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# A replication study : alternative uses for underutilized acute care hospital beds in Northern California

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A REPLICATION STUDY:  
ALTERNATIVE USES FOR UNDERUTILIZED ACUTE CARE  
HOSPITAL BEDS IN NORTHERN CALIFORNIA

A Thesis  
Presented to  
The Faculty of the Department of Nursing  
San Jose State University

In Partial Fulfillment  
of the Requirements for the Degree  
Master of Science

By  
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December, 1991

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## ABSTRACT

### A REPLICATION STUDY: ALTERNATIVE USES FOR UNDERUTILIZED ACUTE CARE HOSPITAL BEDS IN NORTHERN CALIFORNIA

by Susan Burnett

This study was to replicate Montoya's (1986) study investigating alternative uses for acute care hospital beds of Northern California health care agencies. A questionnaire constructed by Montoya (1986) was answered by 60 of 83 (72%) chief nurse executives sent the survey. Their responses were analyzed to determine their agencies' alternative uses of hospital beds. Although the extent of alternative bed use (60%) in this sample was slightly more than that found by Montoya in 1986 (48%), uses that did not generate income had decreased and uses that generated income had increased. The percentage of beds allocated to alternative use increased from 4% to 12%. The use of courtesy and hotel beds that were non-income generating had decreased from Montoya's sample (33%) to the current sample (23% to 27%). The income generated beds, convenience beds (20%) and respite care beds (18%), have increased from Montoya's sample 12% and 5%, respectively.



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## Chapter 1

### INTRODUCTION

#### Background

The rapid economic growth of health care facilities, ending in the mid-80s, was spurred by technological advances, private insurance, and social welfare programs. In the propulsion of acute care hospitals into the high-tech age, the needs of the non-acute patient, the poor, the elderly, and the chronically ill continue to be inadequately addressed and underserved. However, the historical social mission of hospitals to care for these populations may be returning. Decreased revenues may mean less new equipment but perhaps more humanistic care. The hospitals are transforming from primarily meeting physicians' needs to primarily serving patients' needs (Vladeck, 1990).

The changes in patterns of health insurance are forcing hospitals to enter relationships with large health care management organizations. These organizations include: (a) Health Maintenance Organizations (HMOs) and (b) Preferred Provider Organizations (PPOs). These managed care programs seek to reduce hospital and insurance costs by reducing inpatient utilization (Sabatino, 1990). In addition, they curtail expenditures for new technology, equipment, and research. Staffing is lower in all areas of

the hospital. Members of health care management or HMOs and PPOs emphasize better billing and information systems (Michel, Shaked, & Daley, 1985). The financial success rate of HMOs and PPOs has been high, making them attractive to hospitals that are struggling to survive.

It is ironic to see hospitals vying with one another to enter relationships with organizations whose management strategies for financial success is to keep people out of hospitals.

On average (1986), the non-elderly population of the United States has used 850 days of inpatient hospital care per 1,000 patients. In 1989, such managed care organizations led in diversification, improvements, and overall financial success (Sabatino, 1990). Kaiser-Permanente, one of the largest HMOs in the country, has registered 350 days of inpatient care per 1,000 patients, and 41% of the norm (Luft, 1986).

The new ambitious and entrepreneurial managed care ventures are promoting bed-use targets of 250 days per 1,000 patients, aiming membership at healthy people (Vladeck, 1990).

Some hospitals are resisting managed care. These hospitals are exploring other avenues to survive (Brubaker & McGowan, 1986). One avenue has been to convert underutilized acute care beds into alternative services such as: (a) chronic care programs (i.e., programs often



overlooked by managed care organizations); (b) respite bed use; (c) hospice programs; and (d) 23-hour admission (ambulatory surgery guest) programs. The 23-hour admission program has been used by some hospitals to meet the needs of a small number of out patients who require professional monitoring and care beyond the usual recovery room stay but require less than 24 hours of monitoring (Brubaker & McGowan, 1986).

St. Luke's hospital in San Francisco, California, has begun using its extra beds in a way that reconnects the hospital to the community. Its President and CEO states that St. Luke's is going back to its roots, referring to the hospital's use of beds for care of the community elderly. By making the hospital a force in the community again and by using new management strategies, using underutilized beds (e.g., converting 39 acute care beds to a skilled nursing facility), St. Luke's has been able to overcome a multimillion-dollar deficit (Johnson, 1990). Its President and CEO, Jack Fries, wants the hospital to be considered a community and charitable resource such that the community will say, "This is our hospital" (Johnson, 1990). This example shows the innovation of private hospitals to compensate for decreased bed use by refocusing on patients and their communities.

#### Statement of the Problem

Five years ago a study was done by Montoya (1986)

looking at the San Francisco Bay area hospital industry in its transitional state. Since that time a number of ongoing and new changes have occurred in the health care industry that warrant a replication study. Today's hospital industry continues to go through a period of self-examination. This has forced a major overhaul of nearly every facet of hospital operations due to:

(a) additional cuts in federal revenues for inpatient and outpatient care, (b) fierce competition from alternative health care providers, and (c) changes in the ownership of hospitals.

The trends that Montoya identified in 1986 continue today. Inpatient and outpatient cuts in federal reimbursement revenues will reach \$5.5 billion by fiscal year 1991 (Burke, 1990). Competition by alternative health care providers has increased in the areas of: (a) substance abuse treatment units, (b) free standing outpatient diagnostic centers, (c) wellness programs, and (d) home health care (Sabatino, 1990). Total hospital expenses have increased from 9.9% in 1988 to 10.2% in 1989 (American Hospital Association, 1989). There was a 0.3% raise in inflation in 1989 (Coleman, 1990). Yet hospitals have the fewest annual admissions since 1973 (American Hospital Association, 1989). As Montoya notes in her 1986 study, these economic changes have forced hospitals to respond.

Faced with a drop in occupancy and increases in total hospital expenses, administrators are taking several measures to improve operating efficiency and strengthen basic management strategies to insure economic stability of their health care facilities. Some of them are:

(a) making staff changes; (b) consolidating and eliminating services; (c) becoming innovative in bed utilization; and (d) hiring managers with product marketing experience (Coleman, 1990).

This study will examine the current alternatives being used by health care agencies in the San Francisco Bay area and compare the results with the 1986 findings of Montoya. There is a need and a concern for study of the health care industry for the future. The changing financial status of hospitals, combined with the need for hospitals to offer multiple services in order to preserve their market share, directs hospitals of the future to coordinate a wide variety of clinical settings and patient services. The prediction is that approximately 20 "Super Meds" will replace approximately 300,000 firms delivering medical care (Ellwood, 1985). If this prediction comes true, the future of the cottage industry of independent hospitals is at stake. Where this transition leads and what effect it will have on health care needs to be followed (Sloan, 1990).

#### Purpose of the Study

The purpose of this study is to replicate the study of

Montoya (1986) in investigating and describing alternative uses for acute care hospital beds of health care agencies.

#### Significance

Five years ago a study was done by Montoya (1986) looking at the San Francisco Bay area hospital industry and its transition. Since that time a number of ongoing and new changes have occurred in the health care industry that warrant a replication study. The ongoing ones are:

(a) additional inpatient and outpatient cuts in federal revenues; (b) fierce competition from alternative health care providers; (c) changes in the ownership of hospitals; and (d) decreased occupancy. The new changes include: (a) increased outpatient services; (b) more specialization; (c) interest in effective management of nursing resources; (d) hospital based home care; (e) feeder systems such as ambulatory care satellites; and (f) institutional cost containment, especially through "possible avoidable days" (Kennedy, 1990).

Montoya (1986) mentioned several important contributions of her study that also apply to the study currently proposed. The current study looks at changes in the way hospitals have adjusted to keep pace with the realities of today's economics:

1. Health care agencies that find new ways to use underutilized beds can significantly increase their revenues. Horizontal expansion such as converting beds to

respite care or hotel use gives hospitals new ways to cut costs without decreasing the quality of care.

2. Hospitals are changing their emphasis in patient care services focusing on outpatient care in contrast to inpatient services.

3. New models in nursing administration and their adoption are needed to integrate health care and economics. The study may benefit nursing administrators by suggesting new roles and functions that accompany changes in bed utilization. The study provides information to help health care agencies adapt to the changes.

#### Assumptions

The three assumptions underlying this study are: (a) to remain operational, health care agencies must be financially solvent; (b) to ensure effectiveness and viability; health care agencies need to adapt to changes in their economic environments; and (c) there have been changes since Montoya's 1986 study. In addition, the method of this study is based on the assumption that administrators will respond honestly to the questionnaire.

#### Research Questions

The research questions employed in both this research and Montoya's original study were:

1. What types of alternative bed uses are health care agencies utilizing?
2. What is the percentage of designated space for the

alternative uses of beds?

3. What is the relationship between type of alternative bed use and hospital size, location, and financial structure?

4. Does the alternative use of beds generate revenue beyond the fixed overhead costs for the health care agency?

#### Operational Definitions

1. Alternative bed uses are options that a hospital may choose for additional revenue production. These include: (a) hotel accommodations for friends and families of inpatients; (b) courtesy lodging for patients waiting admission; (c) accommodation for patients undergoing chemotherapy or diagnostic evaluation that does not require admission; and (d) respite accommodation for patients with chronic problems dealing mainly with drug abuse.

2. Underutilized beds are the number of acute care beds remaining after subtracting the average daily census plus 2% (protection level) of the number of licensed beds from the total number of licensed beds (Bay, 1984).

3. Health care agencies are those acute care hospitals listed in the 1989 American Hospital Guide and located within the telephone area codes serviced by the following Northern California counties: (a) San Francisco, (b) Marin, (c) Santa Clara, (d) Alameda, (e) Contra Costa, (f) San Mateo, (g) Sonoma, (h) Solano, and (i) Napa.

4. Swing beds are beds in acute care hospitals which

can also be used as skilled nursing facility (SNF) beds depending on hospital needs.

## Chapter 2

### CONCEPTUAL FRAMEWORK AND REVIEW OF RELATED LITERATURE

#### Overview

This review presents a narrative of the literature published regarding acute care hospitals and their current economic crisis since the 1986 Montoya study. No other study was found which replicated her 1986 study even though the situation in health care and particularly in acute care hospitals has changed significantly.

The literature review was conducted by initiating a computerized search using the Medline database and publications from the RAND Corporation in Santa Monica (1990). A manual search was conducted using identifiers such as economics, hospital bed use, swing bed use, respite bed use, alternative bed use, acute care hospitals, bed conversion, hospital cost control, financial management, bed occupancy, and hospital proprietary. Neither the computerized search nor the manual search revealed any follow-up study to Montoya's 1986 study.

#### Conceptual Framework

The health care environment today is strongly influenced by economic policies enacted in Washington, D.C. The need for alternative uses of acute care beds is one manifestation of the government's tighter control over Medicare and Medicaid and the type of care to be given



under the auspices of government programs. To understand economics, one must develop an "economic way of thinking" according to Friedman (Gwartney & Stroup, 1982). Keynes describes economics "as a technique of thinking which helps its possessor to draw correct conclusions" (Gwartney & Stroup, 1982). Basic economic principles help policy makers predict the probable and possible consequences of alternative policy choices (Gwartney & Stroup, 1982).

Economics as a science was developed by Adam Smith in the 18th century in England. Smith believed that consumers' self-interest can best be satisfied by having an unregulated, competitive, self-adjusting market, the law of supply and demand. In Adam Smith's view, the greatest hindrance to economic progress was government. Opposed to Adam Smith's beliefs was that of John Keynes, born in 1883 also in England. John Keynes' answer for a healthy economy centered on economic policies using monetary management and active fiscal policy; that is, government spending and taxing policies (Smith, 1936). These were not theories for specific individuals, and do not apply to health care economics partly because of the role of consumers.

In 1936, the whole direction and emphasis of modern economics was transformed. Coming on the heels of the most disastrous and widespread depression, John Keynes' (1936) book offered remedies to restore economic health. Keynes almost single-handedly developed the rationale for the

basic economic policies of the second half of the twentieth century in the nations of Western Europe and North America.

Keynesian macroeconomics prevailed until the 1970s when this mainstream approach to economics came increasingly into disrepute. Keynesian macroeconomics and the policies derived from it could not handle the simultaneous appearance of both unemployment and inflation called "stagflation." This gave rise to a revival of laissez-faire theories and a rejection of interventionist economic policies.

As the new conservatism moved to power in 1980 with the election of Ronald Reagan as President, the new neoclassical economics spread. Supply-side economics (Reaganomics) was the theme for the Reagan administration. According to Fusfeld (1990), supply-side economics' dominant theme is a reduction of government's role with an enlarged role for private enterprise to stimulate the economy. Reagan's policies rejected a strong activist role for the government by decreasing government spending. Tax breaks to private enterprise and consumers were given to stimulate production, employment, and economic growth (Fusfeld, 1990). Reagan, espousing Adam Smith's fundamental principle behind competition that individual consumers would make decisions in their own economic self-interest given an open market place, stimulated legislative initiatives to promote competition. Each year

since 1980, Congress has introduced such initiatives. In the free market, consumers and producers freely and independently make decisions that affect their exchange of goods and services.

Health care delivery, as it exists today, has been described as organized, controlled, and managed by the most highly trained health professionals. If the direction in health care policy is greater reliance on market forces to create competition, it is critical for economic policy makers to recognize an attempt to reduce the American Medical Association's dominance and prevention of true competition in health care delivery (Cleland, 1990).

A new policy is increasing authority given to nurses, other health care providers, and consumers. This has affected physicians' dominance in many areas of health care. For example, a visit to the doctor for an examination followed by a prescription was typical for a woman with a common vaginal yeast infection. Today, neither is required; women familiar with the typical symptoms of a yeast infection are able to buy the necessary medications over the counter based on their own diagnosis of the problem.

The current policies from Washington attempt to balance the quality of care with costs. Previous emphasis on cost at the expense of quality proved to be, in the long run, an unhealthy, unwise alternative.

Changes in policies are mandated by changing economic conditions. It appears that since the time of Montoya's study both macroeconomics and microeconomics have changed. The general economy has worsened and created financial constraints that prevent hospitals from generously donating bed use without being remunerated for it. At the micro-level the competition for medical dollars has grown fiercer. In today's hospital every effort is made to cut costs. As an example, "possible avoidable day" tracking is becoming a common practice in utilization management. A possible avoidable day is a day of patient care that is deemed medically unnecessary in an acute care setting.

Unnecessary hospital days are very common today. It has been estimated, and our experience shows, that there are an average of 1-2 possibly avoidable days (PA days) for each Medicare admission, even in efficient hospitals with effective Utilization Review departments. Hundreds of thousands of dollars are lost annually at each hospital. A 100 bed hospital with 3,000 Medicare admissions per year could potentially save \$600,000 yearly by eliminating one PA day per Medicare patient. (Kennedy, 1990, p. 9)

Common admissions to the hospital with a diagnosis of congestive heart failure, cerebral vascular accident and total knee or total hip replacement are notoriously costly to the hospital. More frequently than not, patients with

these diagnoses stay in the hospital long after the diagnostic related group (DRG) coverage has expired. Once the Medicare coverage stops, the hospital must pick up the costs. This results in a cost to the hospital which generally averages \$350 per day.

"Possible avoidable day" tracking identifies potential problem diagnoses and identifies physicians who keep their patients hospitalized longer than other physicians for the same treatment. Potential problem diagnoses are identified by the utilization review nurse and the attending physician is asked to state the immediate plans for that patient's care and necessity for continued care at the acute care level. The average cost or charge by physician and DRG and the average length of stay by physician and DRG are tracked.

If certain physicians cost the hospital more because of "possible avoidable days," at credential review time the more expensive care could become a factor for continued work at the hospital. This has not yet been a factor but is likely to be in the future (Kennedy, 1990). The greater control on costs, however, continues to affect hospital bed management. Past policies have resulted in an excess of hospital beds in most private hospitals. Health care organizations today will have to formulate and implement better economic policies to survive.

Gwartney and Stroup (1982) listed seven principles

fundamental to economic thinking and to understanding an economic approach that can be used to base future economic policies. The principles are:

1. Using the terms of economics, scarce goods cost someone something, such as providing free medical services at the expense of taxpayers.

2. Due to scarce resources, decision makers need to make purposeful choices. The question now is how to provide the nation with the best medical care at the best price. Economizing individuals will seek to accomplish this objective at the least possible cost.

3. Incentives are important to consumer choices; as personal benefits increase for the consumer, he/she is more likely to choose that option.

4. Economic thinking is marginal thinking. Marginal choices always involve the effects of net additions or subtractions from the current conditions. Hospitals look at marginal costs when determining whether to expand or reduce the number of their beds.

5. Decision makers realize information about the future is scarce like other resources and they will not always have the necessary information to make purposeful decisions. Consumers will conserve on these limited resources just as they conserve on other scarce resources.

6. Economic decisions will always have secondary effects as well as their immediate effect. Changes in

health care policy will only be seen with the passage of time.

7. Economics usually does not seek to predict the behavior of a specific individual. It focuses rather on the general behavior of a large number of individuals. The proof of economic theory is its ability to predict the future consequences of economic action (pp. 7-10). These principles are relevant to this study and provide a theoretical framework.

#### Nursing Theory

Nyberg's theory (1990) is particularly appropriate in response to pertinent issues to health care in the 1990s. Nyberg recognizes that nurse administrators are aligned with organizational goals (that is, goal attainment and economic output), whereas most staff nurses have the goal of helping people. At the conceptual level, Nyberg focuses on the concepts of economics and human care. She defines economics as the study of human behavior in response to the necessity of allocating scarce resources among alternative possible uses. She further defines economics as the acceptance of a scientific philosophy that stresses mathematics, categorizing, and physical reality and rules. Economics measures dollar values and depends on numbers to reflect reality and to predict the future. Nyberg further defines human care as a perceptual term by recognizing one must acknowledge that life includes perceptions and

feelings as well as physical reality. Nyberg's theory (1990) has the potential to guide the nurse administrator's practice.

Nyberg's theory (1990) recognizes concepts of caring of nurse theorists (e.g., Nightingale, Henderson, Hall, and Watson). This theory recognizes their contributions concerning the concept of human caring and provides a theoretical model for the nurse administrator to move into her new administrative role. Nyberg recognizes the conflicts between optimal care (the nurse's individual goal) and efficiency (the organization's goal). This theory uses rational and scientific data in a way not to decrease human value.

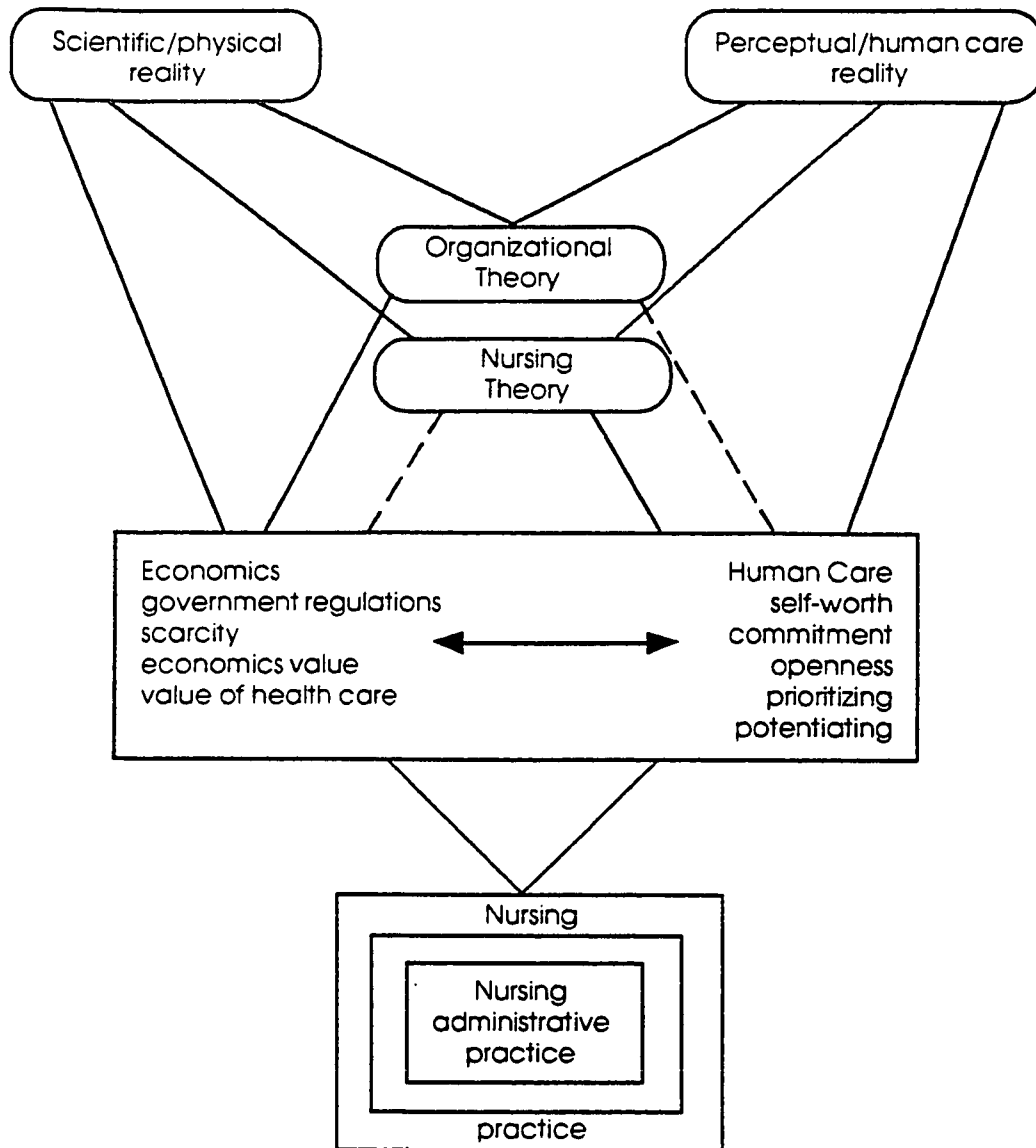
Nyberg's dissertation (1989) examined perceptions of human care and thoughts about economics from a population of 2,793 nurses at seven hospitals. From a sample of 135 nurses, it was found there was a generalized fear that the decrease in staffing coupled with an increased acuity will make it impossible in the future to continue to practice according to perceived ideals. Nurses will find it difficult to meet all patients' needs.

Nyberg's study indicated nurses viewed economics generally negatively, whereas care was viewed positively. Nurses believed they were still caring but felt that cost control posed a threat for them to continue care for high acuity level patients. Interviews were conducted with nine



nurse administrators at each hospital. They revealed that the nurse administrators understood and accepted that human care and economics are interdependent. They viewed economics as a necessary dimension in operating a health care facility (Nyberg, 1989).

Hospitals have felt the pressure to contain health care costs at government's insistence. Hospital administrators, looking for solutions, have recognized that nurses can help control hospital costs more than any other profession with the exception of physicians. By enlisting nurses' support of cost-containment methods, administrators have forced nurses to recognize the effects of economics on the world (Nyberg, 1990). Nyberg's model is useful as a guide to facilitate knowledge building regarding cost and containment for nurses in order to be part of the decision making process. It also assists staff nurses in understanding the mutual reality of economics and human care so that solutions to the cost/quality dilemma can be found. Nyberg's model (Figure 1) for nursing administration encourages a cooperative and collegial attitude and an understanding of nursing administration. It encourages nursing administrators to be leaders in promoting a more positive approach to understanding the interaction of human care and economics and enlists staff nurses to take part in the decision making process (Nyberg, 1990) (Figure 1).



**Figure 1.** Nyberg's Integrative Model for Nursing Administration.

**Note.** From "Care and economics: Foundations of nursing administration practice" by J. Nyberg (1990). Advanced Nursing Science, 13(1), 74-84.

## Review of Related Literature

### Historical Perspective

The growth in hospital expenditures and health insurance is ending. For 50 years, this relationship increased both the desirability and the costs of hospital services which, in turn, reinforced the demand for health insurance.

Historically, hospitals provided indoor relief for indigents and the socially displaced; illness of some sort was generally, but not invariably, a precondition for admission. Traditionally, hospitals were supported by charity, especially those tied to religious orders, and furthered by Florence Nightingale and philanthropy. Hospitals were to provide spiritual support as well as tending to physical and psychological needs (Vladeck, 1990).

During the past 50 years technology played the biggest part in the transformation of hospitals. Enhanced diagnostic techniques mandated more complex and more expensive equipment. With this technological revolution, the medical practitioners became dependent on the hospital as a setting for their activities as well as their training. Hospitals became centers for training doctors rather than focusing on sick and poor patients and patient education. Rather than a humanitarian focus, hospitals became the sites for scientifically advanced

diagnostic and therapeutic interventions. Hospitals also became the sites physicians used to send their private paying patients. A diminishing emphasis was placed on meeting the needs of poor and publicly dependent patients (Vladeck, 1990).

For a time, fees from private patients were the most important source of revenue. Hospitals proliferated, expanded, and invested still further in new technologies and facilities. All this changed with the Great Depression of the 1930s. Private patient revenues were dramatically reduced which severely affected the ever expanding hospital economy. New ways to finance hospitals and health care were needed (Vladeck, 1990).

With the advent of President Franklin Roosevelt's New Deal in 1933, a turnabout in fiscal policy occurred. There was an unprecedented expansion of the federal involvement in the social welfare of the American people. The most significant was the Social Security Act of 1935. This act provided for benefits for the elderly, health care for mothers and children, and grants for state and local public health services. There was an impressive expansion of basic health services (Kalisch & Kalisch, 1982).

Developed for the most part by hospitals, Blue Cross plans (which came into existence in the 1930s) used a large base of healthy participants to spread the economic risk making hospitalization affordable. This system of private,

employment-based health insurance coverage was in contrast to the national health insurance adopted by other countries. Blue Cross adopted a new method of financing health care along with traditional sources of philanthropy and government. It brought about a way to avoid increased government dependency, through taxation, at the same time getting wide support from the middle working class (Vladeck, 1990). Of importance was the adoption of two provisions: (a) the Hill-Burton Act in 1946 which guaranteed funds for hospital construction and (b) the support of the National Institutes of Health for research, training, and indirectly, hospital teaching and staffing (Rosenberg, 1990).

According to Vladeck (1990) "as technologies evolved, hospital admissions increased, but lengths of stay shortened" (p. 271). Service intensity grew daily; there were more costs for specialized services such as respiratory therapy, laboratory technology, diagnostic x-rays, and outpatient surgery. "Ancillary diagnostic and therapeutic services came to account for a larger and larger proportion of total hospital expense" (p. 271). And expenses began to rise at a rate significantly higher than inflation as hospitals added equipment, facilities, and personnel to support their new capabilities.

Other types of care, palliative and convalescent services, elderly care, and care of the unemployed or

unemployable due to chronic illness are of less interest to the new generation of physicians. They were more interested in patients who could be serviced and cured. An additional incentive was that curable patients were more likely covered by private insurance.

From its inception, Blue Cross services were always tied to the employed with episodic illness excluding psychiatric and custodial services. Government leaders sought to extend to a group outside the employment-based insurance system a type of insurance that those of working class possessed; they wanted a national health insurance based on the social insurance model (Vladeck, 1990). The idea of National Health Insurance was being considered through the 1950s. It surfaced with John F. Kennedy's presidency and was followed by Lyndon Johnson's dream of a great society in 1965.

Medicare and Medicaid were created in 1965, to fund health care for the elderly and the poor (Kalisch & Kalisch, 1982). Medicare and Medicaid brought an unexpected boom to the hospital industry. The designers of this plan realized the inadequacy of some facilities to provide services. Hoping to avoid the beneficiaries being treated as second-class citizens incentives to provide and upgrade facilities were given. The architects of Medicare followed the pattern of private insurance reimbursement. According to Vladeck (1990) "Medicare contained the

principle of reasonable costs as the basis for payment to hospitals. This went far beyond what had prevailed with Blue Cross; in fact, reasonable cost with Medicare was cost plus 2%. In addition, Medicare gave hospitals enormous flexibility to allocate costs between Medicare and non-Medicare patients" (p. 275). Medicare principles recognized depreciation expense and reimbursed accelerated depreciation of the complex, expensive equipment now filling hospitals (Vladeck, 1990).

Again technology expanded from increased revenues. Life expectancy increased and death rates among the very young fell dramatically. However, hospitals were becoming increasingly cognizant of the inevitability of an end to the unsustainable cost increases. Medicare also was experiencing dramatic reimbursement costs. For example, when Medicare was enacted coronary bypass grafts were being tested experimentally on laboratory animals; by 1984, Medicare was paying hundreds of millions of dollars for 60,000 of the 200,000 highly sophisticated (and expensive) bypass procedures performed annually in the United States (Vladeck, 1990).

Inpatient hospital utilization has grown continuously since the end of World War II. It now has begun to change. Private-pay insurance and Medicare's downscaling of cost reimbursement has decreased hospital revenues. The result for many hospitals has been a

dramatic increase in non-revenue producing empty beds. Hospitals that were encouraged to provide only conventional acute care have been left with fewer funds to maintain their expensive overheads and designated number of beds. To survive, hospitals were counting their options for bed use (Rosenberg, 1990).

Hospital managers, recognizing that their business was health care and not just hospital care, have capitalized on opening vacant acute care beds for innovative alternative uses (Tonges, 1985). Brubaker and McGowan (1986) describe how their Midwestern 137 bed hospital faced the challenges of the times through diversification. A respite guest program was designed to give temporary relief to caretakers of a dependent person. The program using empty acute care beds started as a weekend trial but quickly expanded to a maximum stay of 3 weeks. Contracting with a local home care agency, Chelsea Community Hospital in Chelsea, Michigan, provided hospice services for patients that required assistance with pain or symptom relief. An ambulatory guest program met the needs, especially for seniors that lived alone, of providing a place to stay the night before and after surgery. Swing beds were another way hospitals utilized empty acute care beds to increase revenues. The Omnibus budget and Reconciliation Act of 1987 allowed large hospitals to be reimbursed for the hospital's use of acute care beds as swing beds or nursing



home type services (Grimaldi, 1988).

#### Economics and Health Care

The condition of the economy has had a direct effect on health care. Since World War II, the United States has relied primarily on regulation to control health care costs. This government regulation has been in the form of: (a) direct ownership of certain health care facilities by directly controlling the nature of, access to, and quality of health services; (b) legal and regulatory influences; (c) control of health services by issuing licenses, regulating tax codes, defining health training, and subsidizing research; and (d) fiscal influences on health services (Cleland, 1990).

Despite regulation, health care expenditures have continued to increase at rates much greater than inflation. The Gross National Product (GNP) is now in excess of \$4 trillion annually and some 11%, \$500 billion, is spent on health care. Expenditures for Medicare, the nation's health protection program for the aged, has been dramatic. In 1968, the program's expenditures represented 2.6% of the federal budget; by 1993, 10.6% of all federal spending is expected to be devoted to Medicare (Cleland, 1990).

In an attempt to control medical expenditures, Congress passed Public Law 98-21 as a component of the Social Security Amendments of 1983. This law

instituted the Prospective Payment System (PPS) based on diagnosis-related group (DRGs). Classification and reimbursement rates are determined prospectively. Hospitals are paid a predetermined fixed amount for provision of treatment to Medicare patients within a specific DRG category.

Over the past 6 years, the prospective payment environment has motivated hospital management to re-evaluate and redefine patient care. The organizational focus on treatment goals and the mechanisms to achieve these goals are no longer based on a cost-based environment where medical care expenses are passed along to the private payer, insurance carrier, and state agency. Prospective Payment Schedules have forced health care organizations to change their cost-based production model to remain financially viable (Thille, 1989).

Health care organizations have shifted managerial orientation from a goal-driven organization model to a revenue-driven model in which available revenue strongly influences all other decisions. Treatment goals must now co-exist with budgetary constraints inherent in an environment of limited revenue (Van Hoesen & Eriksen, 1990). Jerry Hammon, M.D., Vice-President of Medical Affairs at Good Samaritan Hospital in Dayton, Ohio, has trimmed \$1 million off of a \$2 million goal to reduce the hospital operating expenses. Hammon tells his staff to

look at less expensive ways to do things (Kosha, 1990). Nurse managers exposed daily to organizational functions that focus on cost efficiency, DRGs, and political competition are expected to have a business mind set. Nurse managers must deliver patient care as well as balance economic trends and health policy regulations (Miller, 1990).

In recent years, the role of government in health care has become central to a major public policy debate. The inability to find the appropriate fit between government programs and the nation's health care delivery system has given rise to look for new solutions. With the shift in the political climate, Reaganomics, and the escalation in health care costs, a shift to competition and deregulation became popular concepts as means to control health care.

The strategy is for individual consumers to make decisions in their own economic self-interest, in an open market place, and be more effective than government control. This is the same fundamental principle espoused by Adam Smith more than 200 years ago (Cleland, 1990). The problem, however, is that health care in the United States does not fit that economic model. Health care has never been in the control of the consumer. Physicians and administrators have dictated the demand, supply, and price of services in the absence of competition (Drucker, 1974). In addition, the consumer has always relied on the

physician for advice and direction and has little background to compare health care services or costs. The consumer is usually unable to determine what and if a health service is actually needed. For the competitive market scenario to work, it hinges on the ability of consumers to make informed choices. The strategy centers on consumers, seeking to strengthen their financial incentives to shop for low-cost individual providers or to choose efficient alternative health plans. Consumer price shopping would intensify price competition among providers of care as they try to attract or retain patients.

The United States Congress, in 1983, directed the Secretary of Department of Health and Human Services to prepare a study on how informed consumers were in comparing the prices and performance of health care providers. The study conducted by Rand/University of California Los Angeles (UCLA) Center for Health Care Financing Policy Research showed that consumers were not especially knowledgeable and that information does influence consumers health plan choices (Marquis, 1983).

#### Nursing Economics

The merits of competition in the health care industry, although not addressing the role of nursing per se, address changes in the manner health care is delivered, reimbursed, and ultimately the delivery of nursing care. The changes in delivery of nursing care are some of the secondary

effects or economic consequences felt with the passage of time, as mentioned by Gwartney and Stroup (1982). Competition, as an alternative to regulation in health care, should enable informed consumers, rather than government, to determine health services. Legislative initiatives to promote such competition in health care have been introduced in Congress each year since 1980 (deVries, 1991). All federal reimbursement legislation for nurses has passed (C. deVries, personal communication, May 29, 1991). These efforts intend to test the hypothesis that a greater reliance on market forces would reduce utilization rates (as contended by Adam Smith), promote greater efficiency in health care delivery (Gwartney and Stroup's second principle), and ultimately control health care costs.

In 1987, Congress passed the first stage of a bill providing for demonstration projects by community based nursing and ambulatory care services to be paid under part B of Medicare (Gibson, 1984). This was passed over strong protests of organized medicine. Many demonstration projects have proved the economic value of nursing services (Cleland, 1990). Broton (cited in Maraldo, 1989) notes that "nurse specialists can provide effective care for low birth weight infants at home safely at a savings of \$2,000 per day" (Barrett, 1990, p. 41). During the 101st Congress (1989-1990), the American Nurses Association reported many

legislative victories for nursing: (a) Medicare reimbursement for nurse practitioners and clinical nurse specialists in rural areas; (b) reimbursement for services provided by family and pediatric nurse practitioners; (c) reimbursement of nurse practitioners' services to nursing home residents; and (d) direct reimbursement for nurses who provide services to employees and beneficiaries under the Federal Employees Health Benefits Program (deVries, 1991). The aim, states deVries, "is for all nursing service to be reimbursable" (p. 2).

Nurses, as providers of nursing care, are inextricably linked to the economics of health care and most particularly medicine. Cleland (1990) believes that clients should be able to contract for nursing care and that nursing care can decrease the need for more expensive services of physicians, hospitals, and nursing homes.

#### Summary

The picture of health care today has changed. Hospitals for the first time have been left to survive on their own without substantial governmental and private support. The historic nature of hospitals--care of the elderly and chronically ill--which, for so long has been overtaken by new technological advances, has gained a new footing. Services not as attractive to physicians, such as intensity and severity oriented, are now being looked at as alternative sources of income such as alternative uses for

empty acute care beds. In addition, hospitals have enlisted nurses' support for cost containment and have instituted new management strategies. Prospective payment versus retrospective payments to hospitals has had the most immediate effect on health care. The federal government, in addition, has legislated competition to help decrease health care costs; programs set up and run by nurses have proven this to be true. Alternative bed uses is an example of how independent hospitals can survive and resist being the victims of managed care (e.g., HMOs and PPOs). The purpose of private or community independent hospitals is to continue the more personal nature of care only they can provide.

## Chapter 3

### RESEARCH METHODOLOGY

#### Research Design

This time-bound, cross-sectional survey research is a descriptive-comparative replication study using a questionnaire constructed by Montoya (1986) to determine how and to what extent health care agencies are involved in alternative uses for hospital beds. Additionally, strategies were employed based on Dillman's (1978) approach to mail surveys. The demographic variables that were compared are: (a) size, (b) location, (c) organizational structure, and (d) respondent demographics.

Only acute care hospitals were included in this study. Selected hospitals range in size from small (200 beds) to large (400 beds) and were located in rural and urban areas. Their financial structures included private organizations and public facilities. Hospitals not included in this study are chronic care facilities.

#### Subjects

The population included all 83 acute care agencies that were listed in the 1989 American Hospital Association Guide that were geographically located within the following Northern California counties with the telephone area codes of 415, 707, 408, and 916: (a) San Francisco, (b) Marin, (c) Santa Clara, (d) Alameda, (e) Contra Costa,



(f) San Mateo, (g) Sonoma, (h) Solano, and (i) Napa. The average number of beds per agency was 247. The average percentage of occupancy for 1990 was: < 50% (13%), 50-70% (42%), and 70%+ (42%). The sample consisted of all Chief Nurse Executives who voluntarily responded and returned the surveys. Consent for use of Human Subjects was obtained from the Human Subjects Institutional Review Board of San Jose State University (Appendix A). The respondent was assured of complete confidentiality. The questionnaire was given an identification number for mailing purposes only.

#### Data Collection

The Chief Nurse Executive of each agency was contacted by telephone and the United States Postal Service. The contact packet contained a cover letter (Appendix B), an informed participation sheet (Appendix C), the questionnaire (Appendix D), and a pre-stamped return envelope and \$2.00. After 2 weeks, a follow-up letter (Appendix E) was mailed to each nurse executive who did not respond to the initial request with a copy of the questionnaire. Within 4 weeks, a second follow-up letter (Appendix F) was sent with a copy of the questionnaire (Appendix D). To collect the survey data, 83 questionnaires were sent to the acute care hospitals in the designated region. (No chronic care facilities were included.) Of these Chief Nurse Executives, 68 (83%) returned the surveys. Eight of these were returned

incomplete. Thus the final sample was 60 returns for a return rate of 72%. Ninety-eight percent (98%) of respondents were RNs. Of these 60 respondents, 95% were female, and 5% male. They were on average 46 years old and had 5 years in their current positions and 24 years in nursing. Most held advanced degrees, 78% holding a master's degree or doctorate, and 17% had bachelor's degrees. The data gathered from the mailed questionnaires remained in the investigator's possession. The investigator developed a code book and data were collected before being entered into computer analysis.

#### Instrumentation

The questionnaire was developed by Montoya (1986) (Appendix D). The consent was obtained from her prior to its use in this study (Appendix G). The instrument is a 9 question, 38 item questionnaire. Questions 1 through 4 elicit demographic responses of agency size, degree of occupancy, financial structure, and general location. Question 5 determined the presence or absence of seven alternative bed uses with the provision for inclusion of any additional type of alternative bed use. Question 6 assessed allocation of space. Question 7 determined the profitability of different types of bed use. Question 8 explored areas of potential difficulty with respect to medical records, medical staff, liability issues, and licensing regulations. Responses were categorical in

nature. Question 9 elicited demographic responses concerning respondent.

### Reliability

Reliability was calculated by Montoya (1986). The internal consistency correlation coefficient was computed. The Cronbach's alpha was .99. This finding suggested a high degree of internal consistency. No test-retest reliability was reported.

### Validity

The content or domain validity of the questionnaire was supported by an independent critique by five of Montoya's nursing colleagues. They examined the questions for clarity, ambiguity, and relevance. Montoya's study served as validation of the instrument. This project used Montoya's instrument. The findings from this study provide validation of its use.

## Data Analysis

### Research Question 1

Frequency distribution tables of response to Question 6 (parts A-G) was used to answer the question, "What types of alternative bed use are health care agencies utilizing?"

### Research Question 2

To answer this question, "What is the percentage of designated space for the alternative use of beds?" the total number of beds indicated in Question 6 (parts A-G) was divided by the total beds (3 sizes: 0-200, 201-400,

and 401-998) in the agency given in Question 1. The average proportion was then calculated. In addition, after excluding those hospitals indicating no alternative uses made of their beds, the average proportion was calculated.

#### Research Question 3

This question asks, "For each type of alternative bed use (Question 6, parts A-G), what is the relationship between size (Sm < 200, Med 201-400, Lg > 400), location, financial structure, and the number of beds allocated for each use" (0-5 = low, 6-10 = mod, > 10 = high). For each of the responses the chi-square statistic was used to determine whether or not a relationship was present between hospital size (Question 1: small, medium, large) and bed use, location (Question 4: rural, suburban, urban) and bed use, and financial structure (Question 3: private or public) and bed use. Cramer's V was used to test the strength of the relationship.

#### Research Question 4

The fourth question was, "Does the alternative bed use of beds generate revenue beyond the fixed costs for the health care agency?" A frequency distribution table of responses to part 7 (parts A-G) was used to answer this question.

#### Demographics

Demographics included information about the respondents: (a) registered nurse, (b) gender, (c) age,

(d) number of years in position, (e) number of years in nursing, and (f) educational level. Descriptive statistics were used to report these findings.

#### Summary

Chief nurse executives in 83 acute care agencies in the greater San Francisco Bay Area responded to a questionnaire developed by Montoya regarding alternative bed uses. Data were analyzed relative to each of the four research questions posed to guide the study. The findings are presented in the following chapters.

## Chapter 4

### FINDINGS AND INTERPRETATION

#### Introduction

The analyses were carried out as planned using frequencies and percentages of answers from the questionnaire. These frequencies were compared among groups using chi-square tests to answer the research questions. The research questions and findings are presented in the following section. Significance is indicated by test results with probabilities less than .05; however, because of the exploratory nature of the study, probabilities less than .10 also are noted as trends.

#### Results

##### Research Question 1

What types of alternative bed use are health care agencies using? This question was answered by tabulating the frequencies of responses to item 6 and indicate the number of beds allocated for each area. These frequencies and percentages are presented in Table 1.

Alternative bed use was used by a minority of the agencies surveyed. The most frequent type of alternative bed use was for non-staffed evening stay prior to surgery (27%) (courtesy) and non-staffed for loved ones (27%) (hotel). The next most frequent purpose of alternative bed use was non-staffed for clients (25%) (hotel). Fourteen

Table 1

Hospitals' (N = 36) Alternative Bed Uses

Alternatives	<u>n</u>	% of Total Hospitals	<u>M</u> No. of Beds	<u>SD</u>
Non-staffed for clients (Hotel)	15	25%	8.67	15.79
Non-staffed for loved ones (Hotel)	16	27%	10.81	23.69
Non-admitted evening stay prior to treatment (Courtesy)	14	23%	5.00	4.42
Non-admitted evening stay prior to surgery (Courtesy)	16	27%	4.75	3.97
Non-admitted additional days after treatment (Convenience)	12	20%	4.00	2.45
Non-admitted additional days after surgery (Convenience)	11	18%	4.64	2.84
Respite Care	11	18%	7.18	8.08
Other <sup>a</sup>	04	07%	13.25	11.27

<sup>a</sup>Other uses included primarily swing beds.

(23%) of the agencies also used beds for non-admitted evening stay prior to treatment (courtesy). Twelve (20%) agencies used beds for non-admitted additional days after treatment (convenience) and eleven (18%) for non-admitted additional days after surgery (convenience). Eleven (18%) of the agencies used respite beds for alternative use.

From the write-in responses, it was clear that the "other" responses were indicating swing bed use; four (7%) of the agencies used beds for this purpose.

#### Research Question 2

What is the percentage of designated space for alternative use of beds? To answer this question, only the 36 hospitals that actually indicated some kind of alternative bed use were included. The average proportion, for each hospital, was calculated by summing all types of alternative bed uses (Question 6, parts A-G) and dividing by the total number of beds in each agency. As shown in Table 1, the average number of beds in the agencies varied from 4.00 to 13.25 for the alternative uses.

#### Research Question 3

For each type of alternative bed use, what is the relationship between (a) size, (b) location, and (c) financial structure and the number of beds allocated for alternative uses (low = less than 5, and medium = more than 5) (Table 3 & 4).

As seen in Table 2, one significant difference was found among hospitals of different sizes in terms of their uses of any of the eight alternative bed uses. It appeared that small hospitals were more likely to allocate bed use to non-admitted evening stay prior to surgery than were medium or large hospitals. Even though there was one significant result, no conclusions can be drawn because of



Table 2

Alternative Bed Use Related to Size of Hospital (N = 60)

Size	Low Use		Medium Use		Chi-Square	df	p
	n	%	n	%			
<u>Non-Staff for Clients</u>							
Small Hospital	5	63%	3	37%	0.94	2	.63
Medium Hospital	3	50%	3	50%			
Large Hospital	1	100%	0	0%			
<u>Non-staffed for loved ones</u>							
Small Hospital	4	67%	2	33%	0.15	2	.93
Medium Hospital	4	57%	3	43%			
Large Hospital	2	67%	1	33%			
<u>Non-admitted evening stay prior to treatment</u>							
Small Hospital	2	50%	2	50%	3.01	2	.22
Medium Hospital	6	86%	1	14%			
Large Hospital	1	33%	2	67%			
<u>Non-admitted evening stay prior to surgery</u>							
Small Hospital	6	86%	1	14%	6.01	2	.05*
Medium Hospital	6	100%	0	0%			
Large Hospital	1	33%	2	67%			
<u>Non-admitted additional days after treatment</u>							
Small Hospital	3	60%	2	40%	1.16	2	.56
Medium Hospital	5	83%	1	17%			
Large Hospital	1	100%	0	0%			

Table 2 (Cont.)

Size	Low Use		Medium Use		Chi-Square	df	p
	<u>n</u>	%	<u>n</u>	%			
<u>Non-admitted additional days after surgery</u>							
Small Hospital	2	40%	3	60%			
Medium Hospital	4	80%	1	20%			
Large Hospital	1	100%	0	0%			
					2.36	2	.31
<u>Respite Care</u>							
Small Hospital	2	67%	1	33%			
Medium Hospital	5	71%	2	29%			
Large Hospital	1	100%	0	0%			
					0.44	2	.80
<u>Other<sup>a</sup></u>							
Small Hospital	1	50%	1	50%			
Medium Hospital	0	0%	0	0%			
Large Hospital	1	50%	1	50%			
					0.00	1	1.0

<sup>a</sup>These are primarily swing beds.

\*p ≤ .05

lack of reliability of chi-square due to small group sizes and lack of randomization.

Table 3

Alternative Bed Use Related to Location of Hospital(N = 60)

Size	Low Use		Medium Use		Chi-Square	df	p
	n	%	n	%			
<u>Non-Staff for Clients</u>							
Urban	4	57%	3	43%	1.90	2	.39
Suburban	5	71%	2	29%			
Rural	0	0%	1	100%			
<u>Non-staffed for loved ones</u>							
Urban	4	50%	4	50%	1.78	2	.41
Suburban	5	83%	1	17%			
Rural	1	50%	1	50%			
<u>Non-admitted evening stay prior to treatment</u>							
Urban	6	86%	1	14%	2.86	2	.24
Suburban	2	40%	3	60%			
Rural	1	50%	1	50%			
<u>Non-admitted evening stay prior to surgery</u>							
Urban	7	86%	1	13%	1.50	2	.47
Suburban	5	83%	1	17%			
Rural	1	50%	1	50%			
<u>Non-admitted additional days after treatment</u>							
Urban	4	100%	0	0%	2.04	2	.36
Suburban	3	60%	2	40%			
Rural	2	67%	1	33%			

Table 3 (Cont.)

Size	Low Use		Medium Use		Chi-Square	df	p
	<u>n</u>	%	<u>n</u>	%			
<u>Non-admitted additional days after surgery</u>							
Urban	4	100%	0	0%			
Suburban	2	40%	3	60%			
Rural	1	50%	1	50%			
					3.65	2	.16
<u>Respite Care</u>							
Urban	5	72%	2	29%			
Suburban	3	100%	0	0%			
Rural	0	0%	1	100%			
					3.80	2	.15
<u>Other<sup>a</sup></u>							
Urban	1	50%	1	50%			
Suburban	1	50%	1	50%			
Rural	0	0%	0	0%			
					0.06	1	1.00

<sup>a</sup>These were primarily swing beds.

As seen in Table 3, no significant differences were found among hospitals of different locations in terms of their use of one of the eight alternative bed uses.

Table 4

Alternative Bed Use Related to Financial Structure of  
Hospital (N = 60)

Size	Low Use		Medium Use		Chi- Square	df	p
	n	%	n	%			
<u>Non-Staff for Clients</u>							
Private	8	67%	4	33%	1.81	2	.41
Public Hospital	0	0%	1	100%			
Both	1	50%	1	50%			
<u>Non-staffed for loved ones</u>							
Private	9	64%	5	36%	0.15	1	.70
Public Hospital	0	0%	0	0%			
Both	1	50%	1	50%			
<u>Non-admitted evening stay prior to treatment</u>							
Private	7	64%	4	36%	0.74	2	.69
Public Hospital	1	50%	1	50%			
Both	1	100%	0	0%			
<u>Non-admitted evening stay prior to surgery</u>							
Private	10	77%	3	23%	0.85	2	.65
Public Hospital	2	100%	0	0%			
Both	1	100%	0	0%			
<u>Non-admitted additional days after treatment</u>							
Private	8	73%	3	27%	0.36	1	.55
Public Hospital	0	0%	0	0%			
Both	1	100%	0	0%			

Table 4 (Cont.)

Size	Low Use		Medium Use		Chi- Square	df	p
	<u>n</u>	%	<u>n</u>	%			
<u>Non-admitted additional days after surgery</u>							
Private	6	60%	4	40%			
Public Hospital	0	0%	0	0%			
Both	1	100%	0	0%			
					0.63	1	.43
<u>Respite Care</u>							
Private	8	73%	3	27%			
Public Hospital	0	0%	0	0%			
Both	0	0%	0	0%			
					(could not compute)		
<u>Other<sup>a</sup></u>							
Private	2	50%	2	50%			
Public Hospital	0	0%	0	0%			
Both	0	0%	0	0%			
					(could not compute)		

<sup>a</sup>These are primarily swing beds.

As seen in Table 4, no significant differences were found among hospitals of different financial structures in terms of their use of alternative bed use. For respite care and other, chi-square could not be calculated because there were too many empty cells.

In summation for research Question 3, there appeared to be few differences among hospitals in their alternative uses of beds when compared on the basis of size, location, or financial structure.

#### Research Question 4

Does the alternative use of beds generate revenue beyond the fixed costs for the health care agency? To answer this question, analyses were computed comparing the number of agencies who responded "yes" to item 7 and its six subquestions. The majority of responding agencies (from 62% to 87%) answered "undecided" to this item. They were omitted from the analysis. And only those agencies who indicated some use of beds for each allocation were included in the analysis for that allocation (from 13% to 38%). Responses are summarized in Table 5.

Only a minority of hospitals reported generating income from alternative bed use. The types of bed use which generated income for the most hospitals were non-admitted additional days after treatment (36%), respite care (30%), and other (swing) (29%).

Table 5

Income Generated from Alternative Bed Uses

Alternatives	Yes <u>n</u>	%	No <u>n</u>	%	Number of Hospitals Using Beds for This Purpose
Non-staffed for clients	3	16%	16	84%	19
Non-staffed for loved ones	1	5%	19	95%	20
Non-admitted evening stay prior to treatment	4	22%	14	88%	08
Non-admitted evening stay prior to surgery	4	19%	17	81%	21
Non-admitted additional days after treatment	5	36%	09	64%	14
Non-admitted additional days after surgery	(missing data)				
Respite Care	3	30%	07	70%	10
Other <sup>a</sup>	2	29%	05	71%	07

<sup>a</sup>Other uses included primarily swing beds.

## Additional Findings

Responding agencies answered a final question on the survey which asked "With the alternative accommodations, have you experienced any difficulties with medical records, medical staff, liability issues, or licensing regulation?" Responses are shown in Table 6.



Table 6

Difficulties with Accommodations (N = 60)

	Yes		No		Missing	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
Medical Records	13	22%	45	75%	2	3%
Medical Staff	12	20%	47	78%	1	2%
Liability Issues	12	20%	47	78%	1	2%
Licensing Regulations	03	05%	55	92%	2	3%

## Chapter 5

### CONCLUSIONS AND LIMITATIONS

#### Summary

The purpose of this study was to replicate the study of Montoya (1986) in investigating and describing alternative uses of beds in acute care hospitals in the San Francisco Bay Area. This time-bound survey research was a descriptive comparative replication study. The questionnaire was sent to 83 nurse executives of whom 68 returned the questionnaire; there were 8 discards, leaving 60 useable surveys. Nursing executives were from agencies with an average of 247 beds. The nurses were predominantly females 34-60 years of age, holding the position an average of 5 years with 24 years in nursing. Seventy-eight percent (78%) held a master's or doctorate and 17% held a bachelor's degree.

Research Question 1 asked, "What type of alternative bed use are health care agencies utilizing?" About 60% ( $n = 36$ ) of the hospitals used beds for some kind of alternative purpose. This percentage of alternative bed use was greater to that found by Montoya's 48% ( $N = 32$ ) in her study of hospitals in the same area.

Of the 36 hospitals in this study offering some type of alternative bed use, 15 (25%) offered non-staffed beds for clients, and 16 (27%) for loved ones (hotel beds).

This was a slightly lower proportion than that found by Montoya ( $N = 22, 33\%$ ), a difference which may have been attributable to the different time periods of the studies. Montoya completed her study in 1986 during a non-recessionary and generally more lucrative economic period. Hospitals in 1986 may have been more able to donate free beds for use by patients and their families. More of a difference was found for beds allocated to non-admitted evening stay prior to treatment or surgery (courtesy beds). Fourteen (23%) and 16 (27%) of hospitals in the current study offered beds for these uses, whereas in Montoya's sample about 21 (31%) offered beds for this use. Beds used for non-admitted additional days after treatment or surgery (convenience beds) were used by about 12 (20%) and 11 (18%) respectively of hospitals in this study and 8 hospitals (12%) in Montoya's sample. One major difference between the two studies was found in the use of beds for respite care; 3 (5%) in Montoya's sample and 11 (18%) in this study's sample. Both of these two types, convenience and respite, may generate income.

Research Question 2, "What is the percentage of designated space for the alternative uses of beds?" The average proportion of beds designated for any alternative use in this study was 12% and in Montoya's study 4%. Specific use varied on average from a low of 4 to a high of 13 beds. Montoya found that the number of beds

allocated was from 1 to 15. The findings from the two studies appeared to be highly similar in terms of the few beds allocated per use. Although, in this study 12% of all beds were allocated for alternative bed uses whereas in Montoya's study 4% were allocated.

Research Question 3 asked, "For each type of alternative bed use what is the relationship between size, location, financial structure, and the number of beds allocated for each use?" The third research question was broken into a series of analyses addressing allocated bed use in hospitals of different size, location, and financial structure. A complication arose in the analysis because many of the hospitals did not use beds for allocated purposes, thus reducing the sample size to below the minimum number required for a reliable chi-square test to be computed. To get an indication of trends, the chi-squares based on small sample sizes were computed, but the results must be viewed as tentative.

Relative to hospital size, only one chi-square showed a significant difference ( $p < .05$ ) among small, medium, and large hospitals for beds used for non-admitted evening stay prior to surgery. The results indicate that size is not an important variable in alternative bed use. Relative to location, no significant differences in bed use were found among hospitals in urban, suburban, or rural areas, again indicating that no association existed between bed use and

location. Likewise, for the analysis related to financial structure, no association was seen between bed use and whether the hospital's funding was private, public, or both. These findings were similar to those reported by Montoya, who found no association between bed use and hospital size or location.

Research Question 4, "Does the alternative bed use of beds generate revenue beyond the fixed costs for the health care agency?" Income generated from alternative bed use was minimal, although a small percentage of hospitals indicated they received income for three bed uses: non-admitted additional days after treatment (36% of 14 hospitals), respite care (30% of 10 hospitals), and other (swing) (29% of 7 hospitals). The fact that some income was generated from these uses more than for other uses supports the argument that alternative bed use for hotel and courtesy bed use has decreased since 1986 when Montoya did her study.

A final question asked was whether hospitals that offered alternative bed use had difficulty for other reasons such as with medical records, medical staff, liability, or licensing. About 20% ( $N = 12$ ) of the responding hospitals indicated they did find problems with medical records, medical staff, and liability issues. The conclusion is that although this problem was indicated by relatively few hospitals the problems need to be addressed,

especially liability issues.

#### Discussion of Theoretical Framework

##### Principles of Economics

The principles of economics of Gwartney and Stroup (1982) provide a context for several of the study's findings. One finding was that alternative bed use did not appear to be sufficiently income generating for most hospitals; hence, alternative uses of beds that did not generate income were decreased, and those that did, were continued or increased.

Gwartney and Stroup's first principle was that scarce goods cost someone something; for example, providing free medical services through courtesy or hotel beds to those who can't pay is at the expense of other patients. In the case of this study, other payors were no longer paying for the alternative (courtesy or hotel) bed uses, and, hence, the hospitals could no longer afford to provide them.

The second principle was that because resources are scarce, decision makers must make purposeful choices. In the case of acute care hospital administrators, it appears that alternative utilization of beds has increased as an alternative for saving the hospital money as well as making it. One new technique mentioned in the literature for reducing hospital costs without sacrificing care is to streamline hospital services through elimination of "possible avoidable days" (Kennedy, 1990).

The third relevant principle was that economic thinking is marginal thinking involving the net addition or subtraction from the current situation. Alternative bed use may generate some small amount of money, but it often does not cover the hospital's expenses to offer and maintain the beds. Larger savings can be seen in other areas such as shortened lengths of stay. Hence, hospitals may refocus from the marginal advantage of alternative bed use to the more evident advantage of streamlining hospital services.

The other principle relevant to this study's findings is that economic decisions will always have secondary effects as well as their immediate effect. Lessening use of free beds and shortening patient length of stay have the immediate payoff of making the hospital more profitable. This in turn makes the hospital more competitive with other hospitals by being more attractive to payors and insurers. These secondary effects may have more of an impact on the hospital's economic survival, in the long run, than the immediate effects of increased profit.

#### Nyberg's Theory

Nyberg's theory of nursing and nursing economics is also relevant to the findings of this study. Nyberg integrated the caring aspects of nursing with the economic aspects of rendering health care in hospitals. She pointed out the necessity for nursing administrators to be partners

with the hospital administrators in optimizing care while minimizing costs. The findings of this study were that hospitals were decreasing, or at least, not increasing the use of beds for hotel and courtesy purposes. Because of the increased acuity of illness now existing for patients who come to the hospital sicker and stay for a shorter time, some nurses may be worried that decreased alternative bed uses will deprive patients of essential care. However, the primary decreases were for uses that did not involve patient care but rather convenience for the patient and patient's family. In fact, respite care and swing beds, which are used for patient care had increased in use since Montoya's 1986 study.

According to Nyberg's model, the success of the hospital will depend on the alignment of the staff with hospital economic goals. The key player in coordinating staff nurses with hospital goals is the nursing administrator. Staff must understand the economic benefits and detriments of their actions on a day-to-day basis. The nursing administrator must be able to translate the economic goals of the hospital into the daily activities of the staff.

Nurses must be informed about the specific effects of hospital decisions on both hospital economic goals and patient care. Hospitals are responsible to convince nurses that cost containment is possible without sacrificing the



goal of helping people. Nyberg discusses ways in which this can be done at length. Nursing administrators can be made part of the hospital team working toward cost containment if they are convinced that patient care will not be sacrificed.

Nursing administrators must fully understand government regulations that affect costs and hospital procedures. These understandings must be conveyed succinctly to the nursing staff so that the staff can put into practice those methods that will result in cost containment. The broad perspective of the hospital functioning as a team must be communicated convincingly to all staff nurses and staff nurses need to be part of the decisions for how services can be provided to cut costs. Nursing administrators and staff nurses must be taught how to operate cooperatively and collegially with the hospital's economic goals in mind.

Nursing administrators also are key to the success of other methods for cost containment such as the tracking of "possible avoidable days" and providing feedback to nurses and physicians about ways to cut unnecessary expenses in patient care. The key to success with any cost containment method--be it alternative bed use or possible avoidable day tracking--is the close cooperation among all hospital personnel to balance economic goals with goals for patient care.

### Limitations

Because this was a survey study, it was limited by the willingness of the respondents to return the survey. This study was not able to generalize to other areas because the San Francisco Bay Area is unique and the sample was not randomly selected. The study was specifically designed to replicate Montoya's study (1986) so generalization to other populations must be made with caution. Not included in this study were chronic care facilities.

1. The size of the sample ( $N = 60$ ) and the low percentage of alternative bed use (12%) resulted in too few hospitals to reliably analyze alternative bed use relative to the variables of size, location, and financial structure. Likewise the analysis pertaining to income generated was weakened by the small number of hospitals using beds alternatively.

2. The instrument contained one error that was not discovered until after its distribution. Question 7 omitted one of the types of bed use.

3. In this study, allowance was made for HMOs to be included in the findings, however, most HMOs do not provide alternative bed use.

4. The survey did not specify swing bed as an alternative bed use.

### Discussion

The findings of this study suggest a slight increase

in alternative bed use from the findings reported by Montoya; 12% of beds were used for alternative purposes in this study and 4% in Montoya's. It was anticipated that during the 5 years since Montoya reported her study, hospitals would have responded to increased financial constraints by increasing alternative bed uses, especially those that generated additional income. Perhaps hospital management has also employed other techniques to insure the economic stability of their facilities. Some alternative techniques include staff changes, consolidation, elimination of services, or hiring managers with marketing experience (Coleman, 1990). These methods, however, were not addressed in this study.

If anything, the economic situation has worsened for hospitals and yet this study found evidence of only a slight increase in alternative bed use. A trend was a decrease in some alternative bed uses. Alternative bed uses increased for purposes that could generate income, non-admitted additional days after treatment, respite care, and swing bed uses, but still the majority of hospitals said they did not make money on alternative bed uses.

#### Recommendations for Future Research

1. Should the questionnaire be used again, it should be made clearer. It should include swing beds and skilled-nursing facility beds as alternative uses.
2. In this study, HMOs were included; however, they

may or may not be appropriate in future studies because they do not make alternative use of beds.

3. The hospitals included in this study were not randomly selected. A random sample allows for generalizability and statistical validity.

#### Conclusions

It appears that the hospitals in this study may have increased some alternative bed uses relative to hospitals in Montoya's study. There may have been an increase for some of the uses that generate an income and a slight decrease for those that did not. Nurses need to understand that the lack of use of alternative beds does not necessarily mean diminished patient care. Use of beds for respite care and swing beds may actually be on the increase. To keep the hospital viable, the beds must be kept full, and to keep them full, different uses must be made. Changes may be required in how nurses are trained to increase their flexibility for giving patient care in these ways.

The situation for hospitals, physicians, nurses, and patients will become even more demanding. To survive hospitals will need to become ever more efficient. Physicians and nurses will need to work in harmony within hospitals to decrease costs without sacrificing care. Patients and their families will need to lower their expectations for treatment. None of these looming changes

is comfortable. Resistance to them will be an ongoing difficulty. The best that can be hoped is that enough change can occur on the part of all parties to make health care, under streamlined tight economic conditions, as good as it can be.

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**APPENDIX A**  
**Human Subjects Consent**



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Office of the Academic Vice President • Associate Academic Vice President • Graduate Studies and Research  
One Washington Square • San Jose, California 95192-0025 • 408/924-2480

To: Susan Burnett, Nursing  
85 Ellenwood Avenue  
Los Gatos, CA 95030

From: Charles R. Bolz  
Office of Graduate Studies and Research

Date: May 21, 1991

A handwritten signature in cursive script that reads 'Charles R. Bolz'.

The Human Subjects Institutional Review Board has reviewed and approved your request for exemption from Human Subjects Review for the proposed study entitled:

"A Replication Study: Alternative Uses for  
Underutilized Acute Hospital Beds in Northern  
California"

You may proceed with this study without further review by the Human Subjects Institutional Review Board.

I do caution you that Federal and State statutes and University policy require investigators conducting research under exempt categories to be knowledgeable of and comply with Federal and State regulations for the protection of human subjects in research. This includes providing necessary information to enable people to make an informed decision regarding participation in your study. Further, whenever people participate in your research as human subjects, they should be appropriately protected from risk. This includes the protection of the confidentiality of all data that may be collected from the subjects. If at any time a subject becomes injured or complains of injury, you must notify Dr. Serena Stanford immediately. Injury includes but is not limited to bodily harm, psychological trauma and release of potentially damaging personal information.

Please also be advised when people participate in your research as human subjects, each subject needs to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate or withdrawal will not affect any services the subject is receiving or will receive at the institution in which the research is being conducted.

If you have any questions, please contact Dr. Stanford or me at (408) 924-2480.

CC: Phyllis M. Connolly, Nursing

**APPENDIX B**  
**Cover Letter**



---

School of the Applied Arts and Sciences • Department of Nursing  
One Washington Square • San José, California 95192-0057 • 408/924-3130 • FAX. 408/924-3135

I am currently enrolled in a Master of Science program at San Jose State University with an emphasis in Nursing Administration. I am interested in repeating a survey of acute care agencies in the nine-county area surrounding San Francisco to determine the options health care agencies are engaging in to counter the fixed overhead costs associated with underutilized acute care beds.

In order that the results will truly represent the acute care agencies in the San Francisco Bay Area, it is important that each questionnaire be completed and returned.

You may be assured of complete confidentiality. The questionnaire has an identification number for mailing purposes only. This is so that I may check your name off of the mailing list when your questionnaire is returned. Your name will never be placed on the questionnaire.

If you agree to participate in the survey, complete the questionnaire. Completion and return of the questionnaire implies your informed consent. If you would like a copy of the abstract, I will be happy to sent it to you when the study is complete. After enclosing the questionnaire in the enclosed envelope simply put your name, address, and "copy of results requested" on the back of the return envelope.

You might be interested in further information before agreeing to participate. You may reach me at home (408) 395-4911. My faculty advisor is Dr. Phyllis M. Connolly, and she may be contacted at (408) 924-3144.

The results of this survey will indicate changes since the study of 1986 in health care agencies in Northern California. I look forward to your participation.

Sincerely,

Susan Burnett, R.N., BSN

**APPENDIX C**  
**Informed Participation Statement**

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School of the Applied Arts and Sciences • Department of Nursing  
One Washington Square • San José, California 95192-0057 • 408/924-3130 • FAX: 408/924-3135

### INFORMED PARTICIPATION STATEMENT

RESPONSIBLE INVESTIGATOR: Susan Ann Burnett

TITLE OF PROTOCOL: A REPLICATION STUDY: ALTERNATIVE USES  
FOR UNDERUTILIZED ACUTE CARE HOSPITAL  
BEDS IN NORTHERN CALIFORNIA

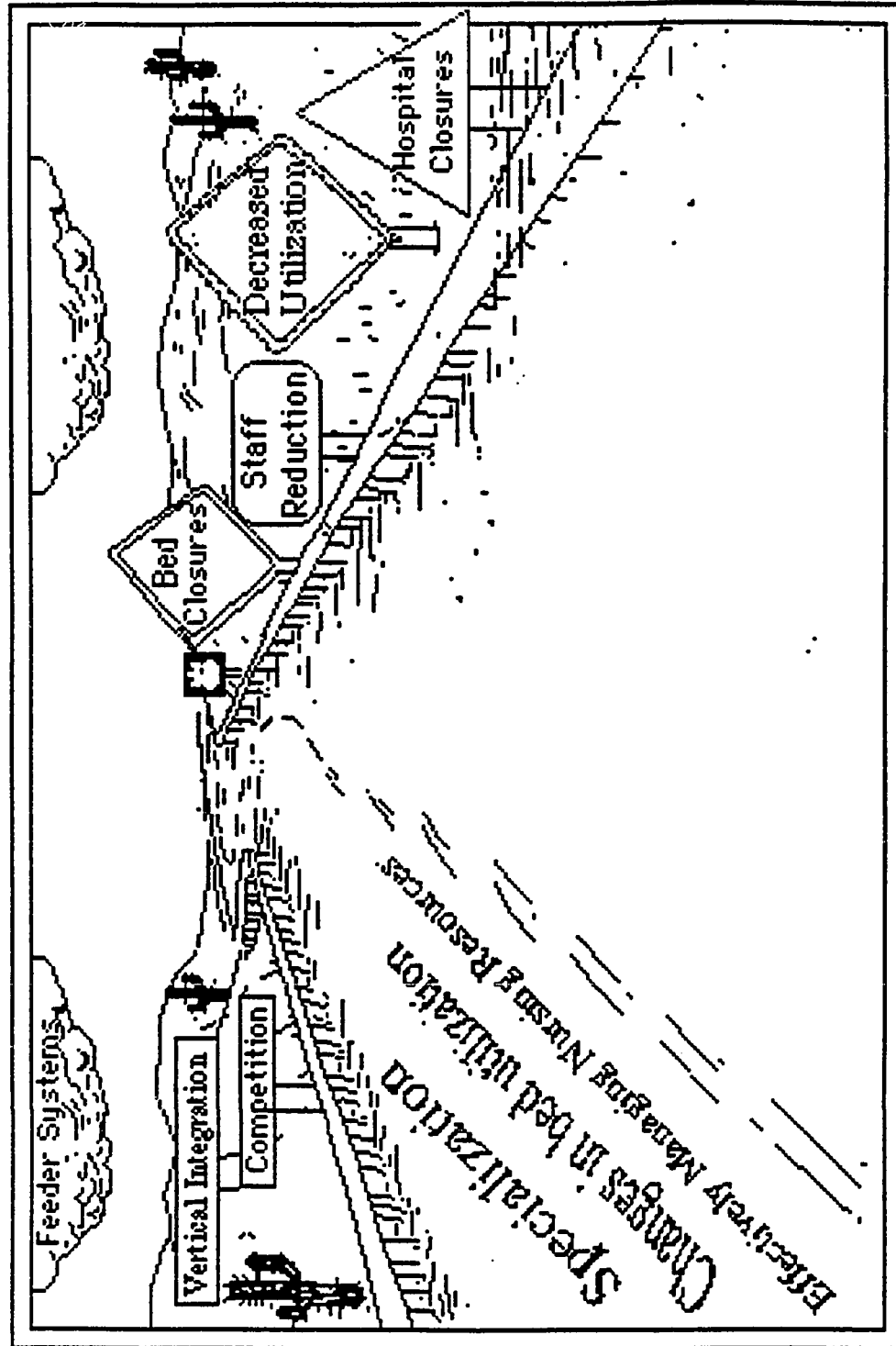
I understand that:

- 1) I will be asked to answer a questionnaire about my agency which should take approximately 45 minutes.
- 2) There are no anticipated risks, but I may need to locate information from several sources within the agency.
- 3) There will be no direct benefit to my agency, but upon completion of the questionnaire and if I request it, I will receive an abstract of the study.
- 4) Total confidentiality will be used, except for the designation located within the telephone area codes serviced by the nine counties comprising the San Francisco Bay Area.
- 5) Any questions about my participation in this study will be answered by Ms. Burnett at (408) 395-4911. Complaints about the procedures may be presented to Dr. Phyllis Connolly, Advisor, at (408) 924-3144 or Dr. Virgil Parsons, Chair, Department of Nursing, at (408) 924-3182. For questions or complaints about research subjects' rights or in the event of research related injury, contact Serena Stanford, PhD (Associate Academic Vice President for Graduate Studies and Research) at (408) 924-2480.
- 6) My consent is voluntary, and I may withdraw at any time without prejudice to my relation with San Jose State University.
- 7) I will receive \$2.00 for my assistance with the completion of the questionnaire.



**APPENDIX D**  
**Questionnaire**

# MANAGING TODAY'S HOSPITALS



## Questionnaire

1. What are the number of licensed beds in your agency?  
\_\_\_\_\_.
2. What has been your average percent of occupancy during 1990?\_\_\_\_\_.
3. How would you classify your agency?
 

<b>Private:</b> <input type="checkbox"/> Not for profit <input type="checkbox"/> For profit <input type="checkbox"/> Health Maintenance Organization <input type="checkbox"/> Multi-hospital Corporation	<b>Public:</b> <input type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> County <input type="checkbox"/> City
--	--
4. Is your agency:
 

<input type="checkbox"/> Urban	<input type="checkbox"/> Suburban	<input type="checkbox"/> Rural
--------------------------------	-----------------------------------	--------------------------------
5. Do you have an area that provides:
 

	Yes	No
<b>A. Nonstaffed rooms</b>		
1. Accommodations for clients	<input type="checkbox"/>	<input type="checkbox"/>
2. Accommodations for loved ones	<input type="checkbox"/>	<input type="checkbox"/>
<b>B. Non-admitted evening stay prior to treatment</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>C. Non-admitted evening stay prior to surgery</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>D. Non-admitted additional day(s) after treatment</b>	<input type="checkbox"/>	<input type="checkbox"/>

- E. Non-admitted additional days after surgery
- F. Respite care
- G. Other (please specify): \_\_\_\_\_

6. Indicate the number of beds allocated for each area:

- A. Non-staffed
1. For clients \_\_\_\_\_
2. For loved ones \_\_\_\_\_
- B. Non-admitted evening stay prior to treatment \_\_\_\_\_
- C. Non-admitted evening stay prior to surgery \_\_\_\_\_
- D. Non-admitted additional day(s) after treatment \_\_\_\_\_
- E. Non-admitted additional day(s) after surgery \_\_\_\_\_
- F. Respite care \_\_\_\_\_
- G. Other (please specify) \_\_\_\_\_

7. Is the income generated by this service greater than the fixed overhead costs of providing it?

- |                               | Yes                      | No                       | Undecided                | Not<br>Provided          |
|-------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| A. Non-staffed room           |                          |                          |                          |                          |
| 1. Accommodations for clients | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

	Yes	No	Undecided	Not Provided
2. Accommodations for loved ones				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Non-admitted evening stay prior to treatment				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Non-admitted evening stay prior to surgery				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Non-admitted additional day(s) after treatment				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Non-admitted additional day(s) after surgery				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Respite care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. With the alternative accommodations, have you experienced any difficulties with:				
			Yes	No
Medical records			<input type="checkbox"/>	<input type="checkbox"/>
Medical staff			<input type="checkbox"/>	<input type="checkbox"/>
Liability issues			<input type="checkbox"/>	<input type="checkbox"/>
Licensing regulations			<input type="checkbox"/>	<input type="checkbox"/>
9. What are the demographics of the respondent?				
A. Nurse (R.N.)			Yes <input type="checkbox"/>	No <input type="checkbox"/>
B. Gender			Female <input type="checkbox"/>	Male <input type="checkbox"/>
C. Age			_____	
D. Number of years in position			_____	

E. Number of years in nursing \_\_\_\_\_

F. Educational level \_\_\_\_\_

**APPENDIX E**  
**First Follow-up Letter**



A campus of The California State University

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School of the Applied Arts and Sciences • Department of Nursing  
One Washington Square • San José, California 95192-0057 • 408/924-3130 • FAX: 408/924-3135

85 Ellenwood  
Los Gatos, CA 95030

(Name)  
(Agency)  
(Address)  
(City, State, and Zip Code)

(Date)

Dear X:

About two weeks ago I wrote to you seeking information about your agency and its use of underutilized acute care hospital beds. As of today, I have not yet received your completed questionnaire.

I am writing to you again because of the significance each questionnaire has to the usefulness of this study. Your name was selected as the most likely person having access to the required information. Only 90 people are being asked to complete this questionnaire. In order for the results of this study to be truly representative of the acute care hospitals it is essential that each person in the sample return each questionnaire.

In the event that your questionnaire has been misplaced, a replacement is enclosed.

Your cooperation is greatly appreciated.

Cordially,

Susan Burnett, R.N., BSN

Enclosure



**APPENDIX F**  
**Second Follow-up Letter**



A campus of The California State University

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School of the Applied Arts and Sciences • Department of Nursing  
One Washington Square • San José, California 95192-0057 • 408/924-3130 • FAX: 408/924-3135

85 Ellenwood  
Los Gatos, CA 95030

(Name)  
(Agency)  
(Address)  
(City, State, and Zip Code)

Dear X:

I am writing to you about my study of use of underutilized acute care hospital beds. I have not yet received your completed questionnaire.

The number of questionnaires returned is very encouraging. But, whether I will be able to describe accurately how your agency has responded to these important issues depends upon you and others who have not yet responded. This is because my past experiences suggest that those of you who have not yet sent in your questionnaires may hold quite different solutions.

It is for these reasons I am sending you a third questionnaire with the hopes you will fill it out and return it as soon as possible.

Your contribution to the success of this study will be greatly appreciated.

:  
Cordially,

Susan Burnett, R.N., BSN

Enclosure

**APPENDIX G**  
**Montoya's Consent**

November 28,1990

Susan Burnett  
85 Ellenwood Avenue  
Los Gatos, California 95030

Beatrice Montoya  
110 Santa Rosa Place  
San Ramon, California 94583

Dear Susan:

As a follow-up to our telephone conversation, I am willing to have you use the questionnaire I developed for a Master's research project at San Francisco State University. Reliability and validity were as stated in the thesis.

I do not expect any financial compensation for your use of the instrument. I do retain all rights as the developer of the instrument.

Naturally, the results of your research study are of interest to me. I eagerly anticipate the results and conclusions of your study. Health care is fluid and dynamic in this decade.

If I can be of any assistance to you during your research project, feel free to contact me. May your data collection go smoothly and your response rate be high.

Respectfully,

*Beatrice Montoya*

Beatrice Montoya, R.N., M.S.N.

**APPENDIX H**  
**Nyberg's Permission**



4200 East Ninth Avenue  
Denver, Colorado 80262

University Hospitals  
School of Medicine

School of Nursing  
School of Dentistry

School of Pharmacy  
Graduate School

July 30, 1991

Ms. Susan Burnett  
85 Ellenwood Avenue  
Los Gatos, California 95030

Dear Ms. Burnett:

You have my permission to use in your thesis Figure 3 from the article, "Theoretic Exploration of Human Care and Economics: Foundations of Nursing Administration Practice," as published in Advances in Nursing Science 13(1), September 1990.

Sincerely yours,

A handwritten signature in cursive that reads "Jan Nyberg, R.N., Ph.D." with the letters "R.N., Ph.D." written in a larger, more prominent script.

Jan Nyberg, R.N., Ph.D.

JJN:d1