Health care delivery models for incarcerated populations
by Susan Jean Wallace Raph

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Nursing
Montana State University

Abstract:
The Regional Correctional Facility Act (53-30-501 through 53-30-511, MCA) was passed in 1997 by the Montana legislature in response to rising health care costs, an increasing prison population, and taxpayer demand for correctional cost-effectiveness. Subsequent to the legislation four regional contract prison facilities were built in Montana. The chosen model of health care delivery at each of the contract facilities was at the discretion of the contractor or county, and it was anticipated by the Montana Department of Corrections that this decentralized approach would provide for wide variances in the structure, process and outcome of inmate health care delivery. Limited information was available regarding the structure and provision of health care services within the correctional system. A non-experimental descriptive exploratory survey study was utilized to describe, compare and contrast the existing models of health care delivery at four regional contract prisons in Montana.

The study identified model similarities and differences. In the analysis of indicators reflecting the provision of health care, similarities were found in the age distribution and in the absence of identified transportation and security costs associated with providing out of facility health care services. Differences between the models were found in the demographic profiles, inmate health complaints as perceived by the health services directors, inmates' access to health care services, staffing patterns of the health service unit, triage protocols, medical records management, pharmacy services, and the approval routines for out of facility health care services. Analysis of the types primary care providers, educational preparation of health services directors, the range of services provided within each model, and the availability, accessibility and use of specialty health care services out of the facility revealed distinct differences among the health care delivery models. In the analysis of indicators used to identify cost efficiency, differences were noted in the comparison of selected radiology, laboratory, and pharmacy costs. The absence of monthly financial reports for the health service directors was consistent among the models.

Efforts to provide constitutionally mandated health care and to limit correctional health care costs illustrate the dichotomy facing the correctional health care system in the 21st century. Insight into the structure of health care delivery models suggests that the standards of correctional health care, established by the National Commission on Correctional Health Care, provide a sound foundation for quality health care provision. Despite the need for cost containment, quality should remain the primary focus of health care delivery models for incarcerated populations.

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Susan Jean Wallace Raph

This thesis has been read by each member of the thesis 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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ABSTRACT

The Regional Correctional Facility Act (53-30-501 through 53-30-511, MCA) was passed in 1997 by the Montana legislature in response to rising health care costs, an increasing prison population, and taxpayer demand for correctional cost-effectiveness. Subsequent to the legislation four regional contract prison facilities were built in Montana. The chosen model of health care delivery at each of the contract facilities was at the discretion of the contractor or county, and it was anticipated by the Montana Department of Corrections that this decentralized approach would provide for wide variances in the structure, process and outcome of inmate health care delivery. Limited information was available regarding the structure and provision of health care services within the correctional system. A non-experimental descriptive exploratory survey study was utilized to describe, compare and contrast the existing models of health care delivery at four regional contract prisons in Montana.

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Efforts to provide constitutionally mandated health care and to limit correctional health care costs illustrate the dichotomy facing the correctional health care system in the 21st century. Insight into the structure of health care delivery models suggests that the standards of correctional health care, established by the National Commission on Correctional Health Care, provide a sound foundation for quality health care provision. Despite the need for cost containment, quality should remain the primary focus of health care delivery models for incarcerated populations.

CHAPTER I

INTRODUCTION TO STUDY

The correctional setting is faced with many challenges in providing quality health care to incarcerated populations. Rising health care costs and increasing prison populations coupled with taxpayer demand for cost-effectiveness support the need for innovative models of health care that are capable of addressing these multidimensional factors.

The Purpose

The purpose of this study was to describe, compare, and contrast the models of health care delivery existing at regional contract prison facilities of the Montana Department of Corrections (MDOC).

Background and Significance of Study

The regional prison concept of the Montana Department of Corrections began as a result of escalating numbers of prisoners housed at Montana State Prison (MSP) in Deer Lodge, the only state owned and operated prison in Montana. This facility, with a functional capacity of 1300, was subject to litigation regarding overcrowded conditions in the early 1990's. Prior to 1998, the State of Montana housed 217 inmates in local county jails because of overcrowding conditions at MSP. As a cost saving measure, the Montana Legislature passed the Regional Correctional Facility Act (53-30-501 through 53-30-511, MCA) in 1997. This legislation authorized the regional housing of

minimum, medium, and close custody adult inmates. Through the end of 1998, Montana continued to require additional inmate housing space as the out of state total Montana inmate population reached 394, with an additional 144 still housed within local Montana county jails. (Beck & Mumola, 1999). In April 1999, Tennessee and Arizona continued to house 305 inmates for Montana (Seldan, 1999). As a result of the legislation and an ongoing demand for inmate housing, four regional contract prison facilities have opened in Montana since the 1997 legislation.

The first regional county owned facility opened in January 1998 at the Cascade County Adult Detention Center, followed closely by the Dawson County Adult Detention/Corrections Facility in Glendive, Montana in November 1998. A third regional prison opened in September of 1999 when Corrections Corporation of America received bid approval in June of 1998 from the Department of Corrections to build the state's first private, for-profit prison in Shelby, Montana. Missoula County opened the Missoula County Detention Center, the fourth regional prison, in November of 1999.

Each of the facilities provides health services to housed inmates as an integral part of the contract with the Montana Department of Corrections. According to the Professional Service Division Administrator, of the Montana Department of Corrections, the chosen model of health care delivery at each of the contract facilities was at the discretion of the contractor or county (Johnson, S. personal communication, December 20, 1999). General and specific guidelines for the provision of medical, dental, and mental health services are outlined by the Department of Corrections in the individual regional prison facility contract. Contracting facility officials were responsible for the translation of the contract language into a health care delivery system. It was

anticipated that this decentralized approach to health care service delivery to inmates would provide for wide variances in the structure, process and outcome of health care delivery.

The Montana Department of Corrections (MDOC) is responsible for the care of all inmates spread out over the nation's fourth largest state. Despite the geographic dispersion of the regional prisons, the MDOC must assure quality and equity in health care service delivery, and conscientious use of taxpayer money throughout the state's prison system.

Standards of correctional health care practice have been established by the National Commission on Correctional Health Care (NCCHC, 1997), and define the broad range of services necessary for incarcerated populations. Despite isolated locations around the state, each contract facility is required "to develop and implement an on-site health services delivery system to provide a constitutionally mandated level of health care" (MDOC, December 3, 1999, p.18). Service delivery must comport with Montana Department of Corrections policies and standards set forth by the National Commission on Correctional Health Care (NCCHC) and American Correctional Association (ACA). Decisions regarding the design of the system, or model of health care service delivery at Montana regional contract facilities were largely based upon availability and accessibility of professional health care resources, and were at the discretion of local officials of law enforcement, city and county government, or contracting agencies, all of whom may have varying knowledge of the needs of health care systems for incarcerated populations.

Incarcerated populations share some universal concerns with the general population with regard to health care service delivery. As with other agencies subject to the policies of managed care organizations, by contract, the MDOC routinely compares the cost of providing out of facility health services with the costs incurred by other contract facilities within the Montana correctional

system for parity and uniformity (MDOC, December 3, 1999, p.18). An overall comparison of the costs of providing health services at each regional contract prison facility has not been assessed by the MDOC.

The rising costs of health care in our nation and the increased prison population compound the issues of health care delivery within the prison setting. These variables have profound impact on the ability of regional contract correctional institutions to provide health care services to inmates in Montana.

Statement of Problem and Research Aims

Health care services are provided to regional prison inmates housed in contract facilities in Montana through a variety of health care delivery systems. There is limited information regarding the provision of health care services at each of the regional contract prison facilities in Montana.

The study sought to address two aims. The first aim was to describe, compare, and contrast the provision of health care to state inmates at each of the four regional contract prison facilities in Montana. Objectives were to describe, compare and contrast:

A. The demographic profile of the state inmate population at each of the four regional contract prison facilities as it relates to health service needs.

B. The implementation of selected policies of correctional health care provision at each of the four regional contract prison facilities.

C. The use of health care providers and staffing patterns at each of the four regional contract prison facilities.

D. The range of health care service provision at each of the four regional contract prison facilities.

E. The accessibility, availability, and use of outside BlueCross/BlueShield (BC/BS) preferred health care providers at each of the four regional contract prison facilities.

The second aim of the study was to describe, compare and contrast selected cost indicators at each of the four regional contract prison facilities. Objectives were to describe, compare and contrast:

A. The cost of providing out of facility health care services at each of the four regional contract prison facilities for follow up of a positive tuberculosis screening test.

B. Transportation and security/safety costs associated with use of out of facility health care services at each of the four regional contract prison facilities.

C. Selected routine laboratory and pharmacy costs at each of the four regional contract prison facilities.

D. The relationship of the overall budget to health care delivery expenses at each of the four regional contract prison facilities.

Conceptual Framework

Quality is at the root of many health care issues, and has been defined by the U.S. Office of Technology Assessment as "the degree to which the process of care increases the probability of outcomes desired by the patient, and reduces the probability of undesired outcomes, given the state of medical knowledge" (as cited in DesHarnes & McLaughlin, 1999). Theorist, Avedis

Donabedian, noted that quality is the extent to which the care provided is expected to achieve the most favorable balance of risk and benefits, and generally reflects the values and goals of the individual, the current medical system, and society at large. (Donabedian, 1980, DesHarnais & McLaughlin, 1999). The search for indicators of quality is an example of the evolution of health care management over the last several decades. As third party payers and government agencies attempt to define optimum care, agencies and health care providers are left to discover the factors that influence the quality of delivered health services.

Donabedian (1980) asserted that individual expectations, valuations, and cost are considerations of the quality of care, and proposed three distinct perspectives of quality. The absolutist, individualist, and social perspectives of quality of care are provided as models of quality assessment. The absolutist perspective is hallmarked by the notion that health professionals have the responsibility of defining health, contributing to health status, and determining how that contribution is to be measured. Factors such as cost and patient expectations and valuations are regarded as obstacles or facilitators to implementation. This definition is conditional on the nature of the health problem, the state of science, technology, and the art of medicine and allied disciplines. Donabedian pointed out that this perspective is paternalistic and fails to recognize the role of the patient or cost of health care to any degree.

The individualist perspective is highlighted by the patient's wishes, expectations, valuations, and means regarding quality of care. In this view the patient is considered the best judge of his own welfare and as a result directs the physician. Much variation in quality of care can occur as a result of the type and stage of illness, response to treatment, and demographic and social characteristics influencing the course of the illness. Some would argue that as a result, the

standard of quality must be established on a case by case basis. Cost is a necessary and legitimate consideration in decision making, and Donabedian (1980) acknowledged that this perspective is morally plagued by the patient's ability to pay, which influences the standard of quality.

Donabedian (1980) identified the social perspective of quality of care as morally neutral. It includes the same factors as the individualized definition, but the theorist noted that the quantity of health care could be different from patient to patient. The focus is shifted to an aggregate net benefit for an identified population, as well as to the social distribution of that benefit within the population. Monetary costs are shifted to the collective, as some forms of care are more highly valued at the social level than others because the benefits are witnessed by more people. The theorist noted that this perspective places ethical dilemmas on the health care provider, as society may place different values on the health and welfare of different segments of the population. These values may rest on what is socially expedient rather than what is socially just. The social perspective points to the practice of placing limits on the care of some in the interest of fairness to all rather than the interests of the economically privileged or politically influential. The correctional health care setting readily illustrates the social perspective. The cost of health care for incarcerated populations is shifted to the general population in the form of taxpayer support which demands control over the health care provider to stop somewhere short of the maximum health attainable benefit. A distinction of the social perspective specifies that quality of care is differentially distributed among individuals or segments of the population and that this is a criterion for evaluating performance of a program or system. Furthermore, equity, which is the assessment of who pays for as compared with who benefits from care, is an important element in the evaluation

of certain programs. One could argue that a healthy prison population, reflective of the provision of preventive health care and health promotion activities, will provide a net benefit to the general population in the form of reduced cost and the return of healthier individuals to society. Others could argue that a healthy prison population will live longer and thus require more incarceration costs.

These varying perceptions of quality assessment reflect the changes in the level and scope of concern that can alter one's perspective of health and the responsibility for health care allocation. Donabedian (1980) noted that both individual and social definitions of quality are necessary to accommodate the varying responses to different levels of responsibility and concern. The conflict between these two definitions could be resolved if the direct and indirect costs of care were borne by society, and the responsibility for the welfare of an entire group of people were shifted to the health care practitioner. In this scenario, all persons would have equal access to care and would contribute to the costs of care in a manner that is equitably related to their ability to pay. While the theorist did not specify the correctional setting in his original work, the underlying foundation provides application for the incarcerated patient and the changing perspectives of society.

Prominent determinants of quality of care include accessibility, coordination, and continuity. Donabedian (1980) defined accessibility as the ease with which care is initiated and maintained, and is dependent upon characteristics of the health care provider and the patient's ability to overcome financial, spatial, social, and psychological obstacles. Accessibility is considered an adaptive response, as efforts to increase accessibility are directed at meeting the needs of both the provider and the patient. Donabedian noted, however, that greater accessibility

may result in greater quality but could also lead to redundant, harmful, or unnecessary and costly care. This variance on the effect of accessibility on quality care would be dependent upon the social valuation of the distribution of health benefits.

Coordination, the second determinant of quality of care was defined by Donabedian (1980) as the process by which elements and relationships of medical care fit together in an overall design. When coupled with the third determinant of continuity, a lack of interruption in needed care, these determinants lead to a better understanding of patient problems, values and expectations, patient participation and satisfaction, and reduction in duplication and resultant costs. Conversely, these determinants can also lead to a lack of attention to new developments, persistence of past omissions and errors, and perpetuation of a poor client-provider relationship.

According to Donabedian, (1980, 1988) inferences drawn about the quality of health care should be based upon the assessment of three conceptual elements: structure, process, and outcome. Structure is defined as the attributes of the setting in which care is delivered and includes the relatively stable characteristics of the provider, material and human resources available, and the physical and organizational structure. It is an indirect measure of quality and is dependent upon the nature of its influence on care. Structure increases or decreases the probability of good performance, and is important in the planning, design, and implementation of systems. It is considered a blunt tool for assessing quality as it indicates only general tendencies, and is hindered by limited knowledge about its relationship with process. Often the relative stability of structure makes it unsuitable for continuous monitoring, and it is better to assess this concept intermittently. The theorist noted that although less important than process or outcome, good

structure is the most important means of protecting and promoting the quality of care and is essential when information about process and outcome is available but incomplete.

The concept of process encompasses the acts of giving and receiving care, or the extent to which professionals perform according to accepted standards (DesHarnais, S. I. & McLaughlin, 1999). Donabedian (1980) proposed process as the most direct approach to quality assessment. Seen as the normative behavior or tradition of the medical setting, the elements of the process of care do not signify quality until their relationships to desirable changes in health status have been established. The theorist proposed that a basic symmetry bonds process to outcome as a result of fundamental causal linkage, and separation of the two concepts in assessing quality is difficult. A drawback of using process to assess quality is a weakness of the scientific basis for much of accepted medical practice. He noted that there is a tendency to error on the side of doing well, thereby fostering overly elaborate and costly care.

Outcome is illustrated through the effects of care, such as improved patient knowledge, behavior, satisfaction and a change in a patient's current and future health status that can be attributed to antecedent health care. While outcome quality assessment is the focus and priority of much of today's health care research, Donabedian (1980) pointed out that the fundamental relationship among structure, process and outcome is essential. It can be difficult to specify the outcomes of optimal care, as to their magnitude, timing, and duration. It is also difficult to distinguish whether the outcome is attributable to the medical care, and to attach specific responsibility for the effect. The theorist noted "that good structure increases the likelihood of good process, and good process increases the likelihood of a good outcome" (p.1745), however such

relationships between concepts must be established before any component of structure, process or outcome is used to assess quality.

Knowledge of the effects of structure on outcome or process comes from organizational science. The associations of structure with process or outcomes are generally considered to be limited and weak, according to Donabedian (1988). One can conclude that characteristics of structure may be conducive to good care, but the ability to infer quality of care is not supported. The theory relies upon the balanced assessment of all three concepts. This allows for the strengths of one concept to balance the weaknesses of another. The theorist admits the ability to assess quality care is dependent upon the need for more precise measurements of the quantity and quality of life, as well as the unique intricacies of interpersonal relationships and their effect on patient's health and welfare.

Definitions

The following definitions are presented for use in this study and intended to assist the reader.

Advanced Practice Registered Nurse (APRN)

In the State of Montana, APRNs are registered nurses who have received a master's degree in nursing and have applied for advanced practice status through the Montana Board of Nursing. APRNs provide specialized advanced level nursing in a specified field, under their own license and according to a defined scope of practice (MCA 37-8-202(5) and 37-8-409). An APRN has national certification relating to a specified area of clinical practice. Categories include Nurse Practitioner, Nurse Midwife, Nurse Anesthetist, and Clinical Specialist. According to MCA 8-32-

301, a nurse practitioner practice is defined as "the management of primary health care of individuals, families and communities." Additional criteria are met for prescriptive authority. (Montana State Board of Nursing, February 1998). APRNs consult with physicians, but maintain an independent practice.

BlueCross/BlueShield Preferred Providers

Bluecross/BlueShield (BC/BS) preferred providers are defined as health care providers under contract with BC/BS Insurance Company to provide health care services to plan participants at a lower than customary charge in an attempt to provide cost savings to MDOC and BC/BS. As a result, the health care provider may benefit from an increased patient volume. The use of out of facility BC/BS preferred providers is part of the overall managed care and cost containment effort of the MDOC (DOC policy 4.5.12, September 1, 1998).

Infirmary Care

Infirmary care is defined as "an area within the confinement facility accommodating two or more inmates for a period of 24 hours or more, expressly set up and operated for the purpose of providing skilled nursing care for persons who are not in need of hospitalization" (Anno, 1997, p. 123).

Inmate Day

Inmate day is defined as each day, or part of a day, including the first but not the last day in which an inmate is housed at the facility. (MDOC, December 3, 1999).

Jail

A jail facility is locally operated by city or county governments to receive adjudicated and non-adjudicated individuals. Jails may temporarily detain juveniles pending transfer to juvenile authorities, and both pre and post trial adult detainees. Individuals may be held for the military, protective custody, contempt, and for the courts as witnesses. Mentally ill persons are housed pending their movement to appropriate mental health facilities (Harlow, 1998).

Model of Health Care Delivery

Model of health care delivery is defined as the structure of the health care services unit within the regional contract facility. This includes material and human resources, administrative and organizational structures in place within the facility, and the credentials of the individuals providing health care. (Adapted from Donabedian, 1988).

Out of Facility Health Care Services

Out of facility health care services are defined as those services deemed necessary by the health care provider, but which are not available within the facility's health care unit. These services may or may not have MDOC approval.

Per Diem

Per diem is defined as the cost per inmate per day the Department of Corrections and contractor have mutually agreed upon to provide inmate supervision. (MDOC, December 3, 1999).

Physician's Assistant (PA)

PA is defined as a physician extender with a bachelor of science degree or certificate and generally 108 weeks of education, who is eligible to practice medicine under a physician's license and supervision. Services are limited to those outlined in a statutory utilization plan. (Buppert, 1999).

Primary Care

"...the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community." (National Academy of Sciences' Institute of Medicine, 1996, as cited in Buppert, 1999, p. 8).

Regional contract prison facility

A regional contract prison facility is defined as "a fully equipped and furnished regional prison, operated by the contractor, for the incarceration of inmates assigned by the Montana Department of Corrections. Facility includes all housing units, administrative offices, classrooms, hearing room, health services unit, and all other structures of whatever kind including roads, fences, infrastructure and utility systems" (MDOC, December 3, 1999, p. 2).

Assumptions

1. Successful models of prison health care existing in a tightly structured environment have adapted and evolved in response to the unique demands of the prison environment.

2. There are unmeasurable factors that affect the success of health care delivery models in the prison setting. These include the unknown agendas of prisoners seeking health care, and the implementation of health care interventions, treatment, and screening by correctional staff untrained in the health professions.

3. There are fundamental differences in the goals and philosophies of correctional administration and health care administration. The degree of difference will have varying impact on the success of the health care delivery model.

4. The Montana Department of Corrections and the State of Montana have a vested interest in providing constitutionally mandated quality health care services to their inmates.

5. The information necessary to conduct this study has been recorded and is accessible to the graduate student.

CHAPTER II

LITERATURE REVIEW

In order to offer a more complete understanding of the models of health care delivery for incarcerated populations, the literature was explored in four dimensions relative to the metaparadigm of professional nursing. These dimensions are health, nursing, person, and environment. The health care issues of the correctional setting, the use of various health care providers in the correctional setting, characteristics of prison inmates, and the prison environment were reviewed for the unique attributes they possess and their impact on inmate health care delivery. The history and evolution of correctional health care were investigated, along with a recent movement toward the use of private, for-profit contractors for prison services.

History and Evolution of Correctional Health Environment

The harsh differences in the philosophies of health care and imprisonment strike as sharply today as in the late 1700's. While the medical issues of the early days of penal institutions have evolved with the advances of medical science, the fundamental philosophical differences in the mission and priorities of inmate health care remain divisive between health care providers and prison officials. Since the early days of John Howard and John Fothergill, concern about the health of confined individuals has focused upon an evolution of perceptions over acceptable conditions (King, 1998). These Victorian men sought to establish basic hygiene and regular

medical attention within the prison system as a method of improving social evils and their consequences on a community's health. This sanitation movement was prefaced by the fact that such a transformation would not compromise the pain and humiliation prison officials demanded, and for which prisons were intended (King 1998). The physician, who was employed by the prison, was vested with the authority to influence the conditions of imprisonment. Prisoners were examined upon entrance for fitness to accomplish assigned labor. Inmates would seek the refuge of the prison hospital because the food was abundant and the treatment less harsh. While the hygienic condition of today's prisons has dramatically improved, the conflicting demands to assure security and institutional policy, yet foster a patient-provider relationship, sustain the fundamental dilemma for correctional health care providers. The conflicts associated with employment of health care providers by prison administration offers insight into the models of health care delivery in the 21st century.

In the early 1800's the demand for statistical information regarding prison mortality and morbidity triggered another movement to improve the conditions for incarcerated populations. A range of French prison mortality rates of 24.5 per 1,000 to 251.9 per 1,000 were discovered upon investigation by Louis Rene Villerme (King, 1998). Variables, such as the differences in the health status of inmates, length of incarceration, prison location, and the "conduct of affairs" were cited by Villerme (King, 1998, p. 6). There was a marked decrease in mortality over the next decade when improvements in food, bedding, clothing, and administrative practices were employed in the prisons. The author noted that today we continue to have inconsistent reporting criteria for health related data. Variations in cardiovascular disease, infectious disease, and accidental trauma and

violence highlight the need for improved information systems to collect and analyze health care and outcome data (King, 1998).

In 1929, Frank L. Rector released his report entitled "Health and Medical Service in America Prisons and Reformatories." As cited in King (1998), this document emphasized the need for adequate resources for the treatment of inmates since many will return to the community. The need to standardize health and hospital practices was highlighted as a solution to the obligations of the state to care for the needs of the individual deprived of the opportunity to care for himself. Rector noted that it is the essence of humanity and the law of civilized communities to care for the sick and injured with "the best the community can furnish" (King, 1998, p. 7). Recommendations from the report included the role of rehabilitation in the prison setting. Punitive treatment and characteristics such as overcrowding were found to have deleterious effects not only on the inmates but also the outside community. The study further recommended that the medical director have full authority over the hospital and all health activities within the prison. This report was considered visionary and was not implemented into practice until the 1970's.

In 1975, the National Institute of Law Enforcement and Criminal Justice issued "Prescriptive Package: Health Care in Correctional Institutions." According to King (1998), this document offered the premise that correctional medicine ought to be delivered and developed within the context of the health and financing mainstream. Institutions were increasingly faced with the need for varied and complex health care services for incarcerated populations or to arrange for these services outside the walls of the prison. This document also noted the synergistic effects of class action litigation on the resultant improvement of health care resources for incarcerated populations. The report's recommendations included the use of physician's assistants, the need to

strengthen the authority of prison health administrators, and the need to establish working relationships with outside health agencies. The report reviewed a fundamental movement at the time to transfer administrative health care responsibility to outside health care agencies. In 1971, New York City moved all correctional health care from the department of corrections to health services administration. Later in 1973, a contract with Montefiore Hospital and Medical Center allowed for provision of correctional health care to inmates on Rikers Island. This change highlighted important implications for patient-provider relationships and correctional authorities. King pointed out that health care providers who no longer report directly to the administrative structure of the prison remain directly accountable to the administrative structure of the employing health care agency. This new relationship influences the provider's professional autonomy and judgement. King suggested that the separation of correctional medicine from the objectives and philosophy of incarceration and the resultant balance of punishment, incapacitation, and rehabilitation may have an effect on the evolution of correctional medicine.

In 1975, efforts to develop standards for correctional health care were initiated. The Law Enforcement Assistance Administration (LEAA) provided a grant to the American Medical Association to upgrade correctional health care. According to Anno (1991), pilot projects were aimed at developing model health care delivery systems, establishing correctional health care standards by which accreditation could be achieved, and establishing a mechanism by which correctional health care information could be disseminated. These efforts lead to the eventual development of the National Commission on Correctional Health Care (NCCHC).

The growing trend of privatization in corrections has become a political issue across the nation. A survey of private adult prison facilities across the nation revealed a dramatic increase

from 3,000 prisoners in 1987 to more than 85,000 in 1996. Many of these are federal prisoners (National Institute of Justice, 1999). A Government Accounting Office (GAO, 1996) review of the operational costs and/or quality of services, found that five studies had been completed since 1991 of facilities in California, Tennessee, Washington, Texas, and New Mexico. The GAO review was not able to draw any conclusions about cost savings or quality of service, as the four studies that assessed operational costs indicated little difference or mixed results, and the two studies that addressed quality reported either equivocal findings or no differences between private and public facilities. Further, the studies provided limited generalizability to various correctional settings, since states differ widely in correctional philosophy, economic factors, and inmate populations. The study noted that the comparative performance of private versus public correctional facilities is dynamic. Changes over time alter the comparative performance. The first year of a new prison could reflect expenses for training inexperienced staff as well as hiring replacements. Private firms may choose to bill for its services at rates below costs to obtain or extend a contract. However, in order to remain viable the contractor's cost-recovery practices would have to change. Similarly, public prisons could become more cost efficient in response to competition from the private sector. The study highlighted the limitations of privatization cost analysis. There are hidden costs in privatization, and a good cost analysis is necessary to determine the cost of a traditional prison system and private contracting. It is of interest that a Tennessee study of one private prison and two state-run prisons excluded the costs of medical and mental health services (GAO, 1996). The National Institute of Justice (1999) has awarded a research grant to conduct an evaluation of the Taft Correctional Institution, a federally owned and privately operated prison in Taft, California, to advance the understanding of prison privatization. The central dimensions to be addressed in this

research are cost and performance. Citing previous problems noted in the GAO comparative report, the Taft study hopes to address the problems associated with comparing private and public prison facilities. The study is expected to identify what, why, and to what effect public and private prisons do differently (National Institute of Justice, 1999). Interim results of this study have not been released to date.

Arguments for the use of private prison contracting have focused on a variety of factors. Advocates cite an enhancement of justice by making prison supply more responsive to changes in demand. It is believed that contracting allows prisons to be financed, sited, and constructed more quickly and cheaply than government prisons, and raises the standards for government as well as for private vendors (Logan, 1990). Alternative views have noted that contracting for imprisonment involves an improper delegation to private hands of coercive power and authority. Contracting may place profit ahead of the public interest, inmate interests, or the purposes of imprisonment. This may lead to conflicts of interests that can interfere with due process for inmates (Logan, 1990). Opponents claim that contracting is more expensive because it adds a profit margin to all other costs, and may reduce quality through the pressure to cut corners economically (Logan, 1990). These perspectives parallel the political viewpoints within state and national governments and fuel the ongoing debate over privatization.

Correctional Health Care

The prison environment is very different from traditional health care settings. Incarcerated populations experience isolation, aggression, violence, and manipulative behavior on a daily basis.

The sounds of the prison setting are loud with clanging metal doors, shouting, and cursing occurring at a constant roar. The scene is stressful and hardly conducive to healing (Galindez, 1990). The health of the prison population is generally considered to be poor. This assumption is based upon the interrelationship between poverty, crime, and poor health (NCCHC, 1997). Correctional facilities traditionally house medically under-served individuals (Johnsen, 1998), who experience a higher rate of disease and disability than the general population. Infectious diseases such as upper and lower respiratory conditions, influenza, gonorrhea, tuberculosis, hepatitis, and human immunodeficiency virus (HIV) generally occur at higher rates in prison populations (Droes, 1994; Leh, 1999). Additionally, noninfectious conditions related to the use and abuse of drugs, such as alcohol, heroin, methadone, and barbiturates are common. Seizure disorders and acute and chronic mental illness have higher prevalence rates in the incarcerated population than in the general population (Droes, 1994). As the prison population ages, the incidence of chronic health conditions continues to escalate. It is common for prisons to treat inmates for cirrhosis of the liver, cardiac pathology, gastritis, and pancreatitis; most related to previous use of alcohol (Droes, 1994). A 1975 study of inmate health revealed a 12% incidence of positive tuberculin skin tests, a 6% incidence of syphilis, and a 60% incidence of drug and/or alcohol withdrawal upon admission to the prison (Galen, 1979 as cited in Felton, Parson & Satterfield, 1987).

In a recent keynote address (2000) to the 23rd National Conference on Correctional Health Care, Captain Newton E. Kendig, II, M.D., medical director for the Federal Bureau of Prisons, summarized the state of correctional health care at the end of the millennium. The director highlighted the success of correctional health care in the fights against HIV, TB, and sexually transmitted diseases (STD) through coordinated efforts to increase screening and detection, and

directly observed preventive therapy and health promotion. Current priorities for health care focus on the increasing incidence of Hepatitis C, the latent health effects of tobacco abuse, and the need for consistent identification and treatment of prisoners with mental illness. He cited a Bureau of Justice report that nearly 300,000 mentally ill offenders were held in state and federal prisons in mid 1998 (Kendig, 2000).

Captain Kendig (2000) emphasized the need to determine the level of care provided to inmates. The Federal Bureau of Prisons is currently reviewing various methods of primary care delivery for inmates. A model that assigns inmates to health care teams appears to limit unscheduled clinic time to true emergencies and urgent health care. In this model, teams routinely schedule chronically ill inmates for evaluation, provide triage for inmate complaints, and schedule follow-up appointments. The scrutiny for providing too many or too few services for inmates is consistent with the public's relationship with established health plans that differ widely in the range of services provided to the subscriber. In an effort to define essential care for inmates, the Federal Bureau of Prisons has identified several core values that reflect the philosophy of practice. These values include: treating all inmates equally; respecting inmate autonomy in treatment decisions; recognizing the importance of treatment on function in activities of daily living, cost effectiveness, protecting public health, and ensuring public safety. The goal of the Bureau is to provide inmates the highest quality of care, within the defined scope of services, without compromising the core values. (Kendig, 2000).

In addition to the overall health of the prison population, the prison setting and conditions within the institution provide opportunity for the development of health problems. The problems associated with large numbers of people living in close quarters combined with underlying mental

illness or violent personalities increases the incidence of trauma within the prison setting. Felton, Parson & Satterfield (1987) noted that the most frequently occurring health problems stem from poor hygiene and unhealthy life style behaviors. Prior to the health promotion movement, general public health concerns of sanitation, vector control, air quality, water supply and sewage disposal, housekeeping, and laundry were often not a priority in prisons. A landmark Supreme Court decision addressed correctional health care issues in the 1970's, and found that failure to provide adequate health care to individuals confined in correctional institutions is a violation of an individual's constitutional rights under the Eighth and Fourteenth Amendments (Dubler, 1979, as cited in Felton, Parsons & Satterfield, 1987). Three basic rights emerged from the decision of *Estelle v. Gamble*, 429 U.S. 98, 97 S.Ct. 285 (1976): the right to access to care; the right to care that is ordered; and the right to a professional medical judgement (Anno, 1991). As a result, this decision mandated adequate and reasonable health care in the prison setting, and set the stage for prison inmates to be the only population in the United States to possess a right to health care in this country. Accordingly, organizations such as the American Public Health Association (APHA), the American Medical Association (AMA), the American Nurses Association (ANA) and the National Commission on Correctional Health Care (NCCHC) began to establish standards for prison health care services (Felton, Parson & Satterfield, 1987; Safyer, Alcabes & Chisolm, 1988).

The costs of correctional health care have risen faster than other correctional costs. This can be attributed to the rising costs of health care in society at large, the increasing number of prisoners, the threat of litigation and pressure from federal courts to improve services, an aging prison population, and a higher prevalence of infectious diseases among correctional populations (McDonald, 1995 as cited in Young, 1998). Nationally, according to the Bureau of Justice, the

expenditures for state correctional activities rose from $9.6 billion in 1985 to $20.9 billion in 1996 (Stephan, 1999). In the Bureau of Justice report, the average inmate costs approximately $20,100 per year, and Montana is consistent with this amount at $20,782 per inmate per year. Variances in state prison costs are associated with cost of living, prevailing wage rates, geography, inmate to staff ratios, and the average number of inmates per facility. Stephan (1999) noted that high inmate to total staff ratios were most common in states reporting low average costs per inmate, and a similar pattern was observed between inmate to security staff ratios and average costs per inmate. The overall pattern between average number of inmates per facility and costs per inmate suggests that a small amount of cost savings resulted from the operation of larger capacity prisons (Stephan, 1999). These results are consistent with the economic theory of economies of scale.

According to the Bureau of Justice report of prison expenditures, Montana spent 9.6% of the overall correctional state budget on medical care, at a cost of $4,030,000 or $5.48 per inmate per day in 1996. This amount of medical cost is consistent with statistics from the northwest region of state prisons at 10% of state budgets, and slightly below the national average of 12%. The states with the lowest daily medical costs were Oklahoma, $2.25; North Dakota, $2.76; South Carolina, $2.80; and Alabama, $2.84 (Stephan, 1999). In fiscal year 1998-99, a legislative audit determined that the Montana Department of Corrections spent an estimated $8.2 million for inmate health services, or $10.45 per inmate per day. This cost includes medical, dental, vision, and mental health services to adult and juvenile offenders incarcerated in both state owned and contracted bed facilities, and reflects an 11.1% increase from the previous fiscal year, compared with an average of 5.8 percent of those states that also reported an increase in health care costs (Blanford, Wilkinson, & Wingard, 1999). The rise in the costs of health care in Montana was

associated with the complex management of decentralized regional contract prison facilities, an increasing number of inmates, and the 1994 and 1997 lawsuits filed over health care services at the MSP: *Langford, et al. v. Racicot, et al.* and *United States of America v. State of Montana.* Although progress has been made toward complying with the terms of the agreements of these two court settlements, unresolved issues primarily focus on nursing protocols, sick call for inmates, and patient referrals for medical services. The National Commission on Correctional Health Care (NCCHC) noted "in systems where the quest for quality is driven by litigation concerns, one of the almost inevitable consequences is an increase in the cost of care" (Anno, 1991, pg. 220). In 1999, recommendations for the Montana Department of Corrections from the Montana Legislative Audit Division included a nine-part plan to improve health care program operations. These recommendations are listed below:

1) an increased emphasis on system wide management of the inmate health care system,

2) expansion of the long-range planning process to include specific goals and measurable objectives for the entire correctional health care system,

3) the development of a comprehensive management information system to review health care costs and utilization patterns system wide,

4) expanded managed care strategies,

5) strengthened and expanded procedures for review of medical billing,

6) implementation of a system wide quality improvement program,

7) development of a contract administration and monitoring process,

8) a formal reexamination each facility's health care services organization structure, and

9) develop and communicate procedures to ensure proper transfer of medical information (Blanford, Wilkinson, & Wingard, 1999).

Correctional Health Care Nursing

Prison nursing has evolved as an extension of community health nursing, with the focus on the under-served and marginalized population of prison inmates. According to the American Nurses' Association's "Scope and Standards of Nursing Practice in Correctional Facilities," the sole responsibility of nurses practicing in correctional facilities is to provide health care services. Nursing involvement in the security aspects of the prison facility performed solely for correctional purposes is considered inappropriate. Nurses are not to participate in disciplinary decisions or in executions by lethal injection. The security regulations that apply to prison personnel also apply to health care personnel (ANA, 1995). The philosophy of correctional nursing, which underscores the standards of practice, includes the belief that health care provided in the correctional setting should be equivalent to care available in the community and be subject to the same regulations. Ensuring the rights of the incarcerated is of major importance in correctional nursing and reflects the guiding concept that nursing services are equitable in terms of accessibility, availability, and quality (ANA, 1995).

The community concept relative to prison nursing stems from the fact that most prisoners come into the system from the community and will eventually return to the community. A global perspective fosters the overall health of not only the inmate, but also the community as a whole. The role of the nurse includes primary health care, with a strong emphasis on health promotion.

The ability to triage sick inmates and carry out the nursing process for a nursing model of health care delivery are essential skills. Traditionally, prison health care services have adopted a medical service delivery model where care and treatment were dictated by the doctor and the administrative arrangements were dominated by the warden or administrator of the prison. Alternative models of health care delivery incorporate the concept of primary care, with a multi-disciplinary team to address the health care needs of the inmates. This model includes varying administrative components, but focuses on the integral skills and influence of nursing (Norman & Parrish, 1999).

Concerns over the management and control by correctional administration with little or no understanding of nursing functions and the nursing standards of correctional health care practice often frustrate prison nursing staff. This frustration can lead to concern over adequate staffing (Norman & Parrish, 1999). The unique characteristics of the prison setting can complicate the ability to attract and retain qualified nursing staff. Moore (1990) found that salary compression was the greatest factor influencing the supply of nurses in the correctional setting.

The use of advanced practice registered nurses as mid-level health care providers in non-correctional settings has been studied extensively regarding issues of quality of care, substitutability, complementarity, and cost (Clawson and Osterweis, 1993 as cited in Jacobson, Parker & Coulter, 1998). Within correctional settings, Jacobson et al. (1998) found that the larger an institution's managed care population, the greater the nurse practitioner's scope of practice and autonomy, although patients with complex illnesses or multi-system problems usually were referred directly to a physician. A three-year study of the use of nurse practitioners as primary care providers in a large urban jail health service unit found the primary care patient volume

doubled, the average cost of each patient visit decreased by one third, and the technical quality of primary care improved continuously during the three-year period. Patient outcomes, patient satisfaction, and overall mortality rates were unchanged from the previous medical model (Hastings, Vick, Lee, Sasmor, Natiello, & Sanders, 1980). The overall suicide rate decreased with the model's introduction of a psychiatric screening and treatment program and cardiopulmonary resuscitation training for the correctional officers.

The prison setting has also become a location for faculty practice for nursing educators and a site for learning for undergraduate and graduate nursing students. The implementation of faculty practice in the correctional setting offers the nurse educator the ability to serve as a role model for nursing students, practice skills and share knowledge with nursing students, and establish credibility with students and respect among peers (Hall & Ortiz-Peters, 1986). The need to continue nursing practice may be essential for educators to maintain national certification in nursing specialties. Peternelj-Taylor & Johnson (1996) noted that the Canadian prison setting offered the nursing student traditional experiences in psychiatric nursing, the ability to apply the nursing process to clinical experiences, and the opportunity to learn about themselves. Additional benefits included an increase in student understanding of human behavior, strategies for meeting the health care needs of high-risk populations, and becoming advocates for neglected populations (Felton, Parsons & Satterfield, 1987).

The Correctional Population

A Federal Bureau of Justice report indicated that by the end of 1998, more than 1.8 million U.S. residents were incarcerated in either jails or prisons. State and Federal prisons housed two-

thirds of the incarcerated population, while jails, typically operated locally and holding persons awaiting trial, held the other third (Beck & Mumola, 1999). As of December 1998, state prisons were operating at between 13% and 22% above capacity. This prison crowding coupled with an increase in the rate of incarceration from one in every 217 U.S. resident to one in every 149 from 1990 through 1998 provides insight into the need for continued efforts to contain the rising costs of health care in the prison setting. Suggestions to reduce the prison population focus on repealing mandatory-minimum drug laws, releasing drug offenders, reinventing probation and parole policy, modifying federal sentencing guidelines, and doubling efforts to prevent juvenile crimes (Dilulio, 1999).

The Montana prison system witnessed a 91.9% increase in the number of sentenced prisoners from 1990-1998 (1,309 inmates increase). This reflects an annual increase of 8.5%, which is slightly higher than the average 6.8% increase for western states and 6.7% nationally. As of December 1998, Montana prisons were operating at 126% of capacity. Middle-aged inmates comprise a growing part of the nation's prison population, with nearly 30% between the ages of 35 and 44, and Montana is consistent with this figure. The average age of offenders at Montana State Prison is 35.5 years (MDOC, 1999). The growth and aging of the prison population are the result of declining release rates, increases in the length of sentences, and the "three strikes you're out" provision of the 1994 crime bill (Beck & Mumola, 1999). The changes in the overall prison age composition are beginning to alter the health care needs of the prison setting (Drummond, 1999; LaMere, Smyer & Gragert, 1996). It costs nearly three times as much to incarcerate the elderly inmate, at about $65,000 a year as it does to incarcerate a younger inmate.

Inmates seeking health care in the prison setting do so at a rate three to four times higher than the general population (Schneiderman, 1996). While it is well supported that the general health of the average inmate is poor, it is also understood within the correctional setting that inmates seek health care for a variety of reasons. For some inmates, sick call requests, termed "kites," may be employed to relieve boredom, to avoid work, for socialization with other inmates, to gain access to drugs, or to prepare groundwork for legal action against the state. This population is generally considered to be more litigious than the general population, and inmates routinely threaten legal action if their demands are not met (Schneiderman, 1996).

The preceding review of literature summarizes what is known in the literature concerning prison health care services. Many unanswered questions remain. This study seeks to address questions regarding the various models of health care used in Montana's regional contract prison facilities to meet correctional health care standards and associated costs.

CHAPTER III

METHODOLOGY

The purpose of this study was to describe, compare, and contrast the models of health care delivery provided by regional contract prison facilities to incarcerated inmates.

Population and Sample

The research study focused on the health care delivery systems available to inmate populations at the four regional contract prison facilities in Montana. All four facilities participated in the study with approval from the Montana Department of Corrections. The designated health services director at each of the facilities was interviewed to gather explicit information about the model of health care delivery.

Design

A non-experimental descriptive exploratory survey design was employed to collect data to address the study's aims. The study included two aims. The first aim was to describe, compare, and contrast the provision of health care to state inmates at each of the four regional contract prison facilities in Montana. Objectives were to describe, compare, and contrast:

A. The demographic profile of the state inmate population at each of the four regional contract prison facilities as it relates to health service needs. This included age distributions and prevalence of chronic health problems in order to give context to the model of health care delivery.

B. The implementation of selected policies of correctional health care provision at each of the four regional contract prison facilities. The implementation of selected policies included access to health care services, staffing patterns for the health services unit, triage, medical records, out of facility health care specialists, pharmaceutical services, and prior approval for non routine medical health services. It was anticipated that these policies would offer an in-depth understanding of the provision of services provided through the model.

C. The use of health care providers and staffing patterns at each of the four regional contract prison facilities. It was anticipated that variation in the provision of health care services would provide information about the efficiency and cost effectiveness of the model.

D. The range of health care services offered at each of the four regional contract prison facilities. It was anticipated that the scope of health care services offered within the model of health care delivery would provide information about the efficiency and cost effectiveness of the health care delivery model.

E. The accessibility, availability, and use of outside BC/BS preferred health care providers at each of the four regional contract prison facilities. Variances in the ability to access preferred providers were examined to gain information about the model's coordination and collaborative efforts with outside agencies and providers. Variances in the availability and use of preferred providers were examined to gain information about the model's efficiency and limitations.

The second aim of the study was to describe, compare, and contrast selected cost indicators at each of the four regional contract prison facilities. Objectives were to describe, compare, and contrast:

A. The cost of providing out of facility health care services at each of the four regional contract prison facilities for follow up of a positive tuberculosis screening test. This cost indicator may reflect on the model's coordination with community agencies to provide cost-effective health care services out of the facility.

B. Transportation and security/safety costs associated with use of outside facility health care services at each of the four regional contract prison facilities. These cost indicators were selected to provide information about the model's indirect costs associated with providing health care services to incarcerated populations. The costs of providing transportation and security during out of facility transportation to health care specialists may reflect upon the cost effectiveness of the model.

C. Selected routine laboratory and pharmacy charges at each of the four regional contract prison facilities. Complete Blood Count (CBC), Alanine Aminotransferase (ALT), Prostate Specific Antigen (PSA), and selected pharmaceutical agents were identified to gather information about the health care delivery model's cost efficiency and coordination with ancillary agencies.

D. The relationship of the overall budget to health care delivery expenses at each of the four regional contract prison facilities. This cost indicator was selected to provide information about the health care needs of the population of inmates, the model of health care delivery, and the practice patterns of health care providers. It was anticipated that this might also reflect the value placed upon health care delivery for incarcerated populations by the correctional facility administration.

Procedures for Data Collection

Multiple existing sources of data were used for the study. Demographic profiles of the MDOC data information system, third and fourth quarter BC/BS cost reports for fiscal year 2000, contracts, and monthly health services reports of the regional contract prison facilities were provided by the Montana Department of Corrections (MDOC). MDOC health services site survey results conducted over the last year, specific to the aims, were reviewed for the study. On-site interviews with each regional contract prison facility health services director were conducted by the researcher with the consent of the MDOC, and focused on the delivery of health services during the time reflected in the quarterly cost reports. A thesis committee member, who is also the health services director at one of the regional contract prison facilities, was interviewed for one of the site visits. The committee member accompanied the researcher during the other three on-site interviews, assisted in gaining entry into the regional prison facilities, but did not participate in the interviews. Facility entrance was also assisted by the Professional Services Administrator and Medical Director of the MDOC.

Instrumentation

Selected components of the MDOC contract survey tool, section 10, Health Services were reviewed and used to gather information about the regional contract prison facilities. Data obtained through this instrument were gathered by the same staff of the MDOC and were consistently used for all site surveys. The survey tool is based upon national correction standards, contractual obligations, and is adapted from the Texas Department of Corrections tool used for

monitoring of all contract prison facilities in Texas. A copy of the survey tool is provided in Appendix A.

The on-site interview guide consisted of eighteen preset questions developed by the researcher to facilitate discussion with the health services director regarding the structure of the health services model at the regional prison facility. A copy of the interview guide is provided in Appendix B.

Human Rights and Consent Process

The research study focused on the health care delivery systems available to inmate populations in Montana. There was no contact with vulnerable prison inmates. While the study described the health care offered to inmate populations, there was no known impact on the quality or content of care received during the course of the study. Based upon the contractual agreement with the regional contract prison facilities to allow access for program audits (MDOC, December 3, 1999, p. 12), voluntary, written consent from the Montana Department of Corrections was obtained for the study. Data obtained and used in the study consisted of new and previously collected information. The interview results, DOC cost reports, and site survey results were considered confidential. Results of the study were written in a thesis in partial fulfillment of the degree of master of nursing. Copies of the written project are available at the Montana State University-Bozeman, College of Nursing and the Montana State University Renne Library. Sites were numbered one through four and not otherwise identified. The written thesis did not identify any participants by name. Cost reports, data base printouts, handwritten notes, and survey results will be stored in a locked file cabinet at the Montana State University- Bozeman, College of Nursing.

They will be removed and destroyed after two years. The summary proposal to the Human Subject Committee of the Montana State University- Bozeman, College of Nursing was approved on May 1, 2000.

CHAPTER IV

RESULTS

A non-experimental descriptive exploratory survey was conducted to describe, compare, and contrast the models of health care delivery existing at regional contract prison facilities of the Montana Department of Corrections. The survey design addressed two aims: to describe, compare, and contrast the provision of health care to state inmates and selected cost indicators at each of the four prison contract facilities.

The four regional contract prison facilities were individually visited by the researcher during June and August of 2000. After obtaining consent from the Montana Department of Corrections, the designated health services director at each regional contract prison facility was interviewed by the researcher using an interview guide of open-ended, structured questions. Minimal problems were encountered in obtaining data from the facilities, with the exception of site #3. Personnel changes in the medical services director position at this site precluded the availability of budget information that had not been received from the previous director.

Additional data were obtained from the Montana Department of Corrections. These included BC/BS cost reports, monthly health services reports, MDOC regional contract prison facility contracts, and site survey results specific to medical service provision. A cost comparison of out of facility expenses specific to an identified routine health service was compiled by the DOC's case manager through access to the department's medical data information system.

Description of Sites

Each of the regional contract prison facilities offered some contextual variation in observed attributes. Observations regarding the facility's location in the community, exterior and interior characteristics, a layout of the medical services area, inmate characteristics, and personal safety are included to provide insight into the context of each regional contract prison facility's structure. Sites are numbered according to the visitation sequence.

Site #1, located in an urban setting near a regional medical center, is geographically separated from the edge of town by an interstate highway. The facility serves as the administrative offices for the county sheriff and coroner, local highway patrol, and city police. The facility houses up to 30 federal, 150 state, and 170 county offenders, both male and female, and has been at near capacity of 350 inmates, since its operation began. It is a new building, with advanced security technology. Upon entrance into the facility, it appears as just another governmental building, with busy staff moving from area to area. All visitors are passed through a metal detector, screened by verbal inquiry as to possession of contraband, and on occasion based on institutional protocol are searched for hidden weapons or other illegal items not permitted past the iron gates. Inside, the bare walls and wide corridors lead to pods of inmates classified as to security risk and pattern of behavior.

The medical services area is small, and in close proximity to the pod that houses county inmates. In order to access the state inmate pod from medical services, one must walk a long corridor and pass through two security gates. The medical services area is adjacent to the booking area, which is used to house new arrivals as they are processed into the facility, as well as inmates who require close medical attention. The staff has decorated the area with confiscated art objects

created by inmates out of toilet paper. There are two examination rooms, two shared office spaces, a small laboratory, small pharmacy stock room, and an even smaller record file room. The staff is friendly, cohesive, and interacts professionally, yet personably with the inmates seeking health care.

The state inmates are housed in large bi-level housing pods, and are occupied with various activities that included television, conversation, reading, indoor exercise equipment and activities in an enclosed gym with an open skylight. All inmates are moved individually within the facility by correctional officers, and to health services by an officer specifically assigned to the health services department. At no time did the researcher experience any threat to personal safety during the on-site interview.

Site #2 located on the edge of a rural community is capable of housing 140 state and 10 county male inmates. It is in close proximity to the local hospital, county fairgrounds and a busy youth baseball complex. The entrance to this new facility, which serves as the administrative site for city and county law enforcement, is confined to a small lobby served by one receptionist behind a glass screen. Upon entrance through a metal detector, the researcher was led through a maze of dark closed-in hallways.

The medical services office is separated into one large and one small room. The large room is used on occasion for patient exams for county inmates, although it appeared to also be used for health services administration and management. The smaller adjacent room is used by the director of nursing for supply, records, and pharmacy storage. A second examination room is located closer to the state inmate population, and away from jail administration. The staff is

friendly, professional, and interacted easily with the prison correctional staff. No observation of inmate interaction was available during the on-site interview.

A tour of the facility revealed a number of inmates with readily visible, brightly colored tattoos (the past-time of creative inmates) and opportunity for inmate education and training in several classrooms. A couple of inmates moved freely and unsupervised between the laundry area and the kitchen. Although the researcher perceived no threat to personal safety, the medical officer expressed some concern over the lack of officer supervision.

Site #3, located in a rural community which has a county hospital, is nearly a mile out of town on an open prairie. It is surrounded by a perimeter of high razor coil fences and lights that make it visible at night from a distance of 15 miles away in multiple directions. As the researcher entered the community from the northbound interstate highway, the facility was readily visible. It is contracted to house a total of 500 inmates, male and female and is limited to state prisoners. No county or federal prisoners are housed. Upon arrival at the outside gate, the researcher observed the presence of three unattended inmates located between the secondary entrance gate and the facility's front door. A task of creating a decorative border of old railroad ties for the sidewalk flower bed apparently had been assigned to the crew, along with the use of a large electric chain saw. The chain saw continued to run as the inmates paused to acknowledge the entrance of the researcher through the secondary gate. Passage through the walkway was negotiated and after several moments a female, unarmed guard appeared in the facility entryway. Notably, a compromised sense of personal safety was experienced by the researcher.

In contrast to the uncontrolled entrance into the facility, a complete screening was conducted by the receptionist guard, who led the researcher back to medical services through an

administrative area. The medical services section of the facility is immense, and reflective of the massive nature and architecture of the facility. Designed to provide infirmary services to a facility with a structural potential for 1500 inmates, this area is complete with locked patient cells, and one padded cell, an emergency/treatment room, dental office, pharmacy, and room to grow in case radiology services are desired in the future. A large waiting room, separate staff office, and administrator's office round out the experience. The staff is busy, reserved, and down to business. The researcher was not afforded a facility tour on this visit, nor was any provider-client interaction observed. A previous unrelated, non-academic visit revealed expansive corridors that led to bi-level housing pods filled with inmates occupied with activities, conversation, and television. Indoor and outdoor recreation facilities were also available.

Site #4 is located in a part of an urban community that has grown dramatically over the last few years, and as a result it is adjacent to busy intersections, a community medical center, shopping malls, and a bustling state highway. It is situated in a complex with existing probation offices and a pre-release facility. The facility is capable of housing 170 state, 110 county, 10 federal, and 30 juvenile offenders, male and female, for a capacity of 320 offenders.

Upon security entrance into the prison facility, the researcher was quickly greeted by the registered nurse supervisor of medical services and escorted to the medical services area located close to the county inmate population. The area contains two medical examination rooms, a dental treatment room, storage, and a large administrative office with desks for the nursing staff. The staff was receptive, expressed interest in other state correctional facility health services, and appeared eager to learn any new information or knowledge. A tour of the facility revealed large pods of

occupied inmate populations utilizing indoor and outdoor recreational facilities, a library, and educational opportunities.

Demographic Profile

The demographic profile of the state inmate population at each of the four regional contract prison facilities as it relates to health service needs was identified. This included age, race and ethnic distributions, and chronic health problems perceived and prioritized by the health services director at each facility.

An analysis of the monthly average daily population of inmates at the four facilities revealed data reflective of the age of each of the regional contract facilities. Sites #1 and #2 housed prison inmates at a nearly consistent rate during the period of January through June 2000, reflective of the fact that they had been open for more than one year. Analysis of sites #3 and #4 reflected a growth in inmate population indicative of the more recent opening of the facility. Typically, the MDOC gradually transfers inmates into a new facility allowing for inmate and administrative adaption and adjustment. Figure 1 on page 44 illustrates the monthly average daily inmate population at each facility during the period of January through June 2000.