Frontier nursing : nursing practice in medical assistance facilities staffed by physician assistants
by Nena Neill Saunders

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Nursing
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Abstract:
The purpose of this study was to describe the perceptions of nurses about the practice of nursing in frontier medical assistance facilities. These facilities were medically staffed by physician assistants.

This study utilized a qualitative approach. The sample consisted of eleven of the fifteen known registered nurses who practiced in medical assistance facilities.

Data from the informants were collected by conducting face-to-face interviews, using an open-ended questionnaire to guide the interview. The interviews were tape recorded and transcribed. Latent content analysis was utilized to analyze the data. Data were coded for emerging themes and similarities and differences. Data were presented in a narrative description of the emerging themes.

It was found that frontier nurses share similar perceptions about nursing practice in medical assistance facilities. Themes identified from their perceptions included isolation in daily practice, professional isolation, generalist perspective, role diffusion, nurse volunteerism, and commitment to frontier nursing colleagues. Nurses in frontier medical assistance facilities perceived the nursing care delivered in these settings as better than nursing care delivered elsewhere. Additional themes concerning stressors and recruitment-retention issues were found. Working relationships with physician assistants were described as hierarchial yet satisfactory and collaborative.

Implications for nursing practice were identified.

The need for continued learning, development and maintenance of practice competencies, and the need for professional collaboration are of special importance. Recruitment-retention strategies in these unique settings are needed. Monitoring and evaluation of quality of care in remote settings are required. This study identified the need for further nursing research to examine the concept of commitment as it relates to work obligations in frontier settings. Enhanced caring, decision making pathways, and working relationships of frontier nurses need further investigation.

FRONTIER NURSING: NURSING PRACTICE IN MEDICAL ASSISTANCE FACILITIES STAFFED BY PHYSICIAN ASSISTANTS

by

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APPROVAL

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Nena Neill Saunders

This thesis has been read by each member of the graduate committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the College of Graduate Studies.

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Date November 24, 1992

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ABSTRACT

The purpose of this study was to describe the perceptions of nurses about the practice of nursing in frontier medical assistance facilities. These facilities were medically staffed by physician assistants.

This study utilized a qualitative approach. The sample consisted of eleven of the fifteen known registered nurses who practiced in medical assistance facilities. Data from the informants were collected by conducting face-to-face interviews, using an open-ended questionnaire to guide the interview. The interviews were tape recorded and transcribed. Latent content analysis was utilized to analyze the data. Data were coded for emerging themes and similarities and differences. Data were presented in a narrative description of the emerging themes.

It was found that frontier nurses share similar perceptions about nursing practice in medical assistance facilities. Themes identified from their perceptions included isolation in daily practice, professional isolation, generalist perspective, role diffusion, nurse volunteerism, and commitment to frontier nursing colleagues. Nurses in frontier medical assistance facilities perceived the nursing care delivered in these settings as better than nursing care delivered elsewhere. Additional themes concerning stressors and recruitment-retention issues were found. Working relationships with physician assistants were described as hierarchial yet satisfactory and collaborative.

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CHAPTER 1

INTRODUCTION

The delivery of rural health care has emerged as one of the most challenging health care issues facing policy makers and rural residents today. While the American health care system has enormous problems and many citizens are left without adequate health care, the deficiencies are nowhere more apparent than in rural America, which is said to be in crisis. Contributing factors to the health care crisis are multifaceted. Economics, demographics, and social changes over the past decade have significantly impacted rural health care delivery (Moscovice & Rosenblatt, 1985; Amundson & Rosenblatt, 1988; Cordes, 1989; Moscovice, 1989).

Rural residents, those people living outside metropolitan statistical areas (U.S. Census Bureau, 1990), have lower incomes, fewer job opportunities, higher unemployment, and a greater probability of living below standard poverty levels (McCormick, 1988; Moscovice, 1989; Cordes, 1989; U.S. Congress Office of Technology Assessment, 1990). Agribusiness, mining, and lumber, the leading industries in rural settings, continue to be depressed (Robinson, 1987).

Wright and Lick (1986) noted "rural Americans are a population at risk in nearly every major disease category and at the same time underserved by practically every type of health professional" (p. 461). Although nationwide there is a surplus of physicians, there is a shortage of physicians in rural America (Hicks, 1990). America's rural population is disproportionately elderly; consequently, there is a higher incidence of health problems in this subpopulation (Krout, 1989; Cordes, 1989; Dwyer, Lee, & Coward, 1990; U.S. Congress, Office of Technology Assessment, 1990). Rural Americans have higher infant and maternal morbidity and mortality rates (U.S. Congress, Office of Technology Assessment, 1990). Chronic conditions are more prevalent in rural populations than their urban counterparts (Wright & Lick, 1986). Unintentional injuries resulting in death are two times higher in rural areas compared to urban cities (Hewitt, 1990). The economic depression is reflected in an increasing incidence of stress-related illness and behaviors (American Nurses' Association, 1989).

Rural hospitals are an important component of a stable rural health care system. Two hundred fifty-two rural community hospitals closed between 1980-1989. This represents approximately 10% of the nation's rural hospitals (American Hospital Association, 1990, in Hart, Pirani, & Rosenblatt, 1991). Hospital closures certainly

impact the delivery of health care as well as the ability to attract or retain health care professionals to rural communities.

Wright and Lick (1986) stated, "In rural America there is a critical shortage of health care professionals" (Wright & Lick, 1986, p. 463). The distribution of physicians-to-population is much higher in metropolitan areas as compared to rural areas (Wright & Lick, 1986). Registered nurses constitute the largest group of health care providers in the United States, yet only 19% are located in rural settings, while 25% of the population is rural (American Nurses' Association, 1987).

The health care crisis has been addressed by the development of alternative systems of health care delivery and the utilization of non-physician providers (American Academy of Physician Assistants Council on Professional Practice, 1990; U.S. Congress, Office of Technology Assessment, 1990). The traditional model of rural practice, which is characterized by a generalist physician delivering medical care in a community-based hospital, is disappearing.

Montana is a rural state, having the fourth greatest land mass of 145,388 square miles. Moreover, 45 of the 56 Montana counties are considered frontier, having less than six residents per square mile (Johnson, 1991). Such factors as sparse population and isolation contribute to

the problems of health care delivery. Some rural hospitals have been faced with closure due to lack of physician services. In an effort to meet the challenges of health care delivery in some of these rural Montana communities, an alternative system of health care delivery has been initiated.

Under a grant from the Health Care Financing Administration, a demonstration project was begun in Montana in which two previously closed frontier hospitals and one hospital facing closure were converted to medical assistance facility status (K. McCarty, personal communication, May 24, 1991). Medical assistance facilities (MAFs) are low intensity, short stay facilities which provide alternatives to hospital closure and may address the problems of health care delivery in sparsely populated areas (Lutz, 1988; Moscovice, 1989; K. McCarty, personal communication, May 24, 1991). The demonstration project was designed to test the MAF model of delivery of care and its economic feasibility (Straub, 1990). These projects are located in frontier counties with fewer than six residents per square mile or where residents would be located more than 35 miles from the nearest hospital (K. McCarty, personal communication, May 24, 1991).

Utilization of physician assistants helps to alleviate rural health manpower shortages and maldistribution (Rockefeller, 1990; Willis, 1990; Lampert, 1990). In 1989,

the Montana Legislature modified statutes to allow greater reliance on physician assistants and nurse practitioners in MAFs. Since early 1989, the number of practicing physician assistants in Montana has nearly doubled, bringing the total to 38 practitioners (Bellinghausen, 1991; R. Spear, personal communication, April 15, 1991).

Although much has been written about physician assistant practice in rural settings (Lippard & Purcell, 1973; Lampert, 1990; Minton, 1990; Sturmann, Ehrenberg, & Salzberg, 1990; American Academy of Physician Assistants, 1990), no literature examines the registered nurse's role in frontier practice when associated with physician assistants. Likewise, little knowledge exists about the role of the nurse in medical assistance facilities. Emergence of alternative delivery models and utilization of non-physician providers in rural Montana invites investigation of nurses' perceptions of nursing in these frontier health care settings in order to enable planning and problem identification and to identify research questions.

Statement of the Purpose

The purpose of this study was to describe the perceptions of nurses about the practice of nursing in frontier medical assistance facilities, medically staffed by physician assistants. The specific aim of the study was

identification of the challenges and concerns of daily practice related to nurses' work in this unique setting.

Definition of Terms

Registered Nurse (RN) - Registered nurses in the state of Montana, educated at the associate degree, diploma, baccalaureate, or master's degree level who hold a variety of nursing positions in rural/frontier Montana.

Rural Nursing - The provision of health care by professional nurses to persons living in sparsely populated areas (Long & Weinert, 1989).

Rural - Those people living outside metropolitan statistical areas (U.S. Census Bureau, 1980).

Metropolitan Area - An urbanized area; a central city and its contiguous closely settled territory with a combined population of at least 50,000 (U.S. Census Bureau, 1990).

Frontier - Counties with low population density--six or fewer people per square mile (Elison, 1986).

Frontier Nursing - Nursing practice in settings with population density of six or fewer persons per square mile.

Physician Assistant - A mid-level health professional who provides medical services that may include examination, diagnosis, prescription of medications and treatment under the supervision of a physician licensed in the State of Montana (Montana Annotated Codes, 1989).

Medical Assistance Facility (MAF) - A facility that provides inpatient care to ill or injured persons prior to their transportation to a hospital or provides inpatient medical care to persons needing that care for a period of no longer than 96 hours, and either is located in a county with fewer than six residents per square mile or is located more than 35 road miles from the nearest hospital (Montana Annotated Codes, 1989).

CHAPTER 2

REVIEW OF LITERATURE

Rurality

The Chairman of the House Select Committee on Aging Task Force on the Rural Elderly, who is also Co-Chairman of the Rural Health Coalition, states that most members of Congress define rural as "you know rural when you see it" (Synar, 1988, p. 311). Krout (1986) stated, "the term 'rural' is used so sloppily that it is almost impossible to determine what it means" (Krout, 1986, p. 174). The term rural has been ill-defined, with no consensus about its meaning. Sparsity of population has generally been agreed to be a concept associated with rurality. The United States Census Bureau has categorized persons living in open country or in towns with fewer than 2,500 residents as rural (Rosenblatt & Moscovice, 1982). The census bureau has also classified metropolitan and non-metropolitan counties. A metropolitan county having at least one city of 50,000 population or adjoining urbanized areas with the same populace has been considered a metropolitan statistical area. Persons residing in counties not designated as metropolitan statistical areas have been

considered rural (U.S. Congress, Office of Technology Assessment, 1990). Others have defined rural through their descriptions of the virtues of the people, a place where people come from on their way to careers, education and lives (Cordes, 1989; U.S. Congress, Office of Technology Assessment, 1990). Moscovice and Rosenblatt (1982) proposed conceptualizing rurality along a rural-urban continuum rather than the traditional dichotomy. Hewitt noted,

> It is difficult to quantify rural health problems and to make informed policy decision without a clear definition of what and where rural areas are. Small populations, sparse settlement, and remoteness are features intuitively associated with rural. These features exist on a continuum, however, while federal policies usually rely on dichotomous definitions. (Hewitt, 1989, p. 1)

Moscovice and Rosenblatt (1982) defined the salient characteristics of rural areas: low population density, distance from urban resources, predominance of undisturbed natural ecology, and cultural and behavioral singularity.

Although a clear universally accepted definition of rurality does not exist, an emerging concept has been that rurality and rural populations are diverse (Krout, 1986; Cordes, 1989; Hewitt, 1989; Patton, 1989). This diversity has required that generalizations about rural people be carefully considered. Distinctive features of the area served must be considered in the development of efficient

and effective rural health care systems (Coward, Miller, & Dwyer, 1990).

Although it has been accepted that diversity exists among rural populations, commonalities exist which contribute to the current crisis in rural health care. America's rural populations have been generally recognized as having greater poverty, less adequate housing and transportation, and a lack of availability of and accessibility to a wide range of services, including health care (Cordes, 1989). America's rural population has a higher concentration of elderly persons (Krout, 1986; Krout, 1989; Cordes, 1989; U.S. Congress, Office of Technology Assessment, 1990). Wright and Lick (1986) reported chronic conditions were more prevalent in rural populations than their urban counterparts. Cerebrovascular disease, emphysema, pleurisy, arthritis, rheumatism and hypertensive heart disease affect more rural residents than urban residents. Moscovice & Rosenblatt (1985) and Hart, Pirani and Rosenblatt (1991) reported additional problems in rural areas include poor roads, outdated communication equipment, radio dead spots, personnel shortages, and outdated medical equipment. Hospital closures or changes in the scope of services (for example, elimination of obstetric service) provided by rural hospitals has contributed to the health care crisis in rural settings. Recruitment and retention of trained health professionals

has been cited as another rural disadvantage (Maier, 1989). Rural communities have been desperately trying creative means of alluring health professionals to their respective communities (Maier, 1989).

Physician Assistants

Physician assistants were first introduced in the United States in 1965, when Dr. Eugene Stead began a two-year academic program at Duke University (Bliss & Cohen, 1977). The revolution of medical knowledge and technology in the 1950-1960s drew physicians from primary care into specialized practice. This manpower shift was one rationale for the development of non-physician practitioners, such as physician assistants and nurse practitioners. It was hoped that these mid-level practitioners would increase primary care services to the urban poor and rural populations (Lippard & Purcell, 1973; Bliss & Cohen, 1977; Buehler, 1982). The federal government subsidized the concept of non-physician practitioners with the Comprehensive Health Manpower Training Act of 1971 as part of the solution to the problems of maldistribution of primary care providers and physician shortages. Physician assistants have been educated clinically and academically to provide diagnostic and therapeutic services to patients. Physician assistants are conceptualized as dependent professionals, an extension

of physicians (Lippard & Purcell, 1973; Bliss & Cohen, 1977). Physician assistants in Montana have served the rural public in a multitude of settings including Indian reservations, prisons, veterans facilities, and rural clinics and hospitals (Bellinghausen, 1991; R. Spear, personal communication, April 15, 1991).

As of 1991, 19,434 physician assistants were certified for clinical practice in the United States (American Academy of Physician Assistants, personal communication, May 1991). A 1989 change in Montana law created an environment which has been attracting physician assistants to Montana. Changes in the law have allowed for insurance reimbursement, temporary duty licenses for vacation replacements, authority for other health care professionals to carry out their orders, representation on the Board of Medical Examiners, and authority to write prescriptions (Montana Annotated Codes, 1989; Bellinghausen, 1991).

Medical Assistance Facilities

Rural hospitals have faced extraordinary difficulties in the provision of health care services to the communities they serve. A declining economic base, difficulty in recruitment and retention of health care providers, declining population, and competition from specialty laden and technologically sophisticated urban centers have all contributed to the struggle for survival faced by rural

hospitals (Robinson, 1987; Moscovice, 1989; Mick & Morlock, 1990). Hospital closures have steadily risen since 1981, with over two-thirds of all hospital closures occurring in rural communities (U.S. Congress, Office of Technology Assessment, 1990). The American Hospital Association predicted that nearly one-fifth of the remaining rural hospitals were in jeopardy of closure (AHA, 1988 in Moscovice, 1989). The Montana Hospital Association examined Montana hospitals in 1988 and determined rural hospitals were in jeopardy of closing for a variety of interrelated factors: (1) small size, (2) changes in reimbursement, (3) changes in regulation, (4) low occupancy, (5) loss of physicians, (6) withdrawal of local government support, and (7) insufficient funds to purchase capital equipment (Montana Hospital Association, 1988).

Rural policy makers have begun to make a commitment to health care rather than the preservation of hospitals through creative and innovative approaches to health care delivery. One such experimental approach has been the implementation of medical assistance facilities (MAFs) in Montana. The Montana Legislature approved this new category of health care facility with support from the Montana Hospital Association. Medical assistance facilities may provide inpatient care for up to 96 hours and/or emergency care prior to transfer to another facility. These facilities must be located in frontier

counties with fewer than six residents per square mile or be at least 35 road miles from another hospital (Lutz, 1988; Montana Annotated Codes, 1989; Moscovice, 1989; U.S. Congress, Office of Technology Assessment, 1990). As of November, 1991, three hospitals in Montana had been converted to MAFs (K. McCarty, personal communication, March 19, 1992). According to Keith McCarty, Director of the MAF project, seventeen of Montana's 56 hospitals were eligible for MAF designation.

Scope of Services

The scope of services provided in MAFs is to be different than full-service hospitals. Some of those differences are: (1) No MAF patient may be cared for in the facility longer than 96 hours. (2) A medical doctor is not required on site in MAFs. (3) Mid-level practitioners are usually the direct medical care providers. (4) The MAF facility is required to have nursing, pharmacy, laboratory and emergency services available (Gaumer, Gabay, & Geller, 1992).

Additional features of the MAF design include identification of appropriate providers and referral agreements with other agencies to provide services for those patients who have needs which the MAF is unable to meet. Furthermore, 100% of all MAF admissions must be evaluated by the state's peer review organization for

appropriateness of admissions and consultation regarding discharge planning (K. McCarty, personal communication, May 24, 1991; Gaumer, Gabay, & Geller, 1992).

Staffing

The staffing requirements for MAFs permit greater flexibility than would be allowed in full-service hospitals. Physician presence and professional nurse requirements have been restructured in this innovative model.

Mid-Level Practitioners

Medical assistance facilities may be staffed by physicians, physician assistants and/or nurse practitioners. Physician assistants or nurse practitioners work under the direction and supervision of a licensed medical doctor (Gaumer, Gabay, & Geller, 1992). Telephone consultation for the mid-level practitioners must be available and consultation must occur within 24 hours of any MAF admission. A physician on staff only needs to be on-site once every 30 days and then only if the facility has had a patient during that time interval. The supervising physician may reside in another town.

Registered Nurses

A registered nurse must be on duty eight hours per day. At all other times, the director of nursing or

another registered nurse is required to be on call and available within 20 minutes. A facility nurse must provide 24-hour nursing service whenever a patient is in the facility (Montana Department of Health and Environmental Sciences licensure rules in Gaumer, Gabay, & Geller, 1992).

Patients

MAF regulations and physician assistant's utilization plans, which have been approved by the supervising physician and the Montana Board of Medical Examiners, delineate the type of patients these facilities can legally manage (Montana Department of Health and Environmental Sciences licensure rules in Gaumer, Gabay, & Geller, 1992). Every patient admission must have been reviewed by a peer review and quality review organization. All Montana MAFs contracted for this service with the Montana-Wyoming Foundation for Medical Care (K. McCarty, personal communication, May 24, 1991; Gaumer, Gabay, & Geller, 1992). Within 24 hours of a patient's admission, the physician assistant or registered nurse must telephone the review organization and provide a description of the severity and intensity of the patient's health problem. If in the judgment of the reviewer the patient's admission symptoms demand consultation by a specialist, the patient would not be approved for admission to the MAF. Patients with acute chest pain, acute abdominal pain and other acute

disorders would not be admitted to the MAF, but they would be referred to appropriate health care providers (K. McCarty, personal communication, May 24, 1991; Gaumer, Gabay, & Geller, 1992).

Facility Utilization

In a report of the implementation phase of the MAF demonstration project, the average monthly admission rate to a MAF had been one to two patients, with an average length of stay of one to two days (Gaumer, Gabay, & Geller, 1992). In a study of community attitudes about the MAF model, community residents interviewed were generally receptive to the MAF concept and the use of mid-level practitioners (University of North Dakota, 1989). Gaumer, Gabay and Geller (1992) noted an increase in utilization of other health care services which were located with the MAF. Office based care increased and nursing home capacity reached 100%.

Rural Nursing

Lawler (1986) noted the nursing profession was facing a critical shortage of nurses and believed that the shortage would continue. With only 19% of all practicing registered nurses (RNs) located in rural settings, the RN shortage has startling implications for rural health care. Without adequate nursing personnel in rural hospitals,

health departments, long-term care facilities, mental health centers and ambulatory care clinics, access to care for rural clients was further limited.

Moscovice (1989) stated, "Rural health is similar to other rural economic enterprises in its dependence on generalists" (Moscovice, 1989, p. 220). It has been well documented that rural nursing requires a generalist perspective (Pickard, 1990; Benson, Sweeney, & Nicholls, 1982; Lassiter, 1985; Scharff, 1987; Long & Weinert, 1989). The generalist has been described as possessing a wide range of knowledge and skills, the ability to function in diverse areas, as well as having highly developed judgment skills (Benson, Sweeney, & Nicholls, 1982; Lassiter, 1985). The nurse as a generalist was further described by Scharff (1987). In her study of 26 rural nurses it was reported that rural nurses must possess multiple competencies. The nurse generalist was described as a jack-of-all-trades, performing tasks usually reserved for respiratory technicians, laboratory technicians, EKG personnel, housekeepers, clerks, and dietitians. Scharff concluded that there were distinctive characteristics in the nature and scope of rural hospital nursing. In addition to noting that the nurse generalist was needed in a rural setting, Scharff noted that collegial relationships, nurse mentoring, and nurse-patient relationships were distinctive. Characteristics important for rural nurses

have been described in rank order as the ability to function as generalist; the ability to be flexible, versatile, and adaptable; leadership skills; the ability to improvise; resourcefulness; and the ability to deal with crisis situations. Rural nurses needed to know when to call a physician, have the ability to function effectively in the areas of maternity, intensive care and operating room, as well as on a medical-surgical-adult-child unit; they also needed to have cultural consciousness, high ethical standards, and professionalism (Biegel, 1983).

Wickham (1980) identified stresses and coping mechanisms of rural nurses. Stressors identified included life threatening and critical situations, too much to do and not enough time or staff, conflict with other people, death and dying, administration's decisions, moral and value conflicts, nursing decisions and assessments, mechanical and technical problems, chronic and elderly patients, work hours, and environment. Bunde (1981) concluded rural nurses believed they were to be dependent upon the physician during the day and independent during the evening and night hours. Additional problems identified in rural nursing were salary disparity, career salary compression, lack of flexibility in staffing patterns, professional isolation, lack of continuing education opportunities, and lack of career ladder programs (Lassiter, 1985).

Nurse-Physician Relationships

Studies of the nurse-physician relationship have described the relationship as a game and termed it the "doctor-nurse game" (Stein, 1967). Relationships were described as hierarchial with the physician being superior to nurses. Stein observed that open disagreement was avoided, making suggestions to physicians was regarded as insolent, and a distinct communication pattern was taught to nurses which enabled them to make suggestions to physicians without offense.

Three physicians concluded in 1990 that the nurse-physician game continued to thrive in some settings (Stein, Watts, & Howell, 1990). These authors also noted that although some relationships remained unchanged, others were making movement away from earlier characterizations. Social changes which were noted to contribute to a more positive nurse-physician relationship included: deterioration of public esteem for physicians, the nursing shortage, increase in female physicians, development and growth of nursing specialties, and utilization of advanced nursing practitioners (Stein, Watts, & Howell, 1990).

Kalish and Kalish (1977) analyzed sources of conflict in the nurse-physician relationship and concluded that the socialization of women and nurses contributed to their subservient stance. The results indicated women (nurses)

were taught to follow the lead of men (physicians) early in life. Kalish and Kalish reported that physicians were taught to function independently, with a high degree of responsibility. As a result, physicians developed an omnipotent self-concept as a coping mechanism. These findings indicated this self-concept has been perpetuated in the physician-patient relationship and the nurse-physician relationship. Kalish and Kalish concluded that physicians' ability to communicate with other health care team members may be limited.

A registered nurse and physician research team (Hodes & Van Crombrugghe, 1990) reported that differences in nurse-physician perspectives have contributed to conflict. They noted differences in the socialization and education of the separate disciplines. Findings of their study revealed that physicians and nurses differed in understanding of hospital organization, chain of command and use of discipline as a problem solving tool.

A more recent study of nurse-physician communication described a "relatively healthy interaction pattern between the two professions" (Kennedy & Garvin, 1988, p. 125). A limitation of that study was that it was conducted in a laboratory setting, with unacquainted dyads of nurses and physicians. No studies concerning the relationship between physician assistants and nurses were found.

Conceptual Framework

According to Weinert and Long (1989), a theoretical basis for understanding rural nursing is in its infancy. The importance of identification of differences and commonalities of nursing practice in rural areas was cited as a part of the rural nursing research agenda. The American Nurses' Association Statement on Rural Nursing (1989) and the description of the nurse-physician relationship by Stein (1967) provided the framework for examining nurses' perceptions of nursing in frontier medical assistance facilities, medically staffed with physician assistants.

The ANA statement has identified a health care crisis in America and particularly in rural America. It was further stated that the largest group of health care providers are nurses and that they have great potential for filling the gap in rural health care (ANA, 1989).

Rural nurses are generalists. A generalist can be described as a nurse who is a jack-of-all-trades. Rural nurses require a broad knowledge and skill base. In this age of specialization, being a generalist is a unique practice pattern. Generalists are required to perform skillfully in diverse areas of nursing.

The American Nurses' Association (1989) has noted that adjunct personnel are often absent or in short supply in

rural settings, which often necessitates that the nurse perform respiratory therapy, laboratory, physical therapy, clerical, and other skills in their work day. Problems further identified in rural nursing center about isolation. Rural nurses have limited opportunities for career development, continuing education, advanced education and professional networking. Isolation has been reported to be the result of limited manpower and fiscal resources, as well as geographic barriers (ANA, 1989).

Nurse-physician relationships provided another facet of this framework. Nurse-physician relationships have been described as hierarchial with nurses in the subordinate position (Stein, 1967; Kalish & Kalish, 1977). The relationship between physicians and nurses has been filled with conflict and lack of understanding of one another's roles. The behavior pattern has been one of dominance by the physician and deference by the nurse (Kalish & Kalish, 1977).

CHAPTER 3

RESEARCH METHODOLOGY

Design

A qualitative descriptive design was used to describe rural nurses' perceptions of nursing practice in frontier medical assistance facilities (MAFs) staffed with physician assistants. Qualitative research lends itself towards perspectives, meaning, uniqueness, and subjective lived experiences. The aim of qualitative research is understanding (Mariano, 1989). Qualitative research offers "rich insight into nursing phenomena." (Leininger, 1985, p. 4) Open-ended questions in a semi-structured interview were used in this study.

Sample

This study utilized a voluntary convenience sample of 11 registered nurses (RNs) who were employed in MAFs in eastern Montana. Names and telephone numbers of potential nurse participants were obtained from key informants in each community. Key informants were nurses who were knowledgeable about their respective communities and the nurse population. Key informants were those in a community

who were the most informed about the domain under investigation (Spradley, 1979). Rural communities selected for inclusion were designated as frontier and had a medical assistance facility. Subjects met the following two criteria to be included in the study: (1) Participants had at least one year's experience in a rural setting where the primary provider was a physician and (2) were employed in a MAF where the primary provider was a physician assistant.

Procedures for Data Collection

Access to subjects was gained through key informants who provided names and telephone numbers of potential subjects. An information letter and an invitation to participate were sent to each potential subject (Appendix A). Potential subjects were then telephoned to establish willingness to meet with the investigator for a face-to-face interview. Participation was strictly voluntary. Once subjects agreed to meet the investigator, a mutually convenient interview time and place was arranged.

The investigator established rapport with each subject at the onset of the interview. Subjects were given a copy of the informed consent. Adequate time for reading the consent was given. It was expected that each interview would last no more than 90 minutes and no less than 60 minutes. Subjects were reminded that interviews would be

tape recorded. Once informed consent (Appendix B) and demographic data (Appendix C) were obtained, an introductory statement was read and the subject was encouraged to freely comment. Open-ended questions with prompts in a semi-structured interview were used in this investigation (Appendix D). In order to develop and maintain collegial relationships with rural health care delivery systems, an information letter explaining the study was sent to the director of nursing of each MAF (Appendix E).

Interviews

Semi-structured, face-to-face interviews were conducted in this study. Interviews allowed for explanation of perceptions, opportunity for clarification, and were a valid way of generating data which described phenomena (Woods & Catanzaro, 1988). The interview guide was developed after a review of the literature and from the researcher's professional knowledge of rural nursing practice.

Leininger (1985) noted that the criteria to judge validity and reliability in qualitative research should not be the same measurement as used in quantitative research. "Validity in qualitative research refers to gaining knowledge and understanding of the true nature, essence, meanings, attributes, and characteristics of a particular

phenomenon under study. Knowing and understanding the phenomena is the goal" (Leininger, 1985, p. 69).

Protection of Human Subjects

Human subjects were protected throughout the study. Subject participation was strictly voluntary. Confidentiality and anonymity were assured.

The subjects for this study were registered nurses employed in medical assistance facilities in Montana which were medically staffed by a physician assistant. Because MAFs, medically staffed by physician assistants, were unique to Montana, these subjects were the only possible participants. Subjects were accessed through key informants in each community.

No physical risks to participants were identified. Some psychological risk was involved in the interview process; by virtue of being interviewed, some subjects may have experienced some anxiety. Subjects may have felt at risk because the population was small. Subjects may have had concerns that participation would affect working relationships and/or community relationships. Minimizing psychological risk was achieved by interviewing in a private environment.

Participation was strictly voluntary. Subjects were fully informed of the nature of the study and provided written consent for participation (Appendix B). Verbal

consent was also tape recorded prior to the beginning of the interview.

The names, addresses, and telephone numbers of subjects were known only to the investigator. Demographic data and interview data were coded and stored in separate locked cabinets to eliminate the risk of participant identification. Tape recordings were made of the interview, but were erased following transcription. Transcriptions identified with participant's code number were available only to the investigator and research supervisors. Consent forms will be maintained in a locked file for three years at Montana State University, Billings campus. Participants could choose not to answer any given question and were free to withdraw from the interview at any time. Participants were assured their names or affiliating agencies would not be used in any publication or presentation of the research findings. This study was approved by the Human Subjects Review Committee of Montana State University, College of Nursing, Bozeman, Montana.

There were no immediate benefits to the participants. The opportunity to discuss perceptions of practice may have been of benefit to some subjects. Information given during the interviews may contribute to knowledge about rural nursing and rural health care. It was believed that benefits of participation in this investigation exceeded any risks inherent in the study.

Data Analysis

Data collected in a qualitative investigation are generally very abundant. An early strategy employed in this study, for the management of large volumes of data, was the development of a conceptual framework. Qualitative data managed within a framework contributes to a focused study (Woods & Catanzaro, 1988).

Latent content analysis was utilized to analyze the data generated in this study. Content analysis required that transcriptions of interviews be coded for emerging themes and similarities or differences in the data. The cyclical process in naturalistic-inductive research lends itself to qualitative research (Woods & Catanzaro, 1988). Data collected with each interview built upon the previously identified emerging themes and patterns. One method of analysis used was coding. Codes were generated from the framework, review of literature, investigator's insight, or emerged from the data in keeping with research authorities (Woods & Catanzaro, 1988). Data were presented in a narrative description of the emerging themes.

CHAPTER 4

FINDINGS

The purpose of this study was to describe the perceptions of nurses about the practice of nursing in frontier medical assistance facilities (MAFs) medically staffed with physician assistants. Little has been reported about the role of frontier nurses, and publications about the nurse's role in MAFs medically staffed with physician assistants were not located. A description of the communities, the medical assistance facilities, the frontier nurses, and the nurses' perceptions of nursing practice in a frontier setting are reported. Through interviews, participants discussed perceptions of working relationships with physician assistants.

Demographic Characteristics of the Sample

A convenience sample of professional nurses employed in MAFs was identified by key informants who were familiar with the nursing work force in three frontier communities in eastern Montana. Of a possible 15 practicing nurses in the frontier communities, 12 registered nurses (RNs) were approached to participate in this study. Eleven registered

nurses provided demographic data and participated in face-to-face audio-recorded semi-structured interviews. One nurse chose not to participate. The researcher collected all of the data during January-February, 1992.

All of the participants were female and ranged in age from 32-60 years with an average age of 46. All participants in the study were married. The academic preparation of the participants were four with baccalaureate degrees, four with associate degrees and three with diploma preparation. No participant had earned any credits toward an advanced degree.

Participants' years of nursing experience ranged from 5 to 39 years. All participating nurses were employed in their respective communities since the inception of the MAFs between January and June, 1991. Five nurses held full-time nursing positions, and five nurses were in part-time positions working an average of 32 hours per two week period. One participant described her practice as "PRN" (as necessary). That individual lived 50 miles from the health care facility and worked as needed during those months when weather was conducive to travel.

The participants in this study had resided in their respective communities 1-50 years, with an average of 24 years in residence. Four nurses described themselves as being born and raised in their communities, only leaving

for their nursing education. Demographic characteristics of the sample are summarized in Appendix F.

The Communities

Data were collected from nurses working in three medical assistance facilities. The MAFs were located in small towns in eastern Montana. Eastern Montana is a vast semi-arid expanse of land and is predominately agricultural with a sparse population of six persons per square mile (Elison, 1986). The geographic vastness of this land can be put into perspective when the reader understands that the largest of the participating counties is the size of the state of Connecticut.

The two smaller communities have fallen on economic hard times. Evidence of this was seen in the numerous closed business ventures, as well as the general disrepair of the residential sections. The third and largest community had several paved streets and a well-maintained business district that included a mini-mall. The populations of the three communities were 439, 494, and 805, respectively (U.S. Census Bureau, 1990). In such ranching-farming areas, county populations were more representative of the service area for each medical assistance facility. The county populations were 1503, 1589, and 2,276, respectively (U.S. Census Bureau, 1990).

Residents in each community were friendly, helpful, and somewhat curious about the presence of the researcher in the community. In one community the motel clerk ventured a question to the researcher, "Are you in town for the big firemen's meeting?" The gas station attendant commented, "Must have the weekend off and just traveling around?"

Children appeared to be important residents in each community. The schools were modern. There were parks and playgrounds in each community and swimming pools in two of the communities. The scheduling of nurse interviews was done around basketball games in every community. The researcher was invited to "stay tonight for the roast beef dinner and basketball game."

Medical Assistance Facilities

Full-service hospitals once existed in each of the three communities where MAFs now exist. Two of the three communities had closed the hospital facilities for a period of months before obtaining MAF licensure. In the third community, hospital administrators converted the full-service hospital license to a MAF license. MAFs opened for business in the three sites between January, 1991 and June, 1991. An overview of the MAF model and aspects of its design are discussed.

The service mission of MAFs was to provide short-term, low intensity acute care and emergency care prior to transportation to a hospital. The scope of services provided in MAFs was discussed fully in Chapter 2, as were staffing requirements.

Physical Plant

Medical assistance facilities in all three communities were located within long-term care facilities. The bed capacities of the long-term care facilities were 38, 21, and 14, respectively. Two facilities had the capacity to receive two MAF patients, and the third could accept up to ten MAF patients. MAF beds in each facility were located next to the nurses' station that served the long-term care section. In the facilities where two MAF beds were available, these beds were in the same room. Persons of the opposite sex could possibly be "roommates" for up to 96 hours in these facilities. Nurses reported, "That hasn't happened yet." During the times of the interviews, MAF beds were unoccupied, and no emergency care was provided. The MAF rooms were clean, pleasant, and freshly decorated. In one community, "ladies' organizations" had donated time and money for paint, wallpaper, and furnishings.

In two of the communities all health care services (MAF beds, long-term care beds, ancillary services) were located in one building. The third facility had two MAF

beds within the community long-term facility, but the emergency room, radiology equipment, laboratory equipment, clinic offices, and pharmacy were in another building about one-half to three-fourths of a mile across town. Plans were being made to locate all medical resources under one roof during the spring/summer of 1992.

Facility Organization and Services

The organizational structure of a medical assistance facility/long-term care facility included the following services: administration, medical, nursing, pharmacy, and laboratory. Housekeeping, dietary, and maintenance personnel contributed to the operation of these facilities.

Facility Administration

Facility administration was provided on-site in two of the three facilities visited. The third facility generally contracted administrative services from a hospital 46 miles away. At the time of data collection, one MAF/long-term care facility's director of nursing was also serving as the temporary administrator.

Medical Service

Physician assistants provided medical services in all three facilities. In one facility a supervisory physician was on-site but reportedly "near retirement" and "not doing as much as before." The physician assistants practiced in

the other two communities without physicians. They were supervised by physicians 84 miles and 36 miles away, respectively.

Nursing Service

In keeping with MAF licensure rules a registered nurse was on duty eight hours per day in each MAF/long-term care facility. During evening and night hours, a RN was on call and within 20 minutes of the facility. During the times any patient was in the MAF, on-site 24-hour RN nursing service was provided. The typical staff in a MAF/long-term care facility consisted of one nurse manager, three to seven full-time equivalent RNs, four to six full-time equivalent licensed practical nurses (LPNs), and six to ten full-time equivalent nursing assistants. A usual staffing pattern for an eight-hour day shift for a two-bed MAF and a 38-bed long-term care facility included one professional nurse plus two to three nursing assistants.

Ancillary Services

All three facilities employed support staff in the areas of administration, housekeeping, dietary, and maintenance. Pharmacy and laboratory services were provided differently in each facility. For example, in one community the physician assistant also served as the laboratory technician.

Patients

Nurses employed in MAFs reported caring for patients with medical diagnoses of pneumonia, dehydration, congestive heart failure, and gastroenteritis and for several victims of motor vehicle accidents. With the exception of some motor vehicle accident victims, patients were usually residents of the surrounding area.

Facility Utilization

Nurse participants reported a generally low patient utilization of the medical assistance facility. The nurses reported, emphatically, a belief that a health care facility was imperative to the survival of the community as well as future development of the community. In regard to low utilization of the facility, one nurse explained, "I think the people have a wait and see attitude." In one community where health care was unavailable for a period of time before the MAF, community residents established medical relationships in neighboring communities and had not "come back." Nurses believed MAFs would stand the test of time and verbalized a commitment to providing quality care in these facilities.

Frontier Nursing Practice in a Medical Assistance Facility

Nurses who practiced nursing in medical assistance facilities in sparsely populated and geographically distant locations described perceptions of nursing practice in these settings. Major themes that emerged in this study included isolation versus community, role, creativity, stressors, and the nurse-physician assistant relationship. The distinctive characteristics of frontier nursing practice in a medical assistance facility, medically staffed with a physician assistant, are reported in the remainder of the chapter.

Isolation Versus Community Membership

Isolation and a strong sense of belonging to a community seemed to coexist in frontier nursing practice. Although nurses spoke openly about being alone, not knowing what would happen next, lack of anonymity, and professional isolation, they also reported a sense of belonging within the community that balanced the isolation enough to keep nurses practicing.

Participants reported that belonging to the community generally afforded flexibility in scheduling of work hours, time to perform at their very best on the job, the advantage of knowing patients personally, rewarding collegial relationships, community appreciation, and

personal satisfaction. Living in frontier settings was seen as advantageous because of the easier pace of life, wide open spaces, clean air and water, and personal safety, as well as being a "great place to raise a family."

Practicing Alone

All participants perceived frontier nursing practice in a medical assistance facility/long-term care facility as different from nursing practice elsewhere. The first thing all participants reported about their practice was the feeling and burden of practicing alone. Nurses reported that after four in the afternoon until seven the following morning nurses worked alone in the medical assistance facility/long-term care facility with one or two nursing assistants for support. The nurses explained, "You are all alone ... and completely in charge. You're the charge person over 37-40 people and you are the only one. You don't have a medication nurse or a treatment nurse--you are just it." One nurse noted, "The big difference is the peer support that others get from one another. Everything that you do is confidential so you can't discuss it ... you are just here by yourself."

Being alone was described as burdensome, worrisome and laden with responsibility. In terms of role isolation, nursing practice in a medical assistance facility/long-term care facility was described as similar to practice in a

rural hospital. To illustrate this responsibility, a frontier nurse explained how it was in the frontier hospital, before there was an MAF:

> First of all, you're there by yourself. You really feel alone sometimes, especially back when we were delivering babies, doing the emergency room plus maybe having seven or eight patients when I first came here. So you're all alone and completely in charge. Just little things ... like maybe you can't get an IV started that day ... you're having a bad day. There's nobody to call on; you've got to do it.

In the MAF, when the local physician assistant was out of town, nurses consulted via the telephone with physicians in distant communities. One nurse shared, "We have had heart attacks here, we get orders over the phone, it's a long way and no one can see what is going on, nor can you tell them everything that is going on ... and you are all alone."

Not Knowing

"Not knowing what a day would bring" was another predominant theme frontier nurses identified as a perceived difference in their practice. The nurses explained, "We just learn to be ready for anything." Another nurse reported, "You are always waiting for the phone to ring." Several nurses reported that in a frontier setting any type of health care need or emergency could and did present itself to the medical facility. Nurses described vehicle accidents, rodeo trauma, broken bones, asthmatic children,

dehydration, lacerations, and "Saturday night earaches" as situations where nurses were expected to provide nursing care. All nurses in this sample considered themselves unprepared to accept the challenge of such an unpredictable workload. Participants reported anxiety related to feeling inadequate to care for patients with emergencies or acute needs. A frontier nursing supervisor reported that when the long-term facility added the two beds for MAF patients, two nurses resigned. She explained:

> The long term care nurses are having a lot of anxiety and apprehension about the emergency nursing and the MAF nursing. I have lost two of them (staff nurses) because of the stress of the MAF.

Lack of Anonymity

A lack of anonymity was described by some frontier nurses. Nurses reported that everyone knows who you are and where you are and will call you. One nurse explained the only "vacation" from nursing that she takes is during the "lambing season." She went on to explain when she did not answer her telephone while on vacation ... "they'll drive out and come up to the lambing shed looking for me." One nurse participant described a lack of anonymity during an emergency situation when "they found me at the court house and asked me to hurry to the MAF." The researcher had an experience that further illustrates the point. The researcher asked to use a telephone in a restaurant, and a

waitress offered to make the local call. After inquiring as to who the researcher was calling, the waitress offered, "Oh, she'll be up ... she didn't work last night."

Professional Isolation

Nurses in frontier medical assistance facilities/long-term care facilities reported being professionally isolated. Frontier nurses noted that continuing education was difficult to obtain because of geographic distance, short staffing, and fiscal constraints in the MAF. Career advancement, continuing education, advanced nursing education, and pertinent rural-frontier references were described as difficult to access, further isolating the professional frontier nurse. Nurses noted most continuing education offerings were at least 200 miles away. One facility had applied for and was awarded a continuing education grant. Nurses in one frontier community reported educators from a large tertiary facility provided on-site continuing education for nurses on a monthly basis.

Learning from colleagues was limited because "no one is there to ask." A participant explained:

> There is nobody but me here and this is different. You don't get experience from others around you -- another person may have different experience or more experience and you learn from others. I miss that a lot.

A few nurses reported reading nursing journals regularly. One nurse noted that nursing journals were

available, but none seemed "pertinent" to rural or frontier nursing.

Community Responsibility

A deep sense of loyalty to community was expressed in all three participating communities by the nurses employed there. Nurses who reported they "did not have to work" did so because their community and colleagues needed them. A nurse described the health care facility as a "spoke of a wheel." Continuing on she said, "If it goes, the school goes, the courthouse goes ... the town goes ... any one of those spokes is critical for community survival." One nurse pointed out that she worked because "I live in a town without enough things ... I don't want to live in a town without medical care."

Two nurses from the same community discussed guilt and obligation as a partial motivating factor to assist in emergency cases. Neither nurse received "on call" reimbursement; if a patient came to the emergency room and nursing help was needed, these nurses were called at home to come in and help. One nurse explained:

> They (administration) say we can say no because we aren't on call, but it's kind of hard to because if you're called you know somebody's been hurt or something. You know that if it was your family and there wasn't somebody to take care of them that you wouldn't want that to happen ... so you usually get up out of bed or whatever and go.

Another nurse who worked only 2-3 days per month explained that she worked "definitely out of a sense of loyalty to her (the physician assistant), and out of a sense of loyalty to the community too. And a little bit out of guilt." One participant felt the community expected allegiance. She explained, "They know you'll be there." Another said, "Sometimes you're tired and you may feel like you want to quit, but they will still call you ... because you are the nurse."

A sincere dedication to the people of the community and the MAF/long-term care facility was evidenced when nurses explained what they would miss most of all if their job were gone tomorrow. For example, one nurse said:

> My old people, I would worry about them. The people in this nursing home are spoiled rotten. I bet there isn't another nursing home in the state where when the call light is turned on we are there in two seconds.

Another nurse commented that she would miss the "residents in the nursing home."

"From Around Here"

While discussing perceptions of nursing practice in medical assistance facilities, nurses described the population they provided care for as people "from around here." The characteristics of local people were described as "the type of people that usually don't come in until they are really sick, so that you know they really need

care." Several nurses noted this same characteristic among their patients, "They get so sick ... they finally need to see someone." One nurse observed that the physician assistant had some trouble with folks "from around here" because "he can't deal with people coming in and telling him what they need." Frontier nurses who were not raised in the community but took up residence there after marriage noted "people from around here don't see you as a professional; they see you as somebody's wife or somebody's mother."

Service which was slowly disappearing because of economics in one frontier county was described by a nurse. "If you were from around here and required the services of the ambulance, you weren't charged anything ... but if you weren't from around here ... you would have been billed."

"From around here" may suggest a particular culture or perhaps a commitment to community. One nurse described a former director of nursing, "She wasn't someone that was going to stay, she wasn't from here."

Knowing Patients Personally

All of the nurses participating in this study were confident that knowing patients personally enhanced their ability to provide care. Nurses reported that when caring for someone they knew that "you want to do your best." Another nurse stated, "Everybody has a favorite (patient),

and they take ownership of them and treat them like family." After thoughtful reflection she stated, "They are family." A nurse with experience in other settings felt that the aspect of knowing patients personally made providing care more emotionally difficult for the nurse due to emotional ties. The nurse explained,

> You know most everybody ... it's more like family and you know it is harder to take care of family than when you don't know the people ... not that I don't think you do just as good of job ... but it's harder because they are almost like family ... there's a bond.

Nurses talked openly about how relationships in the community enhanced relationships with their patients. Several nurses mentioned giving an extra measure of care because "I know her daughter real well" or "our family has been friends of theirs for years." One nurse described how the development of a therapeutic relationship was already established before patients presented in the emergency room or for admission to the MAF. She stated, "We know their personalities, they know us and they respect and trust us."

Most of the nurses believed nursing care in a frontier setting was better than in an urban setting. The ability to provide excellent care as described by the nurses was multifaceted. Low technology, less critical cases, and knowing patients personally contributed to enhanced caring. One very articulate nurse stated, "I know if I were to go back to an urban setting I would be a much better nurse

because I can really see patients as people with lives and families ... not just bodies."

Work Satisfaction

Nurses in medical assistance facilities reported being satisfied with their work. Three themes were identified as being important to nurses. These three themes were collegial relationships, salary, and community appreciation.

Collegial Relationships

Strong loyalty and allegiance to each other by nurse colleagues was apparent in frontier settings. Nurses stated, "Everybody looks out for everybody else. We are a family-- we help each other out." "In a small facility everybody is willing to work for the same goal." "Family" certainly connoted a degree of responsibility and support for other members. Despite extremely low numbers of nurses in a given community, shifts were covered for special requests with little or no perceived conflict. Nurses appreciated collegiality and flexibility. Nurses reported a strong sense of high performance standards. When a contract or temporary licensed practical nurse had performance deficiencies and was unreliable, the supervising nurse stated, "If local people abused/used the system like he did, we would not get by with it." Three nurses remarked that the nursing assistants were "the ones

who need a raise." Nursing assistants and licensed practical nurses were valued. Two nurses indicated nursing assistants and licensed practical nurses did "all the work."

Salary

Although participants perceived nursing salaries as lower than larger Montana communities, they verbalized salary satisfaction. Local economics and cost of living were cited as justification for their satisfaction. Two nurses who had once been paid for "on-call" duty were no longer receiving this compensation and were dissatisfied with that aspect. No nurses mentioned lack of career advancement opportunities as a disadvantage. One nurse hoped she could some day obtain a baccalaureate degree.

Community Appreciation

Most nurses felt "appreciated by the community." One frontier nurse shared, "I am an R.N. and we are pretty unique. We are pretty special. I think we are appreciated."

Role

The role of the nurse in the frontier setting emerged as a unique and demanding one. Nurses employed in MAFs described caring for long-term care residents and patients with a variety of acute illnesses and also practicing nursing in emergency situations. Lack of ancillary

personnel mandated that nurses learn to perform tasks and have the knowledge traditionally reserved for other disciplines including respiratory care, pharmacy, housekeeping, physical therapy, and central supply. Themes which emerged from the data concerning the nurse's role are discussed.

Generalist Perspective

Nurses in frontier settings reported having to be a "jack-of-all-trades." Nurses reported the need for a broad knowledge base. In frontier settings nursing care is provided in a multitude of situations. One nurse explained her role and knowledge base as follows:

> I guess I don't know if I could work in a larger facility or not ... but I just feel that in a larger facility I would have to know more ... I probably know as much or more ... it's just spread out in different areas.

Nurses discussed the importance of being organized and possessing prioritization skills. An experienced nurse explained:

> I don't worry about it, I don't get excited. You take your priority ... the nursing home patient can wait a few minutes ... you know how long they can wait. We have one patient that needs suctioning periodically ... you know how long it can go. The other night I had two emergencies and you just fit it all in.

Although MAFs are not authorized to care for obstetrical patients, a nurse cited previous hospital

experiences in order to describe nursing practice in MAFs. For example, the nurse recollected,

> You had to be ready for anything. You never knew when you might have an OB (obstetric case), a car accident or whatever ... so I guess you just have to be organized.

Role Diffusion

Role diffusion, the extension of the nurse's responsibilities beyond traditional boundaries, was found in this study. Nurses reported that frontier nursing required them to practice as generalists and required that they be competent at multiple skills. One nurse explained that she had received her nursing education in a learning environment which stressed strong health care team concepts. This environment also had many ancillary departments. The nurse reported frontier nursing practice was a challenge because, "There is no team out here; you're all by yourself." What was very apparent was the absent or infrequent services of ancillary departments. The responsibilities traditionally managed by separate departments in urban settings become added responsibility for the frontier nurse. Health care disciplines which frontier nurses noted to be part of their responsibility included: respiratory care, physical therapy, housekeeping, central supply, radiology, medicine, dispatching the ambulance, social services, pharmacy,

laboratory, completing electrocardiograms, medical records, and acting facility administrator.

One participant described her practice clearly, "We may not be specialists, but we know a little bit about everything." Another nurse remarked:

> I draw (blood) from patients, I do EKGs (electrocardiograms). We all do respiratory care -- you have to fit in all of that in just eight hours and some days it's just overwhelming.

Being responsible for such diverse practice areas and being accountable for performing in many non-traditional nursing roles was described as stressful.

Nurses as Respiratory Technicians

None of the three facilities had respiratory service beyond what the nurses provided. Respiratory therapy in frontier settings included nebulizer treatments, incentive-spirometry, percussion and postural drainage, and administration of oxygen therapy.

Nurses as Laboratory Technicians

Laboratory service in frontier settings was not readily accessible and generally had minimal testing capacities. Laboratory service in one MAF was provided three days per week on-site and in a neighboring community the remainder of the week. Nurses drew patients' blood and placed it in the proper tubes, centrifuged the tubes for the appropriate amount of time, and arranged for transport

of the specimens. In some facilities nurses completed laboratory tests such as glucose, hemoglobin, and hematocrit.

Nurses as Pharmacy Technicians

Lack of on-site pharmacy services in a frontier setting was a reason for concern among nurse professionals. MAFs either had a visiting pharmacist one day per week, a pharmacist on duty Monday-Friday, or a pharmacy area located in the clinic across town. In one frontier setting it was not unusual for the RN to drive across town to the pharmacy to secure medications needed for MAF patients more than once a day. Anxiety was verbalized about this role expansion.

Nurses as Housekeepers

All professional nurses in frontier settings performed some housekeeping responsibilities despite the fact that there were other personnel for these duties. Nurses in one facility often laundered patient clothing because the contract laundry service "wears clothes out too fast."

Nurses as Primary Providers

Nurses hesitantly reported providing care beyond the scope of nursing practice in frontier settings. No reported incidents occurred in MAFs, but rather in hospitals that previously existed in the communities.

Nurses described replacing gastrostomy tubes and suturing lacerations, and four reported delivering a child.

Twice nurses raised the issue of the "Hospice Six." The Hospice Six was a recent highly publicized Montana State Board of Nursing disciplinary case. The six nurses involved in this case received disciplinary action after it was determined they had practiced outside the legal scope of nursing practice. While raising this issue the nurses seemed hesitant to discuss the boundaries of the nursing role.

Providing Other Services

In addition to providing nursing care, a typical day in a frontier setting for one nurse included the responsibilities inherent in many other services: medical records librarian, social service, infection control, inservice education, nursing administration, and facility administration. These responsibilities also included direct patient care and driving to the clinic to "get the MAF" patient for admission to the facility.

Lack of Role Differentiation

A phenomenon emerging from the data was identified as a lack of role differentiation in nursing practice among RNs, licensed practical nurses, and nurse assistants in MAF settings. Two nurses perceived that the RN role was the same as the nursing assistant role. A nurse commented, "I

didn't feel like a nurse at all. I felt like a nurse assistant." Another stated, "I always feel like the nurses' aides (assistants) know just as much as I do about the patient." One frontier nurse believed most community members did not understand the role of a nurse. She articulated, "Everybody that works in smaller hospitals really has the same rank in people's eyes whether you are a nurses' assistant, whether you're a nurse, whether you're a cleaning lady." This nurse explained this particular community attitude evolves from something "I've found in a smaller town." She went on to say, "Continuing your education is more than going to college ... it could be going to beauty college. Perceptions are different that way."

Nurse Volunteerism

A concept that emerged was that of nurse volunteerism. Frontier nurses often volunteered their time and professional skills without reimbursement. This practice seemed very goal directed, to help the MAF stay open and survive financially. Furthermore, volunteer nursing seemed to be derived from a sense of duty to the community. Humbly, frontier nurses did not recognize this behavior as unusual or out of the ordinary. Nurses provided stories of their volunteer nursing. One frontier nurse told of administering intravenous morphine to a terminally ill

woman in the MAF/long-term care facility at or about 2:00 a.m. every morning for about a month. "If I worked nights I was already there, so it was only on my days off that I had to come over here." This nurse was uncompensated and explained she did it "because she (the patient) needed it."

Nurses in another facility were asked to work one day every two weeks without pay during a period of economic crisis for the facility. Nurses reported willingly doing this to "keep the place open." A nurse described this as a community effort. "Everybody helped out ... donated cattle or money. I was just doing my part."

Another nurse described how nurses in her community often rode in the ambulance and provided nursing care without charging for nursing care. The nurses' rationale for this behavior was, "You try to make it easier, less stressful. You know they (community members) don't have money. You aren't going to hound them. All the EMTs (emergency medical technicians) are donated ... the nurses could charge but they never do."

Registered nurses were "on call" in all three communities without compensation. During hours when a RN was not on duty in a MAF, one needed to be on call and available within 20 minutes. Occasionally, when additional nursing care was needed, nurses were located and expected

to respond even when not "on call." One nurse reported, "They can always find us in this town."

One unusual situation clearly illustrated nurses' devotion and commitment to the facility and the community. A frontier facility was having performance problems with a temporarily employed licensed practical nurse and dismissed the person. Immediate replacement for that position was out of the question. The nurse working 12-hour shifts during the day volunteered to sleep at night in the facility. She was to be awakened by unlicensed staff for emergency care or professional nurse responsibilities in order to meet staffing needs. This arrangement lasted for two and one-half months. Even on her days off the nurse would drive 20 miles to town to spend the night in the facility.

Nurses in frontier settings volunteered to improve the quality of life of nursing home residents. For example, nurses provided transportation for special outings so that residents might view Christmas lights or enjoy the changing colors of fall.

A nurse in a frontier MAF returned in the evening to administer intravenous antibiotics to a long-term care patient. Although the LPN was certified to provide intravenous therapy, she was apparently "uncomfortable." In this situation, a RN willingly drove 13 miles to town to assist and support a colleague.

A rather dramatic illustration of volunteerism for the benefit of the facility and community was a nurse who had resigned her position as Assistant Director of Nursing/ Quality Improvement Coordinator and yet continued in a staff nurse position. She stated, "I did it because I thought by resigning someone else could be attracted to that position rather than just a staff RN position. I did it because we are desperately in need; we need people."

Decision Making

Effective clinical decisions about patients' problems is crucial in any setting, but may have even more importance in the frontier setting. The decision-making process entails several factors including previous experience and the available data base. Nurses in MAFs have tremendous decision-making responsibilities. A nurse, alone in a health care facility, at times has no other professional to participate in decision making. Nurses evaluated the condition of patients and determined if the physician assistant or nurse practitioner could reach the facility within one hour. If the physician assistant/ practitioner was unavailable, the nurse arranged for the transport of the patient to another facility capable of providing the appropriate level of care. While discussing responsibilities usually reserved for other health care disciplines, one nurse noted, "We do respiratory care, we

do the treatments, and any emergency that comes up ... you have to make the decisions .. you are the only one."

Nurse Creativity

Nurses in the MAFs reported that providing nursing service in a remote setting required creativity. Nurses generally had difficulty readily identifying creative or resourceful aspects of their frontier practice. Nevertheless, the interviews revealed a few examples of creativity and nursing innovation.

Staffing

Meeting staffing demands was an area where frontier nurses were often required to be creative. Nurses, at times, brought their children to work until child care arrangements could be made. In two of the three facilities, nurses had a designated room where they could sleep. This practice facilitated a RN working until 11:00 p.m. with a return shift at 7:00 a.m. The "nurses' room" also often accommodated the nurse who lived 30 miles in the country during winter weather.

Supplies and Equipment

One nurse described a medication shelf she designed which facilitated medication administration to routine nursing home residents. This innovation was described as particularly useful "in case something (a patient) came

into the MAF or emergency room -- my medications were all organized." Clean empty gallon milk jugs served as sharps disposal containers -- functional and cost effective.

Obtaining Services

In one particular facility, obtaining ancillary services, at times, required creativity. On-site laboratory and radiology services were available three days a week. During the remaining part of the week nurses collected laboratory specimens and "sent them" to a neighboring community hospital. The facility nurses explained,

> We always knew the school superintendent would be going after school ... he lived there ... he would check before leaving town to see if we had anything to take. We always know which direction the "kids" (school athletics) are headed. People are always willing to transport for us.

As one nurse aptly put it, "We've done without for so long we don't even know it's creative."

Stressors

Stressors in nursing practice emerged as a common theme in the data. Stressors identified by nurses in frontier settings include specific types of patients, lack of technology, workload, staff shortages, and skills competency.