major challenge for researchers and community planners. Chronic disease prevention programs developed by urban planners are often more applicable to urban than rural settings (Romanow, 2002). The development of a framework that illustrates best practices and linkages to the social determinants of health is essential to providing high-impact programs and services. To develop a framework, researchers conducted an environmental scan from a chronic disease perspective to explore effective rural health programs in relation to the social determinants of health. Searched literature

covered the period from 1998 to 2008. Key words searched included (but were not limited to) intervention, prevention, systematic review, best practice, health promotion, public health, rural, remote, farming, small town, aboriginal health, on- and off-reserve communities, chronic disease, heart health, cardiovascular disease, tobacco control, COPD, asthma, diabetes, mental health, and depression along with their risk factors including healthy eating, active living, and social determinants of health. While the initial focus was on chronic disease prevention, it became apparent that the framework can be applied to other rural health program areas.



## CHAPTER TWO: LITERATURE REVIEW

### 2.1 Defining “rural” populations

The complex nature of characterizing rural population health presents several challenges (Romanow, 2003). In particular, “rural” is an elusive term whose definition shares no universal agreement with policy-makers, researchers, and policy analysts (Smith, K., Humphreys, J., and Wilson, M., 2008). In the past, characterizing the health of rural populations in Canada has been given a lower priority than urban populations (Berkowitz, 2004). While characterizing the health of rural populations in Canada is understood to be a complex endeavour, addressing rural health requires a pragmatic shift in some of the prevailing thinking. This means understanding rural health issues and some of its inherent challenges (Hart, Larson, and Lishner, 2005). Despite the theoretical limitations of the term “rural,” the definitions of rurality help guide policy decisions and serve as a practical analytical tool for program planning (Hart, Larson, and Lishner, 2005). The quest for a meaningful and consistent way of measuring rural health is often precluded by how community health planners, researchers, and policy analysts define it (Smith, K., Humphreys, J., and Wilson, M., 2008).

In Canada, seven main definitions of rural areas exist. Each emphasizes different criteria such as population size, labour market context, population density, or settlement context (Statistics Canada, 2001). The definitions are as follows:

1. **Census Rural**  
This refers to individuals living in the countryside outside centres with populations of 1,000 or more.
2. **Rural and Small Town**  
This classification refers to individuals in towns or municipalities outside the commuting zone of larger urban centres with populations of 10,000 or more (Statistics Canada, 2001). These individuals may be disaggregated into zones

according to the degree of influence of a larger urban centre, called “census metropolitan area and census agglomeration influenced zones (MIZ)” (Statistics Canada, 2001).

3. **Census Metropolitan Area and Census Agglomeration Influenced Zones (MIZ)**  
This refers to a municipality that is assigned one of four categories depending on the percentage of its resident employed labour force who commute to work in the urban core of any census metropolitan area or census agglomeration. Census subdivisions are assigned to a (MIZ) category to include:
  - Strong MIZ: at least 30% of the municipality’s resident employed labour force commutes to work in any CMA or CA.
  - Moderate MIZ: at least 5%, but less than 30% of the municipality’s resident employed labour force commutes to work in any CMA or CA.
  - Weak MIZ: more than 0%, but less than 5% of the municipality resident employed labour force commutes to work in any CMA or CA.
  - No MIZ: fewer than 40 individuals or none of the municipality’s resident employed labour force commute to work in any CMA or CA.
4. **Organization of Economic Co-operation and Development Rural Communities (OECD)**  
This refers to individuals in communities with fewer than 150 persons per square kilometre (Statistics Canada, 2001). It includes those living in the countryside, towns, and small cities inside and outside the commuting zone of larger urban centres (Statistics Canada, 2001).
5. **OECD Predominantly Rural**

#### Regions

This refers to individuals living in census divisions where more than 50% live in OECD Rural Communities (Statistics Canada, 2001). This includes all census divisions without a major city (Statistics Canada, 2001).

6. **Beale Non-metropolitan Regions**  
This refers to individuals living outside metropolitan regions whose urban centres have a population of 50,000 or more (Statistics Canada, 2001).
7. **Rural Postal Codes (Statistics Canada, 2001)**  
This refers to individuals whose postal code has a “0” as the second character (Statistics Canada, 2001). This indicates areas with no letter carriers, where residents pick up their mail at a post office or street postal box (Statistics Canada, 2001).

Although from a program planning perspective seven definitions for rural exist, Statistics Canada recommends the rural and small-town definition as a benchmark for defining and understanding rural populations (Statistics Canada, 2001). However, since there are no standardized and consistent definitions of rural in existing studies or in the studies reviewed, for purposes of this environmental scan the authors’ definitions and criteria of rural have been accepted as meaningful in the context of their work, regardless of how studies treat them.

### 2.2 Determinants of rural health status

Concerns have been raised that inadequate attention has been directed toward the determinants of health and health promotion in rural populations (Romanow, 2002). A growing body of research has established that those determinants could be used to plan, sustain, and improve rural health (Simon-Morton, Greene, and Gottlieb, 1995). The Lalonde Report, A New Perspective on

the Health of Canadians, was influential in Canadian health promotion history (Lalonde, 1974). The report shifted attention from a disease paradigm to a new population health paradigm that emphasized a community health promotion response (Lalonde, 1974). According to the Ottawa Charter for Health Promotion (1984), this approach enables communities to take control of and improve their overall health (Kickbusch, 1986) by leveraging a wide range of factors that determine health status. These include income and social status, social support networks, education and literacy, employment/working conditions, social environments, physical environments, personal health practices and coping skills, healthy child development, biology and genetic endowment, health services, and gender (Desmeules et al., 2006).

Of particular interest is evidence that suggests rural communities have unique characteristics with respect to health determinants, including physical environments, personal health practices, and coping skills (Smith, Humphreys, and Wilson, 2008). First, the locations and characteristics of rural places negatively affect health status (Smith, Humphreys, and Wilson, 2008). Rural communities are often characterized by long distances, lower population density, and widely dispersed population—all serving as barriers for accessing physicians, specialists, programs, services, and technology (Smith, Humphreys, and Wilson, 2008). Also contributing to adverse health outcomes and poorer health are treatment of illness or disease and difficulty accessing primary, secondary, and tertiary care (Smith, Humphreys, and Wilson, 2008). Secondly, rural communities exhibit formidable challenges in lifestyle behaviours (Smith, Humphreys, and Wilson, 2008). Rural populations have a greater incidence of unhealthy or maladaptive behaviour than their urban counterparts (Smith, Humphreys, and Wilson, 2008). According to the report, *How Healthy are Rural Canadians? An Assessment of their Health Status and Health Determinants*, rural areas reported higher smoking and obesity rates, and overall higher mortality rates from circulatory diseases, injuries, and suicides (Desmeules et al., 2006). Unhealthy behaviours are also

influenced by rural socio-economic factors including a higher incidence of low income and poverty, and lower levels of education than their urban counterparts (Smith, Humphreys, and Wilson, 2008).

### 2.3 Aboriginal populations

Few studies express concerns about ethnic populations in Canada's rural communities (Romanow, 2003). This may be explained by a restricted set of rural health indicators and limited data that provide less favourable methods to researchers. In addition, data suppression and under-sampling in rural populations can compromise data integrity and reliability, particularly among minorities and vulnerable populations such as immigrants and aboriginals. Paying considerable attention to vulnerable populations such as aboriginals in rural communities is important because they are often characterized as having a higher burden of disease than non-indigenous people (Smith, Humphreys, and Wilson, 2008). This has been attributed to unaffordability of services, lack of transportation, and unavailability of culturally appropriate services (Smith, Humphreys, and Wilson, 2008). Despite the inherent challenges of rural settings, a theoretical base framework illustrating the relationship between population health and health promotion is needed for evidence-based decision-making and effective health promotion programs. The Population Health Promotion Model (PHP) is one such framework that explains the relationship between population health and health promotion, and incorporates the health determinants in health promotion programming (Public Health Agency of Canada, 2002).

### 2.4 Theoretical framework: the Population Health Promotion Model

According to the Public Health Agency of Canada, the Population Health Promotion Model illustrates that evidence-based decision-making is in the forefront of health promotion activities (Public Health Agency of Canada, 2002; Lefebvre, Warren, Lacle and Sutcliffe, 2006). Policy and program decision makers agree that:

1. Comprehensive action needs to be taken on all the determinants of health by facilitating collaboration among stakeholders to ensure that organizations analyze the full range of possibilities for action.
2. Action needs to be taken on determining and influencing policies and programs conducive to health.
3. The need for co-ordination of activities must be understood by recognizing that there are multiple points of entry to planning and implementation.
4. Health is a multi-faceted concept. It is not just the absence of disease or infirmity; rather, it encompasses emotional, spiritual, physical, and psychological factors as well the physical and social environments in which we live, work, and play.
5. To enjoy optimal health, people need opportunities to meet their social, mental, physical, and spiritual needs. This is possible in an environment that promotes social justice and equality, and fosters mutual respect and caring rather than power and status.
6. Health care, health protection, and disease prevention initiatives complement health promotion—and include a strategic mix of different possibilities. They also require the involvement of people in the development and operationalization of policies (Public Health Agency of Canada, 2002).

This theoretical framework provides an underlying position that addresses population health over the life course, identifies systematic variations in its patterns of occurrence, and applies the resulting knowledge to develop and implement policies and actions to improve the health and well-being of those populations (Public Health Agency of Canada, 2002). The key assumptions that underpin this model illustrate how the relationship between population health and health promotion acts on a full range of health determinants through health promotion strategies and interventions (Public Health Agency of Canada, 2002).

## ■ CHAPTER TWO: Literature Review

### 2.5 Lack of research, policies, and strategies

An understanding of rural health determinants is vital if health promotion programs and health policies are to result in significant improvements in health status (Smith, Humphreys, and Wilson, 2008.) Unfortunately, policies and strategies for improving health implemented in rural settings are not based on solid evidence or research, and do not include policy related to health determinants (Romanow, 2002; Smith, Humphreys, and Wilson, 2008). Instead, policies have concentrated on increasing the workforce and improving access to health-care services in remote and small rural communities, rather than on government and community policy-related determinants of health that operate on a variety of scales (Romanow, 2002; Smith, Humphreys, and Wilson, 2008). Therefore, little connection exists among rural health research, policies, and health promotion programs and strategies—almost inevitably resulting in sub-optimal programs (Romanow, 2002; Smith, Humphreys, and Wilson, 2008). For example, in Ontario, local public health policies that govern chronic disease prevention programs are uniform and do not account for differences in urban and rural settings (Technical Review Committee, 2007). Specifically, the Ontario Public Health Standards frame the expectation of boards of health to provide relevant programs and services to improve the well-being of Ontarians, without providing unique policy approaches appropriate for both urban and rural communities. Therefore, rural health policies related to the determinants of health are essential to providing optimal programs for improving rural health outcomes (Smith, Humphreys, and Wilson, 2008).

### 2.6 Rural population health program delivery

Both the importance of health promotion and prevalence of problems in rural health-care delivery are recognized by stakeholders in clinical settings and public health areas (Schumaker, 2002). Innovative and multi-sectoral chronic disease prevention approaches and programs from local, provincial, and federal governments as well as community agencies can provide mean-

ingful and purposeful data to other rural community stakeholders in guiding their health-promotion policies and programs. To date, best practices in rural health program planning and delivery have not been documented.

### 2.7 Purpose of this report

Building on the Population Health Framework and the Social Determinants of Health, this research report identifies and summarizes the following from a chronic disease perspective:

1. existing effective chronic disease prevention programs applied in rural settings,
2. rural policy implications for public health and other service providers,
3. best practices in systematic rural interventions,
4. elements of best practices for rural health program planning and delivery,
5. an evidence-based framework for rural health program planning and delivery, and
6. application of the Rural Health Framework for program planning and delivery.



## CHAPTER THREE: METHODOLOGY

### 3.1 Database search

While surveys are the most conventional method of environmental scanning, database technology can also provide meaningful data. For this research project, journal articles using online health databases indexed in Academic Search Premier, Pub Med, and CINAHL were used. As part of the search criteria, key words used included: intervention, prevention, systematic review, best practice, health promotion, public health, rural, remote, farming, small town, aboriginal health, on- and off-reserve communities, chronic diseases, heart health, cardiovascular disease, tobacco control, COPD, asthma, diabetes, mental health; and depression risk factors and determinants (Table 1 and Table 2). In general, the e-scan summarized chronic disease and its risk factors in rural settings. Employing a population health lens, the scan identified programs from 1998 to 2008. An exhaustive search of the grey literature was not employed because those sources produced limited results on rural health interventions for chronic disease. Instead, the literature provided an overview of rural differences. The criteria for screening journal publications included: 1) relevance to health promotion and chronic disease prevention, 2) relevance to population health, and 3) focus on primary and secondary prevention rather than tertiary prevention. Where Canadian data were lacking, researchers used data from the United States, United Kingdom, New Zealand, Australia, and Scandinavia.

**Table 1: Search Strategy 1**

Effectiveness	Rural	Interventions	Chronic Diseases	Canada
effective* evaluate* evidence impact outcome* "best practice"* guideline* "systematic review"*	rural "small town**" "remote areas" "remote communities" "remote location**" "farming communities" aboriginal indigenous agricultural	intervention* program* strategy* policy policies prevent* "health promotion" "health education" campaign* "public health" "community health"	"chronic disease**" heart cardiovascular tobacco smoking "chronic obstructive pulmonary disease" asthma diabetes "mental health" depression	Canada Canadian

**Table 2: Search Strategy 2**

Risk Factors/Determinants	Rural	Chronic Diseases	Canada
"risk factors" "risk assessment" determinants epidemiology	"small town**" "remote areas" "remote communities" "remote location**" "farming communities" aboriginal indigenous agricultural	"chronic disease**" heart cardiovascular tobacco smoking "chronic obstructive pulmonary disease" asthma diabetes "mental health" depression	Canada Canadian

## CHAPTER FOUR: RESULTS

### 4.1 Existing effective chronic disease prevention programs in rural settings

Although several articles about such programs exist, few identify or summarize promising chronic disease interventions in rural settings. Overall, 30 articles matched the search parameters (see Appendix B). They discuss chronic disease interventions and public health policies in rural settings. Risk factors associated with chronic disease include unhealthy eating, smoking, physical inactivity, and alcohol use. Three articles were found about smoking, one on substance use, and two on physical activity. No articles specifically about unhealthy eating were found. However, this could be attributed to the search criteria used. On chronic diseases, the following numbers of articles were found: diabetes (8), cancer (1), heart health (5), policy (6), mental health (3), and injury (1). Typically, the articles describe effective rural health intervention programs and public health policy. None were found about effective rural health interventions for injury prevention. It is important to note that the word “cancer” was not part of the search criteria. While it would have been advantageous to widen the search, time constraints made this impossible.

#### 4.1.2 Discussion of rural health interventions

##### DIABETES

Of the eight articles that referred to rural diabetes health programs, seven found effective interventions. According to the article, Development of an Integrated Diabetes Prevention Program with First Nations in Canada, this integrated multi-institutional diabetes prevention program targeting First Nations was effective. It was based on the successful Sandy Lake Health and Diabetes Project and the Apache Healthy Stores program Ho, Gittelsohn, Harris, and Ford, 2006). Although previous literature supports a culturally appropriate diabetes prevention program using a community engagement approach, it is suggested that multiple strategies be utilized for tailoring interventions to: 1) change social norms by intervening

in multiple institutions, 2) address salient concerns, 3) balance community learning preferences with proven strategies, 4) emphasize active community participation, and 5) tailor programs to individual communities (Ho, Gittelsohn, Harris, and Ford, 2006). Combining multiple levels of intervention (school-based, store-based, and community-wide health), integrating theoretical frameworks, and encouraging active involvement of community members with local cultural concepts are factors that have been identified as important to the success of First Nations community-based programs (Ho, Gittelsohn, Harris, and Ford, 2006).

According to the Rationale and Implementation of the SLICK (Screening for Limbs, Eyes, Cardiovascular and Kidney complications) Project and Evaluation of a Mobile Diabetes Care Telemedicine Clinic Serving Aboriginal Communities in Northern British Columbia (Virani et al., 2006, and Jin et al., 2003), mobile diabetes clinics that provide screening and education procedures are effective, beneficial, cost-effective, convenient, and accessible. Moreover, according to Virani et al. (2006), an important factor that contributed to the success of the SLICK Project was its implementation by professionals. The articles, Implementing a Diabetes Prevention Program in a Rural African-American Church (Davis-Smith, 2007) and Pounds Off With Empowerment (POWER): A Clinical Trial of Weight Management Strategies for Black and White Adults With Diabetes Who Live in Medically Underserved Rural Communities (Mayer-Davis et al., 2004) provided an example of modifications to a program that addressed the needs of rural populations. In particular, the effective Diabetes Prevention Program (DPP) sponsored by the National Institutes of Health was modified slightly for rural application. Some modifications included regular use of group sessions, considerably reduced and simplified written materials, inclusion of culturally appropriate examples, encouragement of physical activity in sedentary individuals (Mayer-Davis et al., 2004), and a decrease in the number and duration

of sessions, types of sessions, selection criteria, and levels of support (Davis-Smith, 2007). Each intervention was successful, resulting in weight loss and improved glyce-mic control. Furthermore, it was determined that the DPP can be successfully implemented in a church (Davis-Smith, 2007).

According to the article, Implementing Participatory Intervention and Research Communities: Lessons from the Kahnawake Schools Diabetes Prevention Project in Canada, models implemented in rural areas may need to be modified (Potvin, Cargo, McComber, Delormier, and Macaulay, 2002). To extend this position according to Summersett et al. (2003), diabetes care using a rural outreach model closely approximates, but does not entirely mirror, such care provided in an urban setting. Moreover, using the example of the Kahnawake Schools Diabetes Prevention Project, four principles form the basic components for an implementation model of community programs: 1) the integration of researchers and community members as equal partners in every phase of the project, (2) the structural and functioning integration of evaluation and intervention research components, 3) a flexible agenda responsive to demands from the broader environment, and (4) creation of a project that represents learning opportunities for participants.

##### PHYSICAL ACTIVITY

Of the two articles that referred to physical activity interventions, only one showed the interventions to be effective. According to The Effect of a Primary Care Exercise Intervention for Rural Women, a simple walking program was effective. It included a videotape with home-based exercises, a pedometer, and reinforcement within a primary care practice via telephone contact with nursing staff to motivate patients to adopt a healthy lifestyle (Sherman, Gilliland, Speckman, and Freund, 2006).

##### SMOKING

Of the three articles that referred to smoking interventions, all found them to be effective.

tive. However, the article *The Effectiveness of a Nurse-Managed Perinatal Smoking Cessation Program Implemented in a Rural County* showed that the program influenced the smoking behaviours of recent quitters, but had no effect on those who, at the first prenatal visit, reported smoking (Britton, Brinthaup, Stehle, and James, 2006). This study compared the effects of routine care against the Smoke-Free Baby and Me program, which included the American Cancer Society's Make Yours a Fresh-Start Family program (Britton, Brinthaup, Stehle, and James, 2006). According to the article, *Long-Term Engagement in Smoking Cessation Counselling among Rural Smokers*, the study suggests that longitudinal and high-intensity treatment over a two-year period was both valued and feasible among rural smokers (Cupertino et al., 2007). The high-intensity treatment protocol offered pharmacotherapy and telephone-based counselling that employed a motivational interviewing approach. According to the article, *Aboriginal Users of Canadian Quitlines: An Exploratory Analysis*, smokers' quitlines are an effective intervention for aboriginal populations, specifically men, to help change their tobacco behaviour (Hayward, Campbell, and Sutherland-Brown, 2007). From a health promotion perspective, effective outreach included referrals from community organizations (men), health professionals (women), and some media (Hayward, Campbell, and Sutherland-Brown, 2007).

### HEART HEALTH

In the five articles that referred to heart health interventions, four noted effective interventions. According to the article, *Can a Sustainable Community Intervention Reduce the Health Gap? A 10-Year Evaluation of a Swedish Community Intervention Program for the Prevention of Cardiovascular Disease*, this 10-year population-based intervention in a small rural northern Sweden community was found to be effective in reducing major cardiovascular disease (CVD) risk factors. In particular, reductions in blood pressure and cholesterol levels were more pronounced in the intervention area than in the reference population (Weinehall, Hellsten, Boman, Hallmans, Asplund, and Wall, 2001). From a health promotion perspective, population-based

health promotion activities and individual disease prevention activities were employed (Weinehall, Hellsten, Boman, Hallmans, Asplund, and Wall, 2001). Activities linked to food, lipids, and diet seemed to be more favoured by the intervention group (Weinehall, Hellsten, Boman, Hallmans, Asplund, and Wall, 2001). Moreover, community participation played an important role in the success of the program (Weinehall, Hellsten, Boman, Hallmans, Asplund, and Wall, 2001). The combination of organizational activities, community participation and ownership, as well as supportive environments became the cornerstones of success (Weinehall, Hellsten, Boman, Hallmans, Asplund, and Wall, 2001). From a methodological perspective, the effectiveness of rural cardiovascular community intervention programs can be compared using an overall intensity score, as summarized in the article, *Design Issues in the Combination of International Data from Rural Community Cardiovascular Intervention Programs* (Nafziger, Weinehall, Lewis, Jenkins, Pearson, and Wall, 2001).

According to the article, *Heart Health in Rural Saskatchewan*, the Saskatchewan Heart Health Project (SHHP) had three primary objectives: 1) to reduce the prevalence of risk factors for cardiovascular disease (CVD) and other chronic diseases; 2) promote the reduction of demographic, socio-economic, gender, and geographic risk factor inequalities associated with CVD; and 3) increase the use and understanding of effective community health promotion strategies to prevent chronic diseases including CVD (Ebbesen, Ramsden, Reeder, and Hamilton, 1997). Of particular interest was that the setting for SHHP's third goal was a rural site, Coteau Hills (Ebbesen, Ramsden, Reeder, and Hamilton, 1997). Health promotion initiatives accommodated the physical and social structure of this community as well as the limited capacities and resources often associated with rural communities (Ebbesen, Ramsden, Reeder, and Hamilton, 1997). For example, some initiatives included aerobic classes, Texas linedancing for parents during children's hockey practices, community fitness in a recently converted operating room, and walking clubs in a local health centre (Ebbesen, Ramsden, Reeder, and Hamilton, 1997).

One innovative and comprehensive health promotion program of risk assessment, lifestyle counselling, and physical activity was implemented in the village of Beechy (Ebbesen, Ramsden, Reeder, and Hamilton, 1997). The multifaceted Beechy program, which consisted of computerized risk factor assessments, group education seminars, individual counselling, and physical activity classes, was offered once a week at a walk-in medical clinic (Ebbesen, Ramsden, Reeder, and Hamilton, 1997).

After the first year, the program was modified to better accommodate participants (Ebbesen, Ramsden, Reeder, and Hamilton, 1997). A condensed version of the program matched the seasonal rhythm of rural Saskatchewan; this six-week program was designed so that participants could complete it before the seeding of crops (Ebbesen, Ramsden, Reeder, and Hamilton, 1997). Moreover, the program moved from a walk-in clinic to community facilities to increase the participation rate (Ebbesen, Ramsden, Reeder, and Hamilton, 1997). Overall, the condensed version of the program was well-received and participants were satisfied (Ebbesen, Ramsden, Reeder, and Hamilton, 1997). As a result of the program's success, a Beechy Health Centre was formed and further research was conducted (Ebbesen, Ramsden, Reeder, and Hamilton, 1997). The Beechy program is an example of community mobilization where professionals and lay leaders work together to improve the health of their community (Ebbesen, Ramsden, Reeder, and Hamilton, 1997). The article, *The Cardiovascular Health Education Program: Assessing the Impact on Rural and Urban Adolescents' Health Knowledge*, suggests that school-based cardiovascular health education by a nurse can have a positive impact on the cardiovascular health knowledge of rural adolescents (MacDonald, 1999). The Cardiovascular Health Education Program (CHEP) consists of seven teaching plans that can be adopted by and utilized in other rural communities (MacDonald, 1999).

### MENTAL HEALTH

Of the three articles referring to mental health interventions, all found the interventions to be effective. According to Paediatric

## ■ CHAPTER FOUR: Results

Telepsychiatry in Ontario; Caregiver and Service Provider Perspectives, pediatric telepsychiatry is a very welcome and needed service (Greenberg, Boydell, and Volpe, 2006). However, service providers and caregivers expressed various concerns, including the limitations of available services such as technology and support (Greenberg, Boydell, and Volpe, 2006). To maximize telepsychiatry, professionals should exhibit greater flexibility in scheduling appointments, and should be contextually sensitive when dispensing advice and planning treatment regimens for small rural communities (Greenberg, Boydell, and Volpe, 2006).

According to the article, Providing Mental Health Services to Older People Living in Rural Communities, the Project to Enhance Aged Rural Living (PEARL)—a home-delivered therapeutic psychosocial intervention—had a positive impact on rural elders' quality of life and overall well-being (Kaufman, Scogin, Burgio, Morthland, and Ford, 2007). According to the article, An Evidence-Based Formative Evaluation of a Cross-Cultural Aboriginal Mental Health Program in Canada, existing frameworks of healing and knowledge within aboriginal communities as well as in their worldwide view must be an essential component of aboriginal mental health programs (Thomas Training and Therapy Service, Department of Child and Youth Care, 2006). This includes the adoption of focusing and healing components as part of the program (Thomas Training and Therapy Service, Department of Child and Youth Care, 2006).

### **SUBSTANCE USE**

According to the article, Say Yes First: Follow-Up of a Five-Year Rural Drug Prevention Program, this five-year program was effective. It utilized a case management and educational approach to drug prevention involving elementary students in Grades 4 through 8 (Zavela, Battistich, Gosselink, and Dean, 2004). The results showed a drop in usage of alcohol, drugs, and tobacco, and lower lifetime marijuana use (Zavela, Battistich, Gosselink, and Dean, 2004). Moreover, program participants had less school absenteeism, higher course grades, less negative self-appraisal, less trouble in

school, and more positive attitudes toward school (Zavela, Battistich, Gosselink, and Dean, 2004). The program included a nationally validated health education curriculum, service learning projects, recreational activities, family fun nights, family health walks, and field trips (Zavela, Battistich, Gosselink, and Dean, 2004). Moreover, selective prevention strategies such as enrichment programs and academic tutoring were developed for at-risk students (Zavela, Battistich, Gosselink, and Dean, 2004). An advisory committee was also developed (Zavela, Battistich, Gosselink, and Dean, 2004). Programs were modified to reflect the cultures of students and their families (Zavela, Battistich, Gosselink, and Dean, 2004).

### **4.2 Rural policy implications for public health and other service providers**

Six articles referred to a rural research perspective on public health that has implications for policy. The common themes in the articles were community leadership and capacity, participation, community asset identification, integrated health-care system, rural health service delivery models, information technology, organizational networks, rural health definitions, and life course research (Ellis, Murray, and Chaw-Kent, 2006; Hart, Larson, and Lishner, 2005; Berkowitz, 2004; Berkowitz, Ivory, and Morris, 2002; Schumaker, A., Estey, Kmetric, and Reading, 2007). Each of these approaches contributes to effective rural health programming to improve health outcomes in rural communities (Ellis, Murray, and Chaw-Kent, 2006; Hart, Larson, and Lishner, 2005; Berkowitz, 2004; Berkowitz, Ivory, and Morris, 2002; Schumaker, A., Estey, Kmetric, and Reading, 2007).

### **4.3 Systematic best practices for rural interventions**

According to the Public Health Agency of Canada, the Canadian Best Practices System is defined as “population- and community-based interventions spanning a variety of approaches, (policy, programs, media) aimed at health promotion, disease prevention, and management related to

chronic disease that have been informed by, and result in, evidence of effectiveness to inform decision makers in practice, policy, and research within a variety of settings (e.g., education, workplace, urban, rural) and populations (male and female across the life span, aboriginal, families, etc.)” (Public Health Agency of Canada, 2008). Of the 11 systematic reviews identified as having a rural focus, nine were pertinent to this report. The interventions are summarized in Table 4.



**Table 4: Summary of Chronic Disease Rural Health Systematic Reviews**

	<b>Purpose</b>	<b>Elements of the Program</b>	<b>Results</b>	<b>Determinants of Health</b>
1. Aboriginal chronic disease outreach program	Help additional remote communities improve their management and awareness of chronic diseases.	<ul style="list-style-type: none"> <li>• Regular testing</li> <li>• Treatment</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrated the benefit of systematic management with angiotensin-converting enzyme inhibition in decreasing renal failure and nonrenal deaths.</li> <li>• Increased cost savings.</li> <li>• Improved adherence to testing and treatment protocols.</li> <li>• Made a substantial number of diagnoses.</li> <li>• Improved blood pressure in people using antihypertensive agents.</li> </ul>	<ul style="list-style-type: none"> <li>• Culture</li> <li>• Health services</li> </ul>
2. Chronic disease outreach program	This program included principles of community participation and endorsement by local health-care workers and ongoing evaluation of health outcomes.	Activities includes regular checkups for chronic diseases and their risk factors, follow up, and treatment	<ul style="list-style-type: none"> <li>• Testing identified a substantial number of new cases of disease.</li> <li>• Participants with hypertension showed a decrease in blood pressure.</li> <li>• Adherence to treatment and eating protocols improved.</li> </ul>	<ul style="list-style-type: none"> <li>• Health services</li> <li>• Personal health practices and coping skills</li> </ul>
3. Development and promotion of walking trails	Developed and promoted walking trails in order to increase physical activity in rural communities.	Created eight specific newspapers that promoted interpersonal activities and community-wide events (walk-a-thon and walking clubs).		<ul style="list-style-type: none"> <li>• Culture</li> <li>• Personal health practices and coping skills</li> <li>• Physical environment</li> <li>• Social environment</li> <li>• Social support networks</li> </ul>
4. General practitioner (GP) advice to patients with excessive alcohol consumption	The purpose of this intervention is to reduce heavy drinkers' excessive alcohol consumption by recording their alcohol consumption and obtaining advice from a GP.	Interventions were less than one hour and incorporated simple motivational techniques similar to outpatient smoking cessation programs.	Heavy drinkers who received a brief intervention were twice as likely as the control group to moderate their drinking within six to 12 months.	<ul style="list-style-type: none"> <li>• Health services</li> <li>• Personal health practices and coping skills</li> <li>• Social environments</li> </ul>

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	Purpose	Elements of the Program	Results	Determinants of Health
5. Health Works for Women (HWW)	This program aims to help women improve their health with respect to a variety of risk factors (nutrition, physical activity, smoking cessation, and stress).	<ul style="list-style-type: none"> <li>Implemented in North Carolina.</li> <li>The target population was rural, blue-collar, female workers.</li> <li>Provided personalized health information.</li> <li>Provided an opportunity to receive information and training in the workplace and community.</li> </ul>	The HWW program successfully achieved a behaviour change among blue-collar women in some risk factors (increased vegetable and fruit consumption, decreased fat intake at 18 months, and improved flexibility and strength through exercises).	<ul style="list-style-type: none"> <li>Culture</li> <li>Education and literacy</li> <li>Employment and working conditions</li> <li>Gender</li> <li>Income and social status</li> <li>Personal health practices and coping skills</li> <li>Social environments</li> <li>Social support networks</li> </ul>
6. Lifestyle-focused, fitness-orientated physical education class	Fitness class for 12-year-old overweight students in a rural middle school in Wisconsin	<ul style="list-style-type: none"> <li>Five times every two weeks for 45 minutes</li> <li>Smaller class sizes</li> <li>Implemented competitive games and lifestyle-focused activities.</li> <li>Consistent warm-up and no-change policy</li> <li>Provided educational materials on nutrition.</li> </ul>	<ul style="list-style-type: none"> <li>Lost more body fat.</li> <li>Increased cardiovascular fitness.</li> <li>Improved fasting insulin levels.</li> </ul>	<ul style="list-style-type: none"> <li>Healthy child development</li> <li>Personal health practices and coping skills</li> <li>Physical environments</li> <li>Social support networks</li> </ul>
7. North Carolina Black Churches United for Better Health	This program focuses on increasing vegetable and fruit intake among African-American church members in rural North Carolina.	<ul style="list-style-type: none"> <li>Incorporated fruits and vegetables in church functions.</li> <li>Personalized bulletins</li> <li>Pastor sermons</li> <li>Printed materials</li> </ul>	<ul style="list-style-type: none"> <li>Increase in vegetable and fruit consumption</li> <li>More fruit and vegetables at church functions was the most frequently reported activity and had the highest perceived impact, followed by personalized bulletins, pastor sermons, and printed material.</li> </ul>	<ul style="list-style-type: none"> <li>Culture</li> <li>Education and literacy</li> <li>Income and social status</li> <li>Personal health practices and coping skills</li> <li>Social environments</li> <li>Social support networks</li> </ul>

	Purpose	Elements of the Program	Results	Determinants of Health
8. Step-by-Step trial (pedometers to promote walking)	This walking program included six weekly diaries and a pedometer.	<ul style="list-style-type: none"> <li>• Self-help book, The Step-by Step Program with a structured walking itinerary</li> <li>• Pedometer</li> </ul>	Pedometers may help persons with recommended physical activity	<ul style="list-style-type: none"> <li>• Personal health practices and coping skills</li> </ul>
9. Looma Healthy Lifestyle Program	The purpose of this program is to improve physical activity and diet among community members. This program targets aboriginal populations.	<ul style="list-style-type: none"> <li>• Voluntary screening activities</li> <li>• Provided information on how to manage and reduce the risk of developing the disease.</li> <li>• Concentrated on community action.</li> <li>• Promoted traditional open-fire cooking methods, and provided cooking classes and store tours.</li> <li>• Held informal educational sessions.</li> </ul>	The Looma Healthy Lifestyle program led to initial weight loss, but it was not sustained.	<ul style="list-style-type: none"> <li>• Personal health practices and coping skills</li> <li>• Social environments</li> </ul>



### 4.4 Elements of best practices for rural health program planning and delivery

Best practices in the literature review define six key elements for rural health program planning and delivery. These can be used as a guideline by rural health program planners.

#### 1. KEY ELEMENT ONE: IDENTIFY A RURAL COMMUNITY

A rural population health approach identifies rural areas using a common definition. Although there is no consensus on a standardized definition, the definition selected is at the discretion of the program planner. Is population density the defining concern, or is it geographic isolation? Is it small population size that makes it necessary to distinguish rural from urban? If so, how small is rural? Is there a socio-economic dimension that differentiates the two? For the purpose of this paper, seven definitions from Statistics Canada were used.

There are six main approaches to defining rural areas in Canada including: Census Rural, Rural and Small Town, Organization of Economic Co-operation and Development (OECD) Rural Communities, OECD Predominantly Rural Regions, Beale non-metropolitan regions, and Rural Postal Codes (Statistics Canada, 2001). Each definition emphasizes different criteria such as population size, labour market context, population density, or settlement context (Statistics Canada, 2001). The definitions are listed below.

**Census rural:** Individuals living in the countryside outside centres with populations of 1,000 or more.

**Rural and small town:** Individuals in towns or municipalities outside the commuting zone of larger urban centres (with 10,000 or more population). These individuals may be disaggregated into zones according to the degree of influence of a larger urban centre, called census metropolitan area and census agglomeration-influenced zones (MIZ).

#### Census Metropolitan area and Census Agglomeration-Influenced Zones (MIZ):

This refers to a municipality that is assigned one of four categories depending on the percentage of its resident employed labour force that commutes to work in the urban core of any census metropolitan area or census agglomeration. Census subdivisions are assigned to a (MIZ) category to include:

1. Strong MIZ: at least 30% of the municipality's resident employed labour force commutes to work in any CMA or CA.
2. Moderate MIZ: at least 5%, but less than 30% of the municipality's resident employed labour force commutes to work in any CMA or CA.
3. Weak MIZ: more than 0%, but less than 5% of the municipality resident employed labour force commutes to work in any CMA or CA.
4. No MIZ: fewer than 40 individuals or none of the municipality's resident employed labour force commutes to work in any CMA or CA.

#### Organization of Economic Co-operation and Development (OECD) rural communities:

Individuals in communities with fewer than 150 persons per square kilometre. This includes those living in the countryside, towns, and small cities (inside and outside the commuting zone of larger urban centres).

#### OECD predominantly rural regions:

Individuals in census divisions with over 50% of the population living in OECD rural communities. This includes all census divisions without a major city.

**Beale non-metropolitan regions:** Individuals living outside metropolitan regions with urban centres of 50,000 or more.

**Rural postal codes:** Individuals with a "0" as the second character in their postal code. These individuals live in areas with no letter carriers, so they pick up their mail at a post office or street postal box.

#### 2. KEY ELEMENT TWO: REVIEW THE SOCIAL DETERMINANTS OF HEALTH

A rural population health approach con-

siders a full range of factors that influence and contribute to health, known as the social determinants of health (Public Health Agency of Canada, 2006). The social determinants of health are most responsible for health inequities, and include:

**Social environments:** These are relationships among individuals and their families, peers, communities, and workplaces. Societal norms and values influence the health status of populations. Social stability, good working relationships, safety, recognition, diversity, and cohesive communities provide a supportive environment that promotes health. Effective social and community responses can add resources to an individual's choices of strategies to cope with changes and improve health (e.g., community interventions).

Examples: social stability, good working relationships, safety, recognition, diversity, cohesive and supportive communities, domestic violence, and crime

**Income and social status:** There is strong and growing evidence that higher social and economic status is associated with better health. In fact, these two factors seem to be the most common determinants of health.

Examples: food insecurity, poverty, housing, unemployment, underemployment, unaffordable childcare, and high income

**Education and literacy:** People with higher levels of education have better access to healthy physical environments for their families. Canadians with low literacy skills are more likely to be unemployed and poor, to suffer poorer health, and to die earlier than Canadians with high levels of literacy.

Examples: highest levels of education achieved, and literacy levels

**Employment/working conditions:** Employment provides not only money but also a sense of identity and purpose, social contracts, and opportunities for

personal growth. Unemployed people have a reduced life expectancy and suffer significantly more health problems.

Examples: unemployment, underemployment, physical and psychological conditions at work, job satisfaction, work stress, sense of identity and purpose, opportunities for personal goals, recognition, social contact, and workplace health and safety

**Physical environment:** In the natural environment at certain levels of exposure, contaminants in our air, water, food, and soil can cause a variety of adverse health effects. In the built environment, factors related to housing, indoor air quality, and the design of communities and transportation systems can significantly influence our physical and psychological well-being.

Examples of the natural environment: air, food, water, soil, ultraviolet radiation, second-hand smoke, green space, open spaces, landscape, and trails.

Examples of the built environment: housing, indoor air quality, residential, commercial, roads, sidewalks, population density, institutional and industrial buildings, transportation, distance to health-care providers, amenities, and other services.

**Personal health practices and coping skills:** There is growing recognition that personal health choices are generally influenced by the socio-economic environments in which people live, learn, work, and play.

Examples: physical inactivity, poor nutrition, alcohol/drug misuse, drinking and driving, unsafe sex practices, smoking, risky behaviours, violence, and coping skills

**Culture:** Some persons or groups may face additional health risks due largely to a socio-economic environment defined by dominant cultural values that may perpetuate conditions such as marginalization, stigmatization, loss or devaluation of language and culture, and lack of access to culturally sensitive health care

and services.

Examples: First Nations, Low German-speaking Mennonites, immigrants, and refugees

**Health services:** Health services designed to maintain and promote health, prevent disease, and restore health and function contribute to population health.

Examples: chronic disease prevention approaches and programs, hospitals, access to health care, number of physicians and specialists, diagnostic equipment, and emergency services

**Healthy child development:** The effect of prenatal and early childhood experiences on health in later life, well-being, coping skills, and competence is very powerful. Positive stimulation in life improves learning, behaviour, and health into adulthood.

Examples: growth and development, school readiness, access to health-care services, nutritious foods, genetic make-up, physical recreation, birth weight, childhood illness and disease, positive parenting, and childhood immunization.

**Biology and genetic endowment:** The basic biology and organic make-up of the human body are fundamental determinants of health. Genetic endowment provides an inherited predisposition to a wide range of responses that affect health status and appear to predispose certain individuals to particular diseases and health problems.

Examples: genetic predisposition to chronic conditions, diseases, and disabilities

**Social support networks:** The health effects of social relationships may be as important as established risk factors such as smoking, physical activity, obesity, and high blood pressure. This includes support from families, friends, and communities.

Examples: social contacts, emotional support, and social participation

**Gender:** Refers to an array of society-determined roles, personality traits, attitudes, behaviours, values, relative power, and influence that society ascribes to the two sexes on a differential basis. “Gendered” norms influence a health system’s practices and priorities.

Examples: Men are more likely than women to die prematurely; women are more likely to suffer from depression, stress overload (often due to efforts to balance work and family life), chronic conditions such as arthritis and allergies, and injuries and death from family violence.

**Additional Resources:** Public Health Agency of Canada (2003). What makes Canadians Healthy or Unhealthy? Retrieved July 14, 2011 from <http://www.phac-aspc.gc.ca/ph-sp/determinants/determinants-eng.php#income>

### 3. KEY ELEMENT THREE: FOCUS ON A RURAL HEALTH ISSUE

A rural population health approach uses evidence to assess the health status of the population and respond to the needs of the population. Evidence-informed practice uses population health assessments, surveillance, research, and program evaluation to generate evidence. It answers the following questions:

- How healthy is the rural population? How do you know?
- What are the community’s priorities? Are there any emerging issues?
- What are the priority populations?
- How does the health of the population look over time? Is the population health status getting worse or better?

Evidence of informed practice can be obtained from several data sources and methods:

#### Population health assessments:

These measure, monitor, and report on the status of a population’s health, including determinants of health and health inequities (Ontario Public Health Standards, 2008). They provide information

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about the health of the population of interest through the ongoing maintenance of population health profiles, by monitoring the impacts of programs, and by identifying rural health challenges and assets (Ontario Public Health Standards, 2008). To measure population health, population health assessments use indicators. These are single measures (usually expressed in numbers) that illustrate an important dimension of health. Examples of such measures are the number of people who died from cardiovascular disease, have had a heart attack, or were hospitalized with asthma. The core indicators include, but are not limited to:

- population;
- environment and health (social environment and health, physical environment and health, built environment and health);
- mortality, morbidity, and health-related quality of life;
- chronic diseases and injuries (chronic diseases, cancer incidence and early detection, injury prevention, and substance abuse prevention);
- behaviour and health (smoking, alcohol, physical activity, nutrition and healthy weights, ultraviolet radiation exposure);
- family health (reproductive health, child and adolescent health);
- mental health;
- infectious disease;
- use of health services.

**Surveillance:** Surveillance is the systematic and ongoing collection, collation, and analysis of health information in a timely manner (Ontario Public Health Standards, 2008). This means monitoring or “watching” something like a disease or health-related behaviour to guide programs and services (Ontario Public Health Standards, 2008). Historically, surveillance has been associated with infectious disease, but this has been extended to monitoring chronic disease prevention, child health, injury prevention, and reproductive health (Ontario Public Health Standards, 2008). Surveillance data can be obtained from many sources, among them household surveys and laboratories (Ontario Public

Health Standards, 2008).

### **Research and program evaluation:**

Research is a systematic investigation through purposeful data collection, analysis, and interpretation (Ontario Public Health Standards, 2008). The primary purpose of research is to advance knowledge. Some examples of research include:

- collecting new data, and
- synthesizing existing research findings.

Program evaluation is a systematic method for gathering, analyzing, and reporting data about a program (Ontario Public Health Standards, 2008).

This provides important information for program planners and assists in decision-making (Ontario Public Health Standards, 2008). Program evaluation includes either qualitative (focus groups, words), quantitative (surveys), or combined approaches (Ontario Public Health Standards, 2008). Types of program evaluations include:

- needs assessment (produces evidence to support new programs);
- process evaluation (analyzes early program development and implementation); and
- outcome evaluation (measures program efficiency, effectiveness, and impact).

### **4. KEY ELEMENT FOUR: INTEGRATE MULTIPLE LEVELS OF COMMUNITY SUPPORTS**

A rural population health approach uses multiple levels of support from various sectors and levels that have a vested interest in the health of the target population in every phase of the project. For a project to be successful, early collaboration is recommended (Public Health Agency of Canada, 2011). Effective collaboration is more probable when participants have a common goal based on shared interests and values (Public Health Agency of Canada, 2011). This includes but is not limited to researchers, health professionals, community organizations, government, and other key stakeholders.

### **5. KEY ELEMENT FIVE: IDENTIFY COMMUNITY RURAL HEALTH CHALLENGES AND ASSETS**

A rural population health approach calls for the identification of rural health challenges and assets using the SDOH framework. Challenges are informed by population health assessment, surveillance, research, program evaluation, and personal experiences. Examples of challenges are access to health-care services, geographic and social isolation, and poverty (see Appendix A). Assets are advantages and attributes within a community that in rural areas are vital to sustainability and growth. Examples of such assets are physical infrastructure (buildings), green space, social aspects of community living, agriculture, and volunteerism.

### **6. KEY ELEMENT SIX: ADDRESS RURAL HEALTH CHALLENGES AND MAXIMIZE ASSETS USING GOOD PRACTICES FOR RURAL PROGRAM PLANNING AND DELIVERY.**

A rural population health approach involves addressing health challenges and maximizing assets using the social determinants of health framework. This contributes in meaningful ways to the development and implementation of strategies to improve health. This is based on good practices in minimizing rural health challenges and maximizing rural health assets identified in the literature review (see Table 5 below).

**Table 5: Good Practices in Minimizing Rural Health Challenges and Maximizing Rural Health Assets for Rural Program Planning and Delivery**

Good Practices	Question	Examples
1. Address a rural health issue. Evidence-informed practice includes population health assessment, surveillance, research, and program evaluation to generate evidence.	Did you address a rural health issue in your community? Rural health issues can be identified as rural health trends, local needs, and emerging issues.	<ul style="list-style-type: none"> <li>• Unaffordable food</li> <li>• Poverty</li> <li>• High rates of overweight/obesity</li> <li>• High smoking rates</li> <li>• Low uptake of flu immunization</li> </ul>
2. Integrate multiple levels of community support.	Did you include health professionals, government, community organizations, and other people in program planning and development?	<ul style="list-style-type: none"> <li>• Health professionals: health promoters, registered nurses, physicians, etc.</li> <li>• Government: Public Health, Ministry of Health and Long-Term Care, etc.</li> <li>• Community organizations: Heart and Stroke Foundation, Canadian Cancer Society, etc.</li> <li>• Other people: stroke survivors, parents, etc.</li> </ul>
3. Adopt and modify existing programs.	Did you change an existing program to meet the needs of your target population?	<p>Change the intensity, length, and scope of an existing program.</p> <ul style="list-style-type: none"> <li>• Decrease a 16-session Diabetes Prevention Program (DPP) to six sessions.</li> <li>• Provide a condensed version of the program to match the seasonal rhythm of the crops.</li> <li>• Implement DPP in a church-based group setting and include prayer and gospel aerobics.</li> </ul>
4. Meet the cultural needs of the population.	Did you meet the cultural needs of the population? (e.g., First Nations, visible minorities, immigrants, those with lower socio-economic status, etc.)	<ul style="list-style-type: none"> <li>• Integrate healing components in programs that target aboriginal populations.</li> <li>• Provide resources in other languages.</li> <li>• Provide translation services.</li> <li>• Provide a culturally sensitive environment by being aware of and knowledgeable about Low German Mennonites and Aboriginal Peoples.</li> </ul>
5. Deliver a flexible program responsive to the demands of rural populations.	Did you modify the delivery of the program to meet the needs of rural populations?	<ul style="list-style-type: none"> <li>• Home-based services</li> <li>• Telemedicine</li> <li>• Telepsychiatry</li> <li>• Mobile clinics</li> </ul>

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Good Practices	Question	Examples
6. Provide a no-cost, low-cost, or subsidized program.	Did you provide a no-cost, low-cost, or subsidized program?	<ul style="list-style-type: none"> <li>• Free or low-cost community events (e.g., health fairs)</li> <li>• Free or low-cost health promotion programs and services (e.g., nutrition workshops, physical activity programs)</li> <li>• Free or low-cost clinical services (e.g., free dental health consultations)</li> <li>• Free or low-cost resources (e.g., books, magazines)</li> <li>• Free or low-cost products (e.g., breast pumps, nipple shields)</li> </ul>
7. Provide the program in several geographical areas with high population density and short distance to travel.	Did you provide the program in several areas in the community where there are a lot of people?	<ul style="list-style-type: none"> <li>• Provided the Mothers' Care Clinic in densely populated areas in Haldimand and Norfolk (Simcoe, Caledonia, and Langton).</li> </ul>
8. Provide simple, accurate educational materials, resources, and information for ease of reading.	<p>Did you provide resources at a Grade 5 level?</p> <p>Did you provide materials accessible to persons with disabilities?</p>	<ul style="list-style-type: none"> <li>• Brochures</li> <li>• Fact sheets</li> <li>• Posters</li> <li>• Books</li> </ul>
9. Build on existing strengths in social capital (sense of belonging, inclusion, trust, reciprocity, and participation in community life).	<p>Did you:</p> <ol style="list-style-type: none"> <li>a. provide a safe, comfortable and friendly atmosphere;</li> <li>b. encourage people to help one another;</li> <li>c. encourage people to participate in their community;</li> <li>d. encourage people to build relationships?</li> </ol>	<ul style="list-style-type: none"> <li>• The Well Baby Drop-in provides a supportive, safe, friendly, and comfortable environment for postpartum females where they can help one another, participate in their community, and build relationships with other moms.</li> <li>• Leverage community support to help develop and mobilize the program (e.g., health promoters, dieticians).</li> </ul>
10. Build on existing physical environments (built and natural).	<p>Did you use existing physical (built) environments in your community (e.g., residential, commercial, institutional, and industrial buildings)?</p> <p>Did you use existing natural environments (e.g., green space, open spaces, water, landscape, trails)?</p>	<ul style="list-style-type: none"> <li>• Use existing buildings to implement program (e.g., churches, schools, government buildings).</li> <li>• Promote outdoor activities using local trails, pathways, lakes, etc.</li> </ul>

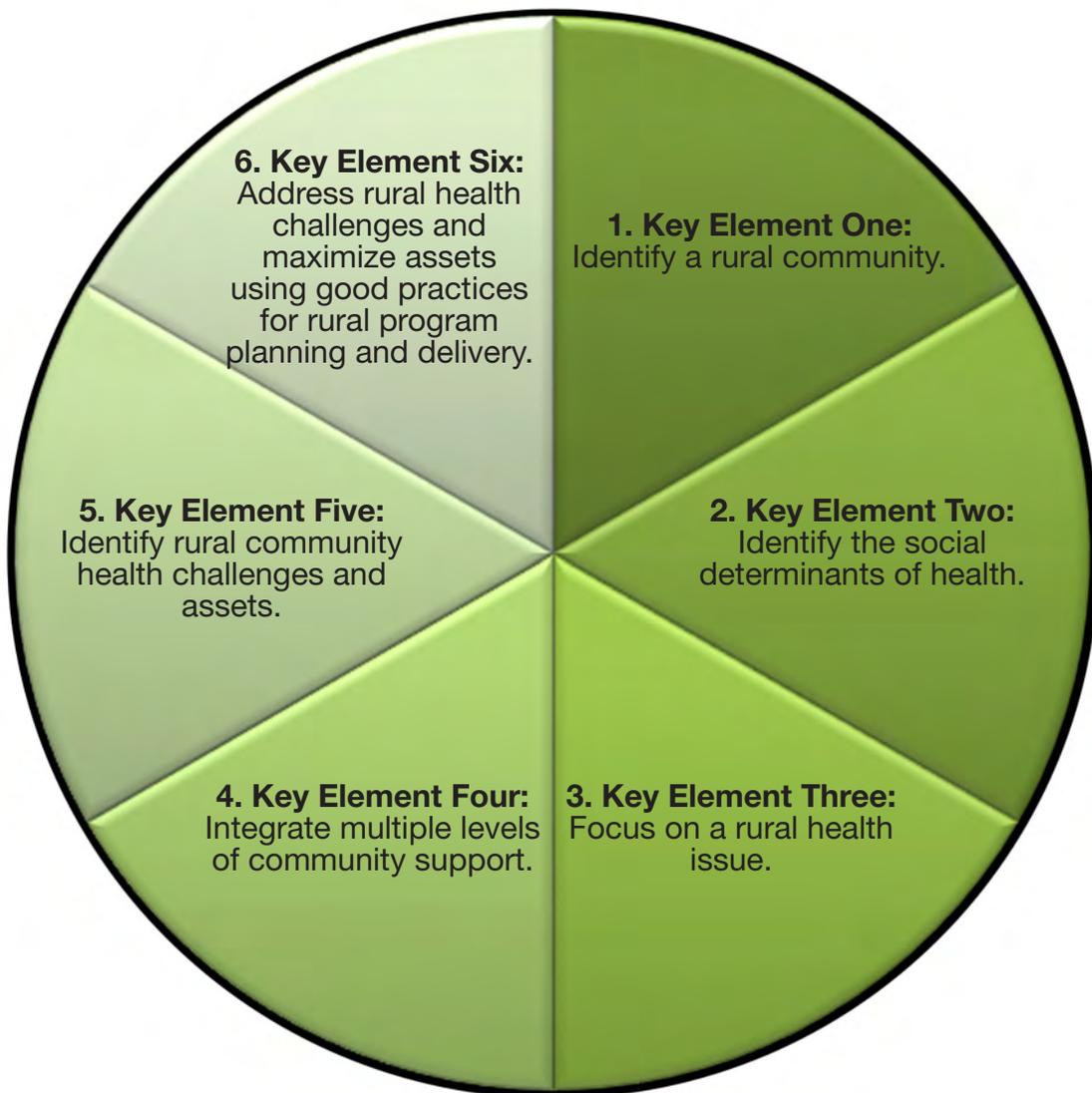
Good Practices	Question	Examples
11. Promote existing local programs, services, and resources.	Did you promote existing local programs, services, and resources?	Conduct an environmental scan of existing programs, services, and resources. Some examples: <ul style="list-style-type: none"> <li>• free family swims at recreation centres,</li> <li>• church events,</li> <li>• OEYC program and services,</li> <li>• Moms and Tots program,</li> <li>• Haldimand and Norfolk Prenatal Health program,</li> <li>• Haldimand and Norfolk prenatal fairs</li> </ul>
12. Use health professionals other than physicians and specialists to provide clinical services.	Did you use health professionals other than physicians and specialists to provide clinical services?	<ul style="list-style-type: none"> <li>• Nurse practitioner</li> <li>• Non-specialists for rural colorectal screening program</li> <li>• Registered nurses</li> <li>• Dental hygienists</li> <li>• Midwives</li> </ul>
13. Utilize and adopt a rural outreach model.	Did you provide the program in areas spread over a large geographic area (but not necessarily, where many people live)?	<ul style="list-style-type: none"> <li>• Mobile Clinics</li> <li>• Travelling vans</li> </ul>
14. Provide transportation.	Did you provide transportation?	<ul style="list-style-type: none"> <li>• Car Pool</li> <li>• Van</li> </ul>



### 4.5 An evidence-based framework: a Rural Health Framework for Program Planning and Delivery

Findings support the development of a rural health framework focusing on the six key elements that address rural health program planning and delivery (see framework below). Unlike other health promotion frameworks, this one's approaches and programs are linked to understanding the rural community and emphasize rural health asset-mapping and challenge identification. The rural framework approaches the planning and delivery process by breaking it into smaller, more manageable pieces. The elements also demonstrate linkages in a continuous cycle. One of the framework's contributions is that it encourages more comprehensive planning of health promotion programs from a rural perspective. Frameworks of this type can assist program planners in improving the health status of a rural community.

#### RURAL HEALTH FRAMEWORK: PROGRAM AND SERVICE PLANNING AND DELIVERY



#### 4.6 Application of rural health model for program and service delivery

To illustrate the framework's usability, the Haldimand-Norfolk Health Unit (HNHU) applied it to several programs. Although the initial focus was to apply the framework only to chronic disease programs, it was clearly adaptable to any rural health program. This illustrated the broad utility of the framework as well as demonstrated that rural health programs and approaches can be more effective when related to health determinants. The programs described in the next section were developed prior to 2010 (when the framework was created), so it was not applied in the planning or development phases of those programs. Rather, it was applied to existing programs. It also became apparent that the expansion of this framework in consideration of the differences in evaluation approaches and marketing and communication strategies in a rural setting, would address the growing knowledge in the area of rural program planning, delivery, evaluation and promotion.

During this exercise, it became apparent that the health unit's existing programs had, without formal documentation, already incorporated aspects of the rural health framework and employed key elements of rural program planning and delivery. This afforded staff the opportunity to showcase their programs and secure their position as "leaders in rural health."

#### WELL BABY AND BREASTFEEDING DROP-IN CLINICS

**Contributors:** *Melanie Laundry and Sabine Murphy*

Well Baby and Breastfeeding Drop-in clinics were first established in Caledonia in 1996 and later expanded to Simcoe and Dunnville. They are free drop-in clinics that provide a supportive environment for postpartum females. Well Baby and Breastfeeding Clinics are offered at the Ontario Early Years Centres (OEYC's), where public health nurses and family home visitors provide support to parents.

The Well Baby and Breastfeeding Drop-

in fosters a supportive environment that promotes healthy child development and breastfeeding. It also strengthens communities by enabling parents to meet one another and create informal parenting support groups. The program promotes child health through services that include:

- breastfeeding support, information, and education;
- weight checks;
- nutrition information for mothers;
- child development information and education;
- immunization information and education;
- postpartum depression information and education;
- referrals as required;
- parenting information and education;
- family dynamic information and education; and
- emotional support and the opportunity to establish an informal social network;
- information about support available in the community.

#### Applied Key Elements

1. **Identified a rural community.**  
Based on the Organization of Economic Co-operation and Development's (OECD) definition of "predominantly rural regions," Haldimand County and Norfolk County are considered rural areas because over 50% of the population lives in rural communities (those with fewer than 150 persons per square kilometre).
2. **Identified the social determinants of health.** All social determinants were selected.
3. **Focused on a rural health issue.** Child and maternal health
4. **Integrated multiple levels of community support.**  
**Researcher(s):** public health epidemiologist  
**Health professionals:** registered nurses, dental hygienists, early childhood educators, speech pathologists  
**Community organizations:** churches

**Government:** Public Health, OEYC

5. **Identified community rural health challenges and assets:** See below.
6. **Addressed rural health challenges and maximized assets using good practices for rural program planning and delivery:** See below.

#### Applied good practices to address rural health challenges and maximized rural assets

- **Addressed rural health issue.** Child and maternal health
- **Integrated multiple levels of community support.**
  - **Health professionals:** registered nurses, dental hygienists, early childhood educators, speech pathologists
  - **Community organizations:** churches
  - **Government:** Public Health and OEYC
- **Met the cultural needs of the population.** A nurse practitioner visits the Moms and Tots program once a month to provide a well baby clinic and toddler/preschool health assessments to Mennonite moms and their children. Provides resources in Low German.
- **Provided a no-cost and low-cost program.** Services included free dental health consultations, free resources on child health (e.g., Joy of Parenting book), and low-cost products such as nipple shields and feeding tubes.
- **Provided the program in several densely populated geographic areas with short travel distances.** Provide the program in Simcoe, Dunnville, Delhi, and Caledonia.
- **Provided simple, accurate, easy-to-read educational materials, resources, and information.** Topics included child health, positive parenting, postpartum depression, family dynamics, coping skills and Fetal Alcohol Syndrome (FAS).
- **Built on strength of social capital (sense of belonging,**

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**inclusion, trust, reciprocity, and participation in community life).** Provided a safe, comfortable, and friendly atmosphere where postpartum females and their families, e.g., partners, grandparents, etc., can establish new friendships and connections with other moms, participate in community life, and help one another. Provided a supportive environment to help postpartum females:

- a. make better choices regarding their baby's health;
- b. feel more confident as mothers;
- c. make more positive changes in parenting approaches; and
- d. anticipate what will arise in

future (e.g., child development, immunization, dental care).

- **Built on existing physical environments in the community.** Offered the Drop-in Centre at the OEYCs and at a church.
- **Promoted existing community rural health programs, services, and resources.** OEYCs, Haldimand-Norfolk Health Unit Preschool Speech and Language Program; and low-cost, no-cost, or subsidized programs, services, and resources.
- **Used health professionals other than physicians and specialists to provide clinical services.** Utilized nurse practitioners, registered nurses, public health nurses, and dental

hygienists.

- **Utilized and adopted a rural outreach model.** Provided the program in several geographic areas (Simcoe, Dunnville, Delhi, and Caledonia).
- **Provided transportation.** Offered a car service.



Rural health challenges/asset identification and solution identification

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Income and social status	<ul style="list-style-type: none"> <li>• Lower median income than Ontario overall</li> <li>• High poverty rate</li> <li>• Unstable income (agriculture)</li> <li>• Low-paying or seasonal jobs</li> <li>• Unaffordable housing</li> <li>• Unaffordable childcare</li> <li>• Unaffordable healthy foods, especially in the off-season</li> </ul>	<ul style="list-style-type: none"> <li>• Local community gardens</li> <li>• Local food banks</li> <li>• Farmers' markets</li> <li>• Subsidized childcare</li> <li>• Housing assistance programs</li> <li>• Local no-cost or low-cost community events</li> <li>• No-cost programs, services, and resources</li> </ul>	<ul style="list-style-type: none"> <li>• Provide a free program.</li> <li>• Provide free dental health consultations.</li> <li>• Provide free resources on child health (e.g., Joy of Parenting book).</li> <li>• Provide low-cost devices such as nipple shields.</li> <li>• Provide information through no-cost, low-cost, or subsidized programs, services, and resources.</li> </ul>
Social support networks	<ul style="list-style-type: none"> <li>• Geographic and social isolation</li> </ul>	<ul style="list-style-type: none"> <li>• Strong social capital (sense of belonging, inclusion, trust, reciprocity, and participation in community life)</li> </ul>	<ul style="list-style-type: none"> <li>• Provide a safe, comfortable and friendly atmosphere where postpartum females can establish new friendships with other moms and participate in community life.</li> <li>• Encourage moms to help one another.</li> <li>• Encourage connectivity among postpartum females.</li> </ul>
Education and literacy	<ul style="list-style-type: none"> <li>• Over 50% of the combined population in Haldimand and Norfolk counties has secondary school education or less. This is higher than the province overall.</li> <li>• Low literacy levels</li> <li>• Language barriers: Low German population</li> </ul>	<ul style="list-style-type: none"> <li>• Existing literacy and education programs and services such as Ontario Early Years Centres (OEYC), Haldimand-Norfolk Health Unit Preschool Speech and Language Program, Literacy Council, alternative education opportunities (e.g., Turning Points, Pathfinders, LEAP)</li> </ul>	<ul style="list-style-type: none"> <li>• Provide simple, easy-to-read educational materials, resources, and information on healthy child development.</li> <li>• Educational materials include topics on immunization, dental health, speech, feeding your baby, nutrition, child development, postpartum depression, parenting, family dynamics, and coping.</li> <li>• Encourage participants to ask questions about their health and/or the health of their babies.</li> <li>• Identify the importance of reading.</li> <li>• Speech pathologist to assess children's speech and make referrals to the Haldimand-Norfolk Health Unit Preschool Speech and Language Program.</li> <li>• Provide resources in Low German. Use the Low German radio station to promote positive parenting messages and information.</li> </ul>

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Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Employment/working conditions	<ul style="list-style-type: none"> <li>• High unemployment rates</li> <li>• High underemployment</li> </ul>		<ul style="list-style-type: none"> <li>• Provide educational employment sessions.</li> </ul>
Social environments	<ul style="list-style-type: none"> <li>• Limited social support services</li> <li>• Few affordable organized sports and recreational activities</li> </ul>	<ul style="list-style-type: none"> <li>• Strong social and community response to health issues</li> <li>• The community values infants, children, and families.</li> <li>• Existing free social and community activities (free family swims at recreation centres, free family skating, church events, OEYC program and services, Moms and Tots program, etc.)</li> <li>• Churches are thriving in Haldimand and Norfolk</li> </ul>	<ul style="list-style-type: none"> <li>• Utilize multiple levels of community support.</li> <li>• Leverage health professionals in the community to mobilize the program (nurses, dental hygienists, early childhood educators, speech pathologists).</li> <li>• Foster engagement by integrating community organizations (e.g., churches) to implement and mobilize the program.</li> <li>• Leverage government partnerships to implement and mobilize the program (Public Health, OEYC).</li> <li>• Provide information on existing free community programs, services, and resources to promote connectivity and civic participation.</li> </ul>
Physical environment	<ul style="list-style-type: none"> <li>• Limited public transportation</li> <li>• Low population density</li> <li>• More distance to travel</li> </ul>	<ul style="list-style-type: none"> <li>• Thriving churches</li> <li>• OEYC's</li> </ul>	<ul style="list-style-type: none"> <li>• Provide a readily accessible drop-in centre to support postpartum females.</li> <li>• Locate the drop-in centre in high-density areas with short travel distances (Simcoe, Dunnville, Delhi, Caledonia).</li> <li>• Provide car service.</li> <li>• Provide the program at a church in Delhi and at the OEYC's in Simcoe, Dunnville, and Caledonia.</li> <li>• Use the OEYC facility to house the drop-in centre in Simcoe, Caledonia, and Dunnville.</li> <li>• Use resources from the OEYC to support the program.</li> </ul>

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
<p>Personal health practices and coping skills</p>	<ul style="list-style-type: none"> <li>Over 50% of residents are overweight or obese, do not consume the recommended daily allowance of vegetables and fruit, and are physically inactive.</li> <li>A higher proportion of Haldimand and Norfolk residents than the rest of Ontario smokes and drinks heavily.</li> </ul>		<ul style="list-style-type: none"> <li>Promote healthy lifestyle behaviours among postpartum females.</li> <li>Provide a supportive environment to help postpartum females:               <ol style="list-style-type: none"> <li>make better choices regarding their baby's health,</li> <li>feel more confident as a mother,</li> <li>make more positive changes in parenting approaches, and</li> <li>anticipate what will happen in future (child requirements such as immunization, dental care).</li> </ol> </li> </ul>
<p>Culture</p>	<ul style="list-style-type: none"> <li>An estimated 8,000 to 10,000 Low German-speaking Mennonites live in Norfolk and nearby settlements from Elgin to Leamington.</li> <li>Mennonites typically have large families.</li> <li>From 2005–2008, the average Haldimand County and Norfolk County teen pregnancy rate was (23.1/1000).</li> </ul>		<ul style="list-style-type: none"> <li>The Moms and Tots program at the Brethren in Christ Church in southwest Norfolk provides educational programs to Mennonite women, and daycare programming for infants and children.</li> <li>A nurse practitioner visits the Moms and Tots program once a month to provide a well-baby clinic and toddler/preschool health assessments to Mennonite moms and their children.</li> <li>Provide postpartum services to teen moms. REACH provides services and food vouchers to teen moms.</li> </ul>



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Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Healthy child development	<ul style="list-style-type: none"> <li>The percentage of new mothers with low education has been increasing (5.2% in 2005 to 8.2% in 2009).</li> <li>The percentage of families with newborns that are experiencing financial difficulties has been increasing (5.9% in 2005 to 9.3% in 2009).</li> <li>The percentage of women who smoke during pregnancy has remained consistent from 2005–2009 (average = 12%).</li> <li>The percentage of women abusing drugs or alcohol during pregnancy has remained consistent from 2005–2009 (average =1.3%).</li> </ul>	<ul style="list-style-type: none"> <li>Teen pregnancy rates have remained consistent although they are lower than provincial rates (2005–2009).</li> <li>Teen live birth rates have declined since the mid-1990s.</li> </ul>	<ul style="list-style-type: none"> <li>Provide simple, easy-to-read educational materials and resources on healthy child development.</li> <li>Educational materials include topics on immunization, feeding your baby, nutrition, child development, postpartum depression, parenting, family dynamics, and coping.</li> <li>Provide sexual health information.</li> <li>Provide information on smoking cessation and community resources.</li> <li>Provide Fetal Alcohol Syndrome (FAS) information.</li> <li>Provide information on the harmful effects of drugs and alcohol during and after pregnancy.</li> <li>Continue to provide sexual health education for teenagers.</li> </ul>
Health services	<ul style="list-style-type: none"> <li>Few specialists and practitioners</li> <li>Lack of access to health-care services</li> <li>Residents travel outside the counties to obtain services.</li> <li>No OB/GYN; only one pediatrician in Haldimand and Norfolk who resides in Delhi</li> </ul>		<ul style="list-style-type: none"> <li>Provide a drop-in centre where postpartum females and their families can speak to a public health nurse if they have concerns about their health or the health of their babies.</li> <li>Provide a place where postpartum females or their families can have their babies weighed and measured for length.</li> </ul>
Biology and genetic endowment	<ul style="list-style-type: none"> <li>Approximately nine babies annually in the two counties are born with Fetal Alcohol Syndrome Disorder (FASD).</li> <li>Common childhood illnesses/chronic conditions and disabilities</li> </ul>		<ul style="list-style-type: none"> <li>Provide Fetal Alcohol Syndrome (FAS) information.</li> <li>Provide information, programs, and resources on chronic diseases, illnesses, and disabilities.</li> <li>Provide a supportive environment conducive to persons with special needs.</li> </ul>
Gender	<ul style="list-style-type: none"> <li>Females comprise 76.7% of single-parent families in Haldimand and Norfolk counties combined (2006).</li> </ul>		<ul style="list-style-type: none"> <li>Provide a supportive and comfortable environment for single-female parents.</li> </ul>

**G.I.R.L.S POWER CAMP**

*Contributor: Michele Crowley*

G.I.R.L.S. Power Camp (GPC) is a unique three-day program offered to Grade 8 girls living in Haldimand and Norfolk counties. The camp-based weekend incorporates many components of best practices for girls’ programs, with activities led by young local women aged 16-27. The weekend is filled with fun and interactive learning experiences that focus on issues such as body image, self-esteem, healthy eating, active living, healthy relationships, and personal safety. Camp is a great learning experience for all involved and gives the facilitators an opportunity to be role models for the campers.

Campers also participate in self-defence and high-ropes courses to increase their confidence, face their fears, challenge their limits, and take risks in a safe setting. The camp helps girls develop critical thinking skills for making informed choices. It is a life-changing experience for campers and youth facilitators alike; at the end of the weekend the young women feel empowered, strong, and comfortable in their own skin. They leave with lasting memories, many new friends, and renewed confidence in themselves.

GPC targets Grade 8 girls during an important transitional stage in their lives. They will soon be entering high school where peer pressures are stronger than ever, and many will be considering entering into relationships. The facilitators are also in a transitional period; many are beginning to think about possible career paths, so camp helps them gain practical experience in leadership and communication.

**Applied Key Elements**

1. **Identified a rural community:** Based on the Organization of Economic Co-operation and Development’s (OECD) definition of “predominantly rural regions,” Haldimand County and Norfolk County are considered rural areas because over 50% of the population lives in rural

communities (those with fewer than 150 persons per square kilometre).

2. **Identified the social determinants of health.** Most social determinants were selected, with the exception of healthy child development and biology and genetic endowment.
3. **Focused on a rural health issue:** Youth health
4. **Integrated multiple levels of community supports:**  
**Health Professionals:** public health dietitians, health promoters, counsellors, and social workers  
**Community organizations:** H-N REACH Children’s Clinical Services, and H&N Women’s Services  
**Government:** Public Health
5. **Identified community rural health challenges and assets:** See below.
6. **Addressed rural health challenges and maximized assets using good practices for rural program planning and delivery:** See below

**Applied good practices employed to address rural health challenges and maximize rural assets**

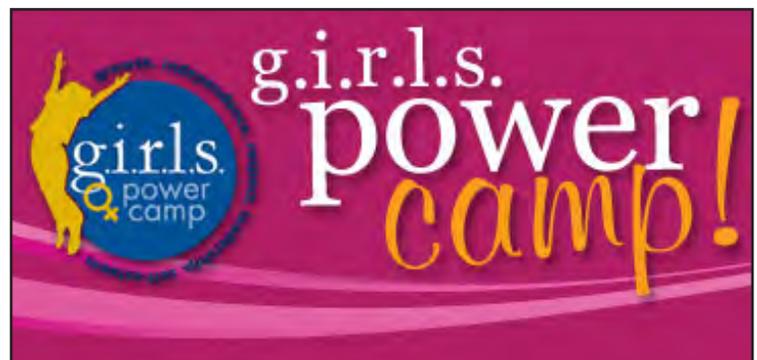
- **Addressed rural health issues.** Provided information on healthy lifestyle behaviours, personal hygiene, healthy body image, coping skills, healthy relationships, and building self-esteem. Provided activities to help youth develop critical thinking skills to make informed choices. Promoted youth empowerment to help increase their confidences, face their fears, challenge their limits, and take risks in a safe setting. Provided volunteer opportunities for youth to explore and gain insight into potential and future career opportunities.
- **Integration of multiple levels of community support**
  - o **Health Professionals:** public health dietitians, health promoters, counsellors, and social workers
  - o **Community Organizations:** H-N REACH Children’s Clinical Services, H&N Women’s Services
  - o **Government:** Public Health

- **Delivered a flexible program responsive to the demands of rural populations:** Developed a flexible agenda responsive to the demands of youth by offering the program on the weekend.
- **Provided a no cost, low cost, or subsidized program.** Offered subsidized program (either part or full subsidization).
- **Provided the program in several geographic areas with high population density and short distance to travel.** Provided program in Waterford.
- **Provided simple, accurate, easy-to-read educational materials, resources, and information.** Topics included information on adolescent health.
- **Built on existing strength of social capital (sense of belonging, inclusion, trust, reciprocity, and participation in community life).** Provided a safe, comfortable, and friendly atmosphere where youth could establish new friendships, build trust, connect with one another, help one another, and participate in community life.
- **Built on existing physical environments in the community.** Provided the program at Camp Trillium in Waterford. Utilized existing facilities at Camp Trillium including high-ropes course and accommodations. Fostered a youth-friendly environment that promoted social participation, teambuilding, trust, relationship-building, and emotional support.
- **Promoted existing community rural health programs, services and resources.** H&N Women’s Services and H-N REACH Children’s Clinical Services.
- **Provided transportation.** Arranged transportation for campers and facilitators if requested.

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### Rural Health Challenges/Asset Identification and Solution Identification

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Income and social status	<ul style="list-style-type: none"> <li>• Lower median income than Ontario generally</li> <li>• High poverty rate</li> </ul>		<ul style="list-style-type: none"> <li>• Offer subsidized program (either part or full subsidization).</li> </ul>
Social support networks	<ul style="list-style-type: none"> <li>• Geographic and social isolation among youth</li> <li>• Lack of programs, resources, and services for youth.</li> </ul>	<ul style="list-style-type: none"> <li>• Strong social capital (sense of belonging, inclusion, trust, participation, reciprocity in community life)</li> <li>• Higher proportion of youth in H&amp;N (12-18) have a strong rather than weak sense of belonging</li> </ul>	<ul style="list-style-type: none"> <li>• Provide a youth-led, youth-focused program.</li> <li>• Encourage peer-to-peer support.</li> <li>• Encourage social interaction and establishment of healthy relationships among youth.</li> <li>• Provide a safe, comfortable and friendly atmosphere where youth can establish new friendships, build trust, and participate in community life.</li> <li>• Encourage youth to help one another.</li> <li>• Encourage connectivity among youth.</li> </ul>
Education and literacy	<ul style="list-style-type: none"> <li>• Over 50% of the population in Haldimand and Norfolk counties combined has secondary school education or less. This is higher than the rest of the province.</li> <li>• Low literacy levels.</li> </ul>	<ul style="list-style-type: none"> <li>• Existing literacy and education programs and services (Literacy Council)</li> </ul>	<ul style="list-style-type: none"> <li>• Promote education and career development.</li> <li>• Provide information about Grade 9 (transition from elementary to secondary school).</li> </ul>
Employment/working conditions	<ul style="list-style-type: none"> <li>• High unemployment rates</li> </ul>	<ul style="list-style-type: none"> <li>• Seasonal employment</li> <li>• Employment services and programs</li> </ul>	<ul style="list-style-type: none"> <li>• Provide volunteer opportunities for youth that can be highlighted on a resume to assist with future employment/career opportunities. Promote local employment programs, services, and resources.</li> </ul>



Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
<p>Social environments</p>	<ul style="list-style-type: none"> <li>• Limited programs and services targeting youth</li> <li>• Youth bullying</li> <li>• Social pressures/peer pressure among youth</li> <li>• Teenagers experience highly dynamic perceptions of body image. This is influenced by self-evaluation, self-esteem, and evaluation by others as well as cultural messages and societal standards of appearance. The prevalence of thin females in the media encourage female adolescents to achieve an undesirable and unhealthy body weight.</li> </ul>	<ul style="list-style-type: none"> <li>• Seasonal employment</li> <li>• Employment services and programs</li> <li>• Strong social and community response to health issues.</li> <li>• The community values youth health. This is demonstrated through various charitable donations.</li> <li>• Local programs, services, and resources (H&amp;N Women's Services, H-N REACH Children's Clinical Services).</li> </ul>	<ul style="list-style-type: none"> <li>• Utilize multiple levels of community support.</li> <li>• Leverage health professionals in the community to mobilize the program.</li> <li>• Public health dietitians, health promoters, STAR counsellors, and social workers.</li> <li>• Foster engagement by integrating community organizations to implement and mobilize the program (H-N REACH Children's Clinical Services, H&amp;N and Women's Services).</li> <li>• Leverage government partnerships to implement and mobilize the program (Public Health).</li> <li>• Encourage social interaction and establishment of healthy relationships among youth.</li> <li>• Create a safe, supportive, youth-friendly environment.</li> <li>• Promote healthy relationships.</li> <li>• Foster an environment that promotes social participation, teambuilding, trust, and emotional support. Some activities include Jeopardy, Family Feud, and drama.</li> <li>• Create interactive learning activities that promote healthy body image, positive self-evaluation, and personal safety.</li> <li>• Provide self-defence classes.</li> <li>• Provide activities that help volunteers gain practical experience in leadership and communication</li> </ul>
<p>Physical environment</p>	<ul style="list-style-type: none"> <li>• No public transportation</li> <li>• Low population density</li> <li>• More distance to travel</li> <li>• Large geographic area</li> <li>• Large number of feeder schools to centralized secondary schools</li> </ul>	<ul style="list-style-type: none"> <li>• Camp Trillium in Waterford, a densely populated area. Camp Trillium is a 143-acre facility with a 35-acre private lake for water sports in a wooded wilderness.</li> <li>• Large agricultural sector</li> <li>• Lots of green space</li> <li>• Esthetically beautiful</li> <li>• More opportunities for youth to engage in outdoor activities</li> <li>• Marinas, hiking trails, conservation areas, museums, libraries and other amenities</li> </ul>	<ul style="list-style-type: none"> <li>• Provide the program at Camp Trillium in Waterford.</li> <li>• Utilize facilities at Camp Trillium. Facilities used include high-ropes course and accommodations</li> <li>• Encourage Grade 8 girls from all elementary schools in Haldimand and Norfolk to attend.</li> <li>• Provide transportation.</li> <li>• Promote and provide information on local services, programs, recreational and sports activities, and amenities.</li> </ul>

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<b>Social Determinants of Health</b>	<b>Rural Health Challenges</b>	<b>Rural Health Assets</b>	<b>Solutions to Health Challenges/Maximize Assets</b>
Personal health practices and coping skills	<ul style="list-style-type: none"> <li>• Over 50% of residents are overweight or obese, do not consume the recommended daily allowance of vegetables and fruit, and are physically inactive.</li> <li>• A higher proportion of Haldimand and Norfolk youth than the rest of Ontario smokes.</li> <li>• Teenagers aged 15–19 are the second-highest age cohort to take their life by suicide.</li> <li>• Teenagers aged 15–19 are the highest age cohort to go to the emergency department for attempted suicides.</li> <li>• English-speaking youth and Low German-speaking youth aged 14–21 attend bush parties in southwest Norfolk.</li> <li>• Alcohol consumption, substance use, high risk-taking, and poor dietary practices are some documented maladaptive adolescent behaviours.</li> </ul>	<ul style="list-style-type: none"> <li>• Over 2/3 of youth in H&amp;N report being physically active</li> </ul>	<ul style="list-style-type: none"> <li>• Promote healthy lifestyle behaviours among youth, with particular emphasis on healthy eating and active living.</li> <li>• Provide information on personal hygiene.</li> <li>• Promote coping skills through various activities (e.g., letter-writing, scrapbooking).</li> <li>• Provide activities that help develop critical thinking skills for making informed choices.</li> <li>• To promote youth empowerment so that females feel strong and comfortable in their own skin.</li> <li>• Provide a high-ropes course to increase their confidence, face their fears, challenge their limits, and take risks in a safe setting.</li> </ul>
Health services	<ul style="list-style-type: none"> <li>• Underdevelopment of mental health services</li> <li>• Lack of health promotion programs for adolescent females aged 13</li> </ul>		<ul style="list-style-type: none"> <li>• Provide a unique three-day camp program that promotes good mental health.</li> </ul>
Gender	<ul style="list-style-type: none"> <li>• Higher prevalence of eating disorders among adolescent females than males.</li> </ul>		<ul style="list-style-type: none"> <li>• Target females in Grade 8.</li> <li>• Provide information, activities, and support that promote a healthy body image and positive self-esteem.</li> </ul>

**PRENATAL BAG PROGRAM**

**Contributor:** Melanie Laundry

The prenatal bag program provides prenatal information and resources for families. The bags are distributed through physicians' offices and in the past in early prenatal classes held at the Health Unit. The prenatal bag program has been in place for more than 12 years and has been evaluated. It is a very effective strategy to ensure that women and families get the information they need as early as possible in their pregnancy.



**Applied good practices to address rural health challenges and maximize rural assets**

- **Addressed rural health issue.** Provided information on child and maternal health. The prenatal bag program provided prenatal information, breastfeeding guidelines, and

**Applied Key Elements**

1. **Identified a rural community:** Based on the Organization of Economic Co-operation and Development's (OECD) definition of "predominantly rural regions," Haldimand County and Norfolk County are considered rural areas because over 50% of the population lives in rural communities (fewer than 150 persons per square kilometre).
2. **Identified the social determinants of health:** All social determinants of health were selected.
3. **Focused on a rural health issue:** Child and maternal health
4. **Integrated multiple levels of community support.**  
**Health Professionals:** public health nurses, physicians, early childhood educators, health promoters, speech pathologists, physicians, and dental hygienists

- **Community organizations:** OEYC, Literacy Council, Welcome Wagon, CAPC, Addiction Services
  - **Government:** Public Health, Ministry of Children and Youth Services
5. **Identified community rural health challenges and assets.** See below.  
**Addressed rural health challenges and maximized assets using good practices for rural program planning and delivery.** See below

- **Integration of multiple levels of community support**
  - o **Health professionals:** public health nurses, physicians, early childhood educators, health promoters, speech pathologists, dental hygienists
  - o **Community organizations:** OEYC, Literacy Council, Welcome Wagon, CAPC, Addiction Services
  - o **Government:** Public Health and Ministry of Children and Youth Services
- **Met the cultural needs of the population:** Made available a Low German translator to describe the bag contents and answer any questions during home visits. Provided resources translated into Low German.
- **Developed a flexible agenda responsive to the demands of rural populations:** Distributed the bags at physicians' offices and

through home visits.

- **Provided a no cost, low cost, or subsidized program.** Provided the prenatal bags at no cost. The bags contained free information, resources, magazines, fridge magnets, booklets, promotional items, and products.
- **Provided the program in several geographical areas with dense populations and short travel distances.** Distributed the bag in various geographical locations in Haldimand and Norfolk.
- **Provided simple, accurate, and easy-to-read educational materials, resources, and information.** Provided magazines, booklets, pamphlets, brochures, promotional items, and fridge magnets on child and maternal health. Topics include immunization, feeding your baby, nutrition, child development, postpartum depression, parenting, family dynamics, coping, childcare, introducing a new baby, safety/injuries, school readiness, sleep, toilet training, values, sexual health, FAS, harmful effects of drugs and alcohol during and after pregnancy, teen pregnancy, teething, and preterm labour signs and symptoms.
- **Promoted existing community rural health programs, services, and resources.** Promoted free or low-cost community programs and services, e.g., Ontario Early Years (OEYC) programs in Haldimand and Norfolk, Haldimand-Norfolk Health Unit Preschool Speech and Language Program, Literacy Council, food banks, and social services agencies.
- **Utilized and adopted a rural outreach model.** Distributed prenatal bags at physicians' offices, home visits, prenatal classes, and the prenatal fair.

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### Rural Health Challenges/Asset Identification and Solution Identification

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Income and social status	<ul style="list-style-type: none"> <li>• Lower median income than the rest of Ontario</li> <li>• High poverty rate</li> </ul>	<ul style="list-style-type: none"> <li>• Several non-profit organizations in H&amp;N</li> <li>• Free government services, e.g., OEYCs, Children In Need of Treatment (CINOT), Haldimand and Norfolk prenatal classes</li> <li>• Community gardens</li> <li>• Farmers' markets</li> <li>• Subsidized childcare</li> <li>• Housing assistance programs</li> <li>• Local no-cost or low-cost community events</li> <li>• No-cost programs, services and resources</li> <li>• Local food banks</li> </ul>	<ul style="list-style-type: none"> <li>• Provide free prenatal bags.</li> <li>• Provide free resources, products (e.g., diapers), and promotional items.</li> <li>• Provide information about free local community services.</li> </ul>
Social support networks	<ul style="list-style-type: none"> <li>• Geographic and social isolation among prenatal females</li> <li>• Lack of programs, resources, and services for prenatal females</li> </ul>	<ul style="list-style-type: none"> <li>• Strong social capital (sense of belonging, inclusion, trust, participation in community life)</li> </ul>	<ul style="list-style-type: none"> <li>• Leverage health professionals in the community to mobilize the program (public health nurses, physicians, early childhood educators, health promoters, speech pathologists, physicians, dental hygienists).</li> <li>• Foster engagement by integrating community organizations to implement and mobilize the program (OEYC, Literacy Council, Welcome Wagon, CAPC, and Addiction Services).</li> <li>• Leverage government partnerships to implement and mobilize the program (Ministry of Children and Youth Services, Public Health).</li> <li>• Leverage community partnerships with physicians to build trust with prenatal females.</li> <li>• Provide information about community resources and support for prenatal females.</li> <li>• Encourage prenatal females to participate in their community.</li> <li>• Provide a vehicle (home visits) for building rapport, trust, and connectivity with health professionals.</li> </ul>

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Education and literacy	<ul style="list-style-type: none"> <li>• Over 50% of the population in Haldimand and Norfolk counties combined has secondary school education or less. This is higher than the rest of the province.</li> <li>• Low literacy levels</li> <li>• Lack of accurate and credible information from websites</li> <li>• Language barriers. An estimated 8,000 to 10,000 Low German-speaking Mennonites live in Norfolk and nearby settlements from Elgin to Leamington. Mennonites speak predominantly Low German, and English is their second language.</li> </ul>	<ul style="list-style-type: none"> <li>• Existing literacy and education programs and services, e.g., Ontario Early Years (OEYC) programs, Haldimand-Norfolk Health Unit Preschool Speech and Language Program, Literacy Council, alternative education opportunities (e.g., LEAP)</li> </ul>	<ul style="list-style-type: none"> <li>• Provide simple, accurate, easy-to-read educational materials, resources, and information on prenatal health. Include magazines, booklets, pamphlets, brochures, promotional items, and fridge magnets.</li> <li>• Provide the book, Healthy Beginnings: Your Handbook for Pregnancy and Birth.</li> <li>• Make available resources at a Grade 6 level.</li> <li>• Health professionals to provide a high-level overview of the information in the bags and encourage questions.</li> <li>• Make available a Low German translator to describe the bag contents, and answer questions during home visits.</li> <li>• Provide resources in Low German.</li> <li>• Promote the OEYCs, Haldimand and Norfolk Preschool Speech and Language Program, and the Well Baby Drop-in</li> </ul>
Employment/working conditions	<ul style="list-style-type: none"> <li>• High unemployment rates</li> <li>• High underemployment</li> <li>• Most people in Haldimand and Norfolk are employed in trades; transport and equipment operations, and related occupations; and sales and service occupations.</li> </ul>		<ul style="list-style-type: none"> <li>• Provide information on employment services.</li> <li>• Since some jobs are inflexible, home visits will be made in accordance with a family's schedule.</li> </ul>
Social environments	<ul style="list-style-type: none"> <li>• Limited social support services</li> <li>• Lack of affordable organized sports and recreational activities</li> </ul>	<ul style="list-style-type: none"> <li>• Strong social and community response to health issues</li> <li>• Ontario Early Years Centres</li> <li>• Moms and Tots program</li> <li>• Existing free social and community activities (free family swims at recreation centres, church events, OEYC program and services, Moms and Tots program, etc.)</li> <li>• Churches are thriving in Haldimand and Norfolk.</li> </ul>	<ul style="list-style-type: none"> <li>• Utilize multiple levels of community support.</li> <li>• Create a supportive environment by offering home-based services.</li> <li>• Provide information on existing free community programs, services, and resources to promote connectivity and civic participation.</li> </ul>

## ■ CHAPTER FOUR: Results

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Physical environment	<ul style="list-style-type: none"> <li>• No public transportation</li> <li>• Low population density</li> <li>• More distance to travel</li> <li>• Lack of access to high-speed Internet</li> </ul>		<ul style="list-style-type: none"> <li>• Provide home-based services.</li> <li>• Utilize and adopt a rural outreach model to disseminate the bags at physicians' offices, homes, prenatal classes, OB/GYN, midwives, and prenatal health fair.</li> <li>• Provide relevant and credible resources and information.</li> </ul>
Personal health practices and coping skills	<ul style="list-style-type: none"> <li>• Over 50% of residents are overweight or obese, do not consume the recommended daily allowance of vegetables and fruit, and are physically inactive.</li> <li>• A higher proportion of Haldimand and Norfolk residents than the rest of Ontario smokes and drinks heavily.</li> <li>• Suicide rates are higher in Haldimand and Norfolk than in the rest of the province.</li> <li>• It is a well-established fact that in the time after birth—the postpartum period—women are vulnerable to depression.</li> </ul>		<ul style="list-style-type: none"> <li>• Promote healthy lifestyle behaviours among prenatal females.</li> <li>• Provide information on healthy lifestyle behaviours including nutrition and physical activity, smoking cessation, FASD, postpartum depression, suicide, and other mental health issues.</li> </ul>
Culture	<ul style="list-style-type: none"> <li>• An estimated 8,000 to 10,000 Low German-speaking Mennonites live in Norfolk and nearby settlements from Elgin to Leamington.</li> <li>• Mennonites typically have large families.</li> <li>• From 2005–2008, the average Haldimand County and Norfolk County teen pregnancy rate was (23.1/1000).</li> </ul>		<ul style="list-style-type: none"> <li>• Provide information in Low German.</li> <li>• Make available a Low German translator to describe bag contents during a home visit.</li> <li>• Provide information on teen pregnancy and positive parenting.</li> </ul>

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Healthy child development	<ul style="list-style-type: none"> <li>• The percentage of new mothers with low education has been increasing (5.2% in 2005 to 8.2% in 2009).</li> <li>• The percentage of families with newborns that are experiencing financial difficulties has been increasing (5.9% in 2005 to 9.3% in 2009).</li> <li>• The percentage of women who smoke during pregnancy has remained consistent from 2005–2009 (average = 12%).</li> <li>• The percentage of women abusing drugs or alcohol during pregnancy has remained consistent from 2005–2009 (average = 1.3%).</li> </ul>	<ul style="list-style-type: none"> <li>• Teen pregnancy rates have remained consistent, albeit lower than provincial rates (2005–2009).</li> <li>• Teen live birth rates have declined since the mid-1990s.</li> </ul>	<ul style="list-style-type: none"> <li>• Provide simple, easy-to-read educational materials, resources, and information on prenatal health. Materials include the following topics: immunization, feeding your baby, nutrition, child development, postpartum depression, parenting, family dynamics, coping, childcare, introducing a new baby, safety/injuries, school readiness, sleep, toilet training, values, sexual health, FAS, harmful effects of drugs and alcohol during and after pregnancy, teen pregnancy, teething, preterm labour signs and symptoms.</li> </ul>
Health services	<ul style="list-style-type: none"> <li>• Few specialists and practitioners</li> <li>• Lack of access to health-care services</li> <li>• Residents travel outside the counties to obtain services</li> <li>• Underdeveloped mental health services</li> </ul>	<ul style="list-style-type: none"> <li>• Canadian Mental Health Association</li> <li>• Norfolk General Hospital</li> <li>• Haldimand War Memorial Hospital</li> <li>• West Haldimand General Hospital</li> <li>• Midwifery services</li> </ul>	<ul style="list-style-type: none"> <li>• Provide prenatal health-care information.</li> <li>• Provide information on postpartum depression and community support.</li> <li>• Provide information on Haldimand and Norfolk hospitals and midwifery services.</li> </ul>
Biology and genetic endowment	<ul style="list-style-type: none"> <li>• Approximately nine babies annually are born with Fetal Alcohol Syndrome Disorder (FASD).</li> <li>• Common childhood illnesses, diseases, and disabilities.</li> </ul>		<ul style="list-style-type: none"> <li>• Provide Fetal Alcohol Syndrome (FAS) information.</li> <li>• Provide information on common childhood illnesses, diseases, and disabilities.</li> </ul>
Gender	<ul style="list-style-type: none"> <li>• Females comprise 76.7% of single-parent families in Haldimand and Norfolk counties combined (2006).</li> </ul>		<ul style="list-style-type: none"> <li>• Provide information and resources for single-female families.</li> <li>• Target females of reproductive age.</li> </ul>

## ■ CHAPTER FOUR: Results

### HEALTHY BABIES HEALTHY CHILDREN PROGRAM

**Contributor:** *RoseAnne Maracle*

The Healthy Babies Healthy Children program (HBHC) is a ministry-funded program that targets infants and children 0 to 6 years of age. The early years play an important role in the growth, development, and future well-being of children.

The program's vision is to ensure that:

- every child (prenatal to age six) in Ontario will be provided with opportunities to achieve his/her optimal potential, and
- every child in Ontario will have access to effective integrated programs and services that support healthy child development.

Available free of charge to all families in Ontario, the Healthy Babies Healthy Children program provides services before or after the birth of a child. Program services are provided by public health nurses and family home visitors—experienced parents specially trained to help families meet children's needs. They provide encouragement and support, translation of information, parenting, prenatal support, child development, and safety information. They advocate on behalf of their assigned families and guide them to other community resources and programs.

**Prenatal home visiting.** Prenatal home visiting provides prenatal support. At a home visit, a public health nurse or a family home visitor provides information on various programs, services, and resources. They may also provide parents with information on pregnancy, labour, delivery, and other topics on child and maternal health.

**Postpartum support.** As part of the HBHC program, a public health nurse will follow up on all births and offer a home visit to all mothers soon after their discharge from the hospital. At this time, the nurse offers support, information, and advice to enhance child development, strengthen parenting, make appropriate connections with community agencies, and arrange a home visit if needed.

**Postpartum home visiting.** Postpartum home visiting can take place through the combined efforts of public health nurses and family home visitors. These visits provide an opportunity for parents to become more confident and knowledgeable in their new roles.

The public health nurse provides support in many areas including:

- bereavement support,
- breastfeeding,
- infant nutrition,
- child development,
- postnatal infant care,
- child safety,
- parenting, and
- prenatal education.

The family home visitor also provides support in many areas including:

- information about child development and safety;
- parenting support;
- prenatal information;
- information about community programs (food resources, support groups, housing assistance, subsidized child care); and
- translation and interpretation.

#### Applied Key Elements

1. **Identified a rural community:** Based on the Organization of Economic Co-operation and Development's (OECD) definition of "predominantly rural regions," Haldimand County and Norfolk County are considered rural because over 50% of the population lives in rural communities (those with fewer than 150 persons per square kilometre).
2. **Identified the social determinants of health:** All social determinants of health were selected.
3. **Focused on a rural health issue:** Child and maternal health
4. **Integrated multiple levels of community supports:**  
**Health professionals:** public health nurses, family home visitors, speech pathologists, social workers, and infant development specialists

5. **Community organizations:** CAS  
**Government:** Public Health and the Ministry of Health and Long Term Care
6. **Identified community rural health challenges and assets:** See below.
7. **Addressed rural health challenges and maximized assets using good practices for rural program planning and delivery:** See below

#### Applied Good Practices to Address Rural Health Challenges and Maximize Rural Assets

- **Addressed a rural health issue:** Child and maternal health
- **Integrated multiple levels of community support**
  - **Health professionals:** public health nurses, family home visitors, speech pathologists, social workers, infant development specialists
  - **Community organizations:** CAS
  - **Government:** Public Health and the Ministry of Health and Long Term Care
- **Provided a no cost program**
- **Provided simple, accurate, easy-to-read educational materials, resources, and information on child and maternal health.**
- **Built on existing strong social capital (sense of belonging, inclusion, trust, reciprocity, and participation in community life).** Employed effective communication channels (telephone contact/counselling and home visits) to build rapport, trust, and connectivity with health professionals.
- **Met the cultural needs of the population.** Modified and tailored the program to reflect the Low German population. This was achieved by creating a culturally sensitive environment by making available Low German family home visitors and providing Low German translation services and resources.
- **Promoted existing rural community health programs, services, and resources.** OEYCs,

Haldimand and Norfolk Preschool Speech and Language Program, prenatal classes, Well Baby Drop-in, Literacy Council, alternative education opportunities, church events, Moms and Tots program, etc.

- **Delivered a flexible program responsive to the needs of rural populations.** Provided home visits at flexible times in response to the needs and demands of the Low German culture.
- **Utilize and adopted a rural health outreach model.** Offered home-based services.



## ■ CHAPTER FOUR: Results

### Rural Health Challenges/Asset Identification and Solution Identification

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Income and social status	<ul style="list-style-type: none"> <li>• Lower median income than the rest of Ontario</li> <li>• High poverty rate</li> <li>• Unaffordable housing</li> <li>• Unaffordable childcare</li> <li>• Unaffordable healthy foods</li> </ul>	<ul style="list-style-type: none"> <li>• Local community gardens</li> <li>• Farmers' markets</li> <li>• Subsidized childcare</li> <li>• Housing assistance programs</li> <li>• Local no-cost or low-cost community events</li> <li>• No-cost programs, services, and resources</li> <li>• Local food banks</li> </ul>	<ul style="list-style-type: none"> <li>• Provide a free program.</li> <li>• Provide free resources on child and maternal health.</li> <li>• Provide information about free local community services.</li> <li>• Provide information on subsidized childcare, food resources; and housing assistance programs, services, and resources.</li> </ul>
Social support networks	<ul style="list-style-type: none"> <li>• Geographic and social isolation</li> </ul>	<ul style="list-style-type: none"> <li>• Strong social capital (sense of belonging, inclusion, trust, participation in community life)</li> <li>• Existing support groups</li> </ul>	<ul style="list-style-type: none"> <li>• Leverage health professionals in the community to mobilize the program (public health nurses, family home visitors, speech pathologists, social workers, infant development specialists).</li> <li>• Leverage community support (CAS).</li> <li>• Leverage government partnerships to implement and mobilize the program (Public Health and Ministry of Health and Long-Term Care).</li> <li>• Provide information on existing free community services and resources to promote connectivity and civic participation.</li> <li>• Create a supportive environment by offering home-based services.</li> <li>• Provide effective communication channels (telephone contact/ counselling and home visits) to build rapport, trust, and connectivity with health professionals.</li> <li>• Encourage prenatal and postpartum females and their families to participate in their community.</li> </ul>



Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Education and literacy	<ul style="list-style-type: none"> <li>Over 50% of the population in Haldimand and Norfolk counties combined has secondary school education or less. This is higher than the rest of the province.</li> <li>Low literacy levels</li> <li>Language barriers. An estimated 8,000 to 10,000 Low German-speaking Mennonites live in Norfolk and nearby settlements from Elgin to Leamington. Mennonites speak predominantly Low German, and English is their second language.</li> </ul>	<ul style="list-style-type: none"> <li>Existing literacy and education programs and services, e.g., Ontario Early Years Centres (OEYC), Haldimand-Norfolk Health Unit Preschool Speech and Language Program, Literacy Council, alternative education opportunities (e.g., Turning Points, Pathfinders, LEAP, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Provide information on existing literacy programs, services, and resources.</li> <li>Provide simple, easy-to-read educational materials, resources, and information on healthy child and maternal development. These include topics on immunization, feeding your baby, nutrition, child development, postpartum depression, parenting, family dynamics, and coping.</li> <li>Encourage moms to ask questions about their health and/or the health of their baby.</li> <li>Identify the importance of reading to their baby.</li> <li>Provide translation services.</li> <li>Provide resources in Low German.</li> </ul>
Employment/working conditions	<ul style="list-style-type: none"> <li>High unemployment rates</li> <li>High underemployment</li> <li>Seasonal jobs</li> <li>Greater vulnerability to economic downturns</li> </ul>	<ul style="list-style-type: none"> <li>Existing employment programs, services, and resources</li> </ul>	<ul style="list-style-type: none"> <li>Provide information on existing employment programs, services, and resources.</li> </ul>
Social environments	<ul style="list-style-type: none"> <li>Limited social support services</li> <li>Lack of affordable organized sports and recreational activities</li> </ul>	<ul style="list-style-type: none"> <li>Strong social and community response to health issues</li> <li>The community values infants, children, and families.</li> <li>Existing free social and community activities (free family swims at recreation centres, church events, OEYC programs and services, Moms and Tots program, Haldimand and Norfolk prenatal health program, Haldimand and Norfolk prenatal fairs)</li> <li>Thriving churches</li> </ul>	<ul style="list-style-type: none"> <li>Utilize multiple levels of community support.</li> <li>Provide information on existing free community services and resources to promote connectivity and civic participation.</li> <li>Create a supportive environment by offering home-based services.</li> </ul>
Physical environment	<ul style="list-style-type: none"> <li>No public transportation</li> <li>Low population density</li> <li>More distance to travel</li> </ul>		<ul style="list-style-type: none"> <li>Utilize a rural outreach model by providing home-based services and telephone counselling.</li> </ul>

## ■ CHAPTER FOUR: Results

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Personal health practices and coping skills	<ul style="list-style-type: none"> <li>• Over 50% of residents are overweight or obese, do not consume the recommended daily allowance of vegetables and fruits, and are physically inactive.</li> <li>• A higher proportion of Haldimand and Norfolk residents than the rest of Ontario smokes and drinks heavily.</li> <li>• Suicide rates are higher in Haldimand and Norfolk than in the rest of the province.</li> <li>• It is a well-established fact that after birth—the postpartum period—women are vulnerable to depression.</li> </ul>		<ul style="list-style-type: none"> <li>• Promote healthy lifestyle behaviours among prenatal and postnatal females and their families.</li> <li>• Provide information on healthy lifestyle behaviours including nutrition and physical activity, smoking cessation, FASD, postpartum depression, suicide, mental health issues, and other topics related to child and maternal health.</li> </ul>
Culture	<ul style="list-style-type: none"> <li>• An estimated 8,000 to 10,000 Low German-speaking Mennonites live in Norfolk and nearby settlements from Elgin to Leamington.</li> <li>• Mennonites typically have large families.</li> <li>• From 2005–2008, the average teen pregnancy rate in Haldimand and Norfolk counties was (23.1/1000).</li> </ul>		<ul style="list-style-type: none"> <li>• To modify and tailor the program to reflect the Low German population:               <ol style="list-style-type: none"> <li>a. Create a culturally sensitive environment by making available Low German family home visitors.</li> <li>b. Provide translation services</li> <li>c. Provide resources in Low German.</li> <li>d. Provide home visits at flexible times in response to the needs and demands of the Low German culture.</li> </ol> </li> <li>• Provide information on prenatal and postpartum health to teen mothers.</li> </ul>

<b>Social Determinants of Health</b>	<b>Rural Health Challenges</b>	<b>Rural Health Assets</b>	<b>Solutions to Health Challenges/Maximize Assets</b>
Healthy child development	<ul style="list-style-type: none"> <li>• The percentage of new mothers with low education has been increasing (5.2% in 2005 to 8.2% in 2009).</li> <li>• The percentage of families with newborns that are experiencing financial difficulties has been increasing (5.9% in 2005 to 9.3% in 2009).</li> <li>• The percentage of women who smoke during pregnancy has remained consistent from 2005–2009 (average = 12%).</li> <li>• The percentage of women abusing drugs or alcohol during pregnancy has remained consistent from 2005–2009 (average = 1.3%).</li> </ul>	<ul style="list-style-type: none"> <li>• Teen pregnancy rates have remained consistent but lower than provincial rates (2005–2009).</li> <li>• Teen live birth rates have declined since the mid-1990s.</li> </ul>	<ul style="list-style-type: none"> <li>• Provide simple, easy-to-read educational materials, resources, and information on healthy child development. Materials include topics on immunization, feeding your baby, nutrition, child development, postpartum depression, parenting, family dynamics, coping, and other topics related to child and maternal health.</li> <li>• Provide information on sexual health, smoking cessation, FAS, drugs, and alcohol.</li> <li>• Provide sexual health education to teenagers.</li> </ul>
Health services	<ul style="list-style-type: none"> <li>• Low number of specialists and practitioners</li> <li>• Lack of access to health-care services.</li> <li>• Residents travel outside the counties to obtain services.</li> <li>• Under-servicing of culturally sensitive populations (e.g., Low German)</li> <li>• Few walk-in clinics</li> <li>• No OB/GYN</li> </ul>	<ul style="list-style-type: none"> <li>• Norfolk General Hospital</li> <li>• Haldimand War Memorial Hospital</li> <li>• West Haldimand General Hospital</li> <li>• Midwifery Services</li> </ul>	<ul style="list-style-type: none"> <li>• Provide home-based services.</li> <li>• Provide telephone counselling.</li> <li>• Provide health-care services to the Low German population.</li> <li>• Provide information on existing health-care programs, services, and resources.</li> </ul>
Biology and genetic endowment	<ul style="list-style-type: none"> <li>• Approximately nine babies a year are born with Fetal Alcohol Syndrome Disorder (FASD).</li> <li>• Common childhood illnesses/chronic conditions and disabilities.</li> </ul>		<ul style="list-style-type: none"> <li>• Provide Fetal Alcohol Syndrome (FAS) information.</li> </ul>
Gender	<ul style="list-style-type: none"> <li>• Females comprise 76.7% of single-parent families in Haldimand and Norfolk counties combined (2006).</li> </ul>		<ul style="list-style-type: none"> <li>• Provide a supportive and comfortable environment for single-female parents.</li> <li>• Target pregnant women, new mothers, and children aged 0-6.</li> </ul>

### PRENATAL AND POSTNATAL NURSE PRACTITIONER PROJECT

**Contributor:** Kristal Pitter

The prenatal and postnatal nurse practitioner (PPNP) program was initially one of the Early Years initiatives, funded by the federal government through the Canada Health and Social Transfer for Early Childhood Development Program. The services provided by the nurse practitioner include preconception, prenatal and postnatal care, well baby checkups, pregnancy testing, birth-control counselling, immunization, cervical screening (PAPs), and breast exams. The Mothers' Care Clinic program increases access to early, regular prenatal and postnatal health care for pregnant women, new mothers, and their children up to six years of age. It also promotes the early identification and treatment of potential complications for mothers and/or infants in the prenatal and postnatal periods. Services are provided by the nurse practitioner in Langton and Simcoe, with the main service site being Langton in an effort to meet the needs of the outlying Norfolk County community.

#### The nurse practitioner:

- provides prenatal and postnatal risk assessments, including early and appropriate screening of mothers, newborns, and children up to six years of age;
- treats medical conditions;
- provides breastfeeding education and support;
- reduces risk to maternal and child health through intervention, prevention, and timely referrals to relevant services and support;
- provides education to support healthy pregnancy and improve maternal, infant, and child outcomes; and
- builds upon and links with local pre- and postnatal services.

#### The nurse practitioner service includes:

##### 1. **Assessment:**

- client health-care needs (physical, emotional, psychological, spiritual);
- prenatal, postnatal, infant, and child screening;
- client and community health-care resources.

##### 2. **Planning:**

- analysis of the findings of health assessment;
- delivery of nursing care or referral to other health professionals as appropriate;
- decision-making regarding the appropriate service or treatment, care provider, or equipment.

##### 3. **Intervention:**

- provide treatment;
- provide health teaching and health promotion (e.g., counselling);
- communicate with clients, families, or the community;
- provide professional advice;
- collaborate with regulated care providers;
- influence the practice of care providers directly or indirectly;
- manage nursing resources;
- contribute to the development of health promotion resources/strategies.

##### 4. **Evaluation:**

- analyze results of interventions with clients and families.

#### The nurse practitioner attempts to inform community residents and health/social service providers of Norfolk PPNP services by:

- linking and integrating with existing community health services/structures;
- implementing local public information and awareness initiatives that target pregnant women, new mothers, and health-care professionals in the community to promote available services and emphasize the importance of prenatal and postnatal care;
- establishing local project co-ordination and accountability structures;
- participating in teleconferences/meetings as required to support project co-ordination and the exchange of ideas/resources among project sites.

#### Applied Key Elements

1. **Identified a rural community:** on the Organization of Economic Co-operation and Development's

(OECD) definition of "predominantly rural regions," Haldimand County and Norfolk County are considered rural areas because over 50% of the population lives in rural communities (those with fewer than 150 persons per square kilometre).

##### 2. **Identified the social**

**determinants of health:** All social determinants of health were selected.

##### 3. **Focused on a rural health issue:**

Child and maternal health

##### 4. **Integrated multiple levels of community supports:**

**Health professionals:** nurse practitioners, physicians, midwives, hospital representatives, health promoters, public health nurses, pharmacists, registered dietitians, dentists, dental hygienists, family home visitors, social workers, OW and Children's Aid Society staff.

##### **Community organizations:**

Midwives of East Erie, Norfolk Help Centre, Mennonite Community Services (MCS), Norfolk General Hospital, REACH

**Government:** The program was originally developed by the Ministry of Health and Long-Term Care, but responsibility currently lies with the Ministry of Children and Youth Services.

##### 5. **Identified community rural health challenges and assets:**

See below.

##### 6. **Addressed rural health challenges and maximized assets using good practices for rural program planning and delivery:** See below

#### Applied Good Practices to Address Rural Health Challenges and Maximize Rural Assets

- **Addressed a rural health issue:** Child and Maternal Health
- **Integrated multiple levels of community support**
  - o **Health professionals:** nurse practitioners, physicians, midwives, hospital representatives, health promoters, public health nurses,

pharmacists, registered dietitians, dentists, dental hygienists, family home visitors, social workers, Ontario Works staff, Children's Aid Society.

o **Community organizations:**

Midwives of East Erie, Norfolk Help Centre, Mennonite Community Services (MCS), Norfolk General Hospital.

o **Government:** The program was originally developed by the Ministry of Health and Long-Term Care, but responsibility currently lies with the Ministry of Children and Youth Services.

- **Offered a no-cost program and sample medications where possible.**
- **Provided simple, accurate, easy-to-read educational materials, resources and information on preconception, prenatal health, postpartum health, and child health.**
- **Built on existing strong social capital (sense of belonging, inclusion, trust, reciprocity, and participation in community life).** Utilized and adopted a rural outreach model by providing services in multiple settings to help build trust and rapport with the nurse practitioner (e.g., Health Unit, Moms and Tots program). Leveraged community partnerships and support to build trust among community members. Fostered a collaborative engagement approach to mobilize the program.
- **Met the cultural needs of the population.** Modified and tailored the program to reflect the Low German population. This was achieved by creating a culturally

sensitive environment and providing resources in Low German. The program was offered in Langton, an area with a high population of Low German Mennonites. The Mothers' Care Clinic offers prenatal and postpartum services to females of lower socio-economic status, and to teen mothers who reside in Haldimand and Norfolk.

- **Promoted existing community rural health programs, services and resources.** Provided information on existing free community services and resources to promote connectivity and civic participation; referred clients to other health professionals in Haldimand and Norfolk as appropriate. Community services include OEYCs, Haldimand and Norfolk Preschool Speech and Language Program, prenatal classes, Well Baby Drop-in, Literacy Council, alternative education opportunities, church events, and Moms and Tots programs.
- **Used health professionals other than physicians and specialists to provide clinical services.** Employed a nurse practitioner to provide prenatal and postnatal clinical services.
- **Provided programs in several geographical areas with high population densities and short travel distances.** Provided the program in Simcoe, Langton, and Caledonia.
- **Utilized a rural outreach model.** Provided home visits and clinical services in the community.



## CHAPTER FOUR: Results

### Rural Health Challenges/Asset Identification and Solution Identification

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Income and social status	<ul style="list-style-type: none"> <li>• Lower median income than the rest of Ontario</li> <li>• High poverty rate</li> <li>• Unaffordable housing</li> <li>• Unaffordable childcare</li> <li>• Unaffordable healthy foods</li> <li>• Many Low German Mennonite families are large and difficult to support on a low income.</li> <li>• Many employers do not have benefits.</li> <li>• Low German Mennonite family size.</li> </ul>	<ul style="list-style-type: none"> <li>• Local community gardens</li> <li>• Farmers' markets</li> <li>• Subsidized childcare</li> <li>• Housing assistance programs</li> <li>• Local no-cost or low-cost community events</li> <li>• No-cost programs, services, and resources</li> <li>• Local food banks</li> </ul>	<ul style="list-style-type: none"> <li>• Provide a Mothers' Care Clinic to populations that have difficulty accessing early, adequate, and consistent care.</li> <li>• Offer prenatal and postpartum services to women of lower socio-economic status.</li> <li>• Provide a no-cost clinic and sample medications where possible.</li> <li>• Provide free resources on preconception, and prenatal and postnatal health.</li> <li>• Provide information about free local community services.</li> <li>• Provide information on subsidized childcare and food resources, as well as housing assistance programs, services, and resources.</li> <li>• Provide resources in Low German.</li> <li>• Advocate for better housing that will accommodate Low German families.</li> </ul>



Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Social support networks	<ul style="list-style-type: none"> <li>• Geographic and social isolation</li> </ul>	<ul style="list-style-type: none"> <li>• Strong social capital (sense of belonging, inclusion, trust, participation in community life)</li> <li>• Existing support groups</li> </ul>	<ul style="list-style-type: none"> <li>• Provide information on existing preconception, prenatal, and postpartum programs, services, and resources.</li> <li>• Provide information on the various family support groups in the community.</li> <li>• Leverage community health professionals to mobilize the program (nurse practitioners, physicians, midwives, hospital representatives, health promoters, public health nurses, pharmacists, registered dietitians, dentists, dental hygienists, family home visitors, social workers, OW and Children’s Aid Society staff).</li> <li>• Foster engagement by integrating community organizations to implement and mobilize the program, e.g., Midwives of East Erie, Norfolk Help Centre, Mennonite Community Services (MCS), Norfolk General Hospital.</li> <li>• Leverage government partnerships to implement and mobilize the program (Public Health Ontario, Ministry of Health and Long-Term Care, Ministry of Children and Youth Services, and the Public Health Agency of Canada.</li> <li>• Provide clinical assessments in a safe, comfortable, and friendly environment that encourages connectivity and trust with the nurse practitioner.</li> <li>• Utilize and adopt a rural outreach model by providing services in multiple settings to build help, trust, and rapport with the nurse practitioner (e.g., Health Unit, Moms and Tots program).</li> <li>• Encourage preconception, prenatal, and postpartum females and their families to participate in their community.</li> </ul>

## CHAPTER FOUR: Results

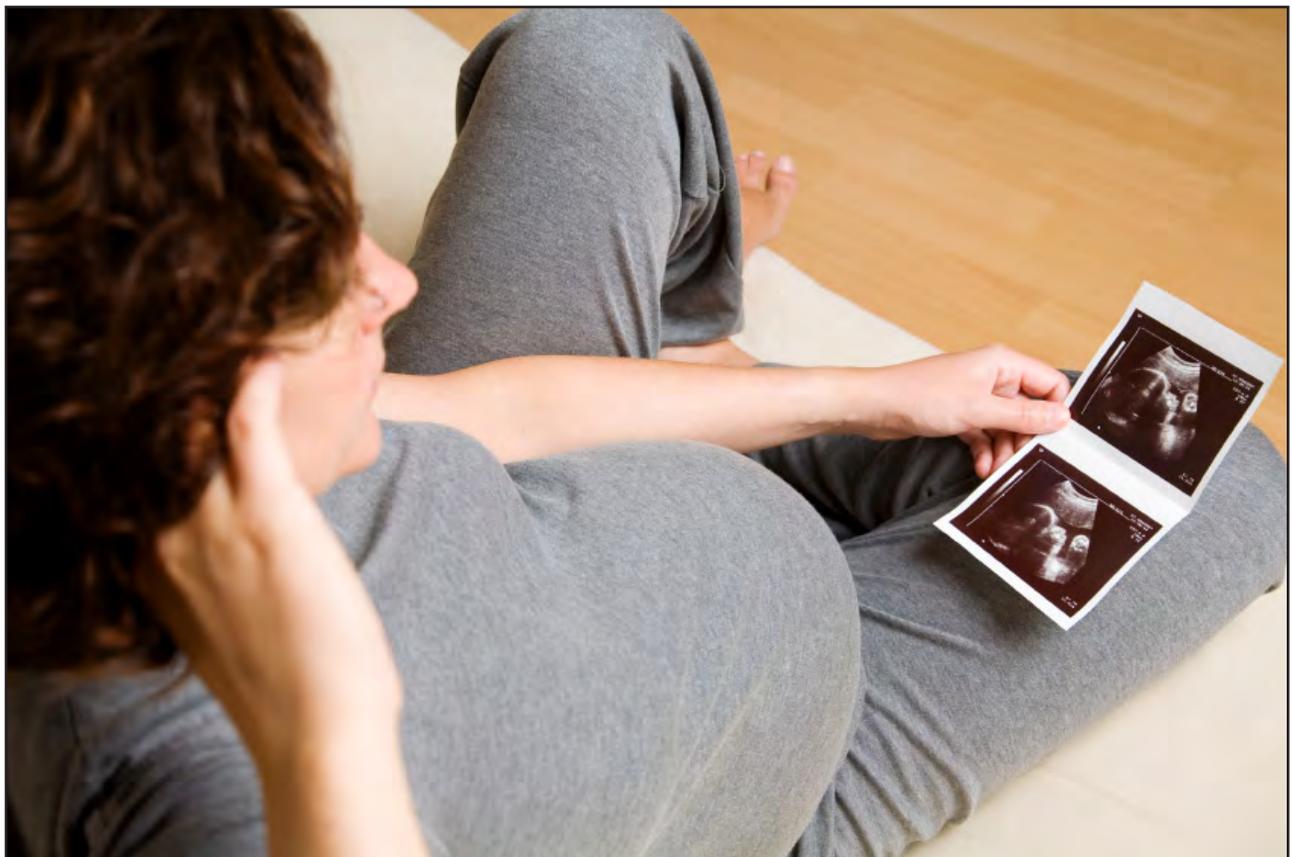
Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Education and literacy	<ul style="list-style-type: none"> <li>Over 50% of the population in Haldimand and Norfolk counties combined has secondary school education or less. This is greater than the rest of the province.</li> <li>Low literacy levels</li> <li>Language barriers. An estimated 8,000 to 10,000 Low German-speaking Mennonites live in Norfolk and nearby settlements from Elgin to Leamington. Mennonites speak predominantly Low German, and English is their second language.</li> <li>Many Low German Mennonites attended school in Mexico for an average of six to seven years.</li> </ul>	<ul style="list-style-type: none"> <li>Existing literacy and education programs and services, e.g., Ontario Early Years Centres (OEYC), Haldimand-Norfolk Health Unit Preschool Speech and Language Program, Literacy Council, alternative education opportunities (e.g., Turning Points, Pathfinders, LEAP).</li> </ul>	<ul style="list-style-type: none"> <li>Provide information on existing literacy programs, services, and resources.</li> <li>Provide simple, easy-to-read educational materials, resources, and information. Materials include topics on preconception, prenatal and postpartum health, and child health.</li> <li>Encourage moms to ask questions about their health and/or the health of their babies.</li> <li>Provide resources in Low German.</li> <li>Promote Low German programs and services.</li> </ul>
Employment/working conditions	<ul style="list-style-type: none"> <li>High unemployment rates</li> <li>High underemployment</li> <li>Seasonal jobs</li> <li>More vulnerable to economic downturns</li> </ul>	<ul style="list-style-type: none"> <li>Existing employment programs, services, and resources</li> </ul>	<ul style="list-style-type: none"> <li>Provide information on existing employment programs, services, and resources.</li> </ul>
Social environments	<ul style="list-style-type: none"> <li>Limited social support services</li> <li>Lack of affordable organized sports and recreational activities</li> </ul>	<ul style="list-style-type: none"> <li>Strong social and community response to health issues</li> <li>The community values infants, children, and families.</li> <li>Existing free social and community activities (free family swims at recreation centres, church events, OEYC programs and services, Moms and Tots program, Haldimand and Norfolk prenatal health program, Haldimand and Norfolk prenatal fair)</li> <li>Thriving churches in Haldimand and Norfolk</li> </ul>	<ul style="list-style-type: none"> <li>Utilize multiple levels of community support.</li> <li>Provide information on existing free community services and resources to promote connectivity and civic participation.</li> <li>Provide breastfeeding education and support.</li> <li>Provide education to support healthy pregnancy, and maternal and child outcomes.</li> <li>Build linkages with other prenatal and postnatal service providers.</li> <li>Create a supportive environment by addressing clients' emotional, physical, psychological, and spiritual needs.</li> <li>Provide counselling services.</li> <li>Communicate with clients, families, or the community.</li> <li>Implement local public health information and awareness initiatives that target pregnant women, new mothers, and health-care professionals in the community to promote available services and the importance of prenatal and postpartum care.</li> <li>Refer clients to other health professionals in Haldimand and Norfolk as appropriate.</li> </ul>

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Physical environment	<ul style="list-style-type: none"> <li>• No public transportation</li> <li>• Low population density</li> <li>• More distance to travel</li> </ul>		<ul style="list-style-type: none"> <li>• Provide program in several geographic areas with a high population density and short travel distances (Caledonia, Langton, Simcoe).</li> <li>• Provide home visits.</li> <li>• Provide programs at a local church.</li> </ul>
Personal health practices and coping skills	<ul style="list-style-type: none"> <li>• Over 50% of residents are overweight or obese, do not consume the recommended daily allowance of vegetables and fruit, and are physically inactive.</li> <li>• A higher proportion of Haldimand and Norfolk residents than the rest of Ontario smokes and drinks heavily.</li> <li>• Suicide rates are higher in Haldimand and Norfolk than in the province overall.</li> <li>• It is a well-established fact that during the time after birth—the postpartum period—women are vulnerable to depression.</li> </ul>		<ul style="list-style-type: none"> <li>• Promote healthy lifestyle behaviours among prenatal and postpartum females and their families.</li> <li>• Provide information on healthy lifestyle behaviours including nutrition and physical activity, smoking cessation, FASD, postpartum depression, suicide, mental health issues, and other topics related to child and maternal health.</li> </ul>
Culture	<ul style="list-style-type: none"> <li>• An estimated 8,000 to 10,000 Low German-speaking Mennonites live in Norfolk and nearby settlements from Elgin to Leamington.</li> <li>• Mennonites typically have large families.</li> <li>• Low German-speaking women generally have limited knowledge about the human body—specifically the reproductive system— and how behaviours affect their health and the health of their children.</li> <li>• From 2005 to 2008 Haldimand and Norfolk counties’ average teen pregnancy rate was (23.1/1000).</li> </ul>		<ul style="list-style-type: none"> <li>• Modify and tailor the program to meet the needs of the population:               <ol style="list-style-type: none"> <li>a. Provide prenatal and postnatal services to Low German-speaking women.</li> <li>b. Provide information in Low German.</li> <li>c. Provide a culturally sensitive environment by being aware of and knowledgeable about the Low German population.</li> </ol> </li> <li>• The program was offered in Langton, which has a high population of Low German Mennonites.</li> </ul>

## CHAPTER FOUR: Results

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Healthy child development	<ul style="list-style-type: none"> <li>• The percentage of new mothers with low education has been increasing (5.2% in 2005 to 8.2% in 2009).</li> <li>• The percentage of families with newborns that are experiencing financial difficulties has been increasing (5.9% in 2005 to 9.3% in 2009).</li> <li>• The percentage of women who smoke during pregnancy has remained consistent from 2005–2009 (average = 12%).</li> <li>• The percentage of women abusing drugs or alcohol during pregnancy has remained consistent from 2005–2009 (average = 1.3%).</li> <li>• From 1999 to 2008, the low birth weight rate in both Haldimand and Norfolk counties was 5.5/100.</li> <li>• The average rate of preterm births for Haldimand and Norfolk counties from 2005 to 2008 (6.9/100) was lower than the provincial average.</li> </ul>	<ul style="list-style-type: none"> <li>• Teen pregnancy rates have remained consistent albeit lower than provincial rates (2005-2009).</li> <li>• Teen live birth rates have declined since the mid-1990s.</li> </ul>	<ul style="list-style-type: none"> <li>• To provide simple, easy-to-read educational materials, resources and information on healthy child development. Materials include topics on immunization, breastfeeding, nutrition, child development, postpartum depression, parenting, family dynamics, coping, and other topics related to healthy pregnancy and maternal, infant, and child health.</li> <li>• Provide information on sexual health, smoking cessation, FAS, drugs, and alcohol.</li> <li>• Provide sexual health education to teenagers.</li> <li>• Reduce risk to maternal and child health through intervention and prevention, and timely referrals to relevant services and support.</li> </ul>
Health services	<ul style="list-style-type: none"> <li>• Few specialists and practitioners</li> <li>• Lack of access to health-care services</li> <li>• Residents travel outside the counties to obtain services</li> <li>• Under-servicing of culturally sensitive populations (Low German)</li> <li>• Few walk-in clinics</li> <li>• Difficult to recruit and retain specialists and practitioners</li> <li>• Less diagnostic equipment and fewer treatment options</li> <li>• Fewer nurses</li> <li>• No OB/GYN</li> <li>• High percentage of clients does not have access to a family physician.</li> </ul>	<ul style="list-style-type: none"> <li>• Norfolk General Hospital</li> <li>• Haldimand War Memorial Hospital</li> <li>• West Haldimand General Hospital</li> <li>• Midwifery services</li> </ul>	<ul style="list-style-type: none"> <li>• Provide preconception, prenatal, and postnatal care by a nurse practitioner.</li> <li>• Provide prenatal and postnatal risk assessments, including early and appropriate screening of mothers, newborns, and children up to age six.</li> <li>• Provide prenatal, postnatal, infant, and child screening.</li> <li>• Analyze the findings of a health assessment.</li> <li>• Make decisions regarding the appropriate service or treatment, care provider, or equipment.</li> <li>• Provide treatment.</li> <li>• Prescribe medications.</li> </ul>

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Biology and genetic endowment	<ul style="list-style-type: none"> <li>• Approximately nine babies a year are born with Fetal Alcohol Syndrome Disorder (FASD).</li> <li>• Common childhood illnesses/ chronic conditions and disabilities</li> </ul>		<ul style="list-style-type: none"> <li>• Provide Fetal Alcohol Syndrome (FAS) information.</li> <li>• Provide information, programs and resources for chronic diseases, illnesses, and disabilities.</li> <li>• Provide a supportive environment that is conducive to addressing youth special needs.</li> <li>• Provide counselling.</li> </ul>
Gender	<ul style="list-style-type: none"> <li>• Females comprise 76.7% of single-parent families in Haldimand and Norfolk counties combined (2006).</li> </ul>		<ul style="list-style-type: none"> <li>• Provide prenatal and postnatal services to teen mothers.</li> <li>• Provide a supportive and comfortable environment for single-female parents.</li> </ul>



### SCHOOL HEALTH PROGRAM

**Contributor:** *Melanie Laundry and Sabine Murphy*

The comprehensive school health program fosters a supportive, healthy school environment and promotes youth health for students in both elementary and secondary schools. A public health nurse (PHN) is assigned to each school and attends on a regular basis. The PHN provides various programs and services to children, youth, and school staff that include:

- confidential counselling for individuals/students;
- referrals to community agencies and support groups;
- resources to teachers and students for classroom teaching on health-related topics and on curriculum lessons;
- classroom presentations on health-related topics;
- work with school personnel, students, and/or parents to assist with activities that promote healthy lifestyles.

Moreover, PHNs provide health programming/education in classrooms consistent with the health and physical education component of the Ontario Ministry of Education's school curriculum. This recognizes that good health practices are an important aspect of daily living and that health and learning are closely connected.

#### Some health topics include:

- healthy lifestyle;
- nutrition and body image;
- bullying;
- self-esteem;
- stress and coping;
- anxiety and depression;
- communication and healthy relationships;
- healthy sexuality, including abstinence, birth control, and STI education;
- preconception health;
- reproductive health;
- parenting;
- mental health.

### Applied Key Elements

1. **Identified a rural community:**  
Based on the Organization of Economic Co-operation and Development's (OECD) definition of "predominantly rural regions," Haldimand County and Norfolk County are considered rural areas because over 50% of the population lives in rural communities (those with fewer than 150 persons per square kilometre).
2. **Identified the social determinants of health:** All social determinants of health were selected.
3. **Focused on a rural health issue:** Youth Health
4. **Integrated multiple levels of community support:**  
**Health Professionals:** public health nurses, health promoters, health and wellness co-ordinators, STAR and addictions counsellors, school board social workers, child and youth workers, physicians, social workers, psychologists, psychiatrists, pharmacists, nurse practitioners.  
**Community organizations:** REACH, Ontario Early Years Centres, CAS, hospitals, employment centres, Ontario Works (LEAP program), DREAM program, Dairy Farmers of Ontario, Pregnancy Care Centres.  
**Government:** Public Health, Ministry of Education, Ministry of Health and Long-Term Care, Ministry of Health Promotion and Sport, school boards, Ministry of Education, and the Ministry of Community Services.  
**Other Key Stakeholders:** parents, teachers, physicians
5. **Identified community rural health challenges and assets:**  
See below.
6. **Addressed rural health challenges and maximized assets using good practices for rural program planning and delivery:** See below

### Applied Good Practices to Address Rural Health Challenges and Maxi-

### mize Rural Assets

- **Addressed a rural health issue:** Youth Health
- **Integrated multiple levels of community support.**
  - **Health professionals:** public health nurses, health promoters, health and wellness co-ordinators, STAR and addictions counsellors, school board social workers, child and youth workers, physicians, social workers, psychologists, psychiatrists, pharmacists
  - **Community organizations:** REACH, Ontario Early Years Centres (OEYCs), Children's Aid Society (CAS), hospitals, employment and youth centres, Ontario Works (LEAP program), DREAM program, Dairy Farmers of Ontario, and Pregnancy Care Centres
  - **Government:** Public Health, Ministry of Education, Ministry of Health and Long-Term Care, Ministry of Health Promotion and Sport, and school boards
  - **Other key stakeholders:** parents, teachers, grandparents, foster parents
- **Offered a no-cost program**
- **Provided simple, accurate, easy-to-read educational materials, resources, and information on health topics. PHNs utilize the 40-asset approach of the Search Institute.**
- **Built on existing strong social capital (sense of belonging, inclusion, trust, reciprocity, and participation in community life).** Provided services in schools to help build trust and rapport among students. This was achieved by providing confidential counselling for them. School health nurses also encourage students to participate in their community by volunteering and engaging in sports, recreation, and cultural activities.
- **Utilized and adopted a rural outreach model.** Provided school health programs in several schools in Haldimand and Norfolk.
- **Met the cultural needs of the population.** Modified and tailored the program to reflect the Low

German population. This was achieved by creating a culturally sensitive environment and providing resources in Low German. School health nurses also provided school visits in southwest Norfolk where there is a high population of Low German Mennonites. School health nurses provided appropriate resources and information to students of lower socio-economic status (e.g., through Salvation Army, Ontario Works, Food Banks).

- **Promoted existing community rural health programs, services, and resources.** OEYCs, Haldimand and Norfolk Preschool Speech and Language Program, prenatal classes, Well Baby Drop-in, Literacy Council, alternative education opportunities, church events, Moms and Tots programs

- **Provided program in several geographical areas with high population density and short distance to travel.** Provided program in several schools in Haldimand and Norfolk.



## ■ CHAPTER FOUR: Results

### Rural Health Challenges/Asset Identification and Solution Identification

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Income and social status	<ul style="list-style-type: none"> <li>• Lower median income than the rest of Ontario</li> <li>• High poverty rate</li> <li>• Unaffordable housing</li> <li>• Unaffordable childcare</li> <li>• Unaffordable healthy foods</li> <li>• Many Low German Mennonite families are large and difficult to support on a low income.</li> <li>• Many employers do not have benefits.</li> <li>• Subsidized housing is limited in rural areas and is not sufficient for the sizes of Low German Mennonite families.</li> </ul>	<ul style="list-style-type: none"> <li>• Local community gardens</li> <li>• Farmers' markets</li> <li>• Subsidized childcare</li> <li>• Housing assistance programs</li> <li>• Local no-cost or low-cost community events</li> <li>• No-cost programs, services, and resources</li> <li>• Local food banks</li> <li>• Have Ride Norfolk provide transportation throughout the community.</li> </ul>	<ul style="list-style-type: none"> <li>• Provide a no-cost program.</li> <li>• Provide free resources on various health topics.</li> <li>• Provide information about free local community services.</li> <li>• Provide information on subsidized childcare, food resources, housing assistance programs, dental health services (Healthy Smiles and other local services and programs).</li> <li>• Promote and provide information on student nutrition programs.</li> <li>• Collaborate with local service agencies that have a vested interest in poverty reduction.</li> <li>• Collaborate with Ontario Works, Salvation Army, and other service providers to better assist students experiencing financial difficulties.</li> <li>• Provide resources in Low German.</li> <li>• Embrace an advocacy role to support students living in poverty.</li> </ul>



<b>Social Determinants of Health</b>	<b>Rural Health Challenges</b>	<b>Rural Health Assets</b>	<b>Solutions to Health Challenges/Maximize Assets</b>
Social support networks	<ul style="list-style-type: none"> <li>• Geographic and social isolation</li> </ul>	<ul style="list-style-type: none"> <li>• Strong social capital (sense of belonging, inclusion, trust, participation in community life)</li> <li>• Higher proportion of youth (12–18) in H&amp;N than the rest of Ontario has a strong sense of belonging.</li> <li>• Existing support groups</li> </ul>	<ul style="list-style-type: none"> <li>• Provide information on existing programs, services and resources on various health topics for youth.</li> <li>• Provide information on support groups in the community for youth and families.</li> <li>• Make referrals to support groups.</li> <li>• Provide a supportive environment to promote healthy schools.</li> <li>• Utilize and adopt a rural outreach model by providing services in the schools to help build trust and rapport with family health nurses.</li> <li>• Encourage youth to participate in their community.</li> <li>• Leverage community health professionals to mobilize the program (public health nurses, health promoters, health and wellness co-ordinators, STAR and addictions counsellors, school board social workers, child and youth workers, physicians, social workers, psychologists, psychiatrists, pharmacists).</li> <li>• Foster engagement by integrating community organizations to implement and mobilize the program (REACH, OECYs, CAS, hospitals, employment and youth centres, Ontario Works LEAP program, DREAM program, Dairy Farmers of Ontario, Pregnancy Care Centres).</li> <li>• Leverage government partnerships to implement and mobilize the program (Public Health, Ministry of Education, Ministry of Health and Long-Term Care, Ministry of Health Promotion and Sport, school boards, and the Ministry of Community Services.</li> <li>• Encourage youth to build healthy relationships.</li> <li>• Encourage youth to be part of the Haldimand-Norfolk Health Education and Advocacy team supported by our youth educator at HNHU.</li> </ul>

## ■ CHAPTER FOUR: Results

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Education and literacy	<ul style="list-style-type: none"> <li>• Over 50% of the population in Haldimand and Norfolk counties combined has secondary school education or less. This is greater than the province overall.</li> <li>• Low literacy levels</li> <li>• Language barriers: An estimated 8,000 to 10,000 Low German-speaking Mennonites live in Norfolk and nearby settlements from Elgin to Leamington. Mennonites speak predominantly Low German, and English is their second language.</li> <li>• Many Low German Mennonites attended school in Mexico for an average of six to seven years.</li> <li>• Education Quality and Accountability Office (EQAO) scores are below the provincial average.</li> </ul>	<ul style="list-style-type: none"> <li>• Existing literacy and education programs and services, e.g., Ontario Early Years programs (OEYC), Haldimand-Norfolk Health Unit Preschool Speech and Language Program, Literacy Council, alternative education opportunities (e.g., Turning Points, Pathfinders, LEAP)</li> </ul>	<ul style="list-style-type: none"> <li>• Provide information on existing literacy programs, services, and resources.</li> <li>• Provide simple, easy-to-read educational materials, resources, and information on various health topics.</li> <li>• Support existing tutoring services available at local libraries and schools; encourage students to embrace them.</li> <li>• Encourage youth to ask questions about their health.</li> <li>• Provide resources in Low German.</li> <li>• Provide resources that follow literacy guidelines (some staff have received training on how to best provide this service).</li> </ul>
Employment/working conditions	<ul style="list-style-type: none"> <li>• High unemployment rates</li> <li>• High underemployment</li> <li>• Seasonal jobs</li> <li>• More vulnerable to economic downturns</li> <li>• Industries relocating operations to developing countries.</li> <li>• Fewer seasonal jobs for youth</li> </ul>	<ul style="list-style-type: none"> <li>• Existing employment programs, services, and resources</li> </ul>	<ul style="list-style-type: none"> <li>• Provide information on existing employment programs, services, and resources.</li> <li>• Provide career counselling.</li> <li>• Promote volunteerism.</li> <li>• Provide information on subsidized childcare, food resources, and housing assistance. Food resources include local food banks, community gardens, and the DREAM project.</li> <li>• Provide information to prenatal teens on the Ontario Works LEAP program.</li> <li>• Collaborate with social services, employment services, and local businesses to promote student summer employment.</li> <li>• REACH staff (teen resource program outreach worker) provides food vouchers and support to teen moms.</li> </ul>

<b>Social Determinants of Health</b>	<b>Rural Health Challenges</b>	<b>Rural Health Assets</b>	<b>Solutions to Health Challenges/Maximize Assets</b>
Social environments	<ul style="list-style-type: none"> <li>• Limited social support services</li> <li>• Lack of affordable organized sports and recreational activities</li> </ul>	<ul style="list-style-type: none"> <li>• Strong social and community response to health issues among youth</li> <li>• The community values youth.</li> <li>• School boards are supportive of the program.</li> <li>• Existing free social and community activities (free family swims at recreation centres, church events, OEYC program and services, Moms and Tots program, Haldimand and Norfolk prenatal health program, Haldimand and Norfolk prenatal fair, etc.)</li> <li>• Thriving churches in Haldimand and Norfolk</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a comprehensive school health program using the Foundations for a Healthy School Framework from the Ministry of Education and the Ministry of Health Promotion and Sport.</li> <li>• Utilize multiple levels of community support.</li> <li>• Leverage health professionals in the community to mobilize the program (public health nurses, nurse practitioners, physicians, pharmacists).</li> <li>• Foster community engagement by integrating organizations and businesses to implement and mobilize the program (pharmacies, Lake Erie Steel).</li> <li>• Leverage community partnerships (e.g., REACH, Ontario Early Years Centres, CAS, hospitals, employment centres, Ontario Works LEAP program, DREAM program, Dairy Farmers of Ontario, and Pregnancy Care Centres).</li> <li>• Leverage multiple levels of community support to provide resources, programs, and services (public health nurses on family health team; health promoters on Population Health Team at HNHU; Sexual Health Team PHNs; health and wellness co-ordinator from Dunnville school; STAR counsellors from Women’s Services; addictions counsellors from CAMHS; school board social workers, child and youth workers, physicians, social workers, psychologists, psychiatrists, and local pharmacists).</li> <li>• Leverage government partnerships to implement and mobilize the program (Public Health, Ministry of Health and Long-Term Care, Ontario Power Generation, long-term care homes).</li> <li>• Make referrals to community agencies and support groups.</li> <li>• Provide information on existing free community services and resources to promote connectivity and civic participation.</li> </ul>

## CHAPTER FOUR: Results

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Social environments continued...			<ul style="list-style-type: none"> <li>• Provide resources to teachers and students for classroom teaching on health-related topics and curriculum lessons.</li> <li>• Provide classroom presentations on health-related topics, including healthy lifestyles, nutrition and body image, bullying, self-esteem, stress and coping, anxiety and depression, communication and healthy relationships, healthy sexuality (birth control and STI education), preconception health, reproductive health, and parenting.               <ul style="list-style-type: none"> <li>a. Build linkages with other community organizations.</li> <li>b. Create a supportive environment by addressing clients' emotional, physical, psychological, and spiritual needs.</li> <li>c. Provide counselling services.</li> <li>d. Communicate with clients, families, and the community.</li> </ul> </li> </ul>
Physical environment	<ul style="list-style-type: none"> <li>• Limited public transportation</li> <li>• Low population density</li> <li>• More distance to travel</li> <li>• Lack of programs, services, sports, and recreational activities</li> <li>• Unsafe roads (unlit, poorly signed; shoulders may be missing or poor).</li> <li>• No after-school buses</li> <li>• Few after-school programs</li> </ul>	<ul style="list-style-type: none"> <li>• Large agricultural sector</li> <li>• Lots of green space</li> <li>• Esthetically beautiful</li> <li>• More opportunities for youth to engage in outdoor activities</li> <li>• Marinas, hiking trails, conservation areas, museums, libraries, and other amenities</li> <li>• School gyms</li> </ul>	<ul style="list-style-type: none"> <li>• Provide information on local programs, services, sports, recreational activities, and amenities.</li> <li>• Promote bike, tractor, and ATV safety.</li> <li>• Collaborate with schools to provide bus transportation to a centralized school to attend presentations and assemblies hosted by the Haldimand-Norfolk Health Unit.</li> <li>• Promote school-based exercise programs and other school health programs.</li> <li>• Promote walking to school with pedometers.</li> </ul>

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
<p>Personal health practices and coping skills</p>	<ul style="list-style-type: none"> <li>• Over 50% of residents are overweight or obese, do not consume the recommended daily allowance of vegetables and fruit, and are physically inactive.</li> <li>• A higher proportion of Haldimand and Norfolk youth smokes than the rest of Ontario.</li> <li>• Teenagers aged 15–19 are the second-highest age cohort to take their life by suicide.</li> <li>• Teenagers aged 20–24 are the highest age cohort to go to the Emergency Department for attempted suicides.</li> <li>• English-speaking youth and Low German-speaking youth aged 14–21 attend bush parties in southwest Norfolk.</li> <li>• Alcohol consumption, substance use, high risk-taking behaviours, and poor dietary practices are some documented maladaptive adolescent behaviours.</li> <li>• High rates of unintentional injuries, mainly motor vehicle crashes and falls.</li> <li>• High rate of ATV accidents</li> </ul>	<ul style="list-style-type: none"> <li>• Existing programs and services for youth on healthy lifestyle behaviours</li> <li>• Applied suicide intervention skills training (ASIST) program</li> <li>• Over 2/3 of youth in H&amp;N report being physically active.</li> <li>• Healthier food options now offered in high-school cafeterias and breakfast programs.</li> </ul>	<ul style="list-style-type: none"> <li>• Promote healthy lifestyle behaviours among youth.</li> <li>• Provide information on healthy lifestyle behaviours including nutrition, physical activity, positive body image, and self-esteem.</li> <li>• Provide information on stress, coping skills, anxiety, depression, communication skills, and healthy relationships.</li> <li>• Provide information on local programs, services, sports, recreational activities, and amenities.</li> <li>• Promote youth safety.</li> <li>• Promote the ASIST program among school staff.</li> <li>• Promote exercise clubs offered at some high schools.</li> <li>• Promote youth engagement and empowerment.</li> <li>• Recruit youth to become members of the Haldimand-Norfolk Education and Advocacy team.</li> <li>• Offer HNHU prenatal classes.</li> </ul>
<p>Culture</p>	<ul style="list-style-type: none"> <li>• An estimated 8,000 to 10,000 Low German-speaking Mennonites live in Norfolk and nearby settlements from Elgin to Leamington.</li> <li>• Mennonites typically have large families.</li> <li>• Low German-speaking women generally have limited knowledge about the human body—specifically the reproductive system—and how behaviours affect their health and the health of their children.</li> <li>• From 2005 to 2008, the Haldimand County and Norfolk County average teen pregnancy rate was (23.1/1000)</li> <li>• Large aboriginal population in Haldimand and Norfolk requiring specialized services</li> <li>• Religious beliefs related to birth control; large families</li> </ul>	<ul style="list-style-type: none"> <li>• Existing Low German programs and services such as the Help Centre, Pathfinders, and Turning Points</li> <li>• Existing aboriginal schools</li> <li>• Aboriginal youth counsellors</li> </ul>	<ul style="list-style-type: none"> <li>• Modify and tailor the program to meet the needs of the population.               <ol style="list-style-type: none"> <li>a. Provide counselling to Low German Mennonites and aboriginal youth.</li> <li>b. Provide information in Low German.</li> <li>c. Provide a culturally sensitive environment by being aware of and knowledgeable about the Low German and aboriginal populations.</li> <li>d. Offer the program in southwest Norfolk schools, where there is a high population of Low German Mennonites.</li> <li>e. Provide information about local services and programs for aboriginal youth.</li> </ol> </li> <li>• Collaborate with local Low German and aboriginal service providers.</li> <li>• Encourage attendance at yearly networking conference in Aylmer for service providers of Mennonites.</li> </ul>

## CHAPTER FOUR: Results

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Healthy child development	<ul style="list-style-type: none"> <li>• The percentage of new mothers with low education has been increasing (5.2% in 2005 to 8.2% in 2009).</li> <li>• The percentage of families with newborns that are experiencing financial difficulties has been increasing (5.9% in 2005 to 9.3% in 2009).</li> <li>• The percentage of women who smoke during pregnancy has remained consistent from 2005–2009 (average = 12%).</li> <li>• The percentage of women abusing drugs or alcohol during pregnancy has remained consistent from 2005–2009 (average = 1.3%).</li> <li>• From 1999 to 2008, the low birth weight rate in both Haldimand and Norfolk counties was 5.5/100.</li> <li>• The average rate of preterm births for Haldimand and Norfolk counties from 2005 to 2008 (6.9/100) was lower than the provincial average.</li> </ul>	<ul style="list-style-type: none"> <li>• Teen pregnancy rates have remained consistent from 2005–2009, although they are lower than provincial rates.</li> <li>• Teen live birth rates have declined since the mid-1990s.</li> <li>• Existing programs and services (OEYCs, CCAC, REACH, Norfolk General Hospital, Haldimand War Memorial Hospital, West Haldimand General Hospital, midwifery services, etc.); nurse practitioner.</li> </ul>	<ul style="list-style-type: none"> <li>• Provide teen moms with simple, easy-to-read educational materials, resources, and information on healthy child development. Materials include topics on immunization, breastfeeding, nutrition, child development, postpartum depression, parenting, family dynamics, coping, and other topics related to healthy pregnancy and maternal, infant, and child health.</li> <li>• Provide information on sexual health, smoking cessation, FAS, drugs, and alcohol.</li> <li>• Provide teenagers with sexual health education.</li> <li>• Reduce risks to maternal and child health through intervention, prevention, and timely referrals to relevant services and support.</li> <li>• Provide prenatal classes at HNHU.</li> <li>• Encourage Roots of Empathy program in schools (early bullying prevention program).</li> </ul>
Health services	<ul style="list-style-type: none"> <li>• Low number of specialists and practitioners</li> <li>• Lack of access to health-care services.</li> <li>• Residents travel outside the counties to obtain services.</li> <li>• Under-servicing of culturally sensitive populations (e.g., Low German)</li> <li>• Few walk-in clinics</li> <li>• Difficult to recruit and retain specialists and practitioners.</li> <li>• Less diagnostic equipment and fewer treatment options</li> <li>• Fewer nurses</li> <li>• No OB/GYN</li> <li>• Under-servicing of pediatric patients</li> </ul>	<ul style="list-style-type: none"> <li>• Norfolk General Hospital</li> <li>• Haldimand War Memorial Hospital</li> <li>• West Haldimand General Hospital</li> </ul>	<ul style="list-style-type: none"> <li>• Provide information on local health services, resources, and programs.</li> <li>• Make it easy to access health unit nurse practitioner services.</li> </ul>
Biology and genetic endowment	<ul style="list-style-type: none"> <li>• Approximately nine babies a year are born with Fetal Alcohol Syndrome Disorder (FASD).</li> <li>• Common childhood illnesses/ chronic conditions, and disabilities</li> </ul>		<ul style="list-style-type: none"> <li>• Provide Fetal Alcohol Syndrome (FAS) information.</li> <li>• Provide information, programs, and resources on chronic diseases, illnesses, and disabilities.</li> <li>• Provide a supportive environment conducive to special-needs youth.</li> <li>• Provide counselling.</li> </ul>

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Gender	<ul style="list-style-type: none"> <li>• Females comprise 76.7% of single-parent families in Haldimand and Norfolk counties (2006).</li> <li>• A higher proportion of young males than females end their lives through suicide.</li> </ul>		<ul style="list-style-type: none"> <li>• Provide information on local services, programs, and resources for prenatal and postnatal teen mothers.</li> <li>• Ensure information is provided on both male and female mental health.</li> </ul>



### FLU CLINICS PROGRAM

**Contributor:** Rose Huyge and Maria Mendes Wood

The Haldimand and Norfolk immunization program provides routine immunization services for infants, children, youth and adults, as well as annual flu clinics for those six months of age and older.

The purpose of the immunization program is twofold:

1. Provide resources that help minimize anxiety by emphasizing the safety and efficacy of publicly funded vaccines.
2. Reduce the incidence of vaccine-preventable diseases in the community.

Flu clinics are available in various community locations; to date, four seniors' clinics are located in Delhi, Simcoe, Caledonia, and Dunnville.

#### Applied Key Elements

1. **Identified a rural community:**  
Based on the Organization of Economic Co-operation and Development's (OECD) definition of "predominantly rural regions," Haldimand County and Norfolk County are considered rural areas because over 50% of the population lives in rural communities (those with fewer than 150 persons per square kilometre).
2. **Identified the social determinants of health:** All social determinants of health were selected.
3. **Focused on a rural health issue:** Youth health
4. **Integrated multiple levels of community support:**  
**Health professionals:** public health nurses, nurse practitioners, physicians, pharmacists  
**Community organizations:** pharmacies, nursing agencies, Community Care Access Centre (CCAC)  
**Government:** Public Health, Ministry of Health and Long-Term Care, long-term care homes  
**Other key stakeholders:** US

Steel, Ontario Power Generation

5. **Identified community rural health challenges and assets:**  
See below.
6. **Addressed rural health challenges and maximized assets using good practices for rural program planning and delivery:** See below

#### Applied Good Practices to Address Rural Health Challenges and Maximize Rural Assets

- **Addressed rural health issue:** Vaccine-preventable diseases
- **Integrated multiple levels of community support**
  - **Health professionals:** public health nurses, nurse practitioners, physicians, pharmacists
  - **Community organizations:** pharmacies, hospitals, nursing agencies
  - **Government:** Public Health, Ministry of Health and Long-Term Care, long-term care homes
- **Other key stakeholders:** US Steel, Ontario Power Generation
- **Offered a no-cost program**
- **Provided simple, accurate, easy-to-read educational materials, resources, and information on influenza and flu immunization.**
- **Built on existing strong social capital (sense of belonging, inclusion, trust, reciprocity, participation in community life).** Leveraged multiple levels of support in the community and built public trust in the efficacy and safety of the vaccine. To minimize anxiety about the safety and efficacy of the vaccine, educated nurses, health professionals, and the public on the impact of influenza on absenteeism, as well as on possible side effects and contraindications.
- **Met the cultural needs of the population.** Promoted the uptake of the influenza vaccine, particularly among high-risk groups (older adults, health-care workers, and persons with chronic conditions) as well as Low German-speaking Mennonites.

- **Built on existing physical environments:** Provided the clinics in schools, Haldimand-Norfolk Health Unit offices, Brethren in Christ church, and the Norfolk Community Help Centre, which provides educational programs and translation services for new Low German-speaking immigrants.
- **Provided program in several geographical areas with high population density and short distance to travel.** Provided flu clinics in several "urban areas" in Haldimand and Norfolk.
- **Delivered a flexible program responsive to the demands of rural populations:** Provided mobile flu clinics.
- **Utilized a rural health outreach model:** Provided mobile clinics in several geographic areas: Delhi, Simcoe, Waterford, Port Dover, Caledonia, Hagersville, and Dunnville

Rural Health Challenges/Asset Identification and Solution Identification

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Income and social status	<ul style="list-style-type: none"> <li>• Lower median income than the rest of Ontario</li> <li>• High poverty rate</li> </ul>		<ul style="list-style-type: none"> <li>• Provide a no-cost program</li> </ul>
Social support networks	<ul style="list-style-type: none"> <li>• Geographic and social isolation</li> </ul>	<ul style="list-style-type: none"> <li>• Strong social capital (sense of belonging, inclusion, trust, participation in community life)</li> </ul>	<ul style="list-style-type: none"> <li>• Leverage health professionals in the community to mobilize the program (public health nurses, nurse practitioners, physicians, pharmacists, hospitals, and nursing agencies).</li> <li>• Foster community engagement by integrating organizations and businesses to implement and mobilize the program (pharmacies, Stelco, Ontario Power Generation).</li> <li>• Leverage government partnerships to implement and mobilize the program (Public Health, Ministry of Health and Long-Term Care, long-term care homes).</li> <li>• Educate nurses, health professionals, and the public on the vaccine's efficacy and safety.</li> <li>• Encourage clients to ask questions about immunization and consult with their family physicians or other health-care providers.</li> </ul>
Education and literacy	<ul style="list-style-type: none"> <li>• Over 50% of the population in Haldimand and Norfolk counties combined has secondary school education or less. This is greater than the provincial average.</li> <li>• Low literacy levels</li> </ul>		<ul style="list-style-type: none"> <li>• Provide simple, easy-to-read educational materials on influenza and flu immunization.</li> <li>• Encourage clients to ask questions about immunization, their health, and the health of their family.</li> </ul>
Employment/working conditions	<ul style="list-style-type: none"> <li>• High unemployment rates</li> <li>• Greater burden of occupational health risks</li> </ul>		<ul style="list-style-type: none"> <li>• Provide evening immunization clinics to accommodate persons who work during the day.</li> <li>• Promote immunization to health-care workers.</li> </ul>
Social environments	<ul style="list-style-type: none"> <li>• Limited social support services</li> </ul>	<ul style="list-style-type: none"> <li>• Strong social and community response to vaccine-preventable diseases.</li> </ul>	<ul style="list-style-type: none"> <li>• Provide flu clinics in various locations throughout Haldimand and Norfolk.</li> <li>• Leverage multiple levels of support in the community to build public trust in the vaccine's efficacy and safety.</li> <li>• Minimize anxiety about the vaccine's safety and efficacy by educating nurses, health professionals, and the public on the impact of influenza on absenteeism, and on possible side effects and contraindications.</li> <li>• Promote immunization in the community.</li> </ul>

## CHAPTER FOUR: Results

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Physical environment	<ul style="list-style-type: none"> <li>Limited public transportation</li> <li>Low population density</li> <li>More distance to travel</li> </ul>	<ul style="list-style-type: none"> <li>Grand Erie District School Board</li> <li>Catholic District School Board</li> <li>Thriving churches</li> </ul>	<ul style="list-style-type: none"> <li>Utilize a rural outreach model to deliver the program in several geographical areas with high population density and short distance to travel.</li> <li>Provide the clinic in local schools, the Norfolk Community Help Centre, the Health Unit and Brethren in Christ church.</li> <li>Encourage community members to provide transportation to residents with no access to transportation.</li> </ul>
Personal health practices and coping skills	<ul style="list-style-type: none"> <li>Uptake of the vaccine is very poor. This may be attributed to the fact that the public and health-care professionals are likely more complacent due to the less serious nature of the pandemic. The public may also be misinformed of the minimal adverse effects of the flu shot.</li> <li>Over 50% of residents are overweight or obese. High-risk groups include the morbidly obese.</li> </ul>		<ul style="list-style-type: none"> <li>Promote the uptake of the influenza vaccine, particularly among high-risk groups.</li> <li>Emphasize the vaccine's benefits over its risks.</li> <li>Provide resources that help minimize anxiety by emphasizing the vaccine's benefits, efficacy, and safety. Provide education on possible side effects and contraindications of the vaccine as well as the impact of influenza on absenteeism.</li> </ul>
Culture	<ul style="list-style-type: none"> <li>The number of older adults (55 years and over) will continue to increase each year. Between 2000 and 2020, the older adult population will increase by 73.2%. High-risk groups include persons living in nursing homes or long-term care facilities, or requiring chronic care.</li> </ul>		<ul style="list-style-type: none"> <li>Promote the uptake of the influenza vaccine, particularly among high-risk groups.</li> <li>Emphasize the vaccine's benefits over the risks.</li> <li>Provide resources for older adults that help reduce anxiety by emphasizing the efficacy and safety of the vaccine. Provide education on possible side effects and contraindications of the vaccine as well as the impact of influenza on absenteeism.</li> <li>Offer clinics at the Norfolk Community Help Centre; provide translation services.</li> </ul>
Healthy child development	<ul style="list-style-type: none"> <li>High-risk groups include children aged two to four years.</li> <li>The percentage of new mothers with low education has been increasing (5.2% in 2005 to 8.2% in 2009).</li> </ul>		<ul style="list-style-type: none"> <li>Provide parents with simple, easy-to-read educational materials, resources, and information on child immunization to help promote the vaccine's efficacy and safety.</li> </ul>

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Health services	<ul style="list-style-type: none"> <li>• Low number of specialists and practitioners</li> <li>• Lack of access to health-care services</li> <li>• Residents travel outside the counties to obtain services.</li> <li>• Under-servicing of culturally sensitive populations (Low German)</li> <li>• Few walk-in clinics</li> <li>• Difficult to recruit and retain specialists and practitioners.</li> <li>• Under-servicing of pediatric patients</li> </ul>	<ul style="list-style-type: none"> <li>• Norfolk General Hospital</li> <li>• Haldimand War Memorial Hospital</li> <li>• West Haldimand General Hospital</li> </ul>	<ul style="list-style-type: none"> <li>• Provide free and accessible flu clinics.</li> </ul>
Biology and genetic endowment	<ul style="list-style-type: none"> <li>• Between September 1, 2010 and March 10, 2011, there were 33 confirmed cases of Influenza A in Haldimand and Norfolk.</li> <li>• High-risk groups include people with chronic cardiac or pulmonary (lung) disorders such as cystic fibrosis or asthma, and a compromised immune system or chronic medical condition such as diabetes, HIV, cancer, anemia, or renal disease.</li> </ul>		<ul style="list-style-type: none"> <li>• Promote the uptake of the influenza vaccine, particularly among high-risk groups.</li> <li>• Provide resources (e.g., fact sheets) to persons with chronic conditions that reduce anxiety by emphasizing the efficacy and safety of the vaccine. Provide education on possible side effects and contraindications of the vaccine as well as the impact of influenza on absenteeism.</li> </ul>



### STEP UP TO HEALTHIER YOU: STROKE PREVENTION INTERVENTION

**Contributor:** Jill Steen

The Step Up to a Healthier You program was developed by the Haldimand-Norfolk Health Unit in collaboration with the Stroke Prevention Advisory Committee. It addressed rural challenges and asset identification in Haldimand and Norfolk. The committee included stroke survivors, hospital representatives, health promoters, registered dietitians, registered nurses, pharmacists, and a psychogeriatric resource consultant.

The content of the program was developed in accordance with the Canadian Best Practices Recommendation for Stroke Care and components of various community chronic disease prevention programs across Ontario. These include: Feel the Power Feel Fit Campaign, Oxford County Public Health Unit Blood Pressure Education Program, and Wellington-Dufferin-Guelph Public Health Unit Health Measures Program. Step Up to a Healthier You employs various teaching methods, adult experimental methods, and experience-sharing to promote group interaction and participation. It also focuses on individual education, goal-setting, and action plans. Adult learning principles are employed to foster a supportive, collaborative learning environment.

Participants had the opportunity to implement learned skills and the action plan at home so they could reflect on it before the next class. Logs to monitor personal daily food intake and physical activity as well as a pedometer were given to participants to track their daily progress. At the beginning of each session, participants were encouraged to share their personal experiences and challenges, and to celebrate their individual accomplishments. Feedback was also welcomed for reinforcement and motivation.

Due to the extent of the geographical area, classes were distributed evenly across both counties, with one class held

in Haldimand and the other in Norfolk. Norfolk classes were held in Simcoe; Haldimand classes in Dunnville; all were held in May. Factors considered in the location of the classes included: demographic profiles in each community, past attendance at health promotion programs in the catchment areas, high population density, short distance to travel, and no public transportation. These factors were deemed critical to participation and attendance rates. The times of classes varied depending on the demographic distribution of the population. For example, since Simcoe has a large working population, classes were held in the evenings. Dunnville classes were held in the afternoons since the town has a predominantly older population. Classes were held following a Haldimand and Norfolk Stroke Prevention Awareness Evening.

#### Applied Key Elements

1. **Identified a rural community:** Based on the Organization of Economic Co-operation and Development's (OECD) definition of "predominantly rural regions," Haldimand County and Norfolk County are considered rural areas because over 50% of the population lives in rural communities (those with fewer than 150 persons per square kilometre).
2. **Identified the social determinants of health:** All social determinants of health were selected.
3. **Focused on a rural health issue:** Older adults (55 years of age and older)
4. **Integrated multiple levels of community supports**  
**Health professionals:** hospital representatives, health promoters, registered dietitians, registered nurses, pharmacists, personal trainers, and psychogeriatric resource consultants  
**Community organizations:** Haldimand Health and Wellness, Canadian Cancer Society, Heart and Stroke Foundation, Alzheimer

Society of Haldimand Norfolk, and Haldimand Norfolk Community Senior Support Services.

**Government:** Hamilton Health Sciences (general site), Brant Community Healthcare System, Norfolk County Community Services Stroke Prevention Clinic (Hamilton General Hospital), Public Health, Haldimand Norfolk Diabetes Program (Norfolk General Hospital), West Haldimand General Hospital

**Other key stakeholders:** stroke survivors

5. **Identified community rural health challenges and assets:** See below.
6. **Addressed rural health challenges and maximized assets using good practices for rural program planning and delivery:** See below

#### Applied Good Practices to Address Rural Health Challenges and Maximize Rural Assets

- **Addressed a rural health concern:** Stroke
- **Integrated multiple levels of community support to provide information and resources.**
  - o **Health professionals:** hospital representatives, health promoters, registered dietitians, registered nurses, pharmacists, personal trainers, and psychogeriatric resource consultants
  - o **Community organizations,** Haldimand Health and Wellness, Canadian Cancer Society, Heart and Stroke Foundation, Alzheimer Society of Haldimand Norfolk, and Haldimand Norfolk Community Senior Support Services
  - o **Government:** Hamilton Health Sciences (general site), Brant Community Healthcare System, Norfolk County Community Services, Stroke Prevention Clinic (Hamilton General Hospital), Public Health, Haldimand Norfolk Diabetes Program

(Norfolk General Hospital), West Haldimand General Hospital.

o **Other key stakeholders:** stroke survivors

- **Offered a no-cost program and provided free resources.**
- **Provided simple, accurate, easy-to-read educational materials, resources, and information on stroke and stroke prevention.**
- **Built on existing strong social capital (sense of belonging, inclusion, trust, reciprocity, participation in community life).**

Provided a safe, comfortable, and friendly atmosphere where

participants could establish new friendships and connections, participate in community life, and help one another.

- **Met the cultural needs of the population.** Promoted the program to adults aged 55 and older.
- **Built on existing physical environments in the community.** Promoted local programs, services, sports, recreational activities, trails, and amenities.
- **Promoted existing community rural health programs, services, and resources.**
- **Provided the program in several geographic areas with high population density and short**

**distance to travel:** Provided the program in Simcoe and Dunnville.

- **Promoted home-based exercises.**



## ■ CHAPTER FOUR: Results

### Rural Health Challenges/Asset Identification and Solution Identification

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Income and social status	<ul style="list-style-type: none"> <li>• Lower Median Income compared to Ontario</li> <li>• High Poverty Rate</li> </ul>		<ul style="list-style-type: none"> <li>• Provide a no cost program and free resources.</li> </ul>
Social support networks	<ul style="list-style-type: none"> <li>• Geographic and social isolation</li> </ul>	<ul style="list-style-type: none"> <li>• Strong social capital (sense of belonging, inclusion, trust, participation in community life)</li> </ul>	<ul style="list-style-type: none"> <li>• Leverage health professionals in the community to mobilize the program (hospital representatives, health promoters, registered dietitians, registered nurses, pharmacists, personal trainers, and psychogeriatric resource consultants).</li> <li>• Foster community engagement by integrating organizations to implement and mobilize the program (Haldimand Health and Wellness, Canadian Cancer Society, Heart and Stroke Foundation, Alzheimer Society of Haldimand Norfolk, and H-N Community Senior Support Services).</li> <li>• Leverage government partnerships to implement and mobilize the program e.g., Hamilton Health Sciences (general site), Brant Community Healthcare System, Norfolk County Community Services Stroke Prevention Clinic (Hamilton General Hospital), Public Health, Haldimand-Norfolk Diabetes Program (Norfolk General Hospital), West Haldimand General Hospital.</li> <li>• Develop a stroke advisory committee and integrate researchers, health professionals, community members, government, and stroke survivors into every phase of the project.</li> <li>• Provide information on services, programs, and resources on stroke prevention and healthy lifestyle behaviours.</li> <li>• Build linkages with other health-care service providers.</li> <li>• Provide a safe, comfortable and friendly atmosphere where participants can establish new friendships and participate in community life.</li> <li>• Encourage participants to help one another.</li> <li>• Encourage connectivity among participants.</li> </ul>
Education and literacy	<ul style="list-style-type: none"> <li>• Over 50% of the population in Haldimand and Norfolk counties combined has secondary school education or less. This is greater than the rest of the province.</li> <li>• Low literacy levels</li> </ul>		<ul style="list-style-type: none"> <li>• Provide simple, easy-to-read educational materials, resources, and information to increase stroke knowledge and promote the adoption of a healthy lifestyle.</li> <li>• Encourage participants to ask questions.</li> <li>• Hold interactive educational sessions.</li> </ul>
Employment/working conditions	<ul style="list-style-type: none"> <li>• High unemployment rates</li> </ul>		<ul style="list-style-type: none"> <li>• Provide no-cost health promotion and stroke programs, services, and resources.</li> </ul>

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Social environments	<ul style="list-style-type: none"> <li>Limited social support services</li> </ul>	<ul style="list-style-type: none"> <li>Strong social and community response to stroke</li> <li>Existing free social and community activities (free family swims at recreation centres; church events)</li> </ul>	<ul style="list-style-type: none"> <li>Provide a novel primary stroke prevention program that is accessible.</li> <li>Stroke prevention is considered a priority in Haldimand and Norfolk by community members, public health, hospitals, social services agencies, politicians, and other key stakeholders.</li> <li>Utilize multiple levels of support.</li> <li>Provide free social and community activities that promote health.</li> <li>Provide a supportive environment to help participants increase their stroke knowledge and adopt healthy lifestyle behaviours.</li> </ul>
Physical environment	<ul style="list-style-type: none"> <li>Limited public transportation</li> <li>Low population density</li> <li>More distance to travel</li> <li>Few affordable programs, services, sports and recreational activities</li> <li>Unsafe roads (unlit, poorly signed; shoulders may be missing or poor).</li> </ul>	<ul style="list-style-type: none"> <li>Large agricultural sector</li> <li>Lots of green space</li> <li>Esthetically beautiful</li> <li>More opportunities for residents to engage in outdoor activities</li> <li>Marinas, hiking trails, conservation areas, museums, libraries, and other amenities</li> <li>Walking clubs</li> </ul>	<ul style="list-style-type: none"> <li>Provide information on local programs, services, sports, recreational activities, and amenities (e.g., walking clubs).</li> <li>Promote outdoor activities (e.g., trail walking).</li> <li>Utilize a rural outreach model to deliver the program in several geographical areas with high population density and short distance to travel.</li> <li>Offer the program in the spring to match seasonal considerations in Haldimand and Norfolk. For example, winter driving can be difficult because roads may be unlit and poorly signed, and shoulders may be missing or poor.</li> <li>Provide the program at an appropriate time of year to match the seasonal rhythm of crops (program to be offered in the spring).</li> <li>Provide classes in wheelchair-accessible facilities.</li> </ul>
Personal health practices and coping skills	<ul style="list-style-type: none"> <li>Over 50% of residents are overweight or obese, do not consume the recommended daily allowance of vegetables and fruit, and are physically inactive.</li> <li>A higher proportion of Haldimand and Norfolk residents smokes than does the rest of Ontario.</li> </ul>		<ul style="list-style-type: none"> <li>Emphasize the risk factors for stroke including physical inactivity and insufficient vegetable and fruit consumption.</li> <li>Provide information about programs, services, and resources on healthy lifestyle behaviours.</li> <li>Utilize adult learning principles.</li> <li>Promote home-based exercises and simple monitoring tools to track progress (e.g., pedometers, food and physical activity logs).</li> <li>Provide additional educational materials for smokers. If there are smokers in the class, offer an additional class on smoking cessation.</li> <li>Encourage participants to set goals.</li> <li>Provide follow-up.</li> </ul>
Culture	<ul style="list-style-type: none"> <li>The number of older adults (55 years and over) will continue to increase each year. Between 2000 and 2020 the older adult population will have increased 73.2%.</li> </ul>		<ul style="list-style-type: none"> <li>Promote the program to persons aged 55 and older.</li> <li>Accommodate older adults by providing the program in the afternoon (depends upon the age demographic of the “urban area”).</li> </ul>

## ■ CHAPTER FOUR: Results

Social Determinants of Health	Rural Health Challenges	Rural Health Assets	Solutions to Health Challenges/Maximize Assets
Health services	<ul style="list-style-type: none"> <li>• Low number of specialists and practitioners</li> <li>• Lack of access to health-care services.</li> <li>• Residents travel outside the counties to obtain services</li> <li>• Few walk-in clinics</li> <li>• Difficult to recruit and retain specialists and practitioners</li> <li>• No primary stroke prevention program in Haldimand and Norfolk</li> </ul>	<ul style="list-style-type: none"> <li>• Norfolk General Hospital</li> <li>• Haldimand War Memorial Hospital</li> <li>• West Haldimand General Hospital</li> <li>• The Haldimand Norfolk Diabetes Program</li> <li>• Heart and Stroke Foundation</li> <li>• Alzheimer Society of Haldimand Norfolk</li> <li>• Haldimand-Norfolk Community Senior Support Services Inc.</li> <li>• Canadian Cancer Society</li> <li>• Haldimand Health and Wellness</li> </ul>	<ul style="list-style-type: none"> <li>• Develop and implement a primary stroke prevention program in Haldimand and Norfolk.</li> <li>• Promote existing programs, services, and resources on stroke prevention.</li> </ul>
Biology and genetic endowment	<ul style="list-style-type: none"> <li>• Leading cause of death in Haldimand and Norfolk from 2003 to 2005 was circulatory disease.</li> <li>• Circulatory disease is higher in these two counties than the rest of the province.</li> <li>• The rate of stroke is higher in Haldimand and Norfolk than the rest of Ontario.</li> </ul>		<ul style="list-style-type: none"> <li>• Provide information about programs, services, and resources on healthy lifestyle behaviours and stroke prevention.</li> <li>• Emphasize the risk factors for stroke, including physical inactivity and insufficient vegetable and fruit consumption.</li> <li>• Provide information on all stroke risk factors.</li> <li>• Teach signs and symptoms of stroke and encourage participants to react quickly by calling 911.</li> </ul>
Gender	<ul style="list-style-type: none"> <li>• In Haldimand and Norfolk, females have higher mortality rates for circulatory disease than males.</li> </ul>		<ul style="list-style-type: none"> <li>• Target females</li> </ul>

## APPENDIX A: RURAL HEALTH CHALLENGES

### Step 1: Rural Health Challenges Identification

The first step is to identify rural health challenges using the SDH framework for the community of interest. Some common rural health trends and issues not specific to any particular rural community are listed below. This list is non-exhaustive; it merely provides examples to program planners. Moreover, program planners should also use challenges specific to a rural community based on population health assessments and lived experiences.

a. **Income and Social Status**

**Challenges:** Unstable income, poverty, low-paying and seasonal jobs; unaffordable housing; no insurance; dependency on male spouses; unaffordable child care; unaffordable healthy foods, especially in the off-season; few large employers in industry or business; large gap between rich and poor.



b. **Social Support Networks**

**Challenges:** Geographic and social isolation; lack of confidentiality and anonymity; less ethnically diverse; lack of civic participation and leadership in some community health initiatives; lack of acceptance of newcomers.

c. **Education and Literacy**

**Challenges:** Low education and literacy levels.

d. **Employment and Working Conditions**

**Challenges:** Higher unemployment, higher underemployment; greater vulnerability to economic downturns; seasonal living conditions (e.g., bunk houses); commute to urban centres for work; lower-paying jobs, higher turnover; greater burden of occupational health problems.

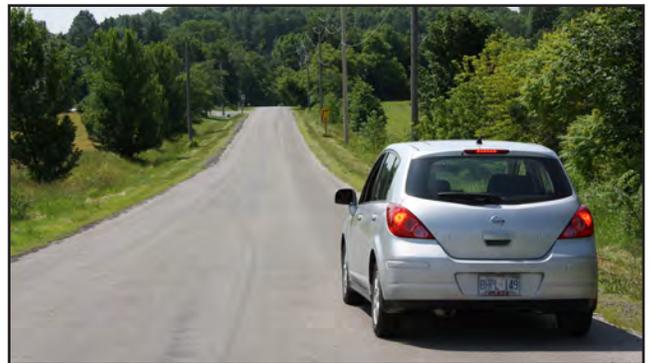


e. **Social Environments**

**Challenges:** Limited social support systems; services outside of rural area; culturally sensitive health issues may not be available; much less activity than in the city; health and social services are available in more densely populated areas; high number of social service clubs; programs developed by urban planners for urban residents are implemented in rural settings; unmet need for mental health services; rural women do not feel equipped to deal with mental health issues.

f. **Physical Environments**

**Challenges:** No public transportation; long distance to specialists, health-care providers, amenities, and other services; long distance to tertiary hospitals; low population density; not attached to adjacent metropolitan area, longer distance to travel; unsafe roads (unlit, poorly signed; shoulders may be missing or poor); sports and recreational facilities are available outside of rural community; lack of shopping amenities; geographically sparse population.



## ■ APPENDIX A: Rural Health Challenges

### g. Personal Health Practices

**Challenges:** Prevalence of obesity, physical inactivity, drinking and smoking; insufficient consumption of vegetables and fruit; higher rates of unintentional injuries, particularly motor vehicle traffic crashes, falls, and ATVs; drinking and driving; more exposure to second-hand smoke, poisoning, and violence; older adults living in rural areas report higher levels of domestic and financial abuse than urban counterparts.



### h. Biology & Genetic Endowment

**Challenges:** High rates of circulatory diseases, respiratory diseases, diabetes, injuries, suicide, and mental health issues; life expectancy is lower than the Canadian average; high disability rates, least healthy, have the lowest life expectancies and disability-free life expectancies in northern communities; high mortality rate; high unintentional injury-related deaths; high cancer-related deaths, cervical cancer is high, men aged 45 to 64 have higher rates of lung cancer.



### i. Health Services

**Challenges:** Few specialists and practitioners; difficult to recruit and retain specialists and practitioners. Limited access to health-care services, residents travel outside of community to obtain services. Less diagnostic equipment and fewer treatment options; limited and delayed emergency services; few nurses; high cost

and low patient volume at rural hospitals. Trauma patients die twice as often as those in urban areas due to time, lack of training, and distance. Underdeveloped mental health services, poor access to acute services, lack of health promotion programs; under-servicing of special needs groups such as seniors and people with disabilities and mental health issues. Hospitals and services have been undergoing restructuring and merging into larger urbanized delivery systems; health care has been increasingly centralized, reduced or eliminated; hospital-based services have been reduced without fully developing or enhancing community based-services.



### j. Culture

**Challenges:** High seniors' population; aboriginal populations tend to have poorest health (low income, low levels of education, unemployment, inadequate housing, exposure to environmental contaminants, and a long legacy from the residential school era). Not multicultural, less ethnically diverse; women have multiple roles (working and juggling family, farming and volunteering); rural men receive less treatment for mental illness than do rural women and urban men.



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## **APPENDIX B: RURAL HEALTH INTERVENTIONS AND POLICIES, CHRONIC DISEASE PREVENTION, CANADA, NEW ZEALAND, UNITED KINGDOM, AND SCANDINAVIA, 1998-2008**

### **Topic: CANCER**

**Journal Title:** Colorectal Cancer Detection in a Rural Community

**Author(S):** Cotterill, M., Gasparelli, R., and Kirby, E.

**Year:** 2005

**Health Topic:** Colorectal cancer screening

**Location:** Canada

**Determinants of Health:** Health Services

**Comprehensive Action Strategies:**

Health Services, Reorient Health Services; Sector/System

**Purpose:** Develop a colorectal cancer screening program in small rural communities. To screen for colorectal cancer safely and effectively in rural areas using colonoscopy performed by non-specialist endoscopists.

**Evaluated:** Yes

**Effective:** Yes

**Methods:** Process evaluation of the program every six months; study completion in two years. The group plans to report on the health effects of the program after five years.

**Results:** Able to design and implement colorectal cancer screening in a small centre with no great effort using non-specialists.

**Recommendations:** Consider using non-specialists for a rural colorectal cancer screening program.

### **Topic: DIABETES**

**Journal Title:** Effectiveness of Rural Paediatric Diabetes Management Program

**Author(S):** Summersett, GM., Richards, GE., Melzer, SM, Sugarman, JR. and Kletter, GB.

**Year:** 2003

**Health Topic:** Diabetes/Model

**Location:** United States

**Determinants of Health:** Health Services

**Comprehensive Action Strategies:**

Health Services; Reorient Health Services; Sector/System

**Purpose:** To determine whether the care of children with type 1 diabetes treated by pediatric endocrinologists in a rural outpatient clinic is comparable to the care of children treated in an urban medical centre by the same diabetes team.

**Evaluated:** Yes

**Effective:** Yes

**Methods:** Retrospective cohort study

**Results:** Urban patients were more likely complete four visits per year than a matched group at the rural clinic. They were also significantly more likely than those in the rural clinic to have four HbA1c measurements per year, and more likely to have an assessment by a behavioural specialist. Children at the rural clinic were more likely to have a visit with a nutritionist during the year.

**Recommendations:** Diabetes care provided using a rural outreach model closely approximates, but does not entirely duplicate, care provided in a rural setting.

**Journal Title:** Pounds Off With Empowerment (POWER): A Clinical Trial of Weight Management Strategies for Black and White Adults With Diabetes who Live in Medically Underserved Rural Communities

**Author(S):** Mayer-Davis, E., D'Antonio, A., Smith, S., Kirkner, G., Martin, S., Parra-Medina, D., and Schultz, R.

**Year:** 2004

**Health Topic:** Diabetes/Weight Management Strategies

**Location:** United States

**Determinants of Health:** Personal Health Practices and Coping Skills

**Comprehensive Action Strategies:**

Personal Health and Practices Coping Skills; Develop Personal Skills; Individual and Community

**Purpose:** The purpose of the study was

to evaluate lifestyle interventions for diabetics who live in rural communities.

**Evaluated:** Yes

**Effective:** Yes

**Methods:** 12-month randomized clinical trial of intensive-lifestyle (modeled after the NIH Diabetes Prevention Program) and "reimbursable-lifestyle" interventions with usual care as a control (intensive-lifestyle intervention delivered in the time allotted for Medicare reimbursement for diabetes education related to nutrition and physical activity).

**Results:** Modest weight loss within six months among intensive-lifestyle participants. This was greater than the weight loss among usual-care participants. At 12 months, a greater proportion of intensive-lifestyle participants lost 2kg or more than usual-care participants. No differences in weight change were observed between reimbursable-lifestyle and usual-care participants. Glycated hemoglobin was reduced among all groups and did not differ among groups.

**Recommendations:** Improvement in both weight and glycemia is attainable through lifestyle interventions designed for persons who had type 2 diabetes and lived in rural communities.

**Journal Title:** Rationale and implementation of SLICK Project

**Author(S):** Virani et al.

**Year:** 2006

**Health Topic:** Diabetes/First Nations

**Location:** Canada

**Determinants of Health:** Physical Environment, Health Services, Personal Health Practices and Coping Skills; and Culture

**Comprehensive Action Strategies:**

Health Services and Personal Health Practices and Coping Skills; Create Supportive Environments, Develop Personal Skills and Reorient Health Services; Community, Sector/System and Individual

**Purpose:** Identifying diabetes complica-

## APPENDIX B: Rural Health Interventions and Policies, Chronic Disease Prevention, Canada, New Zealand, United Kingdom, and Scandinavia, 1998-2008

tions through screening using portable laboratory equipment in aboriginal communities, and providing client empowerment and education for improved follow-up care and self-care.

**Evaluated:** Yes

**Effective:** Yes

**Methods:** Two mobile units went to 44 Alberta First Nations communities to facilitate implementation of the Canadian Diabetes Association Clinical Practice Guidelines. The project also provided counselling and education.

**Results:** There were modest improvements in some program outcomes at the 6-12 month follow-up.

**Recommendations:** It had a successful implementation period facilitated by community acceptance.

**Journal Title:** Development of An Integrated Diabetes Prevention Program with First Nations in Canada

**Author(S):** Gittelsohn, L., Harris, S.B., and Ford, E.

**Year:** 2006

**Health Topic:** Diabetes/First Nations

**Location:** Canada

**Determinants of Health:** Social Environments. Culture Health Service, and Personal Health Practices and Coping Skills

**Comprehensive action strategies:** Education and Personal Health and Practices and Coping Skills; Create Supportive Environments and Develop Personal Skills; and Community and Individual

**Purpose:** Used multiple research methods to develop a multi-institutional diabetes prevention program based on the successful Sandy Lake Health and Diabetes Project and Apache Healthy Stores Programs.

**Evaluated:** Yes

**Effective:** Yes

**Methods:** In-depth interviews, a structured survey, demonstrations, and feedback sessions were employed. Group activities and meetings were used to generate knowledge about the needs of the community.

**Results:** Educating children through a school prevention program was the most popular proposed intervention. Variations

in health beliefs, attitudes, and environmental conditions required tailoring programs to each reserve. It was also necessary to balance community input with proven health-promotion strategies.

**Recommendations:** Demonstrated the importance of formative research in developing health-promotion programs for multiple communities based on previously evaluated studies.

**Journal Title:** Evaluation of a Mobile Diabetes Care Telemedicine Clinic Serving Aboriginal Communities in Northern British Columbia, Canada  
**Author(S):** Jin, A., Martin, D., Maberley, D., Dawson, K., Seccombe, D., and Beattie, J.

**Year:** 2003

**Health Topic:** Diabetes/Aboriginal

**Location:** Canada

**Determinants of Health:** Physical Environment, Health Services, Personal Health Practices and Coping Skills; and Culture

**Comprehensive Action Strategies:** Health Services and Personal Health Practices and Coping Skills; Create Supportive Environments; Develop Personal Skills and Reorient Health Services; Community, Sector/System and Individual

**Purpose:** Describe and evaluate a program to improve access to diabetes care for Aboriginal Peoples in northern communities.

**Evaluated:** Yes

**Effective:** Yes

**Methods:** A diabetes nurse educator and an ophthalmic technician travelled to aboriginal reserves offering diabetes services.

**Results:** Exit strategies showed high levels of client satisfaction.

**Recommendations:** The mobile clinic is not only cost-effective, but also demonstrated improved access to the recommended standard of diabetes care.

**Journal Title:** Implementing Participatory Intervention and Research in Communities: Lessons from Kahnawake Schools Diabetes Prevention Project (KSDPPs) in Canada

**Author(S):** Potvin, L., Cargo, M., Mc-

Comber, A., Delormier, T., and Macaulay, A.

**Year:** 2003

**Health Topic:** Diabetes

**Location:** Canada

**Determinants of Health:** Social Environments, Health Services

**Comprehensive Action Strategies:** Health Services; Create Supportive Environments; and Community

**Purpose:** This paper focused on four principles as basic components for an implementation model of community programs.

**Evaluated:** Non-Applicable

**Effective:** Yes

**Methods:** Participatory

**Results:** Lessons can be learned that are useful for other communities. For example, community health promotion can be successfully implemented through the establishment of an equal partnership between community groups and academic researchers. Negotiation very early in the process of the Code of Research Ethics was instrumental; research and intervention activities reinforced each other in program implementation; and the integration of all program components into a dynamic negotiated space allowed the survival of the KSDPP vision in a changing environment.

**Recommendations:** Lessons can be learned that are useful for other communities. This emerging implementation model for community interventions is one that conceives a program as a dynamic negotiated space through ongoing negotiation.

**Journal Title:** Effectiveness of a Community-Directed Diabetes Prevention and Control in Rural Aboriginal Population in British Columbia, Canada

**Author(S):** Daniel, M., Green, L., Marion, S., Gamble, D., Herbert, C., Hertzman, C., and Sheps, S.

**Year:** 1999

**Health Topic:** Diabetes/Aboriginal

**Location:** Canada

**Determinants of Health:** Health Services and Personal Health Practices and Coping Skills; Create Supportive Environments, Develop Personal Skills and Reori-

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ent Health Services; Community, Sector/System and Individual

### **Comprehensive Action Strategies:**

Health Services and Personal Health Practices and Coping Skills; Create Supportive Environments, Develop Personal Skills and Reorient Health Services; Community, Sector/System and Individual

**Purpose:** The report presents a process for, and summative evaluation of, a community-based diabetes prevention and control project in an aboriginal population in British Columbia, Canada.

**Evaluated:** Yes

**Effective:** No

**Methods:** Quasi-Experimental

**Results:** The project yield few changes in quantifiable outcomes.

**Recommendations:** Systematic evaluation is needed to determine why the project was effective or not, how it could be improved, and how it might be adapted for specific sub-populations.

**Journal Title:** Implementing a Diabetes Prevention Program (DPP) in a Rural African-American Church

**Author(S):** Davis-Smith, M.

**Year:** 2007

**Health Topic:** Diabetes

**Location:** United States

**Determinants of Health:** Social Environments, Personal Health Practice, Health Services and Coping Skills, and Culture

### **Comprehensive Action Strategies:**

Health Services and Personal Health Practices and Coping Skills; Create Supportive Environments, Develop Personal Skills and Reorient Health Services; Community, Sector/System and Individual; and Culture

**Purpose:** The purpose of this study was to determine the feasibility of implementing a diabetes prevention program (DPP) in a rural African-American church.

**Evaluated:** Non-Applicable

**Effective:** Yes

**Methods:** A six-session DPP, modelled after the successful National Institutes of Health (NIH) DPP was implemented in a rural African-American church. The primary outcomes were attendance rates and changes in fasting glucose; and

weight and body mass index measured at baseline, six- and 12-month follow-up.

**Results:** Weight loss and a decrease in fasting glucose were seen after the intervention and 12-month follow-up. The study demonstrated the ability to identify an at-risk population.

**Recommendations:** The pilot project suggests that a modified six-session DPP can be adapted to a group format and successfully implemented in a church setting. Further randomized studies are needed to determine the effectiveness of such an intervention.

### **Topic: PHYSICAL ACTIVITY**

**Journal Title:** The Effect of a Primary Care Exercise Intervention for Rural Women

**Author(S):** Sherman, B., Gilliland, G., Speckman, J., and Freund, K.

**Year:** 2006

**Health Topic:** Physical Activity

**Location:** United States

**Determinants of Health:** Personal Health Practices and Coping Skills, Health Services, Social Support Network

### **Comprehensive Action Strategies:**

Personal Health Practices and Coping Skills; Develop Personal Skills; Individual; Community

**Purpose:** The study assessed the effect of a brief primary care walking intervention in rural women.

**Evaluated:** Yes

**Effective:** Yes

**Methods:** The subjects were given a pedometer and exercise videotape, and provided with exercise counselling at intake and four time points over six months. The week one pedometer step counts were compared with step counts at the six-month follow-up.

**Results:** Participants were recruited by a primary care nurse at three locations in rural Missouri. Over the follow-up period, participants increased their step counts by a mean of 2573 steps per day. Increases in step counts were seen in normal weight, overweight, and obese participants.

**Recommendations:** A simple walking intervention through a primary care practice

was effective in increasing the short-term walking rates of rural women.

**Journal Title:** Health Communications in Rural America: Lessons Learned from an Arthritis Campaign in Rural Arkansas

**Author(S):** Balamurugan, A., Rivera, M., Sutphin, K., and Campbell, D.

**Year:** 2007

**Health Topic:** Arthritis Campaign/Physical Activity

**Location:** United States

**Determinants of Health:** Education and Literacy and Social Environments

### **Comprehensive Action Strategies:**

Education; Strengthen Community Action and Create Supportive Environments; Community

**Purpose:** To review findings and lessons learned from a rural health communications campaign

**Evaluated:** Yes

**Effective:** No

**Methods:** The health communications campaign targeting persons aged 45 to 64 was titled "Physical Activity." The arthritis pain reliever was promoted through radio spots, print ads in local newspapers, and brochures and posters. A survey assessed the effectiveness of the campaign.

**Results:** A high percentage reported having seen or heard the message; however, only 11% recalled the campaign message. Challenges faced during the campaign implementation included limited finances, resources, and staff; time constraints; and distrust.

**Recommendations:** Challenges to health communications campaigns in rural areas can decrease campaign reach and effectiveness. If resource constraints exist, leveraging partnerships and building trust among community residents are important for achieving campaign success.

### **Topic: SUBSTANCE USE**

**Journal Title:** Say Yes First: Follow Up of a Five-Year Rural Drug Prevention Program

**Author(S):** Zavala, K., Battistich, V., Gosselink, C., and Dean, B.

**Year:** 2004

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**Health Topic:** Substance Use

**Location:** United States

**Determinants of Health:** Health Services, Social Environments, and Personal Health Practices and Coping Skills

**Comprehensive Action Strategies:**

Education, Personal Health Practices and Coping Skills; Develop Personal Skills and Create Supportive Environments; and Individual and Community

**Purpose:** Say Yes First to Rural Youth and Family Alcohol/Drug Prevention (SYF) was a five-year, federally funded U.S.D.H.H.S. Centre for Substance Abuse Prevention (CSAP) project from 1991 to 1996. Children were tracked from Grades 4 to 8.

**Evaluated:** Yes

**Effective:** Yes

**Methods:** National Youth Survey Follow-Up Questionnaire

**Results:** Lower usage of alcohol, tobacco, and other drugs by program students. Lower lifetime prevalence of marijuana use for program students than comparison groups. SYF students had higher course grades, lower school absenteeism, more positive attitudes toward school, less trouble in school, and less negative self-appraisal. Program students reported greater participation in sports, more family communication, and fewer disagreements or arguments with their parents.

**Recommendations:** Need to implement similar longitudinal studies of scientifically based drug-prevention programs that investigate the long-term effects of drug risk and resiliency factors in other communities.

**Journal Title:** Heart Health in Rural Saskatchewan

**Author(S):** Ebbesen, L., Ramsden, V., Reeder, B., and Hamilton, T.

**Year:** 1997

**Location:** Canada

**Determinants of Health:** Health Services, Social Environments, Physical Environments, and Personal Health Practices and Coping Skills

**Comprehensive Action Strategies:**

Education, Personal Health Practices and

Coping Skills; Develop Personal Skills and Create Supportive Environments; and Individual and Community

**Purpose:** Heart Health Initiative was established in 1986 (Beechy Program)

**Evaluated:** Yes

**Effective:** Yes

**Methods:** Process evaluation

**Results:** The Beechy Program is an example of how a determined and enthusiastic core group of health professionals can form the solid foundation of a community health network.

**Recommendations:** As a specialized program designed for promoting heart health and preventing CVD in a small rural community, it may have the potential for adoption by similar communities.

**Journal Title:** The Cardiovascular Health Education Program (CHEP): Assessing the Impact on Rural and Urban Adolescents Health Knowledge

**Author(S):** MacDonald, S

**Year:** 1999

**Health Topic:** Heart Health

**Location:** Canada

**Determinants of Health:** Health Services, Social Environments, and Personal Health Practices and Coping Skills

**Comprehensive Action Strategies:**

Education, Personal Health Practices and Coping Skills; Develop Personal Skills and Create Supportive Environments; and Individual and Community

**Purpose:** A quasi-experimental, non-equivalent control group pretest-post-test design was used to assess the impact of the Cardiovascular Health Education Program (CHEP) on the cardiovascular health knowledge of Grade 8 students.

**Evaluated:** Yes

**Effective:** Yes

**Methods:** Quasi-Experimental, non-equivalent control group pretest-post-test design.

**Results:** The findings from the study indicate that CHEP did have a significant impact on the cardiovascular health knowledge of the rural adolescents, but not their urban counterparts.

**Recommendations:** The findings support the need for implementation of the

CHEP within rural populations. This study also showed that nurses can design, implement, and evaluate community-based health promotion programs.

**Journal Title:** Effects of the Quebec Heart Health Demonstration Project on Adult Dietary Behaviours

**Author(S):** Huot, I., Paradis, G., and Ledoux, M.

**Year:** 2003

**Health Topic:** Heart Health

**Location:** Canada

**Determinants of Health:** Health Services, Social Environments, and Personal Health Practices and Coping Skills

**Comprehensive Action Strategies:**

Education, Personal Health Practices and Coping Skills; Develop Personal Skills and Create Supportive Environments; and Individual and Community

**Purpose:** A five-year, multifactorial community-based heart disease program was conducted by regional public health departments on three sites: urban, suburban, and rural.

**Evaluated:** Yes

**Effective:** No

**Methods:** A five-year, multifactorial community-based disease prevention program was conducted by regional public health departments in three sites: rural, urban, and suburban. The experimental and control communities were composed of independent samples. A Food Frequency Questionnaire was administered that yielded the Global Dietary Index (GDI).

**Results:** The rural site GDI showed determination in both groups, but the intervention did not have measurable effects on dietary behaviour.

**Recommendations:** Future interventions could benefit from considering physical and social environments as well as public policy changes to improve efficacy.

**Journal Title:** Design Issues in the the Combination of International Data from Two Rural Community Cardiovascular Intervention Programs

**Author(S):** Nafziger et al.

**Year:** 2001

**Health Topic:** Heart Health

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**Location:** Scandinavia

**Determinants of Health:** Health Services, Social Environments, and Personal Health Practices and Coping Skills

**Comprehensive Action Strategies:**

Education, Personal Health Practices and Coping Skills; Develop Personal Skills and Create Supportive Environments; and Individual and Community

**Purpose:** To compare and contrast rural cardiovascular community intervention programs (CCIP) in northern Sweden, and determine their effectiveness in reducing cardiovascular disease.

**Evaluated:** Yes

**Effective:** Yes (method)

**Methods:** Two rural intervention populations and their reference population were compared. A comparison was made of the intensity and duration of the intervention programs using an overall intensity score. Population-based surveys were conducted at five-year intervals in both counties.

**Results:** The data were pooled, taking into consideration comparable ages. New variables were created in order to define the relationship between similar data that did not permit direct comparison.

**Recommendations:** Combination and comparisons of international data from two programs allowed evaluation of community intervention programs that were developed independently by similar communities. It is possible to select interventions that may be feasible for applications in similar communities.

**Journal Title:** Can a Sustainable Community Intervention Reduce the Health Gap? 10 Year Evaluation of a Swedish Community Intervention Program for the Prevention of Cardiovascular Disease

**Author(S):** Weinehall, L., Hellsten, G., Boman, K., Hallmans, G., Asplund, K., and Wall, S.

**Year:** 2001

**Health Topic:** Heart Health

**Location:** Scandinavia

**Determinants of Health:** Health Services, Social Environments, and Personal Health Practices and Coping Skills

**Comprehensive Action Strategies:**

Education, Personal Health Practices and Coping Skills; Develop Personal Skills and Create Supportive Environments; and Individual and Community

**Purpose:** This study evaluates the 10-year outcomes of a northern Sweden community intervention program for the prevention of cardiovascular disease (CVD), with special reference to social patterning or risk development.

**Evaluated:** Quasi-experimental design, trends in risk factors, and predicted mortality in an intervention area are compared with those in a reference area by repeated independent cross-sectional surveys.

**Effective:** No

**Methods:** This study evaluated the 10-year outcomes of a northern Sweden community intervention program for the prevention of cardiovascular disease (CVD), with special reference to social patterning or risk development.

**Results:** There were significant differences in changes to total cholesterol and systolic pressure between the intervention and the reference populations. The predicted coronary heart disease mortality after adjustment for education and age was reduced by 36% in the intervention area and by 1% in the reference area.

**Recommendations:** Long-term community-based CVD prevention programs that combine population and individual strategies can substantially promote a shift in CVD in a high-risk rural population. There was no gap between socially privileged and less-privileged groups. Socially less-privileged groups benefitted most from this program.

### Topic: POLICY

**Journal Title:** Rural Public Health Service Delivery: Promising New Directions

**Author(S):** Berkowitz, B.

**Year:** 2004

**Health Topic:** Policy/Rural Public Health Service Delivery

**Location:** United States

**Determinants of Health:** Health Services

**Comprehensive Action Strategies:** Health Services; Building Healthy Public

Policy; Society, Sector/System; and Community

**Purpose:** Define and describe the variations of rural health service delivery and how communities meet the challenges of public health practice.

**Evaluated:** Non-Applicable

**Effective:** Non-Applicable

**Methods:** Synthesis of the literature/opinion

**Results:** Networks and collaboration created by local health departments serve as powerful assets in rural communities. Models that promote collaboration hold promise for meeting the challenges associated with a rural community.

**Recommendations:** Evaluating and testing models conducive to rural health collaboration must be part of the public health research agenda.

**Journal Title:** Rural Public Health: Policy and Research Opportunities

**Author(S):** Berkowitz, B., Ivoryt, J., and Morris, T.

**Year:** 2002

**Health Topic:** Policy/Research

**Location:** United States

**Determinants of Health:** Health Services

**Comprehensive Action Strategies:** Health Services; Building Healthy Public Policy; Society, Sector/System; and Community

**Purpose:** This article provides an overview of policy and research implications

**Evaluated:** Yes

**Effective:** Yes

**Methods:**

**Results/ Recommendations:** Important policy and research questions may need to begin with defining the system and infrastructure issues. Policies need to provide incentives for rural health jurisdictions to respond to the critical health needs of their communities rather than to a predetermined set of federal initiatives. Reach, information technology, and leadership in rural public health is essential. The Turning Point Initiative funded by the Robert Wood Johnson and W.K. Kellogg Foundations hold great promise for rural communities.

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**Journal Title:** Interorganizational Networks: Using A Theoretical Model To Predict Effectiveness of Rural Health Delivery Networks

**Author(S):** Scumaker, A.

**Year:** 2002

**Health Topic:** Policy/Model/Interorganizational Networks

**Location:** United States

**Determinants of Health:** Health Services

**Comprehensive Action Strategies:** Health Services; Building Healthy Public Policy; Society, Sector/System; and Community

**Purpose:** Interorganizational health-care delivery networks have potential for sustaining health service delivery in rural areas. Four rural Nebraska health-care delivery networks were compared to an interorganizational model based on theories of interorganizational relations, exchange, population ecology, and synthesized collaboration.

**Evaluated:** Yes

**Effective:** Yes

**Methods:** Non-random, two level mail survey of persons selected by coordinators of the four study networks

**Results:** Correlation and multiple regression analysis show a partial fit between the research model and the study networks. Effectiveness—measured by the gap between best possible and actual practice—increased with network connectivity, group methods of administrative decision-making, and sequential pattern or service delivery. Greater dependence on vertical funding corresponds to greater external control. The predication is upheld that, as scope narrows, task intensity, duration, and volume increase. Centrality and network size decrease together where there is little reliance on vertical sources of funds.

**Recommendations:** The integrated interorganizational model demonstrates some efficacy for testing potential effectiveness of networks.

**Journal Title:** Innovative Approaches in Public Health Research: Applying Life Course Epidemiology to Aboriginal Health

Research

**Author(S):** Estey, E., Kmetric, A., and Reading, J.

**Year:** 2007

**Health Topic:** Policy/Aboriginal/Chronic Respiratory Diseases

**Location:** Canada

**Determinants of Health:** Health Services

**Comprehensive Action Strategies:** Health Services; Building Healthy Public Policy; Society, Sector/System; and Community

**Purpose:** Focuses on the benefits of understanding chronic respiratory diseases in aboriginal populations, and draws attention to the need for well-rounded, high-quality aboriginal respiratory health research.

**Evaluated:** Literature Review

**Effective:** Non-Applicable

**Methods:** Researchers who adopt a life-course epidemiology approach broaden their ability to explain, understand, and describe ways to mitigate the effects of chronic diseases that reduce risk factor development and interaction.

**Results:** Cohort studies were used to determine the interplay of risk factors and the impact of different life stages on the development of chronic diseases that a life approach advocates.

**Recommendations:** These activities should lead to interventions that in turn need to be studied to determine effectiveness.

**Journal Title:** Rural-Urban differences in Health and Health Behaviour: A Baseline Description of Community Health-Promotion Programme for the Elderly

**Author(S):** Valve., F. Et al.

**Year:** 2006

**Health Topic:** Chronic Disease

**Location:** Scandinavian

**Determinants of Health:** Personal Health Practices and Coping Skills

**Comprehensive Action Strategies:** Education, Build Healthy Public Policy; Community, Sector/System and Society

**Purpose:** The study describes the setting and design of the Good Ageing in Lahti Region (GOAL) program by using baseline

results of the goal cohort study to examine whether living in urban, semi-urban, or rural communities is related to risk factors for chronic diseases and functional disability in aging individuals.

**Evaluated:** Baseline data

**Effective:** Non-Applicable/Provided information for program planning

**Methods:** Data were collected using two questionnaires and laboratory assessments.

**Results:** Elevated serum cholesterol, obesity, sedentary lifestyle, and high fat intake were more prevalent in rural than urban and semi-urban populations. Rural communities remained the only community type with increased probability for high BMI after controlling for some variables.

**Recommendations:** The unfavourable health and lifestyle profile together with an older population makes health promotion for elderly citizens a special challenge. The differences in health among the three community types were influenced by education, background, physical activity, and smoking.

**Journal Title:** Rural Definitions for Health Policy and Research

**Author(S):** Hart, G., Larson, E., and Lishner, D.

**Year:** 2005

**Health Topic:** Policy/Rural Definitions, Policy, and Research

**Location:** United States

**Determinants of Health:** Health Services

**Comprehensive Action Strategies:** Health Services; Building Healthy Public Policy; Society, Sector/System; and Community

**Purpose:** Defining “rural” for health policy and research purposes requires that policy analysts and researchers specify which aspects of reality are most relevant to the topic at hand, then select an appropriate definition. Several useful rural taxonomies are discussed and compared in this article.

**Evaluated:** Non-Applicable

**Effective:** Non-Applicable

**Methods:** Synthesis of the literature of community-applied rural taxonomies.

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**Results:** No perfect rural definition.

**Recommendations:** Researchers should familiarize themselves with various rural definitions and geographic methodologies and then carefully weigh the pros and cons of available definitions.

### Topic: SMOKING

**Journal Title:** Long Term Engagement in Smoking Cessation Counselling among Rural Smokers

**Author(S):** Cupertino, P., et al.

**Year:** 2007

**Health Topic:** Smoking

**Location:** United States

**Determinants of Health:** Health Services, Social Environments, and Personal Health Practices and Coping Skills

**Comprehensive Action Strategies:**

Education, Personal Health Practices and Coping Skills; Develop Personal Skills and Create Supportive Environments; and Individual and Community

**Purpose:** This study describes long-term engagement in counselling for smoking cessation and factors associated with engagement.

**Evaluated:** Yes

**Effective:** Yes

**Methods:** Randomized control trial where participants received up to six telephone-based counselling sessions at six-month intervals over 24 months

**Results:** During the six-month interval, over 60% of continuing smokers remained engaged in treatment. Call completion varied over time: while levels of engagement dropped after the first interval, many continuing smokers remained engaged throughout the study. Education, age, motivation, income, diabetes, and health insurance status were predictors of engagement in the treatment.

**Recommendations:** This study demonstrates that smokers will remain engaged in long-term counselling designed to address the chronic nature of nicotine dependence.

**Journal Title:** Aboriginal Users of Canadian quit lines: an exploratory Analysis

**Author(S):** Hatward, L., Cambell, S., and Sutherland-Brown, C.

**Year:** 2007

**Health Topic:** Smoking/Aboriginal

**Location:** Canada

**Determinants of Health:** Health Services, Social Environments, and Personal Health Practices and Coping Skills

**Comprehensive Action Strategies:**

Education, Personal Health Practices and Coping Skills; Develop Personal Skills and Create Supportive Environments; and Individual and Community.

**Purpose:** To investigate an exploratory, comparative study of the utilization and effectiveness of tobacco cessation quitlines among aboriginal and non-aboriginal Canadian smokers.

**Evaluated:** Yes

**Effective:** Yes

**Methods:** Exploratory, comparative study

**Results:** Without a targeted promotion, aboriginal smokers do call Canadian quitlines, primarily for health-related reasons. Quitlines are effective at helping them to quit, and can reach a large proportion of smokers in a cost-effective manner.

**Recommendations:** Quitlines can be an effective addition to aboriginal tobacco cessation strategies.

**Journal Title:** The Effectiveness of a Nurse-Managed Prenatal Smoking Cessation Program Implemented in a Rural County

**Author(S):** Britton, G., Brinthaup, J., Stehle, J., and James, G.

**Year:** 2005

**Health Topic:** Smoking

**Location:** United States

**Determinants of Health:** Health Services, Social Environments, and Personal Health Practices and Coping Skills

**Comprehensive Action Strategies:**

Education, Personal Health Practices and Coping Skills; Develop Personal Skills and Create Supportive Environments; and Individual and Community

**Purpose:** The study examined the effectiveness of a nurse-managed cessation program, that was totally integrated into routine prenatal care, on the cessation rates of pregnant smokers in a rural community and assessed the subjects characteristics associated with smoking

cessation success.

**Evaluated:** Yes

**Effective:** Yes. Had an effect on recent quitters but no effect on those who at the first prenatal visit reported smoking.

**Methods:** Quasi-experimental design with a control group and an experimental group. Data were collected from a convenience sample of 194 pregnant women who stated that they were smokers at the onset of pregnancy.

**Results:** This nurse-delivered program integrated with perinatal care influenced the smoking behaviours of recent quitters, but had no effect on those reported smoking at the first prenatal visit. There are implications for clinical practice.

**Recommendations:** The nurse-delivered program integrated into prenatal care influenced smoking behaviours or recent quitters, but had no effect on those who at the first prenatal visit reported smoking. Implications for clinical practice are discussed.

**Journal Title:** Providing Mental Health Services in Older People Living in Rural Communities

**Author(S):** Kaufman, A., Scogin, F., Burgio, L., Morthland, M., and Ford, B.

**Year:** 2007

**Health Topic:** Mental Health/Older Adults

**Location:** United States

**Determinants of Health:** Health Services, Personal Health Practices and Coping Skills

**Comprehensive Action Strategies:**

Education; Create Supportive Environments; Community; and Sector/System and Society

**Purpose:** This paper reports on the initial phase of a five-year, interdisciplinary clinical research study that is testing the effectiveness of a home-delivered, therapeutic, psychosocial intervention aimed at improving the emotional well-being and quality of life of medically frail elders who live in rural communities.

**Evaluated:** Yes

**Effective:** Yes

**Methods:** The Project to Enhance Aged Rural Living (PEARL) is a five-year interdisciplinary clinical research study using a

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delayed treatment control design to test the effectiveness of providing cognitive behavioural therapy (CBT) to medically frail, cognitively intact persons, age 65 years and older living in rural communities.

**Results:** Encourage social work practitioners to become knowledgeable about mental health issues as soon as possible, advocate for the allocation of resources, and understand the existing cultural context of the communities. Consider budget impact and ongoing research.

**Recommendations:** PEARL is a successful intervention having a positive impact on well-being and quality of life. Successful implementation would require service delivery in the home, either through in-person interventions or emerging technologies.

**Journal Title:** Paediatric Telepsychiatry in Ontario: Caregiver and Service Provider Perspective

**Author(S):** Greenberg, N., Boydell, K., and Volpe, T.

**Year:** 2006

**Health Topic:** Mental Health

**Location:** Canada

**Determinants of Health:** Health Services, Personal Health Practices and Coping Skills

**Comprehensive Action Strategies:** Create Supportive Environments; Community; and Sector/System and Society.

**Purpose:** This study explored user perspectives and experiences of a pediatric telepsychiatry program serving rural communities in Ontario, Canada. The purpose of this research via video-technology was to inform future benefits of program development and health policy.

**Evaluated:** Yes

**Effective:** Yes

**Methods:** Focus groups with rural health service providers and interviews with family caregivers of children receiving telepsychiatry were held.

**Results:** The experience with the telepsychiatry service was positive.

**Recommendations:** There is a need for additional local services to support treatment recommendations.

**Journal Title:** An Evidence-based Formative Evaluation of a Cross-cultural Aboriginal Mental Health Program in Canada

**Author(S):** Thomas, W., and Bellefeuille, G.

**Year:** 2006

**Health Topic:** Mental/Aboriginal

**Location:** Canada

**Determinants of Health:** Health Services and Culture

**Comprehensive Action Strategies:** Create Supportive Environments; Community; and Sector/System and Society and Health Services

**Purpose:** Reports on the formative evaluation of a Canadian cross-cultural aboriginal mental health program that combined the healing properties of the aboriginal healing circle and the self-awareness and empowerment practices of the psychotherapy technique known as "focusing."

**Evaluated:** Yes

**Effective:** Yes

**Methods:** Qualitative: Grounded Theory

**Results:** The program used therapeutic criteria for both its focusing and healing circle components.

**Recommendations:** Implications include the need for further research to be conducted with, for, and by Aboriginal Peoples to ensure that their world view is acknowledged and put into practice. Need to follow existing frameworks of healing and knowledge.

### Topic: INJURY PREVENTION

**Journal Title:** Impact of a National Rural Youth Health and Safety Initiative: Results from a Randomized Controlled Trial

**Author(S):** Lee, B., Westaby, J., and Berg, R.

**Year:** 2004

**Health Topic:** Injury Prevention/Youth

**Location:** United States

**Determinants of Health:** Health Services, Social Environments, and Personal Health Practices and Coping Skills

**Comprehensive Action Strategies:** Education, Personal Health Practices and Coping Skills; Develop Personal Skills and Create Supportive Environments; and Individual and Community

**Purpose:** Conducted a comprehensive evaluation of a rural youth health and safety initiative implemented in 4000 National FFA (formerly Future Farmers of America) chapters across the United States

**Evaluated:** Yes

**Effective:** No

**Methods:** Data were collected from secondary school students and their FFA advisors at three time intervals (pre-intervention, immediate post-intervention and one year post-intervention) with three groups (standard, enhanced, and control), cluster-randomized, controlled trial design.

**Results:** No significant effect of this initiative on agricultural health and safety knowledge, safety attitudes, leadership, self-concept, and self-reported injuries of project participants; results showed the program failed to develop sustainable community partnerships.

**Recommendations:** Desired outcomes were not achieved. Future efforts should better guide effective use of private-sector resources aimed at reducing agricultural disease and injury among rural residents.

*\* Promising rural health interventions that have been evaluated and considered effective*



