Rural Community Well-being: The Perspectives of Health Care Managers in Southwestern Manitoba, Canada

Doug Ramsey Department of Rural Development Brandon University Brandon, Manitoba, Canada R7A 6A9 <u>Ramsey@brandonu.ca</u>

Kenneth Beesley Department of Rural Development Brandon University Brandon, Manitoba, Canada R7A 6A9 <u>beesleyk@brandonu.ca</u>

Abstract

Health care issues in rural areas are dominating the public policy agendas throughout the western world. The issues are many and varied. Canada is no different in this regard, as there are many rural areas with concerns about health care delivery in the face of declining populations. With 80 percent of Canadians living in urban, making the case for designating health care resources in areas with declining populations becomes more difficult. The purpose of this paper is to investigate how health care managers perceive rural community well-being, including indicators of well-being and determinants of well-being. The paper begins with an overview of the literature that places the context of this research in three areas. First, the literature on social capital is reviewed as in recent years both the social and medical sciences have been adopting it for analyzing community health. Second, the determinants of health literature is reviewed as the paper is concerned with the factors (determinants) that affect rural community well-being. Third, an overview of the definitions and models of health and well-being is provided to establish the context for measuring rural community well-being. A model is then applied through a survey of the twenty health care managers responsible for the operations of the 44 health care and seniors' centres located within the Assiniboine Regional Health Authority in southwestern Manitoba. The model also proves useful in identifying determinants of health as well as assessing the role of social capacity in fostering rural community well-being.

1.0. Introduction

Health care issues in rural areas are dominating the public policy agendas throughout the western world. The issues are many and varied, including distance fiscal restraint, an aging population, rural depopulation, and improved diagnostics (Cloutier-Fisher and Joseph 2000; Kearns and Joseph 1995; Joseph and Hallman 1998; Rosenberg and Moore 1997). Canada is no different in this regard, as there are many rural areas with concerns about health care delivery in the face of

declining populations. Within rural areas there are specific demographic challenges, including aging (Pampalon, Martinez and Hamel 2005; Joseph and Chalmers 1995), agricultural (Tay et al. 2004; Stiernstrom et al. 1998), and Aboriginal (Newbould 1998) populations. With 80 percent of Canadians living in urban centres (Statistics Canada 2003), making the case for designating health care resources in areas with declining populations becomes more difficult. Certainly, many parts of rural Canada are facing declining populations (Semple 1981; Millward 2005). Higgs (1999) concluded that more research was needed to better understand the determinants of health and health status in rural areas. Following from this and consistent with literature other work in this area (e.g. Bushy 2002; MacLeod, Browne, and Leipert 1998; Elliott-Schmidt and Strong 1997; Fuller et al. 2004), this paper argues that it is important to better understand how the people delivering services in rural communities perceive health and well-being. The purpose of this paper is to investigate how health care managers perceive rural community well-being, including indicators of well-being and determinants of well-being.

The paper begins with an overview of the literature that places the context of this research in three areas. First, the literature on social capital is reviewed as in recent years both the social and medical sciences have been adopting it for analyzing community health. Second, the determinants of health literature is reviewed as the paper is concerned with the factors (determinants) that affect rural community well-being. Third, an overview of the definitions and models of health and wellbeing is provided to establish the context for measuring rural community wellbeing. In doing so, this paper adopts the four-dimensional model of rural community well-being developed by Ramsey and Smit (2002), as it focuses attention on social well-being, economic well-being, physical health and psychological health. This model is applied through a survey of the twenty health care managers responsible for the operations of the 44 health care and seniors' centres located within the Assiniboine Regional Health Authority in southwestern Manitoba. The model also proves useful in identifying determinants of health as well as assessing the role of social capacity in fostering rural community wellbeing. The research builds upon the work of Annis, Racher and Beattie (2002; 2005) who established a guidebook of health and well-being indicators for rural communities in Manitoba to utilize in assessing their health status.

2.0. Scholarly Context

The definitions of rural are many and varied (Hillery 1955; Rourke 1998). Most definitions recognize either or both of the spatial and thematic aspect of rural and community (Ramsey, Everitt and Annis 2002). Rural community has been defined based on forms of association (Haigh and Murri 1990), income sources (Flora and Flora 1988), and a combination of place, locality, and interaction (Cloke 1994). Rural can also be specified or defined based on health care service delivery. For example, Humphreys (1998) and Leduc (1997), developed rurality indices in order to better plan and allocate resources for health care delivery. Others have focused on the issue of distance in providing health care services to people living in rural areas (Joseph and Hallman 1998; Hallman and Joseph 1999; Clarke and Miller 1990). While debates about how to define rural and community have taken place in the literature (*e.g.* Hoggart 1990; Halfacree 1993; Ryan-Nicholls and Racher 2004), for the purposes of this paper, the definition of rural and small town developed by Statistics Canada is adopted. This definition states that those people

living outside the main commuting zone of Large Urban Centres (LUC) of 10,000 or more people are considered to be rural and small town (Statistics Canada 2003). This definition is relevant for two reasons. First, policy in Canada, including health policy, is developed largely based on Statistics Canada data collection and research. Second, the study area of interest in Manitoba meets this definition, with the City of Brandon (49,000 in 2001) being the only LUC in southwestern Manitoba.

The rural condition, or the state of rural, has also been expressed in the literature a number of ways including: quality of life (Michalos et al. 2001), health (Higgs 1999; Leduc 1997), health promotion (Raphael et al. 1999) sustainability (Beesley 1994; Gauthier and Weiss 2005), social capital (Reimer 2002; Diaz and Nelson 2005), determinants of health (Hartley 2004) and well-being (Ramsey and Smit 2002). These are not mutually exclusive terms or approaches as quality of life could be considered a measure of health and well-being and vice versa. Similarly, sustainability has been viewed as the temporal success of measures of quality of life, health, and well-being (Ramsey and Smit 2002). In establishing the context for the research reported on in this paper, three specific areas of the literature were drawn upon: social capital, determinants of health, and well-being. The literature on each is extensive, thus this paper focuses on the similarities inherent to each. Together, the scholarly context provides the framework and justification for obtaining the views of health care professionals (social capital) to identify both indicators of well-being as well as factors affecting well-being (determinants of health).

2.1. Social Capital

In recent years, articulations of social capacity, capital, and cohesion have been submitted as contexts for assessing rural change and condition (*e.g.* Putnam 1995, 2000; Edmondson 2003; Gauthier and Diaz 2005). Reimer (2002), for example, suggests a model that integrates capacity, capital and cohesion as dimensions for better understanding changes in the rural economy. Social capital and cohesion have also been offered as attributes and indicators of community sustainability (Gauthier and Weiss 2005). Similarly, social capital has been suggested as a measure of what communities and regions have in place to address a particular issue (Gauthier and Diaz 2005). The actions of the resources and the people can be viewed as measures of capacity for a community to respond to changes in health care service provision. A community that is successful in maintaining or enhancing service delivery under constraints and change would be viewed as cohesive.

Social capital has recently been seen as an attribute of health. Pollack and von dem Knesebeck (2004), for example, examine social capital and health of elderly populations in the United States and Germany. The role of social relations in fostering health and well-being has also been addressed in varying ways including placing social capital within the neo-liberal context in which health care services are provided (Edmondson 2003; Talbot and Walker 2007) and examining the relationship between social capital and health, with particular interest in the implications of both on public health and epidemiology (Lomas 1998). Health Canada (2006, 1) recently adopted social capital in identifying "social determinants of health". Citing health as a service example, Rose (2000, 1422) defines social capital as "the stock of networks that are used to produce goods and services in society". This paper draws upon these perspectives of social capital in

recognizing that social relations and networks influence health and well-being. Further, relations and networks are taken to include health care services that are delivered in communities.

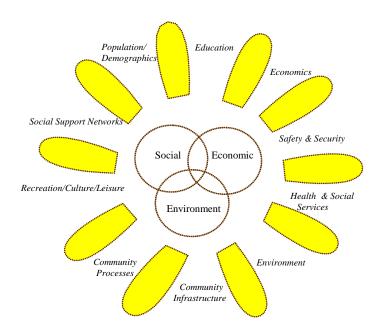
2.2. Determinants of Health

The notion of determinants of health is more literal than social capital, it that it simply articulates the underlying factors affecting health. What the factors are, however, varies in the literature. Determinants of health have been established for particular segments of the population, including the elderly (Craig 1994) and youth (Rueden-Sieberer, Rajmil and Bisegger 2006), for specific aspects of health (Frankish *et al.* 2007), and for health service utilization (Muburu, Smith and Sharpe 1978). Kosteniuk and Dickinson (2003) go further by establishing two categories of determinants (primary and secondary) based on social gradients. More important to this work are the frameworks that have been established by the public sector in Canada. As such, for the purposes of this paper, determinants of health will be referred to generally as those factors, either external or internal to the rural community that affect the health and well-being of the rural community.

Several frameworks of determinants of health have been developed by academics and policy makers (e.g. Frankish et al. 2007). Health and Welfare Canada (now Health Canada) view the social and economic dimensions of well-being as determinants of individual health (H.W.C. 1992). In developing a model of health promotion, Hamilton and Bhatti (1996), for example, describe nine determinants of health: income and social status; social support networks; education; working conditions; physical environments; biology and genetics; personal health practices and coping skills; healthy child development, and; health services. Social capital is inferred in the networks and services determinants. Hancock, Labonte and Edwards (1999) adapted a somewhat different approach in their identification of six general categories of determinants of health in their model of population health for community-level measurement: sustainable ecosystems; environmental viability; livability of built environments; community conviviality, social equity, and; economic adequacy. More recently, the federal Public Health Agency of Canada (P.H.A.C. 2003) resulted in the identification of twelve key determinants of health: income and social status; social support networks; education and literacy; employment and working conditions; social environments; physical environments; personal health practices and coping skills; healthy child development; biology and genetic endowment; health services; gender, and; culture.

Based on a research project that brought rural citizens together throughout southwestern Manitoba between 2000 and 2002, a research consortium from Brandon University developed a health determinants' framework, within which indicators were identified for measuring community health and well-being. Illustrated in Figure 1, the framework included ten dimensions, including: education; economics; safety and security; health and social services; environment; community infrastructure; community processes; recreation, culture, and leisure; social support networks, and; population and demographics. From this a guidebook was developed (Annis, Racher and Beattie 2002, 2005) was developed for communities to assess their health and well-being.

Figure 1. Determinants of Rural Health



Source: Annis (2005)

2.3. Health and Well-being

A commonly referred to definition of health (*e.g.* H.W.C. 1992, 6) comes from the World Health Organization: "a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity". Building upon this definition, health can be seen to include physical and psychological health as well as social and economic well-being (Wan, Gill and Lewis 1982; Ramsey and Smit 2002; Etches *et al.* 2006). Similar to the literature defining determinants of health, approaches to identifying appropriate indicators of health and well-being are many and varied by both governments (H.W.C. 1992; Begin 1993; C.H.P.W.G. 1994) and academics (Lomas 1998; Pong, Pitblado, and Irvine 2002; Robine 2003; Rueden-Sieberer, Rajmil, and Bisegger 2006). Most relevant to this research, however, is that which the Government of Manitoba recognizes. Based on a collaborative effort by the provincial, territorial and federal governments of Canada in 2000, the Government of Manitoba identified 85 indicators of health that were placed into three general categories and 18 sub-categories as follows:

- 1. *Healthy Living* self-reported health, life expectancy, infant mortality, low birth weight, chronic diseases, and health promotion and disease prevention.
- 2. Access to Health Care Services health information or advice, primary health care, family doctor, immediate care, routine care, ambulatory care sensitive conditions, wait times for elective diagnostic services, and prescription drug expenditures.
- 3. *Patient Satisfaction and Quality of Care Received* telehealth services, community-based care, physician care, and hospital care.

(Manitoba Department of Health 2004, 5)

While published after the fieldwork, the framework is relevant to this work given its focus on indicators of both health and health care services.

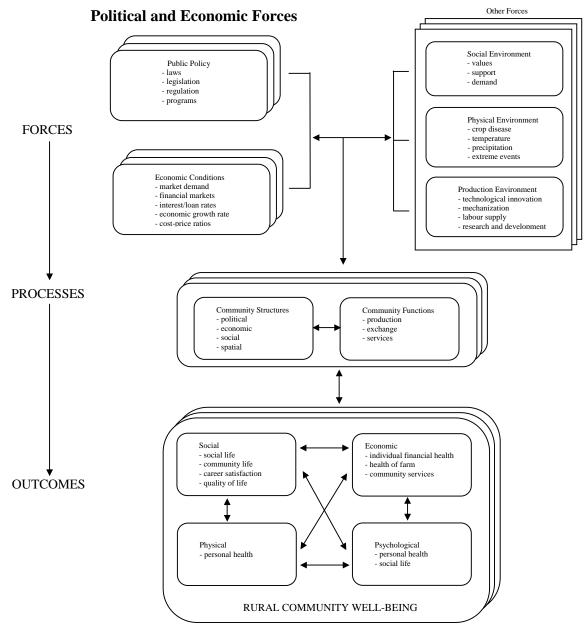
Modeling well-being and health is not a new endeavour, in fact a range of multidimensional models have been described in the literature. At the scale of the individual and within an elderly health promotion context, Wan et al. (1982) describe three overlapping dimensions of human well-being: physical, mental, and social. In a community health context, a parliamentary study for the Government of Australia identified the same three dimensions, albeit with different measurable indicators (P.C.A. 1977). A United States Department of Agriculture study examining how to best target aid to 'distressed rural areas' identified economic, social, and fiscal dimensions and indicators for measurement (Reeder 1990). In a Canadian context, Everitt and Bessant (1992) examined the health of the rural prairies from a regional planning perspective. In doing so, they surveyed both farmers and business operators to ascertain perspectives of individual and economic health. More recently, Ramsey and Smit (2002) modeled rural community well-being on four dimensions: physical and psychological health, and social and economic well-being. This model also established the impacts that external forces of change have on rural community well-being by analyzing a rural community in southern Ontario. In this paper, the model (Figure 2) developed by Ramsey and Smit (2002) is adopted as it separates social and economic well-being and recognizes the overlapping nature of health and well-being. The model is applied in an empirical investigation of a rural region in southern Manitoba, Canada, the purpose of which was to identify whether the overlapping nature of the dimensions of rural community well-being would be recognized by health care program managers responsible for the delivery of health care in rural areas. The work builds upon that begun by the rural health research group at Brandon University discussed earlier (Annis, Racher and Beattie 2002, 2005; Annis 2005). The intent of the fieldwork was to establish a more comprehensive framework for assessing the importance of changes in one dimension of well-being on others. For example, how do health care program managers perceive change in economic wellbeing as an impact on social well-being and physical and psychological health? This was explored be having respondents identify both indicators of rural community well-being and the forces that affect rural community well-being.

3.0 Study Area and Research Methods

3.1 Study Area

According to Statistics Canada (2003), the 2001 population of the Province of Manitoba was approximately 1.17 million people with two-thirds of this total living in the capital city of Winnipeg (Figure 3). The City of Brandon, the second largest city in the Province with a population of approximately 40,000 people, serves as the primary service centre for southwestern Manitoba as well as southeastern Saskatchewan. In addition to having a small university, community college, manufacturing and retail services, Brandon also has a full-service hospital and a number of health care clinics. The rural surroundings of Brandon are served by twenty health care facilities located in smaller communities. Health care delivery in the Province of Manitoba is managed through Regional Health Authorities (RHAs). Southwestern Manitoba (Figure 3) is served by two such authorities, the Brandon RHA (BRHA) and the Assiniboine RHA (ARHA). The BRHA is urban; the ARHA is rural. Thus, the focus is on the latter.





Source: Ramsey and Smit (2002)

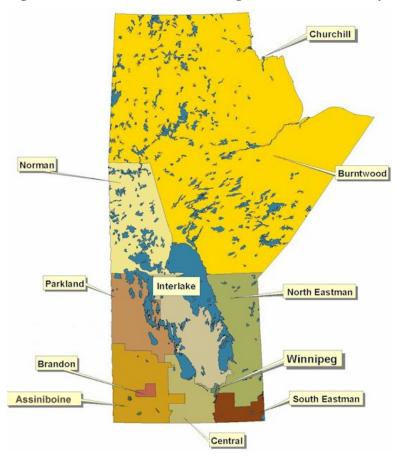


Figure 3. Location of Assiniboine Regional Health Authority in Manitoba

Source: Manitoba Department of Health (http://www.gov.mb.ca/health/rha/rhamap.html)

Table 1 lists the 24 communities within the ARHA, with populations ranging from 304 to 3,325. The communities in the ARHA were classified based on the Canadian Census classifications of Town, Village, and Rural Municipality (RM). For the latter, the three communities listed in Table 1 (Reston, Baldur, Sandy Lake) are villages with populations too small to be designated in the Census. For illustrative purposes, the populations provided for these three villages (Table 1) are for the RMs in which they are located. The total population of the ARHA declined by just over three percent between 1996 and 2001. While RM populations tend to be declining, several villages and towns are witnessing either stabilized or nominal increases in population. Apart from Wawanesa (+6.4%) and Souris (+4.3%), the increases tend to be smaller. Further, communities with stabilized or increasing populations were largely growing at the expense of their rural surroundings. This is consistent with the overall trend of declining farm numbers on the Canadian prairies (Statistics Canada 2004). Table 1 also lists the facilities for each community, including hospitals, clinics, personal care homes, and elderly housing units that provide health care services. The range of services among hospitals varies substantially. For example, some facilities have emergency and diagnostic services while in others the level of service is related largely to the number of physicians (from none to five), and their particular specialties.

Municipal	Name	Services*	Population	Population	% Change
Designation	ivanie	bervices	in 1996	in 2001	1996-2001
Town	Neepawa	H, PCH	3301	3325	+0.7
1000	Virden	H, PCH	3137	3109	-0.9
	Minnedosa	H, PCH	2443	2426	-0.7
	Souris	H, PCH	1613	1683	+4.3
	Russell	H, PCH	1605	1587	-1.1
	Carberry	H, PCH	1493	1513	+1.3
	Boissevain	H, PCH	1544	1495	-3.2
	Rivers	H, PCH, EHU	1117	1119	+0.2
	Melita	H, PCH	1152	1111	-3.6
	Deloraine	H, PCH	1041	1026	-1.4
	Hamiota	H, PCH, EHU	847	858	+1.3
	Shoal Lake	H, PCH	801	801	0.0
	Birtle	H, PCH, EHU	720	715	-0.2
	Rossburn	H, PCH	581	568	-2.2
	Erickson	H, PCH	507	448	-11.6
	Hartney	PCH	462	446	-3.5
Village	Glenboro	H, PCH	663	656	-1.1
	Treherne	H, PCH, EHU	675	644	-4.6
	Wawanesa	H, PCH	485	516	+6.4
	Elkhorn	PCH	514	470	-8.6
	Cartwright	HC	345	304	-11.9
Part of	Reston	HC, PCH	1710	1567	-8.4
RM**	Baldur	H, PCH	1220	1145	-6.1
	Sandy Lake	EHU	894	837	-6.4
Remaining RMs			43555	41646	-4.4
Total Assiniboine RHA 72425 70015 -				-3.3	
Notes:					
		care home; EHU=			th centre
**Village pop	ulation include	d in larger Rural N	Aunicipality (R	.M)	

 Table 1. Study Area Communities and Populations, 1996-2001

3.2. Research Methods

Source: Statistics Canada (Community Profiles) (2001)

The research reported in this paper is based on a survey of each of the 20 health care professionals that either managed health care centers or administered specialized programs in the rural health care centres in the ARHA. While a small number by survey standards, these twenty respondents represent all of the health care centre managers in the ARHA. There were no refusals to participate. In addition, several respondents have shared responsibilities across communities. Because of the small numbers, for reasons of confidentiality it is not possible to identify issues that are specific to a particular community. Consequently, only general observations for the ARHA region as a whole are given. The interviews were conducted from February to April 2003. A semi-structured questionnaire format was adopted in order to obtain respondents' knowledge of the particular topics in question (*e.g.* definitions of rural and community, indicators of rural community well-being, factors affecting rural community well-being, and prospects for the future) (Peterson 2000; Iarossi 2006).

While every effort was made to conduct the interviews face-to-face, inclement weather and scheduling issues necessitated some of the interviews to be conducted by telephone. This is a limitation of the research, as indicated in the literature, could be possible data differences that could result between the telephone and face-to-face administration procedures (Punch 2003). All interviews were tape recorded for later transcription. In order to provide context in the current study, respondents were first asked to define rural and community. Respondents were then asked to define measures for each dimension of rural community well-being based on the model developed by Ramsey and Smit (2001) (Figure 1). Following this, they provided factors affecting the four dimensions of well-being (forces and structural/functional changes in community in Figure 1). To gain a sense of future well-being in the rural communities, respondents were then asked to offer thoughts about the future of their communities for two time points: in five years and in twenty years.

4.0 Research Results

4.1. Identifying Indicators of Rural Community Well-being

Respondents were asked to identify indicators for measuring well-being based on the four dimensions of the model of rural community well-being (Figure 1). It was expected that most of the responses, as the respondents managed the health care delivery in rural and small town facilities, would be rooted in biomedical measures (e.g. number of heart attacks); however, this was not the case. In total, 88 indicators of rural community well-being were identified, an average of 4.4 per respondent or one per dimension of well-being. Several important findings can be identified (Table 2). In the physical dimension, respondents described both standard biomedical indicators (absence of disease, rates of health problems, cardiovascular/respiratory ailments) as well as indicators of health promotion (safe environment, participation in activities, having adequate food). In addition to the standard, measurable indicators, these identified indicators of physical health relate to social capital (participation in activities) and determinants of health (safe environment). While only three indicator types were identified in the psychological dimension, a similar distinction can be made between standard medical indicators (stress response) and determinants of health promotion (community involvement). This distinction also illustrates the relationship between social capital (community supports) and health (absence of disease) that has been established in the literature (Rose 2000; Edmundson 2003).

With respect to indicators in the social and economic dimensions, most respondents (15 of 20) identified relationships with friends and family as the primary indicator of social well-being. The overlapping nature of the dimensions was also recognized. For example, participation in the community was listed as indicator of social well-being as well as both physical and psychological health. While indicators of economic well-being included personal finances affordable housing, it was somewhat surprising that other well-referenced indicators (*e.g.* employment and education) were not identified. Five respondents identified the quality of attire as an indicator of economic well-being, and explained that when people are doing well economically, one of the most obvious indicators is new and high quality clothing. Indicators such as the latter have been identified by others including Tay *et al.* (2004) who found a direct influence of "material deprivation" on health status and classified as material deprivation.

Several indicators illustrate how interrelationships are important not only in the dimensions of rural community well-being, but also to the connections between health and social capital. That is, the health professionals we interviewed believe that rural resident health is strongly influenced by an individual's connections (participation) in the community, the family bonds and community support that they have, and the presence of opportunities to improve one's health (ability to participate in activities). All of these attributes can be considered to be social capital. As noted in the following section, respondents also considered some of these indicators to be factors affecting rural community well-being.

Dimension	Indicator	
Physical	Ability/Participation in Activities (6)	
(23)	Adequate Food (5)	
	Absences of Disease (4)	
	Rates of Health Problems (4)	
	Cardiovascular/Respiratory Ailments (4)	
Psychological	Acceptance/being Positive (8)	
(18)	Able to Respond to Stress (5)	
	Community Involvement (5)	
Social	Relationships with Friends/Family (15)	
(27)	Participation in Community (7)	
	Community Supports (5)	
Economic	Finances (8)	
(20)	Affordable Housing (7)	
	Quality of Attire (5)	
Source: Authors' Survey		

Table 2. Indicators of Rural Community Well-being

4.2. Factors Affecting Rural Community Well-being

The model of changes in rural community well-being (Figure 2) describes a host of external forces (*e.g.* policy, economic condition, environment) that result in changes in rural community structure and function. These changes impact rural community well-being. Respondents provided a mixture of factors that could be deemed forces (health promotion, safe physical environment), changes in structure and function (health care service access), as well as indicators of rural community well-being (genetics, diet). These findings are consistent with the academic (*e.g.* Hamilton and Bhatti 1996) and policy (*e.g.* P.H.A.C. 2003) literature that argues for the recognition of social relations and networks as determinants of health. The findings also compare to other work examining quality of life, sustainability, and social capital and cohesion. Raphael *et al.* (2001), for example, established a linkage between community structures and well-being through an examination of quality of life in a neighbourhood of Toronto, Canada. Social capital and cohesion have also been described as factors affecting rural community sustainability in Saskatchewan (Diaz and Nelson 2005; Gauthier and Weiss 2005).

Dimension	Factor
Physical	Safe Physical Environment (13)
(45)	Genetics (4)
	Healthy Lifestyle Education (4)
	Ability/use of fitness Centres (4)
	Nutrition/Diet (4)
	Economic Situation (3)
	Lifestyle (3)
	Smoking By-laws (2)
	Ability to Cope with Stress (2)
	Access to Health Care (2)
	4 Other factors mentioned once
Psychological	Employment (6)
(53)	Spiritual/Emotional Support (5)
× ,	Coping/Stress Levels (5)
	Financial Situation (4)
	Support Systems (4)
	Environment (3)
	Education (3)
	Home/Community Environment (3)
	Sense of Belonging (2)
	Health Promotion/Exercise (2)
	Access to Health Care (2)
	Sense of Self-Worth (2)
	Diet (2)
	10 Other factors mentioned once
Social	Access/availability of Activities (6)
(30)	Finances (4)
	Social Interaction (3)
	Where from/background (3)
	Access to Transportation (2)
	Opportunities for Interaction (2)
	10 other factors mentioned once
Economic	Employment (8)
(36)	Education/skills (5)
· · /	Personal History (4)
	Finances (3)
	Affordable Housing/Lifestyle (2)
	Access to Human Resources (2)
	Physical Environment (2)
	Community Activities (2)
	8 Other factors mentioned once
Source: Authors' Survey	

Table 3. Factors Affecting Rural Community Well-being

In contrast to identifying specific indicators of rural community well-being as described in the previous section, respondents had no difficulty identifying factors affecting rural community well-being. In total, 164 factors were identified, an average of just over eight per respondent or four per dimension of well-being (Table 2). There was also overlap between what was identified as a measure (Table 2) and factor affecting (Table 3) well-being, with examples ranging from community participation to individuals measures or factors (*e.g.* finances and nutrition). There was also overlap among the four dimensions for example,

employment (Table 3) was identified as a factor affecting psychological and economic well-being. Further, while several factors were mentioned more than once, some by a larger number of respondents, the results illustrate a wide range of 'other' factors identified by only one respondent. In fact, across the four dimensions, 32 factors were mentioned only once. Within the physical dimension, most (13 of 20) felt that a safe physical environment was a factor affecting rural community well-being. Of particular note is the focus on health care promotion, such as lifestyle and nutrition, rather than access to health care services. Similarly, within the psychological health dimension, while stress levels (5), spiritual/emotional support (5) and more formal support systems (4) were mentioned several times, so too were employment (6), education (3), environment (3), and diet (2). The linkage to economic well-being was recognized by several respondents through the articulation of employment (5) and financial situation (4) as factors in one's psychological health.

In addition to opportunities and availability of activities and social interaction, financial situation (4) was also viewed as a factor in social well-being. Only three respondents mentioned finances specifically as a factor in economic well-being. However, financial situation was implied in the thirteen respondents that mentioned employment (8) and education (5). Factors affecting economic well-being also related to the social (community activities), psychological (personal history) and physical (physical environment) dimensions of well-being. Scale was also recognized, with factors ranging from the individual (genetics, diet, employment) to the community (smoking by-laws, access to health care, community activities). Overall, these findings suggest that while it may be possible to identify a core set of indicators of rural community well-being, the factors affecting rural community well-being are more complex.

Another way to understand well-being is to assess desired services in the community (Chappel *et al.* 1996; Janes *et al.* 2005). Respondents were asked to state their two priorities for new services if given the opportunity and funding. While in essence a crystal ball exercise, this questioning provided the opportunity for respondents to list services that would truly benefit the community. As indicated in Table 4, the results were consistent with other parts of the interviews if only in the fact that there was a broad range of responses. Of the nineteen respondents that provided a 'number one additional service', four respondents stated that health promotion, as articulated in the identified need for fitness facilities, would benefit the community. The other services mentioned by more than one respondent were also outside of the traditional health centre service provision domain (fitness, dental, and mental health). Eight other services were mentioned once and ranged from better medical services and facilities to health promotion. Seventeen respondents listed a second additional service, of which only two services were mentioned more than once (chemotherapy; other specialty).

The remaining thirteen services ranged from the need for more churches and better transportation services to educational programs (farm education) and medical services (more physician visits). There was also some overlap between the number one and two services (*e.g.* elderly services and health promotion programs). Together, the services identified by respondents provide a snapshot that seems to indicate that more is needed than more physicians and specific medical services such as x-rays and other diagnostics. The listing of services such as fitness and elderly facilities also illustrate a broader view of rural community well-being. The

importance of place is reflected in the broad range of services outside of the health care domain (*e.g.* need for churches, fitness centers).

Priority	Service
First Additional Service (19)	Fitness Facilities (4)
	Elderly Services (3)
	Dental Services (2)
	Enhance Mental Health Services (2)
	Tele-health Services
	More doctor visits
	Better lab facilities
	Primary Care Improvements
	Minor/Outpatient Services
	Enhanced Health Promotion
	Teenage/Young Adult Crisis Seminars
	More Physiotherapist Visits
Second Additional Service	Chemotherapy Services (2)
(17)	More Specialty Service (2)
	More Churches
	Better Support for Young Families
	Primary Health Care Centre
	Better Transportation
	Improved Mental Health Services
	Enhanced First Response Services
	Rehabilitation Programs
	Enhance Disease Prevention
	Farm Accident Education
	Enhanced Elderly Services
	More Doctor Visits
	Chiropractic
	More Social Worker Visits
Source: Authors' Survey	

Table 4. Additional Services Desired by Respondents

4.3. Prospects for the Future

The last two questions to respondents asked for perceptions regarding the future of the communities where they were employed over the next five and twenty years (Table 5). For each time point, the responses illustrate the linkages between sustainability, social capital and rural community well-being. In the next five years, four respondents indicated specific changes in health care services, all declining or reduced. Eleven respondents described population change scenarios, eight of which related to declines and aging. These trends are consistent with the statistical realities facing communities throughout the ARHA (Table 1). Three respondents mentioned of further hog barn construction modeled on Intensive Livestock Operation (ILO). The issue of ILOs is a controversial one in Manitoba and elsewhere and has been articulated in the literature (Novek 2003; Broadway 2006; Ramsey and Everitt 2001). The issues range from odour and pollution (negative) to economic and population stabilization or growth (positive). Certainly, communities within the ARHA have been divided on the issue (Ramsey, Everitt and Behm 2005). In fact, there is currently a provincial moratorium on hog barn construction. While, beyond the purpose of this paper, that it was viewed as an issue in.

Time Period	Prospect
Next Five Years (19)	Changes in Health Care Services (4)
	Aging /Fewer Young People (4)
	Population Declines (4)
	Population Increases (3)
	Hog Barns/ILOs (3)
	New arena (1)
Next Twenty Years (18)	Continued Population Decline (4)
• • •	Further Loss of Services (3)
	Nothing Left (3)
	Fewer Farms/More Corporate Farms (2)
	Aging Further (2)
	Population Increase (1)
	Volunteering Problems (1)
	Depends on Environmental Issues (1)
	Depends on Next Generation (1)
Source: Authors' Survey	

 Table 5. Prospects for the Future

The prospects for the next twenty years were gloomier. Most respondents mentioned at least one negative issue, such as population decline, loss of services, fewer farms, and an aging population with fewer available volunteers. Perhaps most telling is that three respondents indicated that there would no longer be a community within the next twenty years. Having said this, one respondent from a larger community felt the population would increase. One closing remark regarding the prospects to the future could lie in the comment by one respondent that the status of the community in the next twenty years depends on the generation that takes it there.

The ARHA faces a number of challenges in the next five to twenty years, including recruiting and keeping physicians. These challenges will persist regardless of how small the communities become. In addition, the ARHA has a challenge to contribute to the well-being of the population it serves, not only in providing health care services, but also through positively affecting and reinforcing influences on rural community well-being. Thus, the ARHA can be considered both social capital (the people, services) and a determinant of health (services) that impact rural community well-being.

5.0 Summary

The trend toward urbanization is a worldwide phenomenon. For those communities facing depopulation, maintaining critical services becomes more difficult. With 80 percent of its population concentrated in urban centres, providing health care coverage to the remaining 20 percent spread across a large expanse has long been of great concern to policy planners and politicians. Leduc (1997) and Rourke (1998) illustrate this case from a health care provision perspective by developing models of degrees of rurality and remoteness as factors in designing health care service delivery formulae.

The populations of rural communities are aging at a greater rate than their urban counterparts due to a number of circumstances, including out-migration of youth, lack of in-migration to rural areas, the general post-war trends of aging and smaller families, as well as the attractiveness of some rural communities for retirees. Aging populations place a greater burden on the health care system and at the same time this system remains important to the individuals in those communities. This paper has illustrated the issues of rural decline, and in doing so recognized that each dimension of rural community well-being is linked to the others. As the structure of agriculture continues to change, maintaining these communities will remain difficult. In response to these issues, the research summarized in this paper provides an illustration of how one can measure the complexities of rural community well-being by paying attention to overlapping dimensions of rural community well-being and what factors (both external and internal to the rural community) have an impact on the well-being of the community. The results of this study illustrate the importance of, for example, the economic and social dimensions of well-being as indicators and factors affecting indicators or wellbeing. The ARHA is thus an appropriate and relevant example of the issues of both health and place. It is hoped the findings illustrate opportunities for future research in other rural areas regardless of whether they are declining, growing or staying the same. In doing so, we can continue to illustrate the linkages among various concepts and measures that have been highlighted from the literature, including quality of life, sustainability, health, well-being, social capital and the determinants of health.

6.0. Acknowledgments

We want to thank David Bruce (Director, Rural and Small Town Programme, Mount Allison University, Sackville, New Brunswick, Canada) for taking on the task of editing and managing the review process for our manuscript. Thanks also go to the four anonymous reviewers for their comments and suggestions. We also want to thank Amanda Campbell for conducting the interviews and the respondents for agreeing to be interviewed.

7.0 References

- Annis, R. C. (2005). *Determinants of Health of Rural Populations and Communities Research Project. Final Report 1999-2005.* Social Sciences and Humanities Research Council Grant 828-1999-1029.
- Annis, R. C., Racher, F. E., & Beattie, M. (Eds.). (2005). Rural Community Health and Well-being: A Guide to Action. Brandon, Manitoba: Rural Development Institute, Brandon University.
- Annis, R. C., Racher, F. E., & Beattie, M. (Eds.). (2002). A Rural Community Guide for Assessing Well-being and Quality of Life. Brandon, Manitoba: Rural Development Institute, Brandon University.
- Beesley, K. B. (1994) Sustainable Development and the Rural-Urban Fringe: A Review of the Literature. Winnipeg: University of Winnipeg, Institute of Urban Studies, Issues in Sustainability No. 3.
- Begin, M. (1993). Our Environment Our Health: Healthy Ecosystems, Healthy Communities, Healthy Workplaces. Review Committee on Goal 3, Premier's Council on Health, Well-being and Social Justice, Toronto.
- Berkman, L., & Glass, T. (2000). Social integration, social networks, social support and health. In L. Berkman & I. Kawachi (Eds.) Social Epidemiology (137-173). New York: Oxford University Press.

- Bouchard, L., Roy, J. F., & van Kemanade, S. (2006). Developing an operational model based on networks. *Health Policy Research Bulletin*, 12:13-15.
- Broadway, M. (2006). Pigs on the prairies. *Geographical Review*, 96(1):
- Bushy, A. (2002). International perspectives on rural nursing: Australia, Canada, USA, *Australian Journal of Rural Health*, 10: 104–111.
- Chappel, N. L., Penning, M. J., Havens, B., Everitt, J., Annis, R. C., Klein, H., & Kyle, B. (1996). Evaluating support services to seniors and partnering in research. *Home Care Provider*, 3 (1), 30-46.
- Clarke, L., & Miller, M. (1990). The character and prospects of rural community health and medical care. In Luloff, A.E. and Swanson L.E. (eds.) *American Rural Communities*. Boulder: Westview Press.
- Cloke, P. (1994). Rural community. In Johnston, R.J., Gregory, D. and Smith, D.M. (eds.) *The Dictionary of Human Geography* (Third Edition). Oxford: Basil Blackwell. 537-538.
- Cloutier-Fisher, D., & Joseph, A. E. (2000). Long-term care restructuring in rural Ontario: retrieving community service user and provider narratives. *Social Science and Medicine*, 50:1037-1045.
- Community Health Profile Working Group (C.H.P.W.P.). (1994). Community Health Profile. Toronto: Ontario Ministry of Health.
- Craig, C. (1994). Community determinants of health for rural elderly. *Public Health Nursing*, 11(4): 242-246.
- Curtis, S. (2004). *Health and Inequality: Geographical Perspectives*. Thousand Oaks: Sage Publications.
- Diaz, P., & Nelson, M. (2005). The changing prairie social landscape of Saskatchewan: the social capital of rural communities. *Prairie Forum*, 30(1):43-54.
- Edmundson, R. (2003). Social capital: a strategy for enhancing health? *Social Science and Medicine*, 57:1723-1733.
- Elliott-Schmidt, R., & Strong, J. (1997). The concept of well-being in a rural setting: understanding health and illness. *Australian Journal of Rural Health*, 5: 59–63.
- Etches, V., Frank, J., Di Ruggiero, E., & Manuel, D. (2006). Measuring population health: a review of indicators. *Annual Review of Public Health*, 27(1): 29-55.
- Everitt, J., & Bessant, K. (1992). Regional planning in rural Manitoba: a study of the 'health' of a prairie region. *Applied Geography*, 12(1):65-79.
- Flora, C. B., & Flora, J. L. (1988). Public policy, farm size, and community wellbeing in farming-dependent counties of the Plains. In Swanson, L.E. (ed.) *Agriculture and Community Change in the U.S.: The Congressional Research Reports.* Boulder: Westview Press. 76-129.
- Franke, S. (2006). What is social capital and why is it important to health research and policy. *Health Policy Research Bulletin*, 12: 6-9.

- Frankish, C. J., Moulton, G. E., Qantz, D., Carson, A. J., Casebeer, A. L., Eyles, J. D., Labonte, R., & Evoy, B. E. (2007). Addressing the non-medical determinants of health: a survey of Canada's health regions. *Canadian Journal of Public Health Revue Canadienne de Sante Publique*, 98(1):41-47.
- Fuller, J., Edwards, J., Martinez, L., Edwards, B., & Reid, K. (2004). Collaborations and local networks for rural and remote primary mental health care in South Australia. *Health and Social Care in the Community*,12(1):75-84.
- Gauthier, D. A., & Diaz, P. (2005). Rural adaptation and social cohesion for sustainable development of the prairies. *Prairie Forum*, 30(2):iii.
- Gauthier, D. A., & Weiss, S. (2005). Assessing performance: indicators, social cohesion and community sustainability. *Prairie Forum*, 30(2):313-328.
- Haigh, R. J., & Murri, D. G. (1990). Survival Strategies in Rural Canada: The Need For New Paradigms. Rural Economy Staff Paper, Department of Rural Economy, Faculty of Agriculture and Forestry, University of Alberta, Edmonton, Canada.
- Halfacree, K. (1993). Locality and social representation: space, discourse, and alternative definitions of rural. *Journal of Rural Studies*, 9:23-37.
- Hallman, B. C., & Joseph, A. E. (1999). Getting there: mapping the gendered geography of caregiving to elderly relatives. *Canadian Journal on Aging*, 18:397-414.
- Hamilton, N., & Bhatti, T. (1996). *Population Health Promotion: An Integrated Model of Population Health and Health Promotion*. Ottawa: Health Promotion Development Division.
- Hancock, T., Labonte, R., Edwards, R. (1999). *Indicators That Count! Measuring Population Health at the Community Level*. Ottawa: Health Canada.
- Hartley, D. (2004). Rural health disparities, population health and rural culture. American *Journal of Public Health*, 94(19): 1675-1678.
- Health Canada. (2006). *Health Policy Research*. Ottawa: Minister of Public Works and Government Services Canada. 12.
- Health and Welfare Canada (H.W.C.). (1992). User's Guide to 40 Community Health Indicators. Ottawa: Ministry of Supply and Services Canada.
- Health, Manitoba Department of. (2004). Manitoba's Comparable Health Indicator Report. November 2004. Winnipeg: Government of Manitoba.
- Health, Manitoba Department of. (2007). Physician recruitment positions. http://web4.gov.mb.ca/physician/list.jsp. Site visited 24-04-07.
- Higgs, G. (1999). Investigating trends in rural health outcomes: a research agenda. *Geoforum*, 30(3): 203-221.
- Hillery, D. A. (1955). Definitions of community: areas of agreement. *Rural Sociology*, 20:111-23.

- Hoggart, K. (1990). Let's do away with rural. *Journal of Rural Studies*, 6(3):245-257.
- Humphreys, J. (1998). Delimiting 'rural': implications of an agreed 'rurality' index for healthcare planning and resource allocation. *Australian Journal of Rural Health*, 6:212-216.
- Iarossi, G. (2006). The Power of Survey Design: A User's Guide for Managing Surveys, Interpreting Results and Influencing Respondents. Washington, D.C.: World Bank.
- Janes, R., Arroll, B., Buetow, S., Coster, G., McCormick, R., & Hague, I. Rural New Zealand health professionals' perceived barriers to greater use of the internet for learning. *Rural and Remote Health*, 5 (online)-436:. Available from: http://www.rrh.org.au
- Joseph, A. E., & Chalmers, A. I. (1995). Growing old in place: a view from rural New Zealand. *Health and Place*, 1(2):79-90.
- Joseph, A. E., & Hallman, B. C. (1998). Over the hill and far away: distance as a barrier to the provision of assistance to elderly relatives. *Social Science and Medicine*, 46(6): 631-639.
- Kearns, R., & Joseph, A. E. (1995). Restructuring health and rural communities in New Zealand. *Progress in Human Geography*, 21(1):18-32.
- Kosteniuk, J. G., & Dickinson, H. D. (2003). Tracing the social gradient in the health of Canadians: primary and secondary determinants. *Social Science and Medicine*, 57(2): 263-276.
- Leduc, E. (1997). Defining rurality: a general practice rurality index for Canada. *Canadian Journal for Rural Medicine*, 2(3):125-131.
- Lomas, J. (1998). Social capital and health: implications for public health and epidemiology. *Social Science and Medicine*, 47: 1181-1188.
- MacLeod, M., Browne, A. J. & Leipert, B. (1998). Issues for nurses in rural and remote Canada. *Australian Journal of Rural Health*, 6: 72–78.
- Michalos, A. C., Hubley, A. M., Zumbo, B. D., & Hemingway, D. (2001). Health and other aspects of the quality of life of older people. *Social Indicators Research: An International and Interdisciplinary Journal for Quality-of-Life Measurement*, 54: 239-274.
- Millward, H. (2005). Rural population change in Nova Scotia, 1991-2001: Bivariate and multivariate analysis of key drivers. *The Canadian Geographer*, 49(2):180-197.
- Muburu, F. M., Smith, M. C., & Sharpe, T. R. (1978). Determinants of health services utilization in a rural community in Kenya. *Social Science and Medicine Part A Medical Sociology*, 12(4a): 211-217.
- Newbold, K. B. (1998). Problems in search of solutions: health and Canadian Aboriginals. *Journal of Community Health*, 23(1): 59-73.
- Novek, J. (2003). Intensive hog farming in Manitoba: transnational treadmills and local conflicts. *Canadian Review of Sociology and Anthropology*. 40(1):3-26.

- Pampalon, R., Martinez, J., & Hamel, D. (2005). Does living in rural areas make a difference for health in Québec? *Health and Place*, 12(4):421-435.
- Parliament of the Commonwealth of Australia (P.C.A.). (1977). *Indicators of Community Well-being*. A Report to the Department of Social Security, Parliamentary Paper No.64/1977. Canberra.
- Peterson, R. A. (2000). *Constructing Effective Questionnaires*. Thousand Oaks, California: Sage Publications.
- Poland, B., Graham, H., Walsh, E., Williams, P., Fell, L., Lum, J. M., Polzer, J., Syed, S., Tobin, S., Kim, G., & Hardy, G. (2005). 'Working at the margins' or 'leading from behind'? A Canadian study of hospitalcommunity collaboration. *Health and Social Care in the Community*, 13(2): 125-135.
- Pollack, C. E., & von dem Knesebeck, O. (2004). Social capital and health among the aged: comparisons between the United States and Germany. *Health and Place*, 10(4): 383-391.
- Pong, R. W., Pitblado, J. R. & Irvine, A. (2002). A strategy for developing environmental health indicators for rural Canada. *Canadian Journal of Public Health*, 93:1 52–56.
- Presbitero, A. F. (2006). Institutions and geography as sources of economic development. *Journal of International Development*, 18(3): 351-378.
- Public Health Agency of Canada (P.C.A.C.). (2003). What Determines Health. <u>http://www.phac-aspc.gc.ca/ph-sp/phdd/determinants/index.html</u>. Site visited 24-04-07.
- Punch, K. (2003). *Survey Research: The Basics*. Thousand Oaks, California: Sage Publications.
- Ramsey, D., & Smit, B. (2002). Rural community well-being: models and application to changes in the Ontario Tobacco-belt. *Geoforum*, 33(3):367-384.
- Ramsey, D. & Everitt, J. (2001). Post-Crow farming in Manitoba: An analysis of the wheat and hog sectors. In R. Epp and D. Whitson (eds.) Writing off the Rural West: Globalization, Governments, and the Transformation of Rural Life. University of Alberta Press: Edmonton. 3-20.
- Ramsey, D., Annis, R. C., & Everitt, J. (2002). Definitions and boundaries of community: the case of rural health focus group analysis in southwestern Manitoba. *Prairie Perspectives: Geographical Essays*, 5:187-201.
- Ramsey, D., Annis, R. C., & Everitt, J. (2003). Rural community in Westman: theoretical and empirical Considerations. In R. Blake and A. Nurse (eds.) *The Trajectories of Rural Life: New Perspectives on Rural Canada.* Canadian Plains Research Centre, University of Regina. 1-10.
- Ramsey, D., Everitt, J., & Behm, L. (2005). People and hogs: Agricultural restructuring and the contested countryside in agro- Manitoba. In S. Essex (ed.) Contrasting Ruralities: Changing Rural Economies, Societies and Landscapes. U.K.:CABI. 48-67.

- Raphael, D., Renwick, R., Brown, I., Steinmetz, B., Sehdev, H., & Phillips, S. (2001). Making the links between community structure and individual well-being: community quality of life in Riverdale, Toronto, Canada. *Health and Place*, 7:179-196.
- Raphael, D., Steinmetz, B., Renwick, R., Rootman, I., Brown, I., Sehdev, H., Phillips, S., & Smith, T. (1999). The community quality of life project: a health promotion approach to understanding communities. *Health Promotion International*, 14(3): 197-210.
- Reeder, R. J. (1990). Targeting Aid to Distressed Rural Areas: Indicators of Fiscal and Community Well-being. Agriculture and Rural Economy Division, Economic Research Service, U.S. Department of Agriculture. Staff Report No. AGES 9067. Washington, D.C.
- Reimer, B. (2002). Sample frame for rural Canada: design and evaluation. *Regional Studies*, 36:845-859.
- Robine, J. M. (2003). The relevance of population health indicators. *Journal of Epidemiology and Community Health*, 57(5):318-
- Rose, R. (2000). How much does social capital add to individual health? A survey study of Russians. *Social Science and Medicine*, 51(9): 1421-1435.
- Rosenberg, M. W., & Moore, E. G. (1997). The health of Canada's elderly population: current status and future implications. *Canadian Medical Association Journal*, 157:1025-1032.
- Rourke, J. (1998). In search of a definition of 'rural'. *Canadian Journal of Medicine*, 2: 113-115.
- Rueden-Sieberer, U., Rajmil, L., & Bisegger, C. (2006). Socioeconomic determinants of health related quality of life in childhood and adolescence: results from a European Study. *Journal of Epidemiology and Community Health*, 60(2): 130-135.
- Ryan-Nicholls, K. D., & Racher, F. (2004). Investigating the health of rural communities: toward framework development. *Rural and Remote Health*, 4(online)-244: 1-10.
- Semple, R. K. (1981). A geographical perspective of the prairies: the 1980s. *Manitoba Geographical Studies*, 7:106-123.
- Statistics Canada. (2003). 2001 Census: Age and Sex Profile: Canada. (www.12statcan.ca/english/census01/Products /Analytic/companion/age/canada.ca).
- Statistics Canada. (2004). *Canadian Agriculture at a Glance*. Agriculture Division, Statistics Canada, Ottawa, Ontario, Canada.
- Stiernstrom, E. L., Holmberg, S., Thelin, A., & Svardsudd, K. (1998). Reported health status among farmers and nonfarmers in nine rural districts. *Journal* of Occupational and Environmental Medicine, 40(19): 917-924.
- Talbot, L. & Walker, R. (2007). Community perspectives on the impact of policy change on linking social capital in a rural community. *Health and Place*, 13:482-492.

- Tay, J. B., Kellerher, C. C., Hope, A., Barry, M., Gabhainn, S. N., & Sixsmith, J. (2004). Influence of sociodemographic and neighbourhood factors on self rated health and quality of life in rural communities: findings from the Agriproject in the republic of Ireland. *Journal of Epidemiology and Community Health*, 58(11): 904-911.
- Van Kemenade, S. (2003). Social Capital as a Health Determinant How is it Defined? Health Policy Research Working Paper Series. Ottawa: Minister of Public Works and Government Services Canada.
- Wan, T., Gill Odell, B., & Lewis, D. (1982). *Promoting Well-Being of the Elderly: A Community Diagnosis*. New York: Haworth Press.
- Worley, P. S. (2005). Rural and remote communities innovation in the midst of adversity. *Rural and Remote Health* 5 (online)- 458: 1-2. Available from: <u>http://www.rrh.org.au</u>