

ACCEPTABILITY OF PRIMARY CARE: A STUDY  
OF ONE COMMUNITY IN MONTANA

by

David James Vaughan

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Committee Chair, Jean Shreffler-Grant, PhD,

Approved for the College of Nursing

Dean Elizabeth Nichols, DNS, RN, FAAN

Approved for the Division of Graduate Education

Dean Carl A. Fox, PhD

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## DEDICATION

To my wife, Amy, for your love, support and constant encouragement over the last two years and especially during these final months. To my children, Hannah and Philip, for your understanding and patience while daddy missed out on so much, and for helping to stuff envelopes. I'm coming home! To my in-laws, Frank and Michal, this would not have been possible without you and all you have done for our family. To my parents for teaching me the importance of education. Most importantly I wish to thank my Lord, Jesus Christ, for guiding me to be the man I am today, and for giving me the heart and desire to serve others with the knowledge and education He has allowed me to obtain.

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## ABSTRACT

**INTRODUCTION:** Access to health care is a concept that is of primary importance to health care providers, clients, and policy makers throughout America. This is especially true in rural communities, where researchers in one study indicated that it was the highest priority (Gamm, et al., 2003). Access is a multi-dimensional construct that includes the availability, accessibility, accommodation, affordability, and acceptability of health care. **DESIGN AND PURPOSE:** This study used a descriptive survey design to examine one dimension of access, acceptability of primary care, in one rural community in Western Montana. The purpose of this study was to examine the “fit” between the perceptions of rural residents about the acceptability of local primary care and the perceptions of the primary care providers about the acceptability of local primary care. The purpose was addressed by answering the following research question: How does the rural health care client’s perception of acceptability of primary care available in their community compare with the rural primary care provider’s perception of the acceptability of primary care delivered? The tool used was an adaptation of the Acceptability Scale (Shreffler, 1996) to determine the “fit” between clients and primary care providers. **RESULTS:** The range of the possible Acceptability Scale scores in this study was a minimum score of 8 and a maximum score of 40. The mean Acceptability Scale score was 17.25 (n=97) for the client responses and 11 (n=3) for the provider responses. These scores are similar and indicate an above average opinion of primary care services offered in that community. There were, however, five of the eight items on the Acceptability Scale that had a difference in mean rating of 1 or greater, possibly indicating the need for improvement in “fit.” Those items were: overall quality of care (diff=1.1), competence of primary care providers (diff=1.4), concern/compassion for patient (diff=1.0), “personal” aspects of care (diff=1.1), and acceptability of provider as a source of care (diff=1.2). The ratings in this study are the opinions of the respondents; no direct measure of these dimensions was made. One limitation of this study was in the ability to statistically analyze the difference in Acceptability Scale scores related to small sample size and disparity in sample size between clients and providers. Additional qualitative research in this population may better clarify the degree of “fit” between the clients and providers regarding the acceptability of primary care.

## CHAPTER 1

## INTRODUCTION

Access to healthcare is a topic that has been studied internationally for decades and access to rural healthcare remains at the forefront of academic research and health policy debate. Gamm, Hutchison, Dabney, and Dorsey (2003), for example, conducted a survey of national and state health experts in which they were asked to prioritize major rural health issues. Respondents most frequently selected “access to quality health care” as the number one priority to address in rural health care.

Key to any research of access to health care is defining what is meant by the term access. Access as a construct is multidimensional, interrelated, and dependent upon a variety of factors that include age, gender, ethnicity, geographic location, socioeconomic status, employment status, and others.

What type of health care is available? Is the measure of adequate access based upon having primary care, acute care, mental health, or specialty services? Do all levels of care need to be present in order to achieve adequate access and if not, which must be present? The mere presence of health care services does not adequately insure access, as there are a significant number of persons with limited access to healthcare in areas of high provider density, such as urban areas. Ahmed, Lemkau, Nealeigh, and Mann (2001) conducted a study in Dayton, Ohio in which they found a variety of significant barriers to access that

included lack of information about healthcare services, cost of service, difficulty with transportation and child care, taking time off work, and negative previous experiences. Availability of healthcare services was not included as a significant barrier to access to healthcare in that study.

If the desired health care services are available, how far from the client are they located? Particularly in rural areas, distance and transportation factors play a significant role in defining adequate access. Additionally, the health care services must be organized, in terms of appointment availability, hours of operation, and walk-in services, in a manner that allows the population to access them.

Undoubtedly cost plays a factor in access to healthcare, but is it the primary factor? Healthcare costs have risen steadily over the last several decades and in 2000 increased its share of gross domestic product and “outpaced growth in total GDP for two years running” (Gundling, 2002). Does it follow then, that the wealthy have no issues with access to healthcare?

Once the previous dimensions of access have been accounted for, there may still be a significant barrier to access in the acceptability of the services offered. This dimension pertains to the attitudes regarding such aspects of health care as the appropriateness and quality of the services. The acceptability of rural primary care is the focus of this study.

### Purpose

This study used a descriptive survey design to examine access to care in one rural community in western Montana and focused on one dimension of access to healthcare. The dimension of access upon which this study focused was acceptability of the primary care services that are available in that community. The purpose of this study was to examine the “fit” between the perceptions of rural residents about the acceptability of local primary care and the perceptions of the primary care providers about the acceptability of local primary care. The purpose was addressed by answering the following research question: How does the rural health care client’s perception of acceptability of primary care available in their community compare with the rural primary care provider’s perception of the acceptability of primary care delivered?

### Definitions

In this section, definitions to various terms used in this study are presented.

Access: is a multidimensional construct that encompasses the level of fit between the health care provider and client across the dimensions of acceptability, affordability, availability, accommodation, and accessibility (Penchansky & Thomas, 1981).

Acceptability: is a broad concept that includes the relationship of clients' attitudes about personal and practice characteristics of providers to the actual characteristics of existing providers, as well as to provider attitudes about personal characteristics of clients. (Penchansky & Thomas, 1981).

Primary Care: "the provision of integrated, high-quality, accessible health care services by clinicians who are accountable for addressing a full range of personal health and health care needs; developing a sustained partnership with patients; practicing in the context of family and community; and working to minimize disparities across population subgroups" (Agency for Healthcare Research and Quality, 2002). Modern definitions place an emphasis on the sustained, holistic nature of the patient-provider relationship rather than as an entry point into the health care system. Within this paper and consistent with the Institute of Medicine's definition, the terms primary care provider and health care provider shall apply equally to medical doctors, osteopathic doctors, physician's assistants, and nurse practitioners.

Client: refers to all persons in the sample who could potentially utilize primary care services in the study community. It is not contingent on whether they actually have utilized or are willing to utilize available primary care services.

Rural: The U.S. Census Bureau defines rural as any area that is not urban. In general, the criteria for an area to be considered rural is any area having a

population density of less than 1,000 persons per square mile and a combined population of less than 50,000 persons (U.S. Census Bureau, 2000).

### Background and Significance

Access to health care is a complex construct with many variables to consider. In describing barriers to access or in efforts to establish policy to improve access, the precise definition of what access is has varied. While research on access to health care initially focused on the distribution of services, it was noted early that this dimension was inadequate to fully describe the real and perceived barriers to access. The dimension of quality has now become integral to the study of access, as in Rural Healthy People 2010 (Gamm, et al., 2003) where access to healthcare is specifically defined as “access to quality health services” (Vol. 2, p. 45).

Avedis Donabedian wrote extensively on the topic of quality in healthcare. Central to the theme of this study is Donabedian’s (1985) statement that a duality exists with regard to perspectives on quality of care, that of the provider and the client. Both must be examined in order to get a true picture of the quality of healthcare services. Donabedian (1985) indicated that there was a severe lack of research available for review that offered this dual perspective of quality.

Twenty years later this gap in literature regarding the fit between healthcare systems and clients apparently still exists. Panelli, Gallagher, and Kearns (2005) indicated that access to care in a rural setting is an area of ongoing interest.



There is much written about health care policy, the provision of healthcare, and the access experiences of the consumers of health care. However, they also stated that there is an apparent void in the literature regarding the point at which these dimensions of access to health care meet, or the fit. It is the “fit” between primary care provider and client that is central to the focus of this study.

This gap in the literature may shrink as more research is conducted. Currently, there is a study underway in Canada exploring Penchansky and Thomas’ (1981) five dimensions of access utilizing participatory action research methods in rural and frontier settings with all potential stakeholders in which a variety of scientific and non-scientific ways of knowing will be employed (Rural Development Institute, 2006). There is considerable literature that describes the uniqueness of rurality and the factors that affect health care delivery in the rural setting (Long & Weinert, 2006; Boland & Lee, 2006, Lee & McDonagh, 2006; Ricketts, 2000; Van Dis, 2002; Heady, 2002). It is well documented that there are differences between urban and rural settings that have an impact on access to health care. For example, Long and Weinert (2006) and Lee and McDonagh (2006) described the phenomena that rural dwellers seem to have a different perception of the meaning of health than do their urban counterparts, with the ability to work as a primary element of health among rural dwellers.

Gamm et al. (2003) stated that the impetus for their Rural Healthy People 2010 study, “...was the recognition that rural areas frequently pose different and, in some instances, greater challenges than urban areas in addressing a number of Healthy People 2010 objectives” (Vol. 1, p. 3). These investigators also stated

that there is a large body of evidence that supports the existence of disparities between rural and urban healthcare.

A study of access to primary care in rural communities is relevant to advanced practice nursing due to the ongoing shortage of physician health care providers in the United States. Salsberg and Forte (2002) found that between 1960 and 1980 there was explosive growth in the number of medical school graduates in the United States. This was followed by a sharp decline in the growth rate of medical school graduates prompted by concerns of an impending surplus of physicians.

The current reality is quite the opposite. While medical schools and policy makers were actively curtailing the number of medical schools and medical school graduates, other forces including the economy, the growing aged population, and the growing range of medical services provided have created a previously unforeseen demand for both primary care and specialty physicians. The Council on Graduate Medical Education reversed its previous position regarding surpluses, stating that the current issue is the pending shortage. The scale of the shortage may reach 200,000 physicians by 2020 (Cooper, 2004)

This shortage is being filled, in part, by advanced practice nurses and other non-physician providers. For example, Martin (2000) conducted a survey of all licensed and currently practicing nurse practitioners in Pennsylvania regarding their location of practice and their willingness to practice in underserved areas. Martin (2000) reported that among all respondents, a majority of urban nurse practitioners (67%, N=623), and a majority of rural nurse practitioners (84.5%,

N=390) were willing to practice in rural, underserved areas. This research supports the idea that nurse practitioners may play a key role in filling the need for primary care providers in rural areas.

There is growing evidence that non-physician providers, specifically nurse practitioners, nurse anesthetists, and nurse midwives are well suited to the primary care role. Lenz, Mundinger, Kane, Hopkins and Lin (2004) conducted a randomized, comparative study of patient satisfaction and health outcomes between patients treated by nurse practitioners and physicians in a primary care practice. No significant differences were found in any outcome measure in this study at both six months and two years after being treated.

Lenz et al. (2004) pointed out a fundamental difference in the training of physicians versus the training of nurses and nurse practitioners. Physicians are traditionally trained with an emphasis on the biologic system or disease and focusing on cures. Nurses are traditionally trained with a holistic emphasis on the patient as not only an individual, but as being part of a family and community and focusing on health and disease prevention.

It is for these reasons that studying acceptability, one dimension of access to health care, is significant to advanced practice nursing. The results of this study may help advanced practice nurses practicing in rural areas to better meet the needs of their clients by providing care that is acceptable both from the clients' and providers' perspectives.

## Conceptual Framework

In an effort to define access in a way that captured its various aspects, Penchansky and Thomas (1981) proposed five dimensions of access: availability, accessibility, accommodation, affordability, acceptability. They defined each of these areas as follows:

“Availability, the relationship of the volume and type of existing services (and resources) to the clients’ volume and types of needs. It refers to the adequacy of the supply of physicians, dentists and other providers; of facilities such as clinics and hospitals’ and of specialized programs and services such as mental health and emergency care.

Accessibility, the relationship between the location of supply and the location of the clients, taking account of client transportation resources and travel time, distance and cost.

Accommodation, the relationship between the manner in which the supply resources are organized to accept clients (including appointment systems, hours of operation, walk-in facilities, telephone services) and the clients’ ability to accommodate to these factors and the clients’ perception of their appropriateness.

Affordability, the relationship of prices of services and providers’ insurance or deposit requirements to the clients’ income, ability to pay, and existing health insurance. Client perception of worth relative to total cost is a concern here, as is clients’ knowledge of prices, total cost and possible credit arrangements.

In the literature, the term acceptability appears to be used most often to refer to specific consumer reaction to such provider attributes as age, sex, ethnicity, type of facility, or religious affiliation of facility or provider. In turn, providers have attitudes about the preferred attributes of clients or their financing mechanisms. Providers either may be unwilling to serve certain types of clients (e.g. welfare patients) or, through accommodation, make themselves more or less available” (pp. 128-129).

This last dimension, acceptability, describes features such as the appearance of the clinic or office, the client or provider, and the general neighborhood in which the practice is located. It includes not only the physical attributes of the practice or the client; it includes the clients' and providers' attitudes toward these characteristics as well (Penchansky & Thomas, 1981).

### Assumptions

The assumptions made by the researcher are the following:

1. Rural residents are knowledgeable enough regarding their own health needs and the health care services available in their community to provide meaningful responses to the survey questions.
2. Improving access to primary care services available locally increases the health of community residents.

## CHAPTER 2

### REVIEW OF LITERATURE

#### Introduction

This section contains a review of literature pertinent to primary care, access to healthcare, and health care quality. Articles were chosen specifically to form a frame of reference for the study.

#### Primary Care

Primary Care is the point at which client would usually look to enter the health care system. The Agency for Healthcare Research and Quality (2002) lists the following as core attributes of primary care:

“Primary care serves as a point of first contact for the patient, playing a key role in access to care and in coordinating care for patients who use multiple providers or specialists. Primary care is holistic and comprehensive, focusing on the whole person and taking into account his or her social context. Uncertainty is a common attribute of clinical decision making in primary care. Primary care practice is information intensive. Opportunities to promote health and prevent disease are intrinsic to primary care. A sustained personal relationship between patient and clinician is a key aspect of primary health care, emphasizing the importance of compassion, continuity, and communication between provider and patient” (pp. 2-3).

This definition and theme of primary care has been widely adopted, however, an article by Povar (1996) highlighted the broad field of primary care research that had yet to be explored. She promoted the idea of viewing primary

care in a broader context than the individual provider, but as a system of organizations and communities. Mold and Green (2000) claimed that the bulk of research funding has historically gone to biomedical research and that what little was spent on clinical research has been earmarked for specific, chronic illnesses. While the science of medicine has advanced greatly over the last century, the practice of medicine (particularly as a part of primary care) has many research opportunities yet unexplored (Mold & Green, 2000). Mold and Green (2000) subdivided primary care research into four interrelated categories: theoretical/methodological research, health care research, clinical research, and health systems research. A relevant example of each is provided in the following paragraphs.

How primary care providers address behavioral risk factors with their patients, and the providers' attitudes, behaviors, and perceived barriers was the focus of a study in which a tool for measuring these variables was validated (Yeazel, Lindstrom Bremer, & Center, 2006). Their study examined the validity of the Preventive Medicine Attitudes and Activities Questionnaire (PMAAQ), which assess 84 items of prevention behaviors, perceived effectiveness and importance of prevention, comfort with discussing sensitive topics, and perceived barriers to providing preventive services. Yeazel et al. (2006) found the PMAAQ to have a high level of validity and showed the potential for use in the areas of quality assurance, assessing educational needs of providers, and evaluation of the effectiveness of preventive interventions.

Cheraghi-Sohi et al. (2006) studied primary care with respect to its key attributes from the patients' perspectives. After conducting an extensive literature review of published reviews of patient preferences, a conceptual 'map' was designed to show both the key elements of patient preference (access, technical care, interpersonal care, patient-centeredness, continuity, outcomes, and hotel aspects) and the relationship between the elements. Cheraghi-Sohi et al. (2006) concluded that there was a gap between the current primary care theoretical concepts and the content of instruments used to assess them.

An example of clinical research in primary care was a study conducted by Andrus and Clark (2007), in which the effect of clinical pharmacy services at a nurse practitioner staffed, rural clinic was evaluated. Among patients who were referred to a clinical pharmacist, a significant number attained their goals of improvement in low-density-lipoprotein, blood pressure, glycosylated hemoglobin, and anti-coagulation. While their study lacked a control group with which to compare the results of the intervention group, Andrus and Clark (2007) reported that their findings were consistent with those of an earlier study that did utilize a control group.

While the implementation of the State Children's Health Insurance Program (SCHIP) has greatly reduced the number of uninsured children nationally, there is still a significant number who remain uninsured. This fact formed the basis for Hill, Stockdale, Evert, and Gifford's 2006 study of issues in access to primary care and enrollment in SCHIP. They conducted separate focus groups with parents of insured and uninsured children in several cities across the



United States. While many positive findings were revealed (reasonably good access to primary care, the value of being insured, and relative ease in the SCHIP enrollment process), the prominent negative finding was of having unacceptably long wait times both in getting an appointment and while at the doctor's office. This finding, was more prominent with parents of uninsured children and may contribute to the negative feelings that lead these parents not to enroll their children in SCHIP (Hill, Stockdale, Evert, & Gifford, 2006).

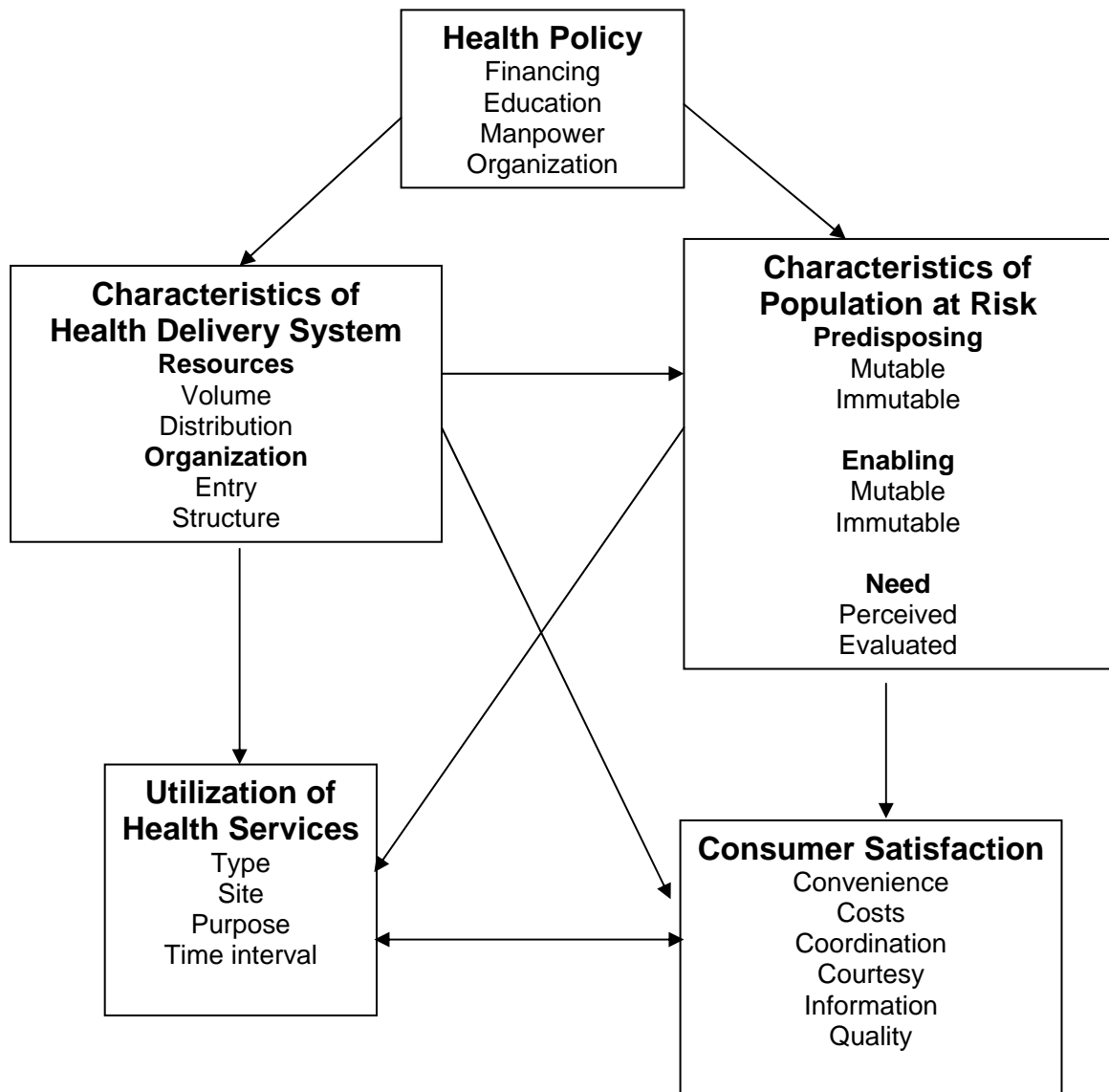
### Access to Health Care

Access to health care has been a focus of research for several decades. Access has been a focus of attention for policy makers, health care providers, and advocacy groups. One of the difficulties encountered by researchers has been defining access to health care sufficiently to guide meaningful research across all disciplines.

One of the early frameworks for studying access incorporated predisposing characteristics (demographic, social structure, and health beliefs), enabling resources (personal/family, and community), and need (perceived or evaluated) in a model to predict or evaluate a persons use of health services (Andersen; 1968). In 1974, Aday and Andersen defined access more comprehensively than ever before and incorporated that definition into a framework for the study of access to medical care. In their framework, they used a synthesis of previously separate concepts of access and built upon Andersen's

earlier work by including client demographics, characteristics of the healthcare delivery system, and socio-economic factors (Figure 1).

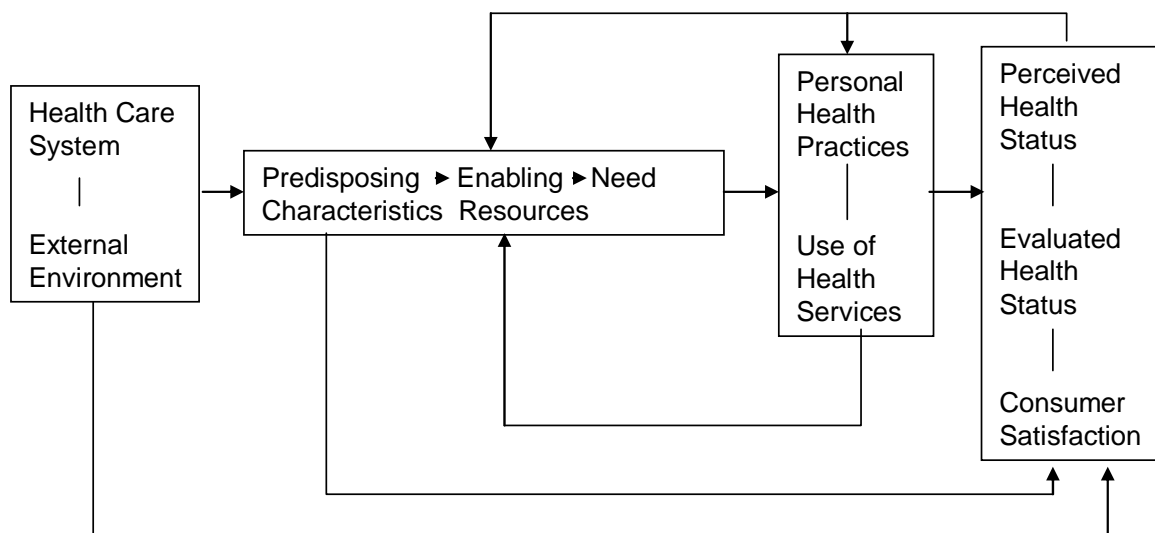
Figure 1. Aday and Andersen model, 1974.



(From Aday, L.A., & Andersen, R. (1974). A framework for the study of access to medical care. *Health Services Research*)

The model was again modified by Andersen in 1995 to include health outcomes. It was also noted at that time that there existed additional feedback loops that may affect future access and health behavior (Figure 2).

Figure 2. Andersen model, 1995.



(From Andersen, R.M. (1995). Revisiting the behavioral model and access to medical care: Does it matter? *Journal of Health and Social Behavior*)

For decades the Aday and Andersen model has been the dominant and most commonly cited framework for the study of access to healthcare (Ricketts & Goldsmith; 2005).

To refine the definition of access, Penchansky and Thomas (1981) developed the five dimensions of access as described in the conceptual framework section in Chapter 1 of this thesis. In addition to proposing the five dimensions, they conducted a study to test the discriminant and construct validity

of those access dimensions. In their study, they defined access as the “degree of ‘fit’ between the clients and the system” (p. 128). In this way, each dimension was conceptualized as a two way interaction between the provider and the client. Penchansky and Thomas (1981) conducted a survey using a tool that contained questions based on the proposed access dimensions, and scored on a Likert scale. Psychometric testing of the survey results demonstrated that each of the proposed access dimensions had discriminant and construct validity within their study population. That is to say, for their study sample, the respondents could and did, in fact, distinguish among the different access dimensions.

Nursing, as a profession, is well suited to researching access to healthcare. Stevens (1992) stated that nursing is a natural liaison between patients and doctors, and enjoys an understanding of the multiple levels of the health care system like no other group. She pointed out that nursing has come late to the arena of researching access to health care, and concluded that nurses must rise to the occasion of actively conducting research of the issues surrounding access to health care, and implementing change through collective action and patient advocacy. Racher and Vollman (2002) reiterated that nurses are in a unique position to be leaders in access to health care research and policy making. They concluded that there are 13 key points to consider in developing research studies on access to care. Several that are particularly pertinent to this study are as follows:

- “1. Supply is necessary but not sufficient.
2. Research must explore the fit between the consumer and the health service or system.

3. Consumer willingness to access health services is influenced by a variety of factors.
4. Understanding of access must be gleaned from users and non-users of the system.
5. Clients and professionals evaluate need differently”  
(pp. 86-87).

Characteristics of the population that affect opportunities to access health care have garnered much attention in research. These characteristics include gender, ethnicity, education level, and socioeconomic status. One such study was conducted to determine if there was a difference in access to primary care between different ethnic groups. Ethnicities included white, Latino, Asian, and African American. The investigators reported finding statistically significant differences in patient assessments of primary care, primarily between Asians and whites after correcting for age, gender, education level, socioeconomic status, health care delivery system, and other factors. The items which the Asian respondents rated greater barriers to access included financial (ie. cost related) and organizational (ie. wait times, office hours, and appointment availability) aspects of primary care. They could not conclude from their research why the difference existed, only that the difference existed. They did, however, suggest that quality differences in the provision of primary care to different ethnic groups may exist, according to patient assessments (Taira et al., 2001).

In a publication about making public policy responsive to the needs of rural residents for access to health care, Slifkin (2002) posed questions for research to address the following themes: utilization, availability, and acceptability differences; understanding consumer satisfaction; mutable factors

that affect access to health care; and availability of services that are known to improve outcomes.

Shreffler (1996) examined access to care from the perspectives of residents living in the Medical Assistance Facility (now called Critical Access Hospitals) service areas in six frontier communities in Montana. As part of that study, five dimensions of access to care (availability, affordability, acceptability, accommodation, and accessibility) were used to predict clients' use and willingness to use local health care services in their community (Shreffler, 1996). One of the findings of that study was that the most significant predictor of utilization of local health care, including local primary care, was the acceptability of the health care available. This was also the most significant predictor of consumer satisfaction with the health care received. The Acceptability Scale comprised the summed values of responses to twelve 5-point Likert-type rating questions related to the concept of acceptability. Items selected for inclusion were based on the work of Penchansky and Thomas (1981, 1984) and validated in telephone interviews in Shreffler's study. The reliability coefficients for the Scale were Cronbach's alpha = .97 and the Standardized item alpha = .97 (Shreffler-Grant, 2006).

More recently, access to health care has evolved to include an increasing voice to all the stakeholders, particularly the consumers of health care. Panelli, Gallagher, and Kearns (2006) illustrated how health care services that exist in policy may fall severely short of meeting the needs of the lived experiences of the potential consumers of those services. Their survey that was conducted in rural

New Zealand by a community organization led to real and meaningful policy change regarding access to health care services. Panelli, Gallagher, and Kearns (2006) emphasize the importance of community involvement in research that is aimed at policy making. An example of this approach is exemplified in the participatory action research currently underway by the Rural Development Institute (2006) in Canada.

### Health Care Quality

Andersen (1968, 1995), Aday and Andersen (1974), and Penchansky and Thomas (1981) all included in their frameworks the concept that the availability of health care must be appropriate to the needs of the patient. Part of the fit of available care and meeting the needs of the client is that the care is of sufficient quality to meet those needs.

Avedis Donabedian (1985) pointed out that the study of health care quality goes back to the early 1900's and earlier. Donabedian (1985) also stated that nearly everything that is known about the study of health care quality was already known as early as 1964, that future directions in the study of quality should focus on how to better implement what we know to improve the structure (characteristics of the organization or person providing care), process (activities of the providers in managing patients), and outcomes (end result as health and satisfaction) of health care. This framework of structure, process, and outcomes has guided the writings of Donabedian, and many others, in the study of health care quality.

An Australian study that utilized the structure, process, outcome framework employed survey methods to explore perceptions of rural doctors, nurses, patients and family members about the quality of procedural care (Hays, Veitch, & Evans, 2005). Each stakeholder was asked what factors contributed to good, or poor, procedural care. The investigators concluded that within the groups, the factors thought to be important were very similar. Between the groups, the factors were very different. The doctors and nurses generally agreed that technical competence, adequate numbers of staff, and availability of continuing education were important to delivering high quality care. The patients and family members, however, rated interpersonal traits such as communication, caring, calmness, and personality as being the most important determinants of quality procedural care. This suggested that there was apparently not a good “fit” in terms of what determined quality care between the providers and clients in that study population.

Another aspect in quality of health care is technical quality, or what services were received by patients in comparison to what services are recommended. McGlynn et al. (2003) conducted a study in 12 metropolitan areas in the United States to assess what services were provided for a variety of acute and chronic conditions and preventive care. They found that only about half of the recommended care was actually received when compared to the RAND Quality Assessment Tool’s indicators of quality. In a related study (using the same data set), Asch et al. (2006) examined whether poor-quality health care followed socioeconomic strata. They found that while there were some significant



differences in technical quality of health care, they were small and did not indicate any obvious bias. For example, females were reported to have higher quality scores than males in preventive and chronic care, and lower in acute care. In contrast to previous studies, Blacks and Hispanics had marginally higher quality scores than whites. The authors concluded from their results that policy efforts would better serve the health care system in the United States by improving care for all people rather than trying to close the gaps between socioeconomic groups (Asch et al., 2006).

### Summary

The literature indicates that there is a close connection between the perceived barriers to access, across each of the five dimensions (availability, accessibility, accommodation, affordability, and acceptability), and the perception of quality of health care. The acceptability dimension of access may be the strongest predictor of perceived quality. For this reason, the acceptability of primary care services available may have the greatest impact on the health of a community as a predictor of use or willingness to use those services. This is significant as primary care services are often the common entry point into the larger health care system.

## CHAPTER 3

## METHODS

Introduction

In this chapter, the study design, tools, study procedures, and sample pertaining to this study are described.

Design

In order to answer the research question a cross sectional descriptive study using survey methods was conducted in one frontier community of western Montana using a mailed survey tool that explored the acceptability of primary care. The survey method was chosen for two reasons. First, it allowed for the collection of information from a relatively large population in a short amount of time. Second, the design of the survey allowed for easy comparison of the responses. An application was submitted to Montana State University's Human Subjects Committee on February 13, 2007. Institutional Review Board approval was received on February 22, 2007.

Tools

To address the purpose of this study, two versions of a survey tool were produced, one for providers and one for clients. The tool contained a revised version of Shreffler-Grant's Acceptability Scale (2006). For this study, modifications in the scale were made to refer only to primary care rather than to

hospital and primary care. Both the client and provider versions contained the same eight items pertaining specifically to acceptability. Those eight items were five-point Likert scale rating questions (Table 1).

Table 1. Acceptability Scale Items.

1. Overall quality of care
2. Competence of Primary Care Providers
3. Concern/compassion for patient
4. "Personal" aspects of care
5. Competence of support staff
6. Acceptability of provider as source of care
7. The appearance of the provider's office
8. The location of the provider's office

The client and provider surveys differed only in the questions pertaining to professional, socioeconomic and demographic content. Both versions contained an open ended question for any comments the respondents would like to share. A copy of the client survey tool is included in Appendix A. The provider survey tool is included in Appendix B.

### Sample Selection

The survey was mailed to all nine of the health care providers in the community who were identified as primary care providers. These providers were identified through the local hospital's web site listing of the four clinics and cross-referenced with the local telephone directory. Providers who identified

themselves exclusively as being in a specialty practice, such as obstetrics/gynecology were excluded.

The sampling frame used for the client survey was the telephone directory for the communities included in the study. Listings in the telephone directory representing the entire service area of the four clinics were numbered consecutively. Listings that were business listings or duplicates (ie. FAX line, children's line, shop line, etc.) were excluded from the selection process. Finally, 400 potential survey participants were chosen with the use of the random number generator in Microsoft® Excel®. The total number of potential survey participants was chosen based on an expectation of a 25% response rate and in consideration of time and budget limitations.

### Study Procedures

The procedures for implementing the survey were based on Dillman's Tailored Design Method (2000). Surveying a rural community presents certain challenges that can serve to reduce response rates. For this reason, the Tailored Design Method was adapted in an attempt to increase survey response rates. The survey itself was constructed in accordance with the Tailored Design Method in order to present a neat, professional appearance. Coding of the surveys was implemented in order to provide the means to send survey results to respondents who requested them. Each survey was accompanied by a cover letter explaining the study's purpose, introducing the researcher, assuring respondent confidentiality, and offering study results to those who wish them. A copy of the

client cover letter is included in Appendix C; the provider cover letter is included in Appendix D.

One challenge to conducting mail surveys in rural communities is the difficulty in identifying physical addresses. Many rural telephone books do not include street addresses and many rural residents have their mail delivered to Post Office boxes. Similar to a strategy used by Shreffler (1999), the local post office was contacted regarding this issue. The opinion of the Post Office staff was that surveys that did not have a street address would be delivered to potential survey participants in most cases. Only persons new to the community, and not well known by the postal workers, were likely to not receive the survey.

Shreffler's (1999) study also highlighted an aspect of rurality that can be detrimental to achieving adequate response rates with mailed surveys, privacy and distrust of outsiders. A measure taken in an attempt to maximize survey response was a public announcement of the study in the local newspaper. It was felt that an article describing the research appearing in a source from within the community would serve to decrease the outsider phenomena. A news paper article was submitted to the editor who stated with enthusiasm that it would be printed. The article was submitted one week prior to mailing the survey. A copy of the news paper article submitted is included in Appendix E. It is unknown if the newspaper article was published during the data collection period.

Prior to mailing the survey, contact was attempted with a key stakeholder in the community, the Chief Executive Officer (CEO) of the hospital in the study's major community. The endorsement of the study by the CEO could have served

to legitimize the study to persons within the sample who might be reluctant to complete the survey. As the response from the CEO was after the data collection period, the effect of this contact is uncertain.

Due to time constraints prior to the deadline for completion of this thesis, the data collection period was limited to two weeks and no follow up contact with non-respondents was made. At the completion of the study the abstract was mailed to respondents who indicated on their surveys that they wanted a copy of the results.

### Analysis

As surveys were returned by mail to the investigator, data were cleaned, checked and entered into SPSS® version 15 for Windows® for analysis. Descriptive statistics and frequencies were produced to identify possible data entry error and to summarize the results. The acceptability scores were computed for each subset of the sample (providers and clients) and compared. Comparisons between primary care provider and client data were made by describing and visually comparing the descriptive statistics of the two groups' acceptability ratings. Additionally, selected written comments that pertained to the "fit" of the acceptability measures are included in the discussion section of Chapter 5 to assist in describing the results. As there was a significant difference in the sample sizes of the health care providers and clients, no statistical analysis to examine the fit between the clients' and providers' perception of acceptability of primary care was possible.

## CHAPTER 4

## RESULTS

Introduction

The purpose of this study was to examine the “fit” between the perceptions of rural residents about the acceptability of local primary care and the perceptions of the primary care providers about the acceptability of local primary care. The purpose was addressed by answering the following research question: How does the rural health care client’s perception of acceptability of primary care available in their community compare with the rural primary care provider’s perception of the acceptability of primary care delivered? This was accomplished by comparing the aggregate acceptability scores of completed surveys for each group. A total of four hundred client surveys and 9 provider surveys were mailed. Ninety-four client surveys were returned by the Post Office as undeliverable, these were subtracted from the total number of surveys mailed because the addressees had no opportunity to respond making the total number of surveys that were delivered to clients 306. None of the provider surveys were returned undeliverable. Response rates for the client and provider surveys were 35% (n=108) and 33% (n=3) respectively. A discussion of the responses is presented.

### Client Demographics

Of the completed surveys, the median age of the respondents was 58 years old (range 34-88). Additionally, 34% (n=107) were over the age of 65 years old. This compares with a median age of the survey county of 44 years and 17% (n=10,227) over the age of 65 years old (U.S. Census Bureau, 2000). The percentage of respondents who were married was 66% (n=107), compared to 61% (n=10,227) of the total population of the survey county. Likewise, the percentage of Caucasian respondents was very high, 92% (n=106). This is the same percentage of Caucasians in the county studied according to the U.S. Census Bureau (2000).

Economically, the majority (55%, n=98) of survey participants who responded to the question about income listed their self-reported annual income level above \$25,000, and 74% (n=106) reported that they had health insurance. This number compares with the Montana state average of persons who are insured which is estimated to be 81% (Seninger, Sylvester, Baldrige, & Herling, 2004). Another finding of this study is that 73% (n=104) of the survey participants responded that it was "very important" to have primary care services offered in their community. Consistent with this number, 73% (n=104) identified themselves as having a primary care provider in their community.



### Provider Demographics

The primary care providers were divided among four clinic locations throughout the survey county. The mean age of the primary care providers who responded to the survey was 47.5 years old and their race was 100% (n=3) Caucasian. The providers who responded reported that they have been in practice in the survey community for between 1 and 5 years and that they see between 6 and 20 patients daily.

### Acceptability Scores

Participants opinions about primary care services in the survey population were gathered utilizing a survey which asked respondents to rate various dimensions of access to health care, including the eight Acceptability Scale items (Table 1), on a five-point Likert scale rating with the following scale: 1=excellent, 2=good, 3=average, 4=fair, 5=poor, and 6=don't know. Table 2 shows the mean Likert scale rating for all questions in the survey, including questions not specifically pertaining to acceptability.

Table 2. Comparison of mean Likert scale ratings of client responses and provider responses, all questions.

	Client Responses	Provider Responses
Overall quality of care	2.4 (n=95)	1.3 (n=3)
Competence of primary care providers	2.4 (n=92)	1.0 (n=3)
Reasonableness of charges	3.1 (n=93)	1.3 (n=3)
Concern/compassion for patient	2.3 (n=94)	1.3 (n=3)
“Personal” aspects of care	2.4 (n=90)	1.3 (n=3)
Competence of support staff	2.4 (n=91)	2.3 (n=3)
Night and weekend care availability	3.4 (n=80)	3.0 (n=3)
Ability to get appointment quickly	2.2 (n=96)	1.3 (n=3)
Waiting time in office with appointment	2.7 (n=96)	1.7 (n=3)
Ability to get health questions answered	2.5 (n=97)	1.3 (n=3)
Acceptability of provider as source of care	2.5 (n=89)	1.3 (n=3)
Consultation with specialists	2.8 (n=75)	2.3 (n=3)
The appearance of the provider’s office	1.9 (n=95)	1.3 (n=3)
The location of the provider’s office	1.9 (n=98)	1.0 (n=3)

Note: A lower score is reflective of a higher rating.

Of the fourteen items, 8 items had a difference in mean score of 1 or greater: overall quality of care (diff=1.1), competence of primary care providers (diff=1.4), reasonableness of charges (diff=1.8), concern/compassion for patient (diff=1.0), “personal” aspects of care (diff=1.1), waiting time in office with appointment (diff=1.0), ability to get health questions answered (diff=1.2), and acceptability of provider as a source of care (diff=1.2). All of these differences

consist of slightly less positive ratings by clients than the ratings by providers. Of these differences in responses, five of them are part of the acceptability scale, overall quality of care, competence of primary care providers, concern/compassion for patient, “personal” aspects of care, and acceptability of provider as a source of care. The average difference in mean score for all items was 0.9.

To more easily compare the responses that specifically pertain to acceptability, an Acceptability Scale score was calculated by summing the ratings on each of the eight Acceptability Scale items. The range of possible Acceptability Scale scores in this study was 8-40, with a lower score representing a more favorable rating. The range of Acceptability Scale scores for client responses was 8-37 (n=97) with a mean score of 17.25. Over half (53.6%, n=97) of the client Acceptability Scale scores were below, or more favorable than, the mean score. The range of provider responses was 8-15 (n=3) with a mean score of 11.0 (Table 3).

Table 3. Comparison of Acceptability Scale Scores from client and provider responses.

	Client Scores (n=97, 89.8%)	Provider Scores (n=3, 100%)
Acceptability Scale Score Mean	17.25	11.0
Acceptability Scale Score Standard Deviation	5.75	3.61
Acceptability Scale Score Minimum - Maximum	8-37	8-15

Note: a lower score indicates a more favorable rating.

Utilizing only the client responses, additional analysis was performed in an attempt to identify any trends based on socio-demographic characteristics. A binomial variable was created by dividing the Acceptability Scale scores equal to or below (more favorable rating) and above (less favorable rating) the mean. A chi-square analysis was then performed to determine if a relationship existed between the Acceptability Scale scores and both a clients insurance status and whether or not they had a local primary care provider. The results, presented in Tables 4 and 5, indicate that there are no significant associations between the Acceptability Scale score and insurance status (n=96, p=0.559) or whether or not a client had a local primary care provider (n=96, p=1.000).

Table 4. Chi-square analysis of Acceptability Scale scores and client insurance status using client responses (n=96, 88.9%).

	Acceptability Scale score equal to or below the mean	Acceptability Scale score above the mean	Total
Client HAS insurance	40	33	73
Client DOES NOT HAVE insurance	11	12	23
Total	51	45	96
Chi-square		p=0.559	

Note: Acceptability Scale scores equal to or below the mean indicate a more favorable rating.

Table 5. Chi-square analysis of Acceptability Scale scores and whether client has local primary care provider using client responses (n=96, 88.9%).

	Acceptability Scale score equal to or below the mean	Acceptability Scale score above the mean	Total
Client HAS local provider	39	33	72
Client DOES NOT HAVE local provider	13	11	24
Total	52	44	96
Chi-square		p=1.000	

Note: Acceptability Scale scores equal to or below the mean indicate a more favorable rating.

Further analysis was performed by dividing the client respondents by age 65 years old and above and those 64 years old and below and calculating a chi-square to test the association between client age and Acceptability Scale score. In this case, there was a strong, statistically significant correlation (n=97, p=0.000) between age and Acceptability Scale score. Clients 65 years old and over were more likely to have Acceptability Scale scores below the mean, indicating a more favorable rating (Table 6).

The final analysis performed was a test of the association between the reported income level of the client and the Acceptability Scale score. Once again utilizing chi-square, there is no significant association (n=90, p=0.292) between income level and Acceptability Scale score using client survey responses (Table 7).

Table 6. Chi-square analysis of Acceptability Scale scores and client age using client responses (n=97, 89.8%).

	Acceptability Scale score equal to or below the mean	Acceptability Scale score above the mean	Total
Client age 64 years and younger	25	37	62
Client age 65 years and older	27	8	35
Total	52	45	97
Chi-square		p=0.000	

Note: Acceptability Scale scores equal to or below the mean indicate a more favorable rating.

Table 7. Chi-square analysis of Acceptability Scale scores and annual client income using client responses (n=90, 83.3%)

	Acceptability Scale score equal to or below the mean	Acceptability Scale score above the mean	Total
Less than \$5,000	1	0	1
\$5,000 – 9,999	7	3	10
\$10,000 – 14,999	9	5	14
\$15,000 – 24,999	5	10	15
\$25,000 – 49,999	11	15	26
\$50,000 or more	13	11	24
Total	46	44	90
Chi-square		p=0.292	

Note: Acceptability Scale scores equal to or below the mean indicate a more favorable rating.

### Summary

The analysis of the client responses when compared to provider responses indicated that there was little difference in their opinions pertaining to various dimensions of access to primary care. Similarly, the Acceptability Scale

scores of the clients and providers were consistent in that both groups rated primary care as favorable. Due to the disparity in sample size, statistical analysis between client and provider responses was not possible. Finally, there were few significant associations identified between client socio-demographics and Acceptability Scale scores. The only demographic that may act as a predictor of a favorable rating on the Acceptability Scale was that of age being 65 years or older.

## CHAPTER 5

## DISCUSSION

Introduction

This study was conducted to examine access to health care in one rural county in Western Montana, focusing on one dimension of access, acceptability of primary care. In order to accomplish this purpose, a survey was mailed to a random sample of actual and potential clients and primary care providers and their responses were compared to examine the level of fit in terms of the self-reported attitudes of the primary care providers and the actual or potential clients in the community they serve. The purpose was addressed by answering the following research question: How does the rural health care client's perception of acceptability of primary care available in their community compare with the rural primary care provider's perception of the acceptability of primary care delivered? This chapter includes a discussion of the results of the study, its limitations, the summary, and implications for future research and practice.

Evaluation of Results

It is of particular importance to highlight the fact that this study examined acceptability from the perspectives of the respondents only. Direct assessment of quality of care, competence of providers, etc. was not conducted.

As stated by Gamm et al. (2003), access to high quality health care is an issue of primary importance to rural America. The importance of rural health care



is evident by the level of response to the survey in this study (35% response rate) given that the data collection period was only two weeks and no follow-up mailings were sent to non-respondents after the initial mailing. The residents of the study county were apparently interested in the health care available to them locally. Further evidence of the importance of access to health care was the number of respondents who provided additional comments with their responses (49%, n=107) and the number of respondents who requested the results of this study (48%, n=107). It is unclear if the providers share a similar attitude due to a small sample size (33%, n=3).

To more easily compare the responses of the clients and providers, an Acceptability Scale score was used. The Acceptability Scale for this study had a minimum score of 8, and a maximum score of 40. A lower Acceptability Scale score represented a more favorable rating. The mean Acceptability Scale scores were similar for the clients and providers, 17.25 and 11.5 respectively. These mean scores would correspond with an above "average" to slightly above "good" rating on a Likert scale as was used in the survey. The results indicated that the providers had a more favorable opinion of primary care services available than did the clients who used or could potentially have used those services. This difference in scores is not entirely unexpected. Two of the many possible reasons were, first, the providers were, in effect, being asked to rate themselves. While it was hoped that they would rate the primary care they provided objectively, there certainly was a high potential for bias in their responses. Secondly, the mere difference in perspective of the clients' and providers' can

lead to the difference in scores. This is similar to the findings of Hays et al. (2005) in which the definition of what constituted quality health care was very different from the perspectives of the providers and clients.

An interesting finding was that there was no statistically significant association between Acceptability Scale scores and whether or not clients utilized local primary care services. There were also no statistically significant associations between Acceptability Scale scores and income or insurance status of the client. This is not to say that the affordability dimension of access was not foremost in the minds of the survey respondents. Of the additional comments that clients made with their survey responses, 28% (n=30) of them addressed cost of health care as a primary concern.

A finding that did have a statistically significant association was that of Acceptability Scale score and age. It was found that the older clients consistently had Acceptability Scale scores lower, or more favorable, than the mean. It is not known if these older clients are long time residents of the community in the study or if the length of residence would affect the Acceptability Scale score. These findings were consistent with those of other studies in which older age was associated with higher satisfaction ratings of health care (Larrabee et al., 2004; Al-Windi, 2005; Rahmqvist, 2001).

With regard to quality, in terms of its connection with acceptability of primary care, both the clients and providers rated the overall quality of care as above average. While the mean Likert scale score for providers (1.5) was more favorable than the mean Likert scale score for clients (2.4), many of the

comments made by clients indicated a high opinion of the overall quality of primary care. Of the comments that address overall quality of care, nearly 3 to 1 are favorable. Below are representative examples of the comments received relating to overall quality:

“I am a resident of (county name removed). My primary doctor has an office 2 blocks from me. He is excellent in all respects. He spends considerable time with his patients and truly gets to know them. I th (*sic*) hospital is excellent, also. Physicans (specialist) come here from Missoula providing Cardiac, eye care, orthopedic, to name a few. We are very fortunate to have such a facility in our midst. Emergency care is available 24 hrs. a day.”

“I feel that overall, we have as good a care system in most rural health care hosp. in Montana, and perhaps a bit better than most. And, if the local hosp cannot provide a particular procedure or service, then the extensive services in Missoula are reasonably close, if not convenient.”

“They seemed real concerned about our health till a couple years back. Since then, they don’t seem to care. Sooner they get you out the door, the better. The new office secretary doesn’t call back on things, gets paperwork lost and is hard to talk to on the phone.”

These responses, both positive and negative, suggest that the respondents thoughtfully completed the survey. The responses support the assumption that the residents of the study community thought that they were knowledgeable enough about local health care to provide meaningful responses to the survey questions. All of the written responses are included in Appendix F.

### Limitations

This study was subject to several limitations, including: small sample size, limited response, disparity in survey group sizes, and survey design and method. While the sample size was adequate to provide meaningful results,

it was not large enough to generalize those results to other populations. Also, although a strong statistical association was found between client age and Acceptability Scale score among survey respondents, the small sample size limited the ability to detect other associations if they existed.

Related to the sample size was the response rate. Despite efforts to maximize the response rate, only 108 of the 306 (35%) total client surveys delivered and 3 of the 9 (33%) total provider surveys delivered were returned completed. Undoubtedly these rates could have been higher if time constraints would have allowed for more thorough follow-up procedures, particularly with the provider group. Higher response rates would have strengthened the results.

Possibly the most significant limitation is the disparity in sample size between the primary care providers and the number of potential clients. This disparity effectively prevented the ability to statistically compare clients' and providers' perceptions of acceptability. Rather, the data were compared descriptively. It is understood that in any community, the percentage of health care providers is small in comparison to the population as a whole. When surveying a rural community, this disparity creates specific statistical challenges in that the actual number is so small. In this study, a 100% response rate from the providers would have yielded nine completed surveys. This small a sample size would simply not allow any meaningful statistical analysis. Despite this limitation, this study did attempt to examine fit, for which responses of both groups was necessary.

Another limitation was the survey method itself. With regard to the type of information collected, the analysis was limited to forced choice and a few short answer questions. This was adequate to address the research question but also was done to simplify the approach of the study, given time and resource limitations. The concept of acceptability embodies attitudes and opinions related to equally hard to define concepts including “personal” attributes and quality and assigning numbers may not fully explain the phenomena. The inclusion of more qualitative approaches to explore the various dimensions of access to health care, though more time consuming and costly, may have provided richer information.

### Summary

This study achieved the stated purpose of comparing the fit between clients and providers in one rural community based on their survey responses. The results of this study indicated that the clients and providers in the study community generally agree with one another and have a generally favorable opinion of the acceptability of their local primary care services. The results and comments provided with the survey also indicated that there exists a gap in opinion between the client respondents and provider respondents regarding the acceptability of primary care services available, albeit small, that could be improved. Believing that increased access to high quality and acceptable primary care will improve the health of community residents, it is in the interest of each of

the stakeholders in the study community to use these results to stimulate that improvement.

### Implications and Recommendations for Practice and Further Study

This study has significant implications for advanced practice nursing, and primary care in general. Advanced practice nurses are in a unique position to go beyond filling a mere shortage of providers. Nurses are more holistic than physicians by nature of their training (Lenz et al. 2004). It is, therefore, a natural progression that advanced practice nurses should seek to improve the “fit” of their services with their clients’ expectations at all levels of access in an effort to improve the health of the residents in the communities in which they serve.

A specific finding in this study that may help advanced practice nurses was that while the survey respondents had a generally favorable opinion of the primary care services available, five of the eight Acceptability Scale items had a mean Likert scale score difference of 1 or greater. This may indicate the need for addressing those specific elements of acceptability such as quality, concern/compassion for patient, and “personal” aspects of care in order to improve the “fit” between provider and client.

Future research in the area of access to health care is nearly boundless. Specific research questions that could be explored to build upon this study include: Is there a difference in Acceptability Scale scores between rural and urban dwellers? What socio-demographic factors are associated with higher

Acceptability Scale scores? How do the Acceptability Scale scores of advanced practice nurses compare with other health care providers? As stated previously, the only way to adequately describe the various dimensions of access to health care is to include a good deal of qualitative research methods. Using the results of a survey such as was used in this study and conducting follow up interviews or focus groups would yield stronger data.

By nature of the research question and methods used, the results of this study are quite unique to the population sampled, providing a mere snapshot in time. Much work could be done to improve the survey instrument so that more meaningful conclusions regarding the fit between client and provider could be obtained. For example, including more questions that allowed the respondent to explain why they had particular opinions about the Acceptability Scale items could lead to efforts for meaningful change to improve the “fit” between providers and clients. Repeating the study on the same population as well as other rural communities could reveal trends in either the health care system or the rural culture that have an effect on the fit between the client and provider.

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APPENDICES

APPENDIX A  
CLIENT SURVEY

## Client Survey

Note: The following pages contain the content of the survey used in this study. The actual survey was in the form of a booklet. These pages show the content in the appropriate order.

Instructions

Please fill out the following questionnaire as completely as possible. You may use either a pen or a pencil.

If you do not wish to answer a question, just skip that question and go to the next one. The entire questionnaire should take less than 10 minutes to fill out.

When you are finished, please place the completed questionnaire in the pre-paid envelope and put it in the mail.

Thank you for promptly completing and returning this questionnaire!

Primary Care services include the provision of accessible health care services by clinicians who are accountable for addressing a full range of personal health care needs. Primary Care is often thought of as where a client enters the health care system, for example, a clinic or doctor's office.

How would you rate the following aspects of Primary Care services available in your community? (Circle one answer)

	Excellent	Good	Average	Fair	Poor	Don't Know
1. Overall quality of care	1	2	3	4	5	X
2. Competence of Primary Care Providers	1	2	3	4	5	X
3. Reasonableness of charges	1	2	3	4	5	X
4. Concern/compassion for patient	1	2	3	4	5	X
5. "Personal" aspects of care	1	2	3	4	5	X
6. Competence of support staff	1	2	3	4	5	X

7. Night and weekend care availability	1	2	3	4	5	X
8. Ability to get appointment quickly	1	2	3	4	5	X
9. Waiting time in office with appointment	1	2	3	4	5	X
10. Ability to get health questions answered	1	2	3	4	5	X
11. Acceptability of provider as source of care	1	2	3	4	5	X
12. Consultation with specialists	1	2	3	4	5	X
13. The appearance of the provider's office	1	2	3	4	5	X
14. The location of the provider's office	1	2	3	4	5	X

Please let me know a little more about you.

15. What is your current marital status?

Circle one answer

Married

Single

Divorced

Separated

Widowed

16. What was your age on your last birthday? \_\_\_\_\_



17. Which of the following best describes your yearly total household income before taxes?

Circle one answer

- Less than \$5,000
- \$5,000-9,999
- \$10,000-14,999
- \$15,000-24,999
- \$25,000-49,999
- \$50,000 or more

18. Which of the following best describes your racial identification?

Circle one answer

- Caucasian
- Native American
- African American
- Asian
- Other \_\_\_\_\_

19. Are you of Hispanic origin?

Circle one answer

- Yes
- No

20. Do you have health insurance?

Circle one answer

- Yes
- No

21. Do you have a regular Primary Care provider in your community (a local provider who you see for most of your health care needs)?

Circle one answer

- Yes
- No

22. How important is it to you to have Primary Care services offered in your community?

Circle one answer

Very important

Somewhat important

Indifferent

Somewhat unimportant

Unimportant

23. Please provide any additional comments you would like to share regarding Primary Care services in your community. Feel free to attach additional sheets if you need more room.

APPENDIX B  
PROVIDER SURVEY

## Provider Survey

Note: The following pages contain the content of the survey used in this study. The actual survey was in the form of a booklet. These pages show the content in the appropriate order.

### Instructions

Please fill out the following questionnaire as completely as possible. You may use either a pen or a pencil.

If you do not wish to answer a question, just skip that question and go to the next one. The entire questionnaire should take less than 10 minutes to fill out.

When you are finished, please place the completed questionnaire in the pre-paid envelope and put it in the mail.

Thank you for promptly completing and returning this questionnaire!

Primary Care services include the provision of accessible health care services by clinicians who are accountable for addressing a full range of personal health care needs. Primary Care is often thought of as where a client enters the health care system, for example, a clinic or doctor's office.

How would you rate the following aspects of Primary Care services available in your community? (Circle one answer)

	Excellent	Good	Average	Fair	Poor	Don't Know
1. Overall quality of care	1	2	3	4	5	X
2. Competence of Primary Care Providers	1	2	3	4	5	X
3. Reasonableness of charges	1	2	3	4	5	X
4. Concern/compassion for patient	1	2	3	4	5	X
5. "Personal" aspects of care	1	2	3	4	5	X
6. Competence of support staff	1	2	3	4	5	X
7. Night and weekend care availability	1	2	3	4	5	X

8. Ability to get appointment quickly	1	2	3	4	5	X
9. Waiting time in office with appointment	1	2	3	4	5	X
10. Ability to get health questions answered	1	2	3	4	5	X
11. Acceptability of provider as source of care	1	2	3	4	5	X
12. Consultation with specialists	1	2	3	4	5	X
13. The appearance of the provider's office	1	2	3	4	5	X
14. The location of the provider's office	1	2	3	4	5	X

Please let me know a little more about you and your practice.

15. How many primary care providers (include NP and PA) work in your practice?

Circle one answer

- 1
- 2
- 3
- 4
- 5 or more

16. How long have you been in practice in this community?

Circle one answer

- Less than 1 year
- 1-3 years
- 4-5 years
- 6-10 years
- More than 10 years

17. Approximately how many patients do you treat in your practice on a normal day?

Circle one answer

Less than 5

6-10

11-15

16-20

21 -25

More than 25

18. What was your age on your last birthday? \_\_\_\_\_

19. Which of the following best describes your racial identification?

Circle one answer

Caucasian

Native American

African American

Asian

Other \_\_\_\_\_

20. Are you of Hispanic origin?

Circle one answer

Yes

No

21. Please provide any additional comments you would like to share regarding Primary Care services in your community. Feel free to attach additional sheets if you need more room.

APPENDIX C  
CLIENT COVER LETTER

## Client Cover Letter

Dear Sanders County Resident,

I am writing to ask you to participate in a research study of health care in rural Montana. The purpose of the study is to examine access to health care from the perspectives of the residents and health care providers in your community. Your name was randomly selected from the telephone directory for Sanders County.

I am a Family Nurse Practitioner student at the Montana State University and this study is part of the research required for my masters degree. Local perspectives on access to rural health care is of interest to me because I plan to practice as a Nurse Practitioner in rural Montana when I graduate. I want to incorporate into my future practice the aspects of health care that rural residents value and find acceptable.

Enclosed is a **Client Survey** that should be completed by a person 18 years or older in your household who can best complete the survey. The survey contains general questions about your views about health care in your community. There are also a few general questions about you and your household. The survey should take 10 minutes or less to complete.

Your participation is entirely voluntary. Your responses will remain **strictly confidential**, the results will be reported in group form, and no one will see your responses except me and my thesis committee chair, Jean Shreffler-Grant, Ph.D., RN. You do not have to participate, you are free to stop at any time, and you are free not to answer any questions you do not wish to answer. The potential benefit to you is the knowledge that you have helped improve our knowledge about rural residents' perspectives on local health care.

If you decide to participate, please complete the survey and return it in the enclosed envelope **within one week**. If you have any questions about this study, you may contact Jean Shreffler-Grant or myself, using the addresses or telephone numbers listed below. If you decide not to participate, and do not wish to be contacted further, you may return the blank survey or call Dr. Grant or myself. If you have questions about your rights regarding this survey, you may contact the Chairman of the MSU Institutional Review Board, Dr. Mark Quinn, at 406-994-5721. Thank you very much for your help with this project.

Sincerely,

David Vaughan, RN, BSN  
Graduate Student  
Montana State University  
College of Nursing, Missoula Campus  
32 Campus Drive  
Missoula, MT 59812  
(406) 243-6515 (message)  
davidv@montana.edu

Jean Shreffler-Grant, Ph.D., RN  
Associate Professor  
Montana State University  
College of Nursing, Missoula Campus  
32 Campus Drive  
Missoula, MT 59812  
(406) 243-2540



APPENDIX D  
PROVIDER COVER LETTER

## Provider Cover Letter

Dear Sanders County Primary Care Provider,

I am writing to ask you to participate in a research study of health care in rural Montana. The purpose of the study is to examine access to health care from the perspectives of the residents and health care providers in your community. Your name was selected as a primary care provider who practices in Sanders County.

I am a Family Nurse Practitioner student at the Montana State University and this study is part of the research required for my masters degree. Local perspectives on access to rural health care is of interest to me because I plan to practice as a Nurse Practitioner in rural Montana when I graduate. I want to incorporate into my future practice the aspects of health care that rural residents value and find acceptable.

Enclosed is a **Provider Survey** that should be completed by you. The survey contains general questions about your views about health care in your community. There are also a few general questions about you and your practice. The survey should take 10 minutes or less to complete.

Your participation is entirely voluntary. Your responses will remain **strictly confidential**, the results will be reported in group form, and no one will see your responses except me and my thesis committee chair, Jean Shreffler-Grant, Ph.D., RN. You do not have to participate, you are free to stop at any time, and you are free not to answer any questions you do not wish to answer. The potential benefit to you is the knowledge that you have helped improve our knowledge about rural providers' perspectives on local health care.

If you decide to participate, please complete the survey and return it in the enclosed envelope **within one week**. If you have any questions about this study, you may contact Jean Shreffler-Grant or myself, using the addresses or telephone numbers listed below. If you decide not to participate, and do not wish to be contacted further, you may return the blank survey or call Dr. Grant or myself. If you have questions about your rights regarding this survey, you may contact the Chairman of the MSU Institutional Review Board, Dr. Mark Quinn, at 406-994-5721. Thank you very much for your help with this project.

Sincerely,

David Vaughan, RN, BSN  
Graduate Student  
Montana State University  
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Missoula, MT 59812  
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davidv@montana.edu

Jean Shreffler-Grant, Ph.D., RN  
Associate Professor  
Montana State University  
College of Nursing, Missoula Campus  
32 Campus Drive  
Missoula, MT 59812  
(406) 243-2540

APPENDIX E  
NEWSPAPER ARTICLE

## Newspaper Article

David Vaughan, RN, BSN  
Graduate Student  
Montana State University  
College of Nursing, Missoula Campus  
32 Campus Drive  
Missoula, MT 59812  
(406) 243-6515 (message)  
davidv@montana.edu

December 7, 2006

## Access to Healthcare: new survey seeking information

One of the biggest problems faced by all Americans is access to quality health care. Nowhere is this more true than in the rural communities across the nation. Now there is one small way that you can help. A survey will be conducted in the Sanders County in the next couple of weeks seeking your opinion on the acceptability of primary care services available in Sanders County. This survey is unique in that both community members and health care providers will be surveyed, and their responses compared.

The results of the survey may improve the understanding of health care providers' and clients' attitudes regarding the acceptability of locally available primary health care. The group results will be made available to the hospital, the health care providers, and anyone else who is interested. All of the individual responses will be held in strict confidence, only the group results will be released.

The survey is being conducted by David Vaughan, a graduate nursing student from Montana State University, Bozeman as part of his Master's thesis. David lives in St. Ignatius, and hopes this study will lead to improved understanding of the acceptability of health care in western Montana.

Selection for the survey is random, and a high response rate is important to the study. If you are chosen to participate, don't delay in completing and returning your survey!

If you have any questions regarding this survey, you may contact David Vaughan at (406) 243-6515 (message), or by e-mail at davidv@montana.edu.

APPENDIX F  
SURVEY COMMENTS

## Survey Comments

The following is a compilation of the comments that were made to the open ended question at the end of the survey. The responses were transcribed verbatim as written to preserve the accuracy of the message. Personal information, such as names and addresses that were included with responses, was removed to maintain the confidentiality of the respondent.

“Confidentiality (lack of) is the primary reason people go elsewhere for med care. It does not matter how good the care is if you can’t trust the overall system.”

“It’s great that we have a hospital in (local town). (when I was a kid, we had to drive to other towns for medical care.) But the hospital & clinic in (local town) have a poor reputation – they make a lot of mistakes, lose people’s records, and cost way too much. I’m not sure I can trust them with the important health problems. Still, I do appreciate their individual attention and genuine concern. My biggest problem is the cost. I can’t afford health care. My dogs get much better health care that I do. No kidding. I never go to the doctor. ☹️”

“Kudos for your resolve to enter health care, which lacks efficiency and is bankrupt. My comments are about health care in general. I had a colonoscopy for which I paid one half before hand because I lacked insurance, when I went to pay the balance, the hospital asked for the second half plus \$260. I asked for

20% off and took 15%. The surgeon refused any discount for cash; I was told that was against the law. I had researched the price and concluded that getting the final and accurate price was impossible. What kind of system is this where I can bargain for health care? Health care should study Toyota to learn about efficiency. Our only hope is for wal-mart to provide health care. All the best.”

“Primary care is utmost important to me for daily care. They draw my blood for my specialist is (other town) – reporting directly to him. They have recently taken over the care from my Neurologist in (other town) & will handle all the ongoing medication and care for migraines. Dr. (provider name) seldom is not able to see me on the same day if I request it and he is always ready to refer if necessary. We are 100 miles away from both (other town) and (other town) and we appreciate the service he provides.”

“Our primary care provider is 10 miles away. The hospital that sponsors him is 75 miles away. We have closer facilities in (other State) where many of the local people go for care.”

“I have never used the P.A. care provider in (local town), as my physician is in (other State). I feel it is important for (local town) to have a clinic for the citizens that need immediate care.”

“I rarely have need for a primary care provider.”

“Care in general is improving in our community. Primary care at times is an issue (do to vacations, holidays, or just plain busy). During the weekends and evenings Primary care is 25 miles away. It should be noted that the ambulance side of the EMS system is above average.”

“The cost is the most important.”

“We feel with the growing population & growing aging population we need better healthcare in our area. PA’s are great, but it would be better if we could have an MD on site at our clinic more often.”

“I didn’t know we had this here. Let me know where and when I can get it.”

“Having the care is great, but if you need any kind of medication we still have to travel over 35 miles to obtain. Sometimes its just easier to see the doctor where medication is readily available.”

“Pre-existing condition. Cannot get insurance. Cannot afford local care. Travel to V.A. facilities for care. Primary care – (other town) or (other State).”

“The nursing staff is great. As we’ve gotten new doctors over the last 4-5 years, I’ve noticed the service is better. The administrative staff needs to overhaul the



billing department. A lot of people are billed as much as 5-6 months later and then quickly handed over to collections because of the lapse of time in payment. Quite a few people now go to (other town) or (other town) for medical needs – strictly because of the billing dept.”

“Would like to see health costs lowered! Also with prescription medication!”

“We have lived in (local town) since we retired seven years ago. Since then we have doctored with two young doctors serving here. They are both professional, compassionate, personable young men. Several years ago, I received a phone call from one of them regarding my health history – not unusual but it was 8:00 PM – he was still “doing his job.” Quite commendable.”

“They seemed real concerned about our health till a couple years back. Since then, they don’t seem to care. Sooner they get you out the door, the better. The new office secretary doesn’t call back on things, gets paperwork lost and is hard to talk to on the phone.”

“I think it is pretty darn good considering the equipment and every thing and the consideration they give personally.”

“I am quite active gardening flowers, fishing, hiking, etc. In 2004 I had surgery for torn ligaments in my right knee. The orthopedic doctor does come from (other

town) twice weekly, thus affording competent care here in (local town). I was grateful to be near home for the surgery and follow up P.T. for several weeks.”

“There is a clinic in our community that is very knowledgeable the few times I need it. For the major problems, I see the Doctors in (other State) or their hospital. That is our closest hospital – 50 miles.”

“We (Americans) need a comprehensive health care for all dental & vision.”

“Good luck Dave. I used a semantic differential questionnaire for my degree in the early 70s at Brooklyn College, N.Y.C. Now I’m on disability after working 37 years. Both as a professional, sitting behind a desk, & I went to work, for experience, in the logging, fishing, and vegetable industries for 18 yrs. in rural Maine. I lived in a town of less than 200 people. Now I live in a town of less than 600. I did a kind of flip over from N.Y.C. If you can imagine the perspective I have after such life experiences I have to tell you the entire health care system in rural – reservation Montana is so awful I cannot think of a slanderous phrase to describe it. At least that’s my opinion, I guess that is why they call it medical practice . The industry practices on us in poverty. It sucks. Good Luck”

“We have a PA at our local clinic. I think he does a good job and has great nurses. Can go to (other town), (local town), or (other State) for specialized folks.”

"I am a resident of (local county). My primary doctor has an office 2 blocks from me. He is excellent in all respects. He spends considerable time with his patients and truly gets to know them. I th (*sic*) hospital is excellent, also. Physicians (specialist) come here from (other town) providing Cardiac, eye care, orthopedic, to name a few. We are very fortunate to have such a facility in our midst. Emergency care is available 24 hrs. a day."

"I feel we are lucky that we have the (local) hospital here in (local town)."

"Excellent office – Dr. Knowledgeable – Dr's in community too rushed – do not offer information, spend less than 10 minutes per visit – most of the time 5 min. is average. Does not take time to answer questions – too rushed. All of the above info has included time spent on are for emphysema – Pap test – blood work, etc. No personal care!"

"Separate comments

1. Costs of medical have skyrocketed beyond rural wage base abilities
2. Believe avenues need to be studied to level wage vs med costs if possible"

"The care we receive here is very good. Our P.A. is excellent in sending patient to specialist to take care of illnesses. But the care provided by a specialist is

awful. A person feels like when they see a specialist – we see money signs in their eyes. Usually no offer of follow up care – you have to be almost dead before you can be treated!”

“I have been very fortunate with my health needs. I have observed the frustration of others who run into troubles. Service is sometimes slow. Perhaps there needs to be brief guidelines posted as to who can get the ball rolling. I hope we can get a stronger program of home care for the increased aging population in Montana. Good luck on your study and efforts.”

“As far as I know, Primary care services in (local town) are adequate. There is no way I could afford, monetarily, to visit such services and know first hand. My provider practices out of the VA clinic in (other town). Without VA services, many more of us would suffer medical conditions in the midst of this broken health care system. It needs to be nationalized... single payer. And the drug companies need to take a big hit... need to for once, to be at the mercy of a market driven pricing and lose their influence in Washington! We need a big fix, and in the meanwhile, 50 million people in this country will continue to be excluded from preventative health care. Let's get it right for we the people and our kids & grandkids. At the present the U.S. ranks about 26<sup>th</sup> in the world where the health care is concerned. And G.M. foods will keep people sick and the drug companies fat.”

“Unable to get insurance due to high cost – only see Doc for emergencies”

“Thank goodness our clinic is here We do so many test right here for my elerldly (sic) mother. This saves us so much travel time and it hard for Mom to get ready to go.”

“I go to the V.A. hospital in (other State). We have a small clinic a few miles from here – (local) Clinic. I had to go there once for an emergency, therefore I am not qualified to judge the quality. From what I hear they have a good reputation. For me its nice to know that it is there for an emergency. I think quite a few people go there on a regular basis.”

“We need some kind of affordable health care. Were self employed & cant afford health insurance. We pay cash for minor visit if we had major health problems. We would be in very bad financial shape. My wife works full time for a small company the last 5 yrs. The company don't carry any kind of insurance”

“Dear Mr. Vaughan

A survey was recently completed by (local) County Sanitarian & County Health Dept. Many of the questions you ask, were asked by the recent survey, plus a lot of other information concerning general well being of community. (personal information excluded in this part of comments) Indian Health Services, my primary health care. Eastern side of (local) County is on the reservation.”

“We ranch and I am also a County Com. The (local) Clinic PA does an excellent job. In fact people from out of the local area come to the clinic. Our building and equipment needs upgrading.”

“I didn’t survey because I think I would be biased.”

“I am a retired dentist, I have had reasons to use emergency services and surgical services over the last few years, in comparison to other areas that we have lived in our care has been excellent in (local town), or in (other hospital).”

“We have a small hospital with clinic attached. Both my wife and I believe they push pills and hesitate for tests. We both received bills in Feb. from Sept. visits. They were refused by insurance for improper coding by clinic staff. This is not the first incident of the poor & late billing. I was run over by bull in May, 06. A short hospital observation & pills & bruises. Insurance paid, but 24 hr stay was \$6000.”

“Health care in (local) Co. is focused more on the bottom line than on the welfare of the people. For the most part they are understaffed and indifferent. Our experiences have left us feeling dis-satisfied and insecure.”

“Our care here is of very high standard plenty of Dr. staff & good friendly support people. Plus local hospital & ambulance, we also have some home care for those

who need it along with meals on wheels. The people who provide our community are great. Please join them when you are ready”

“We need home care assistance for people who are still ambulatory (*sic*) but becoming frail. More in line with housekeeping dusting, putting things away, etc. Not quite hospice level, no baths, shopping service. So folks can continue at home. Possible pet care – in/out Water plants indoor & out”

“We do not have a hospital in our town and x-rays, blood draw & other procedures, you must travel out of town. Most doctors are in their office 3 days a week. An emergency clinic open 7 days would be beneficial in our area, as there is a lot of elderly people here and a lot of folks that cannot drive out of town especially during the winter.”

“Health insurance costs are my primary concern. I own my own business and am part of a group plan with New West. The Family Plan runs \$750/month with a \$5000 deductible/person and a \$750 in well care ‘1<sup>st</sup> dollar’ @ \$1000 deductible the monthly cost jumps to 1200/month per family this is a 50-60% of an average employees take home pay.”

“Our local PA providers excellent care. The MDs are a little less accessible. This may be due to the considerable transition in the past 5 years. Primary Care services are through the local clinic & are fairly expensive.”

“We don’t use local services – we go to (other State) because our doctors are long time care providers for my wife and I”

“We live in a small community of approx. 400 population. Our care service is located between two small communities close to the same population. The main health care giver is a Family Nurse Practitioner. We have had very little knowledge other than ‘word of mouth’ about the local clinic. Our primary care giver is located 45 miles from here.”

“It would be nice to have a women close to be able to see other than a man Dr.”

“The health care in our community has improved over the last few years. Our hospital has a new section and the older part has and is being upgraded. We have improve diagnostic services. The doctors don’t hesitate to refer to specialists outside our area when need beyond their skill level. The hospital staff is quick to provide directions and even personal escort throughout the hospital for persons not familure with the physical layout of the building. Our community dentist provides good quality care but at an excessive financial charge. Good quality physical therapy is available at a reasonable charge. Good quality chiropractic care is also reasonably priced but I think providers live outside the area and provide services on a limited number of days on a weekly basis.”



“The (local) Hospital could use some tuning up at times.”

“I feel that overall, we have as good a care system in most rural health care hosp. in Montana, and perhaps a bit better than most. And, if the local hosp cannot provide a particular procedure or service, then the extensive services in (other town) are reasonably close, if not convenient.”

“In Dec 2006 I fell off a ladder broke my shoulder. I needed help right now. (local) Hospital has been very good to me for my recovery care. Our Hospital could use more special care units. ie dialysis”

“Good luck with this and your program!”