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# The effectiveness of strategic planning in competitive environments: An empirical study of acute care hospitals in California, Oregon and Washington

Forbes, Susan Kay, Dr.P.H.

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U·M·I
300 N. Zeeb Rd.
Ann Arbor, MI 48106

# THE EFFECTIVENESS OF STRATEGIC PLANNING IN COMPETITIVE ENVIRONMENTS: AN EMPIRICAL STUDY OF ACUTE CARE HOSPITALS IN CALIFORNIA, OREGON AND WASHINGTON

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By

Susan K. Forbes

Dissertation Committee:

D. William Wood, Chairperson
Jerrold Michael
Robert Mytinger
Theodore Helmer
Eldon Wegner

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## ABSTRACT

The purpose of this study was to determine whether planning in any form was actually practiced in hospitals, was believed in by management, and had any relationship to performance. The major research question explored was:

> In competitive environments, does the organization's use of strategic planning result in superior performance?

A case study involving in-depth, face-to-face interviews with CEOs and Planners at 7 hospitals in one competitive community and telephone surveys of CEOs and Planners at 40 hospitals in California, Oregon and Washington provided most of the data for exploring strategic planning in hospitals.

A conceptual model provided the framework for analysis. Aspects of the model included the nature of the competitive environment; the organizational context in which planning was performed; the planning functions, structures and processes used; strategic change; and performance.

Planning, including the range of functions reported and the strategic planning processes used, appears to be valued by most CEOs. For the most part, planners are performing traditional roles, and these are perceived to have a positive impact on the hospital. However, the value of planning and

the role that planning plays in strategic change and subsequent performance were not as strong as planners would like to believe.

Results suggested a benefit derived from planning involvement in strategic change, yet the issues of greatest import to the hospital--financial pressures and the corresponding strategic change of managing financial risk--are outside the traditional realm of hospital planning. If planning is going to play a more important role in strategic change, planners must move beyond their traditional roles and become expert in those issues which drive the hospital's future, notably finance and medical staff relations. These issues impinge on finance and marketing. Far from being superseded by these functional areas, planning should serve as a mechanism for integration and collaboration to insure that strategic issues are addressed and managed.

Thoroughness and regularity in planning, and its integration with the day-to-day practice of management, were observed to be critical aspects of good planning.

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## PREFACE

The choice of the very broad area of investigation--effectiveness of strategic planning in hospitals in competitive environments--arose from personal experience, review of the trade literature, and discussions with staff planners in various hospitals in my community as well as in other states.

Among the changes experienced by hospitals since the 1983 introduction of Prospective Payment for Medicare patients have been the need for reorientation in how hospitals interact with their environments, how they manage internal operations, how they envision what businesses they are in, and how they structure themselves to carry out those businesses. In my own experience, the Planning Department has been an active participant in all of these areas of change, with the exception of management of internal operations.

Major change, whether directed or imposed, results in conflict, periods of confusion, and a search for identity. Staff planners have not been immune to the conflict, even though, by virtue of training, planners may be somewhat better-equipped to identify the need for change and direct its implementation, or adapt to it.

In my role as a staff planner, there has been the need for a periodic realignment of roles and the addition of new roles. The need arose from the deliberate development of a health care system. In 1983, I was employed by a single, specialty hospital. By 1990, a system had evolved which included the specialty hospital and a general medical/surgical hospital, as well as a variety of other ventures and a foundation under the umbrella of a not-for-profit parent holding company. The relative frequency of role changes reflects a real flexibility in the organization, a great strength at a time when adaptation is essential. These role changes also reflect a "creative tension" where different schools of though about what "works" become dominant at different times. One of these schools of thought is that, given the extent and rapidity of the changes taking place in the environment [over which it is assumed we have no control], it is not possible to plan beyond a one year horizon. Under this school, the planning function becomes an analysis branch to justify what has already been done, or to support other tactical activities. Another school of thought, predictably, is that it is imperative to plan for a 3-5 year horizon in order to set the stage for the future.

Debates over the tactical vs. strategic role definition of planning are not the only changes that have taken place. With the advent of competition after the introduction of

Prospective Payment, came a reorientation of functions in planning from interacting with the regulatory infrastructure (i.e., preparing Certificate of Need applications) to competitive posturing. The shift has been from process to results.

Massive change within one organization and one community provided the context from which I developed my research questions. I believed that I needed the answers in order to provide relevant planning support for the organization. The encouragement provided by my employer and my colleagues enabled me to pursue the research reported in this dissertation. I am thankful that my organization offers a dynamic and creative environment where questioning is encouraged and answering is rewarded.

# CHAPTER 1

# INTRODUCTION

## 1.1 Introduction to the Problem

The hospital industry underwent significant structural changes in the 1980s. The most dramatic was the 1983 introduction of Prospective Payment for the care of Medicare patients and the consequent financial risk to hospitals. Other major changes included increased competition among hospitals and non-hospital health care providers, the shift from inpatient to outpatient care as the result of technological advances and pressures from payers, the transition from a large number of individual providers to the development of hospital systems, and increased demand for services from an aging population (Shortell and Mickus, 1986). In response to these changes, many hospitals embarked on a variety of strategies, presumably as implementation of a deliberate strategic plan or as simply something to do. Among these strategies were advertising and promotion, the creation of marketing departments, discounting services, managed care, diversification, and on and on. (Clement, 1988)

Given the magnitude of the risks associated with the changes and the speed with which hospitals must respond, hospital administrators have been faced with the need to mobilize their

management resources to produce desirable outcomes for the institution, such as profitability, productivity, increased market share, and care of the uninsured. The risks are substantial. In many cases, survival of the institution is at stake. Management needs to know what contributes to success and what detracts from it. Resources are limited and those that do exist--especially people--must be contributing to success.

Strategic planning is one of the management activities intended to contribute to success. Strategic planning has been described by various experts as:

> ...a process by which a hospital assesses its present situation in terms of various environmental forces (usually outside its control) and internal conditions (often within its control), considers the implications of these forces on the work of the hospital, defines a desired future to accommodate their impact, and then prepares a plan to bridge the gap between where it is now and where it desires to be at a certain time in the future. (Peters, 1985:14)

> Strategic planning is the process of making and implementing decisions concerning the use of resources to achieve an organization's goals and to fulfill its mission. Strategic planning is concerned with the alternative uses of resources rather than the immediate control of how targeted resources are spent (which distinguishes it from program planning). It is concerned with the structure of the organization and its major services, products, and markets. (Kropf and Greenberg, 1984:7)

Since 1983, there has also been a dramatic change in the nature of planning activities in hospitals as one means of adaptation (Harrel and Fors, 1987). Strategic planning in

hospitals is a relatively new endeavor, becoming popular in the mid-1970s (Buller and Timpson, 1986; Johnson, 1986). Initially, the focus of hospital planning and long-range planning paralleled prevailing federal health policy (Swett, 1981). With the advent of Prospective Payment in 1983, the financial risks to hospitals increased substantially, and the nature of planning changed to deal with these risks (Applegate, Mason, and Thorpe, 1986). There is no empirical evidence that planning activities in the hospital industry relate to superior performance.

In other industries, strategic planning emerged in the 1950s and gained prominence in the 1960s and 1970s (Steiner, Kunin and Kunin, 1983). Past experience in the evolution of planning has included challenges to its effectiveness and adaptations:

> The case against strategic planning is not that its logic is fundamentally flawed or its practitioners are less than able, but rather that the traditional domain of strategic planning does not address all parameters of the strategic challenge faced by the firm. (Smith, 1987:220)

Outside of health care, during times of turbulence and rapid change, planning departments have been among the first to be phased out. Of course, one rationale for their demise has been that they failed in the past and, as a result, the industry failed to adapt to the turbulence in the present. Regardless of potential threats to planning departments, management may invest significant amounts of time and

resources in carrying out its planning activities and needs to know whether there is value in the investment.

In a speech before the Strategic Management Society in 1987, Lawrence A. Bossidy, Vice Chairman of the Board and Executive Officer of General Electric cited the following reasons for deserting strategic planning:

> 1. It is no longer possible to see 5 years ahead...you can't plan the unplannable.
> 2. Strategic planning was reluctant or unable to confront the reality of the need to compete internationally.
> 3. Strategic planning inculcated a preoccupation with precision as well as predictability.
> 4. Strategic planning produced operating management that did not participate in the development of strategy, that did not understand it when developed, and often, when understood, disagreed with it. (1987:57)

In place of strategic planning, General Electric has adopted "strategic thinking" or "strategic management", a flexible process of gathering information, setting direction, marshalling resources, identifying objectives, analyzing performance, modifying objectives, revising resource commitments, and changing direction as appropriate (Bossidy, 1987:57). Strategic management focuses on the process of adaptation that characterizes the relationship between organizations and their environments (Conant, Mokwa, and Wood, 1987).

The example of General Electric is provided as an illustration of the transition in planning and management focus that many

hospitals are now trying to adopt. From an evolutionary perspective, strategic management is a final phase in the development of planning systems (Smith, 1987). The adaptation of planning systems in hospitals has not been empirically studied.

## 1.2 Purpose of the Study

This study has five purposes:

1. To determine the nature and extent of strategic planning and management activities in urban hospitals;

2. To identify the structural features of these activities and the actual functions;

3. To determine the extent to which the size and nature of the competitive environment is related to the structure and functions of planning activities;

4. To determine the extent to which planning staff and formal planning processes are involved with strategic change; and, finally,

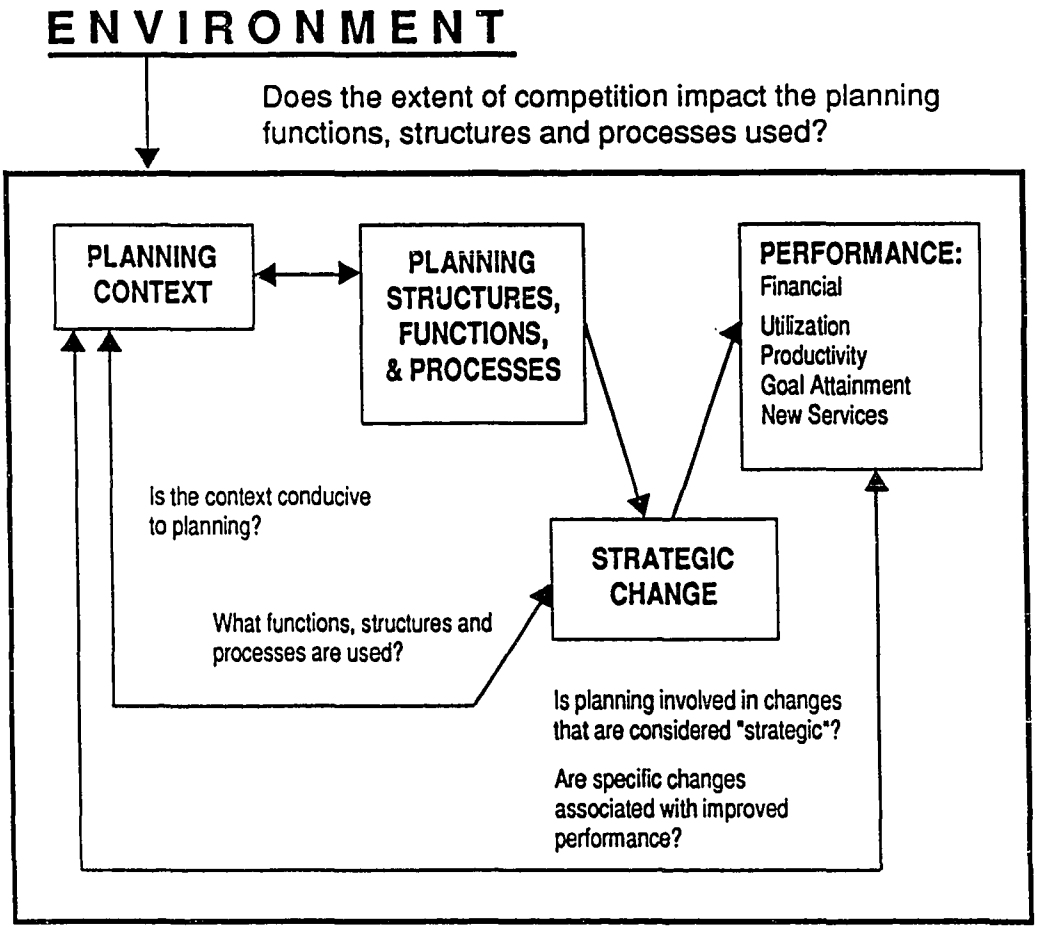
5. To relate these functions, structures and changes to actual performance between 1983 through 1988. This time period was selected because it reflects the initial implementation and adjustment to prospective payment, a "frame-breaking change" (Shortell, Morrison, and Friedman, 1990).

One outcome of the study will be the categorization of planning functions in terms of their strategic planning orientation, operational support orientation, and business development orientation. These categories will be used in establishing the relationships between planning involvement in major changes implemented by the organization and with performance.

A model is presented encompassing multiple variables intended to measure the hostility of the environment in which the hospital operates, the context in which planning operates (or does not exist), planning structures and functions, types of strategic change between 1983 and 1988 and the degree of planning involvement in these changes, and organizational performance between 1983 and 1988. The model is presented as a schema in Figure 1. The variables associated with these dimensions of the model are defined conceptually in Section 1.4, "Definition of Terms", and defined operationally in Chapter 3. In addition, other variables are utilized as control variables and descriptors. These include the background of the interviewees and the size and ownership of the hospital.

Bivariate and multivariate methods are used to examine the statistical relationships within the model. The dependent variables within the model are various performance measures which indicate both the growth of the hospital and its financial soundness. These indicators include market share, change in number of services provided, productivity and financial performance.

Figure 1
Conceptual Model



## 1.3 Hypotheses and Research Questions

The basic question to be addressed is:

> In competitive environments, does the organization's use of strategic planning result in superior performance?

Related questions to be addressed in the research include the following:

> Is the strategic planning process carried out in hospitals? What are the structural and functional aspects of strategic planning in hospitals?
>
> Are the structure and functions of strategic planning related to the environment in which study hospitals operate?
>
> Does the planning context influence the degree to which there is planning involvement in strategic change?
>
> Is the approach to strategic planning influenced by the competitive environment and planning context?
>
> Is there any relationship between the comprehensiveness of the strategic planning effort and the outcomes achieved?
>
> Have planners and formal planning processes been involved with the major changes the hospitals have implemented?
>
> What planning processes are associated with different levels of performance?
>
> What types of changes that management considers "strategic" are most associated with superior performance?

The hypotheses under consideration are as follows:

> **H1:** Performance in hospitals in which planning is involved in strategic change will be better than in hospitals in which planning is not involved in change.
>
> **H2:** The more support evident for strategic planning, the more likely that planning will be involved in strategic change.
>
> **H3:** The greater the competition faced by the hospital, the greater the use of strategic planning.

**H3.1:** The greater the competition, the greater the involvement of planning in strategic change.

**H3.2:** The greater the competition, the greater the number of types of strategic change reported.

**H3.3:** The greater the competition, the more elaborate the planning functions and processes, including support for operations and business development, as well as for strategic planning.

This study is exploratory. Some of the data regarding strategic planning structure and function are qualitative. Some of the outcome measures are qualitative as well. The intent is to provide a theoretical base for future research and to identify those aspects of strategic planning and hospital planning, in general, which merit greater emphasis based positive relationships with performance.

## 1.4 Definition of Terms

A listing of variables, their definitions, and methods of measurement is included Chapter 3. Components of the model used in analysis are defined as follows:

Environmental Hostility: Reflects the nature and extent of competition and regulation in the environment.

Planning Context: Reflects the CEO's attitudes regarding the value of strategic planning, and the organizational culture and management philosophy described by the CEO and Planner.

Planning Structures, Functions, and Processes: Planning structures reflect the organization and resources devoted to

planning, reporting relationships, the existence of a strategic planning committee, and the presence of a written strategic plan. Planning functions include descriptors of the activities carried out. Planning processes include descriptors of the established strategic planning processes used, if any.

Strategic Changes: Reflect perceptions of Chief Executive Officers (CEOs) and Planners regarding changes implemented by the hospital between 1983 and 1988 that were considered "strategic" and of major importance.

Planning Involvement in Strategic Change: Identifies involvement in the planning, decision-making, and/or implementation of a strategic change, and a description of the process involved. Planning involvement is ascertained through either the planner being identified as one of the people instrumental in the change or the change being the result of the hospital's strategic planning process.

Organizational Performance: Many types of performance are possible and desirable in the hospital industry, such as healthy financial performance, growth in market share, increase in services offered, and enhanced productivity. Also included are CEO and planner perceptions of most important performance measures.

## 1.5 Significance of the Study

The phrase, "Do things differently or do different things", has often been quoted as advice to hospital administrators as the way to survive the turbulence in the current health care environment (Coile, 1986). Strategies and management techniques from other industries are being adopted. Strategic planning has evolved from a facilities planning function (in response to the opportunities posed through the Hill-Burton Act of 1946), to a community health planning function (in response to the National Health Planning and Resource Development Act of 1974), to strategic and corporate planning similar to that found in other industries (Smith, 1987). In the evolution (or revolution) of hospital management in general and strategic planning in particular, new ways of thinking and analyzing have been introduced, along with new functions and different organizational structures. While individual hospitals and systems may know what is working for them, there has been no systematic review of what "works" for hospitals in general, related to preparing themselves to do well in the future. This study is the first step toward that more comprehensive view. It is a systematic attempt to determine whether planning is believed in, actually practiced, and provides value to the hospital.

## 1.6 Assumptions and Limitations

Major assumptions made in collecting and analyzing the data are as follows:

1. Strategic changes impact performance.

2. Multiple indicators of performance, i.e., market share, financial performance, and services offered, provide adequate measures of "absolute" performance in the absence of knowing what the hospitals were actually trying to achieve.

3. It is possible to characterize corporate culture and management philosophy based on qualitative interview data rather than prolonged observation. The assumption is that CEOs and planners are able to characterize accurately and candidly these concepts.

Given the exploratory nature of the study, certain limitations are inherent:

1. Open-ended questions were used to capture richness in the responses. The limitation was that some respondents provided irrelevant answers.

2. Market share based on total admissions in the community in which the hospital is located must be

considered a proxy measure, a rough estimate of true market share, for two reasons: a) the true market area for an individual hospital is not known and b) market share, for most hospitals, has come to be defined in terms of specific services (cardiac, maternity, etc.) and not in terms of global utilization. Availability of data also influenced the selection of measures.

3. Given the refusals and/or unavailability of many hospitals targeted to participate in the study, generalizability of the results must be closely considered. A list of 70 hospitals was selected at random from the universe of 164. All 70 hospitals were contacted and 41 agreed to participate. It is not known whether there are systematic differences between participating and non-participating hospitals in terms of planning context; planning structures, functions, and processes; and strategic changes.

## 1.7 Organization of the Dissertation

Chapter 2 presents a literature review detailing the history of strategic planning in hospitals as well as an overview of concepts and empirical research related to the model used in this dissertation, i.e., reflecting the environment, planning context, planning structures and functions, strategic change, and performance. Chapter 3 outlines the methods used in this

dissertation. Chapter 4 presents the results of a case study of seven hospitals conducted in one competitive environment. This case study provided the impetus for the subsequent telephone surveys conducted among CEOs and Planners in 40 hospitals located in California, Oregon, and Washington. Chapter 5 presents the descriptive analysis of the telephone survey results. Chapter 6 presents the explanatory analysis, i.e., the presentation of results in relation to the hypotheses under consideration. Chapter 7 offers conclusions and implications for further research.

## 1.8 Summary

This research is a systematic attempt to determine whether planning is believed in, actually practiced, and provides value to the hospital. A better understanding of the contribution of planning and other management processes is critical since the consequences of misuse of resources--time, people, money--may be the demise of the hospital.

No empirical research into the effectiveness of planning in hospitals exists. This research is a starting point.

# CHAPTER 2

# LITERATURE REVIEW

## 2.1 Introduction

This literature review is organized in two major parts. The first, which encompasses Sections 2.2 through 2.2.3, focuses on the history of strategic planning in hospitals, establishing the relevance of the dissertation research to the field of hospital strategic planning and clarifying the role of this research within public health.

The second part of the review encompasses Sections 2.3 through 2.3.8, and is organized according to the conceptual model used and presented as Figure 1 in Chapter 1. Subsections include a review of empirical research reflecting the components of the model and major variables. The components are: the environment in which the hospital operates, the organizational context within which strategic planning may or may not be performed, the nature of strategic planning in the hospital, strategic changes or changes which management to consider to be of major importance, and performance. Major variables and their interrelationships, as reported in other research, are presented.

Three main bodies of literature were researched in the development of this review: hospital and health administration; business policy and strategy; and organizational behavior.

## 2.2 History of Strategic Planning in Hospitals

In order to provide a basis for this research, some understanding of the history and development of strategic planning in hospitals is required. Hospital planning has evolved slowly over the past 25 years, and, in many ways, is a relatively new tool in hospital administration (Harrell and Fors, 1987). The development of strategic planning and strategic management in hospitals has followed other industries (Buller and Timpson, 1986; Johnson, 1986).

This section of the literature review describes national policies and major forces impacting the nature of health planning and hospital planning and the formalization of the hospital planning role.

### 2.2.1 Policies and Major Forces Impacting Strategic Planning in Hospitals

For many years, planning in hospitals was driven primarily by national health care policies (Swett, 1981). Table 1 provides a summary of selected Federal policies and initiatives influencing development of health planning and hospital planning between 1946 and 1983.

**TABLE 2.1**

**FEDERAL POLICIES AND INITIATIVES INFLUENCING DEVELOPMENT OF HEALTH AND HOSPITAL PLANNING**

| | |
|---|---|
| **1946** | **Hill-Burton Program (P.L. 79-725)**<br>**Hospital Survey and Construction Act of 1946**<br>Enabled construction of facilities based on health requirements. |
| **1954** | **Medical Facilities and Construction Act of 1954**<br>Extended Hill-Burton authorization. |
| **1964** | **Hospital and Medical Facilities Amendments of 1964**<br>Extended Hill-Burton authorization and provided funding for areawide planning. |
| **1965** | **Regional Medical Program**<br>Expanded areawide health planning concept, established cooperative arrangement among health care institutions, medical schools and research centers in the treatment of heart disease, cancer and stroke. |
| **1965** | **Social Security Amendments, Medicare Title 18 (P.L. 89-97)** |
| **1966** | **Comprehensive Health Planning**<br>Firmly established concept of areawide health planning. Authorized support for CHP agencies. Required state CHP agencies to assist health facilities in planning capital expenditures. |
| **1970** | **P.L. 91-296**<br>Legislative requirement that the governing council for areawide CHP agencies include the interests of hospitals and other health care facilities, practicing physicians, and general public. |
| **1972** | **Social Security Amendments of 1972 (P.L. 92-603)**<br>Attempt to monitor, evaluate and control hospital payments. Authorized government to refuse building or depreciation charges in Medicare payments to any health facility that ignored a designated state planning agency's ruling concerning its proposals for capital investment. |

**Table 2.1. (Continued) FEDERAL POLICIES AND INITIATIVES INFLUENCING DEVELOPMENT OF HEALTH AND HOSPITAL PLANNING**

| | |
|---|---|
| **1974** | **National Health Planning and Resources Development Act (P.L. 93-641)**<br>Promise to develop national health policy framework. Established national network of health systems agencies to improve health of residents of health service area; increase accessibility, acceptability, continuity and quality of services; restrain increases in the cost of health services; and prevent unnecessary duplication of health resources. Four types of reviews: Certificate of Need, Section 1122, Appropriateness Reviews, and Reviews of Proposed Uses of Certain Federal Funds. |
| **1979** | **Amendments to the National Health Planning and Resources Development Act (P.L. 96-79)**<br>Extended health planning through 1982. Addition of another national health priority: competition, i.e., strengthen the effect of competition on the supply of health services. |
| **1981** | **Reagan Administration applied pressure to terminate Federal involvement in health planning** |
| **1983** | **Social Security Amendments (P.L. 98-21)**<br>Prospective payment for Medicare patients phased in as a way to bring incentives for cost effectiveness. |
| **1986** | **Defunding of 93-641** |

Sources:
Coyne (1985)
Weintraub (1986)

Weintraub (1986) suggests that the time frame 1946 through 1983 can be described in terms of four phases of health planning development related to Federal policy initiatives:

- Formative -- 1946-1964
- Expansion -- 1965-1973
- Mandate -- 1974-1979
- Decline -- 1980--Present

These phases are described below, with additional emphasis on the relationship between health planning and hospital planning.

1946--1964:

The Hill-Burton Act of 1946 was a distributive policy (i.e., policy specifically involving the government in delivering goods or services) designed to spur the construction of hospitals especially in poorer and more rural areas. Between 1947 and 1973, the U.S. Public Health Service supported 11,255 projects. Over half of the grants assisted general hospitals (Thompson, 1981: 41). Health planning focussed on areawide planning tied to facility development and issues related to access to medical care. Similarly, hospital planning in this environment was facilities planning, not strategic planning. Hospital planning issues focussed on hospital size, location and design. It must be noted that government incentives and initiatives were not the sole impetus for hospital planning. Early voluntary planning efforts by hospitals are reported (Starr, 1982), although no evaluation of the effectiveness of these voluntary efforts was found in the literature.

1965-1973:

By the mid-1960s, the Federal government acted to curb "undisciplined" growth of hospitals (Thompson, 1981). The 1964 Amendments to the Hill-Burton Act established health facilities planning councils to help plan the development of

facilities, hospitals included (Smith, 1965). In 1966, Comprehensive Health Planning Agencies which, in 1966, replaced the earlier planning councils (Weintraub, 1986; Michael, 1967). The impact on hospital planning was direct: areawide planning contributed to defining need for hospital development (Paley, 1968).

During the same period, Medicare and Medicaid were adopted, medical service policies designed to explicitly involve the Federal government in providing health services to specific segments of the population, in this case, the elderly and the poor. Their adoption undermined Congressional support for the Hill Burton program because they heightened awareness regarding hospital costs (Thompson, 1981). Medicare, from its inception, has had a profound impact on hospital planning because it stimulated the use of hospital services by a large and rapidly growing population segment which was more likely than other segments to need its services.

In 1972 new Social Security Administration regulations mandated institutional planning for health care facilities participating in the Medicare and Medicaid programs (Buller and Timpson, 1986). Hospitals were required to prepare a plan for annual review which included an annual operating budget and capital expenditure plan. The capital expenditure plan was to have a 3 year planning horizon.

From the mid-1960s to the mid-1970s, areawide health planning received increasing attention, leading up to the 1974 Health Planning and Resources Development Act (Michael, 1967; Arnold, 1969; Brown, 1972).

1974-1979:

The National Health Planning and Resource Development Act of 1974 embodied multiple objectives: improving the health of residents of a health service area; increasing accessibility, acceptability, continuity and quality of health services; restraining increases in the cost of health services; and preventing unnecessary duplication of health resources. At the time of the bill's passage, the federal government confronted a medical care system that featured the hospital as its centerpiece. Close to half of all the money directly spent on health care for individuals flowed to hospitals. Moreover, admissions to hospitals and patient days per capita had risen for more than two decades. From 1950 to the mid-1970s, admissions to nonfederal short-stay hospitals had almost doubled, an increase that clearly outstripped the general population growth during this time. (Cambridge Research Institute, 1976; US Public Health Service, 1977, Thompson, 1981).

The orientation of health planning continued to be areawide planning, but focused on the objectives of the Act. Hospital

planning began to differentiate from health planning, with recognition that the role was becoming more complex and external pressures on the hospital more pronounced (Stuehler, 1976; Peters, 1976; Swett, 1981).

In the article, "Where is Hospital Planning Headed?", Swett states:

> In recent years, considerable formal planning of hospital roles has focused on the concept of the hospital as a diagnostic and treatment center. A major impetus in this direction was provided by the National Health Planning and Resources Development Act of 1974 (PL 93-641) which established national mandates for rationalizing the institutional health care delivery system within are regulatory framework of areawide capital rationing. The major problems with this approach ... are its incompatibility with the competitive model, general lack of acceptability to the majority of affected hospitals, and certain inherent inconsistencies. (1981:6)

He proceeds to describe three planning models for determining the hospital's role, diagnostic and treatment center, business enterprise, and community service organization, with differing major environmental factors and goals. These models beg the question, "What business are we in?", the cornerstone of strategic planning.

1980-Present:

Support for Health Planning began to subside early in 1980 (Weintraub, 1986), the beginning of a period of deregulation.

At this point, the hospital planning literature began referring to corporate planning, reflecting the shift from facilities planning to program planning, business outreach, and planning marketing integration. In 1981, the literature began to reflect the phasing out of health planning initiatives, and the emphasis in hospitals on corporate reorganizations and the development of competitive strategy. Emphasis on strategic planning continued throughout the early 1980s, with a proliferation of articles on models and techniques (Milch, 1980; Domanico, 1981; Thieme, Wilson, and Long, 1981; Breindel, 1981; Melum, 1981; Kennedy, 1981; Falkson and Leavitt, 1982; Jaega, 1982; Files, 1983; Zallocco, Joseph, and Doremus, 1984). Webber (1982) reviewed 30 contributions to the field of hospital strategic planning that were published in 1980 and 1981 and reported them in his article, "Ideas Outpace Reality of Hospital Strategic Planning, but Do They Pinpoint the Future?"

Files reported impressions of the state of strategic planning in hospitals:

> (1) corporate-level, proactive strategy-making is infrequently practiced by hospitals; (2) most hospital planning would probably more accurately be termed business level (or program) planning;and thus, (3) what we see as strategic planning is only partially implemented in hospitals. (1983:13)

In October 1983, the Prospective Payment System for Medicare patients was introduced, signaling an abrupt change in the

management of hospitals and, certainly, strategic planning within hospitals. Unlike previous regulatory and distributive policies, Prospective Payment introduced financial risk into the hospital's operating environment (Coyne, 1985). Other pressures placed on hospitals during the same period which increased the complexity of the planning endeavor included an array of delivery systems designed to foster a competitive market place (Coyne, 1985, Harrel and Fors, 1987); the easing of Federal restrictions on facility development and capital expenditures (Weintraub, 1986); and the emergence of competitive bidding agreements at the Federal, State, and Industry level (Katz, Zavodnick and Markezin, 1983; Vraciu, 1985; and Applegate, Mason, and Thorpe, 1986).

In their recent book, Shortell et al describe the magnitude of the policy's impact:

> The introduction of PPS and these associated events represent an example of frame-breaking change encompassing a sharp departure from the past (Tushman, Newman, and Romanelli, 1987). Such changes frequently require concurrent shifts in an organization's strategies, structures, people, and decision-making processes, often within a relatively short period...(1990:7)
>
> ...The frame-breaking change associated with PPS requires three fundamental reorientations for hospital executives and their organizations:
>
> 1. The need to move from a product orientation (we provide services to patients brought to us by the medical staff) to a market orientation (we must define market needs and preferences and actively develop programs to meet these needs).

> 2. The need to move from a caretaking mentality (our job is to be stewards of the hospital's assets) to a risk-taking mentality (our job is to increase the hospital's assets).
> 3. The need to move from operational management (we run a good shop) to strategic management (we must position the organization to seize future opportunities). (1990:9)

Applegate et al (1986) describe the relationship between the changes and the required adaption for hospital planning:

> Under a full cost, retrospective reimbursement mechanism, hospital competition was primarily directed toward improving the service provided. Hospital planning efforts were directed toward identifying the internal strengths and weaknesses of the organization and instituting programs that enabled the hospital to provide the most attractive package of services to draw physicians (and, therefore, patients) to the hospital. These activities were primarily focused on internal facilities planning and the development and maintenance of a technological advantage over other competitors. The cost of these activities and programs was of less concern since costs would be reimbursed fully by third-party payers...
>
> The recent changes in the economic structure of the health care delivery system that favor competition have resulted in a shift in the hospital planning activities from internal, operational planning to external, strategic planning. Hospitals must now focus not only on their internal strengths and weaknesses but also on their competitors' strengths and weaknesses. Hospitals must attempt to provide the most attractive package of services at the least cost. They must identify the services that are money-makers, their services that are money-losers, and the services that have the potential to become money-makers. (1986:81)

At this point, the separation between health planning and hospital planning is complete.

The second half of the 1980s saw the emergence of strategic management as a theme in the literature. Smith (1987) states:

> The case against strategic planning is not that its logic is fundamentally flawed or its practitioners are less than able, but rather that the traditional domain of strategic planning does not address all parameters of the strategic challenge faced by the firm. (1987:220)

He describes a strategically managed company as being adept at building new capabilities consistent with strategy; heeding behavioral aspects of planning and change, and blending the roles of line managers and planning staff.

Questions raised by Smith about hospital [strategic] planning include:

> Where are hospitals in the evolutionary continuum of planning?
>
> Are they ready to adopt strategic management and are they progressing in that direction, or are there reasons to believe that strategic management is but a faint hope?
>
> Are the lessons of strategic management useful guides for hospitals? (1987:230)

This dissertation research will address the questions, in part, by assessing the nature and extent of strategic planning in sample hospitals and its link with operational management.

Of note is the paucity of research dealing with strategic planning in hospitals. Only seven studies were encountered and they were, for the most part, market research aimed at determining extent of strategic planning taking place, not at defining theory for future research and applications (Kropf and Goldsmith, 1983; Scotti, 1984; Zallocco, Joseph, and Furey, 1984; Thakur, 1985; Greaf, 1988; AHA Society for

Healthcare Planning and Marketing, 1990). The findings of these studies and their relevance to this research are included in Section 2.3.5 of this literature review under the subheading Planning.

### 2.2.2 Formal Recognition of Hospital Planning

Given the relative newness of the profession of hospital planning and the recency of strategic planning activities, the formalization of the role and function is documented. The role of hospital planning was formalized through the American Hospital Association (AHA Society for Healthcare Planning and Marketing, 1989). In 1977 AHA formed a steering committee to investigate the need for a separate professional society for hospital planning, taking into account the increasing complexity in the hospital environment. The first organizational meeting and education conference for the Society for Hospital Planning was held in late 1978.

Other trends in the development of hospital planning are reflected in the evolution of the Society. In May, 1984, the membership voted to change the name of the Society to the Society for Hospital Planning and Marketing. In October 1987, the Society changed its name again to reflect the expansion of domain of the hospital planner and marketer beyond the hospital to include alternative delivery systems. The Society became the Society of Healthcare Planning and Marketing.

### 2.2.3 Summary

Overall, strategic planning is a relatively new management tool for hospitals. There is no empirical evidence of its effectiveness. This dissertation is intended to begin to fill the gap in knowledge. The importance of the topic in the field of public health is based on the evolution of hospital strategic planning in the context of federal health policy and the reality that, of the many goals hospitals strive to achieve, and strategic planning address, is the support of health and treatment of illness of its area population. On a more pragmatic level, the fact that hospitals consume 44% of the health care dollar (Shortell et al., 1990), means that public health as a field is thoroughly invested in hospital care with an obligation to gain understanding into the means by which we might best utilize our limited resources.

## 2.3 Empirical Research and Key Issues

This section summarizes the empirical research and key issues which correspond to the conceptual model used in this research. In this model, organizational performance is related to the nature of a hospital's competitive environment; the organization's context which, in turn, may impact the planning structures, functions and processes; and the strategic changes which may, or may not, have involved strategic planning. Subheadings include Environment, Planning Context, Planning, Strategic Change and Performance.

### 2.3.1 Environment

All organizations operate within a larger environment. Numerous authors from many different disciples, including sociology, industrial organization, economics, and organizational behavior, have defined and conceptualized the environment to enable empirical research. In Table 2.2, environmental concepts and their definitions are summarized.

From the previous sections dealing with the history of strategic planning in hospitals, it is obvious that recent history has been a period of significant environmental challenge, including consumer challenges, technological challenges, governmental challenges, competitor challenges and union challenges. Due to the variety of challenges and the perceived speed with which changes in the environment are taking place, a research design decision was made to narrowly focus the study of environmental dimensions. The works by Shortell et al. (1990) and Williams et al. (1987) provided the only examples encountered in which aspects of the health care environment were studied empirically.

This dissertation research builds upon their work by selecting environmental hostility, primarily extent of competition, as the aspect of the environment for study in relation to hospital planning and performance. The actual environmental measures used in this research are defined in Chapter 3.

## TABLE 2.2

## SUMMARY OF CONCEPTS AND VARIABLES: ENVIRONMENT

| CONCEPT | DEFINITION | SOURCE |
|---|---|---|
| Variability | The degree of change which characterizes environmental activities relevant to an organization's operations. | Child, 1972 |
| Complexity | The heterogeneity and range of environmental activities which are relevant to an organization's performance. | Child, 1972<br>Aldrich, 1979 |
| Illiberality | The degree of threat from external competition, hostility, ore even indifference. | Child, 1972<br>Aldrich, 1979 |
| Hostility | Competition, regulation | Shortell, Morrison & Friedman, 1990 |
| Harshness | Availability of support for medical school, state funding for care of indigent, and competitiveness of medical care marketplace. | William, Carter, Hammons & Pointer, 1987 |
| Munificence | Favorable market demands and resource supply. | Aldrich, 1979<br>Dess and Beard, 1984<br>Shortell, Morrison, & Friedman, 199 |
| Dynamism | Stability-instability, turbulence. This includes the rate of environmental change and the unpredictability of that change. | Aldrich, 1979<br>Miles, Snow & Pfeffer, 1974 |

**TABLE 2.2. (Continued)**
**SUMMARY OF CONCEPTS AND VARIABLES: ENVIRONMENT**

| | | |
|---|---|---|
| Environmental Challenge: | A positive or negative change in the environment of the firm which alters its ability to function or provides new alternatives. Examples below: | Jauch, Osborn, Glueck, 1980<br>Negandhi and Reiman, 1973<br>Osborn and Hunt, 1974 |
| Socio-Economic Challenge | A change in the economy, economic policies, alterations in the distribution of wealth which appeared to affect demand. | |
| Consumer Challenges | A change in consumer attitudes. | |
| Technological Challenges | A shortening in the product life cycle or change in the nature of major products. | |
| Governmental Challenges | Changes in regulations or political pressure. | |
| Competitor Challenges | Price changes, introduction of new competitors. | |
| Supplier Challenges | Alterations in the price and availability of raw materials. | |
| Ownership Challenges | Major changes in ownership, takeover bids. | |
| Union Challenges | Changes in employee unions. | |
| Distributor Challenges | Excess or shortage of capacity by purchasers. | |
| Organizational Domain | Those areas in which the organization is dependent on inputs from the environment. | Mahon & Murray, 1981 |
| Task Environment | Those parts of the environment which are relevant to goal setting and attainment. | Mahon & Murray, 1981<br>Shortell, Morrison & Friedman, 1990 |
| Institutional Environment | The larger political economy within which organizations function. | Shortell, Morrison & Friedman, 1990 |

### 2.3.2 Environment and Performance

Lenz (1980) presented an extensive review and evaluation of empirical research, focussing on the identification of factors influencing organizational performance. Six different groups of research were identified, three of which include environmental factors: environment and performance; environment--organization structure and performance; and environment--strategy--performance. Each of these groups of research is described briefly below.

Lenz (1980) reported 22 studies dealing with the relationship between environment and performance. It was concluded that, as one might expect, organizations are not purely products of their environments. Further, evidence exists that organizations can be agents of environmental change. Lenz notes:

> These findings confirm what has been suggested else where (see Porter, 1979; Gabel, 1979): the relationship between environmental conditions and organizational performance is neither direct nor unidirectional. Instead, it is moderated by the basic economics of the industry (market) under consideration and the relative competitive position of firms within this setting. Further, the environment appears to be both "cause" and "effect". Through an evolving pattern of interaction, some of its features are altered by organizational initiatives. These features, in subsequent periods, influence strategic choices and firm performance. (1980:133)

Another group of studies reported by Lenz was based on the idea that organizational performance is based on the degree of congruence between the environment and organizational

structure (1980:133). Nine studies were reported with varying findings, suggesting that the causal link between environment and structure may be tenuous and that many different factors inside and outside an organization may influence structure and performance.

The third environment-related group reported by Lenz included 16 studies. Similar findings were reported among the five studies of a diverse group of industrial organizations using the PIMS data base (Profit Impact of Market Strategies), a large portion of variance in return on investment was explained in terms of the joint effects of market conditions and corporate strategy (Schoeffler et al., 1974; Schoeffler, 1977; Boston Consulting Group, 1968; Chevalier, 1972; and Buzzell et al., 1975).

Studies of single industries also reflected differing results depending on the degree of regulation in the industry. In heavily regulated industries, environment influences performance more than strategy (Fruhan, 1972; Verbrugge, Shick, and Thygerson, 1975; Verbrugge and Shick, 1976; Verbrugge and Goldstein, 1978; Lenz, 1980). In less regulated industries, strategy influences performance more than environment (Hatten, Schendel, and Cooper, 1978; Snow, 1976; Datta, 1979; Schendel and Patton, 1978; Thiel, 1970).

Additional environment-strategy-performance studies were reported by Jauch, Osborn and Glueck (1980) and Shortell, Morrison, and Friedman (1990). Jauch et al. (1980) presented research based on content analysis of 358 Fortune case studies of publicly-owned corporations covering the period 1930-1974 to examine the interrelationships of environmental changes and strategic action variables with each other and with short term performance. They found that firms tended to follow certain strategies when faced with various environmental challenges. Surprisingly, none of the 72 possible strategy-environment interactions were related to variance in the two aspects of financial success used.

Only one study encountered dealt with the hospital industry (Shortell et al., 1990). The study includes 8 hospital systems, reflecting 63% of all investor-owned hospitals and 7% of all not-for-profit hospitals in the country. Their intent was to develop an understanding of how hospitals respond to change. As a means of achieving this understanding, they developed a model of strategic adaptation:

> The ability of executives to recognize the need for change ... is likely to be a function of both the environment facing the organization and its performance in that environment. Consideration of these factors will also be influenced by characteristics of the managers themselves, the organization's mission, and its current strategic orientation. (1990:33)

Their key findings included the identification of particular adaptive styles in specific environments that are associated with better performance.

Given the "frame-breaking" changes that have taken place in health care (Shortell et al., 1990) that are described in Section 2.2.1 of this review, it is surprising that more health care research dealing with environmental factors is not reported. Certainly the need for further research is supported.

### 2.3.3 Planning Context

The external environment is only one of the environments that may impact hospital planning, strategic change and performance. The internal environment of the organization, referred to as planning context, is also important. Much has been written about the need to match the planning system with its organizational environment (Schendel, 1976; Calingo, 1984; Masoud, 1986; Yip, 1985). Many aspects of planning context are reported in the literature, including top management support for planning, satisfaction with strategic planning, leadership style, management style, participation, values, commitment and corporate culture. These concepts are summarized and defined in Table 2.3.

## TABLE 2.3

## SUMMARY OF CONCEPTS AND VARIABLES: PLANNING CONTEXT

| CONCEPT | DEFINITION | SOURCE |
|---|---|---|
| Management Support for Planning | Ambiguity related to top management support and involvement in planning. Also, resources provided for planning and resistance to planning | Lyles & Lenz, 1982<br>Ramanujan, Venkatraman & Camillus, 1986<br>King & Cleland, 1978 |
| Participation | Interest group participation, degrees of communication in planning process, and involvement in strategic decision making. | Dyson & Foster, 1982<br>Child, 1981 |
| Management Design | Divisionalization, decentralization, degree of generalism viewpoint, degree of formalization of structure, and degree of coordination. Planning management design includes degree of complexity of planning. degree of participation of hierarchy to planning involvement of top management, and degree of freedom in relation to control. | Horovitz & Thietart, 1982 |
| Organizational Structure | Type of environment, size of unit, diversity of operation, technology, and type of personnel. | Child, 1974 |
| Management Styles | Myers-Briggs assessment of personality types. The resulting six management styles used to suggest specifc impacts on strategic planning. | Mullen & Sturnpf, 1987 |
| | Miles-Snow typology: defenders, prospectors, analyzers and reactors. Used to analyze marketing strategies in Health Maintenance Organizations and in the study of strategic adaptation by hospital systems. | Conanat, Mokwa & Wood, 1987<br>Shortell, Morrison & Friedman, 1990 |

**TABLE 2.3. (Continued)**
**SUMMARY OF CONCEPTS AND VARIABLES: PLANNING CONTEXT**

| | | |
|---|---|---|
| Leadership Styles | Psychoanalytic study described five styles: manager, craftsman, the jungle fighter, the company man, and the gamesman. | Maccoby, 1976 |
| | Mechanisms that reinforce the leader's actions: organizational design and structure, systems and procedures, design of physical space, stories and myths, and formal statements of organizational philosophy, creeds and charters. | Smith & Peterson, 1988 |
| Corporate Culture | The basic assumptions and beliefs that are shared by organizational members, that operate unconsciously, and define a basic taken-for-granted view of the organization and its environment. | Nordstrom & Allen, 1987<br>Schein, 1988 |
| | Cultural forms include rites, rituals, myths, sagas, legends, stories, folktales, symbols, language, gesture, physical setting and artifact. | Beyer & Trice, 1987 |
| | Culture types defined in terms of degree of risk associated with the company's activities and the speed at which companies get feedback on whether decisions or strategies are successful. | Deal & Kennedy, 1982 |
| | Components include: attitude toward change; focus; standards and values; rituals to support values; concern for people; rewards and punishments; opennes, communication and supervision; conflict resolution; market and customer orientation; excitement, pride, and esprit de corps; commitment; and teamwork. | Bettinger, 1989 |

In this dissertation research, planning context is described in terms of culture type and management philosophy espoused by respondents, as well as top management support for planning. The variables are consistent with those reported in the literature. Variable definitions are provided in Chapter 3.

### 2.3.4 Planning Context, Planning, Strategy and Performance

Several authors have noted the importance of the "fit" between corporate culture and strategy (Arogyaswamy and Byles, 1987; Scholz, 1987; Green, 1988; and Bettinger, 1989). Arogyaswamy and Byles note that "though there is broad agreement among scholars in the field as to the approach's central premise (i.e., organizational structure should be in alignment with certain contextual and environmental factors for the organization to perform well), there is little agreement as to the identity of the factors, their relative importance and the mode of structural finetuning (1987:647)."

When noting the current popularity of corporate culture, they state:

> If the reason for the increased focus on culture is improved explanation and prediction of performance, it is indeed ironic that many studies relating to organizational culture appear to imply that the culture of an organization determines its performance...In other words, though originally viewed as an additional explanatory variable, culture is increasingly being treated as a major, if not <u>the</u> only predictor of performance. (1987:647)

Three groups of empirical studies are reported: context and performance; strategy, context and performance; and context and planning.

Lenz (1980) provides an extensive review of organizational structure-performance studies. Key variables in these studies are organizational size and organizational form (e.g., multi-divisional, functional). While these studies are not central to the focus of this dissertation, one conclusion reported by Lenz and attributed to Child (1977) is that "one important factor for attaining high performance appears to be the internal consistency of demands that a structure imposes upon organizational participants" (Lenz, 1980:136). This statement fits in the broad concept of corporate culture.

Denison (1984) used survey data as an indication of cultural managerial style and Standard and Poor's financial ratios as performance indicators in his study of 35 large American firms. The survey used 22 indexes covering organizational climate, leadership, peer relations, group process, work design, and satisfaction. While only 34 firms were included, the total number of respondents was 43,747, members of 6,671 work groups! A key finding of the study was that participative cultures perform better than non-participative ones and the difference between the two increases over time. Further research was recommended.

Horovitz and Thietart (1982) studied firms in France, Great Britain and Germany, utilizing in-depth interviews and content analysis of company documents to establish the link between performance and the fit between management system and strategy. While the research was considered exploratory, consistency was found between specific types of strategy (e.g., diversification) and management styles (e.g., decentralization). With respect to implications for planning, the results were interesting:

> Although, now for a long time, emphasis in concepts and approaches has been put on long range planning on portfolio approaches and thus on tools helping top management, the impression gathered in the field is that when firms have several businesses they tend to use a bottom up participative approach. At department, division level, managers prepare their plans which are then consolidated and discussed at top management level. The results show that this practice is less likely to lead to good performances in growth and in profitability than a top bottom less participative approach. As for the top bottom approach, one understands indeed the need for top management, even with several businesses, to specify in advance the main thrust, mission, and objectives they want to pursue. (1982:71)

Three empirical studies dealing with context and the effectiveness of planning or planning performance are noteworthy. As earlier reported, Lyles and Lenz (1982) studied the human side of planning in six commercial banks to determine the frequency of occurrence of behavioral problems among managers and their impact on the effectiveness of the planning process, and to determine whether the constellation of behavioral problems faced by managers vary according to the role of the manager in the planning system. The result of

this research was the identification of 14 critical behavioral problems encountered when managing the planning process.

Dyson and Foster (1982) reported on a comparative study of ten organizations in the United Kingdom aimed at determining the relationship between participation and the effectiveness in strategic planning. The results were inconclusive.

Finally, Ramanujam, Venkatraman, and Camillus (1986) noted that the relationship between strategic planning and organizational performance is one of the most extensively researched issues in the field of strategic management. Their contribution to what they consider a fragmented and contradictory body of research is the addition of multiple contextual variables to more precisely define what the relationships might be. Their sample included responses from 207 executives from Fortune 500 companies. They used multi-item scales to measure seven dimensions of planning systems. Two are used as contextual variables in this dissertation.

> The importance of the context of planning is underscored by the fact that each of the three criteria of effectiveness employed in this study appears to be influenced significantly by at least one of the two contextual dimensions. Both resources provided for planning and resistance to planning were key discriminators for satisfaction as well as objective fulfillment, whereas resources ranked consistently at the top for relative competitive performance. Future studies should include more contextual dimensions than the two used in this study. Possible candidates include environmental volatility, leadership styles, and maturity of planning systems. (1986:366) (underlining added)

From review of the literature reflecting the organizational context and performance, the relative lack of health care research is evident. Further, the operationalization of the concept of corporate culture is illusive.

### 2.3.5 Planning

Four bodies of research dealing with planning and strategic planning are considered relevant to this dissertation: strategic planning and organizational performance; strategic planning and planning performance; strategic planning and strategy formulation or strategic decision-making; and descriptive research on the state of strategic planning in hospitals. Each of these areas summarized below.

Much research exists dealing with the relationship between planning and firm performance (Wood and LaForge, 1979; Rhyne, 1986; Leontiades and Tezel, 1980; Shrader, Taylor and Dalton, 1984; and Armstrong, 1982). In the seventy studies reviewed by Shrader et al., (1984), the value of various aspects of planning to firm performance fell into question in nineteen of the studies. In fact, a wide range of reasons other than the existence of formal planning were suggested as alternative contributors to firm performance, including the environment, state of organizational life cycle, managerial skill, time horizon and time spent on planning, quality of planning and

quality of strategy, quality of implementation, ability to monitor activities, organizational structure, and organizational technology.

Peters and Waterman (1982) in In Search of Excellence did not include planning as one of the characteristics of successful firms. Yet, as Rhyne (1986) points out, Peters and Waterman and others are not critical of planning per se, but the manner in which it is carried out.

Armstrong (1982) conducted an extensive review of organizational behavior research and field research on the evaluation of planning and found that "formal planning" tended to be more useful where large changes were involved, but, beyond that, little information was available to suggest when formal planning is most valuable. He recommended future research on the planning process, the situation in which it is used, and the effects of the process on the system.

Several methodological issues have been raised in and about this body of research (King, 1983; Greenley, 1983; Foster and Foster, 1982; Shrader, Taylor and Dalton, 1984; and Ramanujam and Venkatraman, 1987). Ramanujam and Venkatraman (1987) point out three major limitations of the previous research. First of all, much of the research has dealt with categorization of planners and non-planners, or complete

planners, incomplete planners and non-planners (e.g., Herold, 1972; Thune and House, 1970; Wood and LaForge, 1979), or formal planners and informal planners (Kudla, 1980). While seductively simple, these categorizations loose sight of the fact that in most large firms at this point in time, significant resources are committed to planning and the firms have years of experience with the process--they are planners--and, as a result the characterizations loose their relevance. This recognition is confirmed by Burnett, Yeskey and Richardson (1985) in their survey of over 250 corporate executives in which they found that the planning function has a relatively long history in business and it has undergone major changes in the past ten years. Simple categorizations of planning miss its evolutionary aspects.

The Guttman-scale of planning developed by Wood and LaForge (1979) is considered by Ramanujam and Venkatram as an improvement over planner-non-planner dichotomies, yet the scale still treats planning in unidimensional terms.

The second major methodological flaw is that researchers have tended, almost exclusively, to view evaluate the planning - performance relationship in terms of financial performance, ignoring other payoffs from planning and other types of firm performance.

> Given that planning can be expected to confer many benefits of a tangible and intangible nature (Camillus, 1975; Hax and Majluf, 1984; King and Cleland, 1978; Steiner, 1979), it is logical and necessary to expand the conceptualization of planning effectiveness to include "process benefits", in addition to "outcome benefits"... (Ramanujam and Venkatraman, 1987:454)

The third flaw relates to the unidimensional aspects of analysis used in the studies, i.e., reliance on simple correlational and regression techniques. If both planning and outcomes are conceptualized in multidimensional terms, the techniques used in analysis should also be multidimensional. They recommend the use of multidimensional methods such as canonical correlation analysis.

Along a similar vein, King (1983) criticized the use of the indirect approach to evaluating planning, i.e., taking a leap of faith regarding the potential relationship between aspects of planning and firm performance. As King states:

> The indirect approach does not provide results that are operationally useful to management, even if the results were consistent. In effect, the indirect approach treats the products of planning--the plan, the strategy which it entails, etc.--as a "black box" that should be assessed solely in terms of the ultimate performance of the business. Without making a direct assessment of the nature or quality of the plans and other elements of strategic choice (except in so far as is necessary to ascertain the existence or level of planning in a firm) the indirect approach seeks to assess whether the existence of planning (or its level of sophistication) can be associated with business performance. (1983:265)

Of note is the fact that only one study dealing with the impact of planning, in this case market planning, on hospital

performance was encountered. McKee, Varadarajan, and Vassar (1986) studied the marketing planning orientation of hospitals among 211 hospital administrators in Arkansas, Louisiana and portions of Texas, relying on a mailed questionnaire.

Planning orientation was found to be positively related to perceived intensity of competition. In addition, the planning performance relationship, as measured by average daily occupancy, was positive. The study did not address strategic planning functions and structure and performance measures used were limited to occupancy rates and trends in occupancy rates.

Another body of literature deals with the effectiveness of planning in relation to planning performance not firm performance (Javidan, 1987; Ramanujam and Venkatraman, 1987; Ramanujam, Venkatraman and Camillus, 1986; King, 1983). This research reflects what King calls the direct approach to planning evaluation which encompasses the following components:

> Inputs to the Strategic Planning System--people, funds, computer time, etc. for the planning function.
>
> Outputs of the Strategic Planning System--mission, objectives, strategies, goals, resource allocations and strategic programs.
>
> Business Performance--financial measures of performance, market share, etc.
>
> External Standards for Inputs, Outputs, and Business Performance--for the most part, these standards do not exist.

Javidan (1987) suggested that one means of going beyond the "black box" indirect evaluation of planning described by King would be to examine the functions performed by planning staffs, yet he noted that the construct of planning staff effectiveness was not easily defined or measured. In his study, he conceptualized planning staff effectiveness in terms of: (1) their contribution to the firm's performance, (2) their impact on strategic decisions, (3) their impact on managerial innovativeness, and (4) the overall performance of the planning staff.

Once again, it is noteworthy that no empirical research dealing with the relationship between dimensions of planning systems and planning effectiveness in hospitals was encountered, although the strategic management and planning literature targeted to hospitals contains management articles (as opposed to research articles) emphasizing audits of planning systems to determine the "goodness" of planning (Zallocco, Joseph, Doremus, 1984; Schlosser, 1987; Johnson, 1986).

The third body of research deals with the relationship between planning and strategic decision making. As Armstrong (1982) states: "Formal planning seems valuable for strategic decision making because so much money is spent on it." (p. 197)

Thakur, (1985) studied the role of long-range planning and strategic management in 400 hospitals and investigated the structural aspects of planning and the relationship with strategic decision-making. He found that planning constraints in hospitals are similar to those found in other industries. Of greater practical significance was the finding that planning and operational decision-making were not linked.

> A critical factor for this low impact of planning seems to be that as far as hospitals are concerned, it is external pressures which dictate the shape and form of long-range planning. The sole emphasis on external sources, largely forced by mandated planning requirements, reduces not only the intensity of internal demands but also transforms planning to a paper-shuffling exercise to meet the exigencies of bureaucrats. (1985:476)

Apart from being an unflattering comment about the state of planning in hospitals, a question must be raised about the time frame in which the study was conducted because history since the introduction of Prospective Payment and the revocation of the National Health Planning Act of 1974 have eliminated the force behind "mandated planning requirements" and added the force of competition. Thakur's sample, though the study was published in 1985, was drawn from the 1979 American Hospital Association Guide to the Health Care Field, i.e., well before the 1983 introduction of Prospective Payment.

Outside of health care, Calingo (1984) and Javidan (1987) provide insights into the planning-decision making and planning-strategy relationship. Javidan states:

> ...more effective planning units are those who substantially contribute to their firm's success by providing meaningful input in its strategic decisions. (1987:306)

Other contributors to strategy making are described by Gluck, Kaufman, and Walleck (1982) in their discussion of the phases of strategic management which include financial planning, forecast-based planning, externally oriented planning, and strategic management. Strategy can be formulated through strategic thinking, strategic planning, and/or opportunistic decision-making. Given these possibilities, it is no wonder that the contribution of strategic planning to decision-making and strategy formulation may be questioned, and may vary from organization to organization, and environment to environment (Mintzberg, 1978). What is lacking is a sizeable body of research addressing the relative contribution of each of these three contributors to actual strategy formulation.

The fourth body of research is descriptive and deals with the state of the art of strategic planning, but not with its effectiveness. For this particular area, only research dealing with the hospital industry is included. Only six studies were encountered in the health care administration literature. The first, conducted by University of Southern California Center for Health Services Research for the Society of Hospital

Planning of the American Hospital Association (1980), was intended to determine the extent to which hospitals employed in-house planners and the characteristics and activities of those persons responsible for hospital planning. For the most part, hospitals with 200 or more beds were more likely than not to have an in-house planner, reporting directly to the Chief Executive Officer. In 1980, the average experience in the hospital planning position was 3.5 years. Other topics covered included CEO involvement in planning, consultant usage, information routinely gathered and planning emphasis. At that point in time, facility planning was most emphasized, followed by financially oriented planning, organizational planning, regulatory planning, staff planning, and, finally, market planning. The expectation for the future was that financial planning would become most emphasized over the period 1981-1986, followed by facility planning, market based planning, organizational planning, regulatory planning, and staff planning.

In 1989, The Society, now renamed the Society for Healthcare Planning and Marketing, conducted its second national survey on hospital planning (1990). Key findings from this market survey were that roughly three fourths of the hospitals reported using a formal planning process, but less than half had a planning department and only one fourth had a planning budget. The lack of resources committed to planning raises

questions about its perceived importance. Evidence from this survey suggests that hospitals with up-to-date strategic plans are not using those plans for direction in such areas as hospital operations, program planning, medical staff development, marketing, or financial planning.

A 1983 study by Kropf and Goldsmith addressed the question, "to what extent are hospitals developing institutional plans that reflect the state of the art in planning?" Conclusions drawn from their sample of 32 hospitals were that there is a lack of standardization in the technical aspects of the planning process, that the plans produced reflected minimal use of sophisticated analytical techniques, and that the plans did not reflect information about competitors.

> Where, then, is hospital planning? It is suggested here that the recent intense interest in planning, as a result of its intellectual attractiveness, legal requirements or the dangers of competition and regulation, has not resulted in extensive innovation in plans. Plans, at least those presented to the public, are still political (perhaps propaganda) documents of internally oriented institutions, and are of limited technical sophistication. (1983:15)

Scotti (1984) studied smaller (100-299 bed) not-for-profit hospitals in Pennsylvania to ascertain planning processes in an attempt to validate prescriptive theory about the value of strategic planning. His survey data, based on 66 responses revealed four patterns dealing with planning process: non-planners, embryonic planners, primary strategic planners, and progressive strategic planners. The process which formed the

basis for classification included 6 steps: mission statement, situational analysis, environmental assessment, goal development, strategy formulation, establish a control procedure and prepare the written plan. Organizational aspects considered in the study were the existence of the planning committee, a commitment to the plan, responsibility for technical planning, the planning department, outside planning consultants, and the existence and scope of the planning manual. For the most part, prescriptive theory was supported. As a concluding thought, Scotti noted:

> Empirical evidence suggests that strategic (long-range) planning pays off in commercial business firms; firms that do strategic planning outperform those that do not. While planners outperform nonplanners in durable goods industries, the reverse may be true for the service industries. The fact that hospitals are service organizations raises the possibility that strategic planning may be more of an anathema than a panacea. (1984:62)

Zallocco, Joseph and Furey (1988) conducted a survey to determine the extent of strategic planning management and specific planning techniques used in hospitals. Of their sample of 94 hospitals, they found that a formal strategic planning was used in 60% of the hospitals, that hospitals of 200 beds or more were more likely to have a formal strategic planning process, that the process tends to be "top-down" with little participation from middle management and that a variety of planning models are being used.

Finally, Greaf (1988) conducted a study comparing strategic planning processes in public and voluntary not-for profit hospitals. He operationalized a nine step model of the strategic planning process which encompassed: organize to plan, plan to plan, develop goals and objectives, analyze the gap between current and desired institutional state, develop strategies, develop and select alternatives, pretest alternatives, develop operational plans, and review and evaluate the planning process.

### 2.3.6 Strategic Change

The literature on strategy, both theoretical and empirical, is extensive and growing. The challenge in presenting this literature is to define the relevance of specific aspects to the research at hand. The starting point is the definition of strategy as the plans and activities developed by an organization in pursuit of its goals and objectives, particularly in regard to positioning itself to meet external environmental demands relative to its competition (Shortell, Morrison, and Robbins, 1985; Hambrick, 1980).

Different levels of strategy can be studied, including corporate strategy ("What business should we be in?", Wrigley, 1970; Rumelt, 1974) and business-level or institutional-level strategies ("How do we compete in this business?", Hambrick, 1980). The focus of this review is business level strategy.. Hambrick noted in 1980 that there were no generally accepted methods for operationalizing business-level strategies, nor had any empirical research been conducted into links between corporate level and business level strategy. Since 1980, a great deal of research has been conducted, some of which provides options for operationalizing strategy. In Table 2.4, concepts and variables related to strategic change are described.

Mintzberg (1978) and Quinn (1977) noted the difficulty in determining whether an organization has a strategy, observing that four measurement approaches were available: investigator inference, self-typing by the respondent in the organization, assessment by an expert external to the organization, and objective indicators. Their recommendation was the use of multiple indicators.

Given the obvious complexity in the study of strategy, what aspects are relevant in the context of the model previously presented which included the dimension of "strategic change"? Herbert and Deresky (1987) state:

## TABLE 2.4

## SUMMARY OF CONCEPTS AND VARIABLES: STRATEGIC CHANGE

| CONCEPT | DEFINITION | SOURCE |
|---|---|---|
| Strategic Adaptation | Process by which an institution manages change in the organization-environmental linkage, the strategy-structure linkage, and the structure-behavioral linkage. | Kimberly & Zajac, 1985 |
| | Process of abandoning current core strategy for another that will provide a better position for continued viability. | Shortell, Morrison & Friedman, 1990 |
| Strategic Orientation | Miles-Snow typology encompasses orientation to market place, production and distribution, and issues of organizational control. | Miles & Snow, 1978 |
| | Porter typology encompasses generic strategies and strategic group membership. | Shortell, Morrison & Friedman, 1990<br>Porter, 1980 |
| | Other types: strategies of action, structure, technological strategies, financial strategies, and human resource strategies. Internal strategies (build, hold) and external strategies (buy, sell). | Foster, 1982<br>Leontiades, 1983 |
| Strategic Choice | Similar organizations operate within the same environment and may choose to address that environment differently based on the strategic orientation of their management. | Dess & Davis, 1984 |
| Strategy Content | Content types: goal content focusses on survival, economic performance, social conduct, etc.; scope content deals with diversification, vertical integration, geographical expansion, etc.; competitive strategy content reflects strategic groups and taxonomies. | Fahey & Christensen, 1986 |

> Insight into the nature and content of business level strategy as realized may lead to a better understanding of business level strategic choices, the patterns of managerial actions by which their implementation is accomplished and the reasons for their relative effectiveness. (1987:135)

In this context, strategic change is defined as actions taken which management considers to be important in terms of the institution's ability to compete, survive or prosper. Strategic change is not the same concept as that described by Shortell et al., as strategic adaptation, a change in strategy.

Lenz (1980), in his literature review, reported seven studies dealing with the strategy-organizational structure-performance linkage:

> Collectively, these findings indicate that strategy and structure affect managerial perceptions, the socialization of individuals, and many other aspects of behavior that, in turn, influence strategic choices. Over time, these choices, and their attendant implications for environmental conditions the firma is apt to confront, greatly affect organizational performance. (1980:137)

In the health care literature, a body of research is developing, apparently driven by the efforts of Stephen Shortell. In a study of strategy, structure and performance of multi-hospital systems (Shortell, Morrison, Friedman, Hughes and Hughes, 1987; and Shortell, Morrison, and Friedman, 1990) five sets of variables are examined in relation to the emergence and growth of multi-hospital systems: environment,

mission and goals, strategies, decision-making structures, and performance. One outcome of the study was the delineation of a model of strategic adaptation. Using the Miles-Snow typology for strategy, Shortell et al. developed lessons for success revolving around shifting from a product orientation to a market orientation; shifting from a caretaking mentality to a risk-taking mentality; and the shift from a focus on operational management to an emphasis on strategic management. Regarding financial performance, they found that the strategy types, "prospectors" and "reactors" were generally more profitable than "analyzers" and that "analyzers" were more profitable than "reactors".

Other studies in health care included a case study by Tuckman and Chang (1986) to determine how strategies among a few large hospitals in Memphis had changed over time and a study of strategic adaptation in Texas (Ginn and McDaniel, 1987). Case study findings included an observation that, with increased competition, hospitals were competing in more market segments and all had rethought their competitive strategies. Findings from the strategic adaptation study were that a number of hospitals had changed strategies in response to a changing environment (i.e., the period 1976-1980 versus the period 1981-1985) and that hospitals responded to increased turbulence by moving from a defender strategy towards a prospector strategy, according to the Miles-Snow typology.

### 2.3.7 Performance

The final section of this literature review deals with performance, a concept that has been reflected in most of the previous sections since it is often the dependent variable (or set of variables) in studies of the impact of environment, context, planning or strategic change.

The primary purpose of this section is to present the literature, addressing the appropriate performance measures for studies dealing with hospitals.

Of the empirical studies reported from other industries, financial measures were almost always the only relevant performance measures. Common measures were sales, profit, productivity, revenue, dividends, growth, stock price, capital, cash flow, return on assets, return on capital, return on equity, return on investment, and earnings per share (Christensen and Montgomery, 1981; Denison, 1984; Shrader, Taylor and Dalton, 1984)

Coyne (1982 and 1985) suggests the use of financial ratios to identify financial stress and the strength of multi-institutional health care organizations. A number of other authors recommend the use financial ratios to determine internal strengths and weaknesses in comparing hospitals (Choate, 1974; Choate and Tanaka, 1979; Carunana and McHugh,

1980; Cleverly and Nilsen, 1980; and Balsano and Ryan, 1988). Aaker and Mascarenhas (1985) recommend the monitoring of measures of liquidity (current ratio, acid-test ratio, and debt/equity ratio) as means of measuring flexibility of the organization. They define strategic flexibility as the "ability of the organization to adapt to substantial, uncertain, and fast-occurring (relative to required reaction time) environmental changes that have a meaningful impact on the organization's performance." (1985:74) Finkler (1982) recommends caution in the use of financial ratios for trending due to the potential effect of inflation and other confounding factors. He contends that comparisons among institutions is difficult because of different accounting methods used, although comparisons from year to year within a single institution are appropriate.

Empirical studies dealing primarily with the financial performance in hospitals utilize a variety of measures. Pauly (1986) examined the circumstances in which a third party payor or regulator might want to set hospital prices to yield a positive rate of <u>return on equity</u>. Clement (1987) examined <u>return on assets</u> as measures of profitability and of risk in relation to hospital diversification activities. He found that diversification, regardless of whether related or unrelated to the hospitals' previous mix of services, is not associated with either increased profitability or reduced

risk. Coyne (1982) found that system hospitals realize higher cost and higher productivity levels than independent hospitals when comparing cost per case, payroll per day, admissions per bed and FTEs per 100 occupied beds. In a latter study, Coyne (1985) compared capital structure, as measured by the ratio of assets to equity, and profitability, as measured by operating margin and return on equity, among system and independent hospitals. Capital structure and profitability were cited as particularly important under Prospective Payment. The importance of capital structure is based on the fact that, under Prospective Payment, payment for capital becomes increasingly more stringent than under cost-based reimbursement which provided reimbursement for depreciation and interest and, as a result, eliminated much of the financial risk hospitals faced in assuming large amounts of long-term debt. Krystynak (1983) recommends monitoring debt/equity ratios and return on equity as a means of managing risk under prospective payment. The importance of profitability is based on the reality that, under Prospective Payment, less support is available for unprofitable services.

Renn, Schramm, Watt and Derzon (1985) studied the effects of ownership and system affiliation on economic performance using 24 measures reflecting revenues and expenses, markups and profitability, productivity and activity, and patient and payer mix. This study utilized almost all of the 29 financial

ratios used by the Financial Analysis Service , developed by the Hospital Financial Management Association in cooperation with the Ohio State University to facilitate research into hospital financial performance (Cleverley and Nilsen, 1980). Similarly, McCue used 20 measures of financial performance in his study of small multi-hospital systems. Friedman and Shortell 1988) compared aspects of financial performance of investor-owned and not-for-profit system hospitals before and after the introduction of Prospective Payment. The financial measures used were cost per adjusted admission, operating margin, and net income after tax.

While financial measures are available, they are not the only measures of relevance to hospitals. In his study of the value of strategic planning in hospitals, Scotti noted:

> Before researchers can determine whether the kind of strategic planning implemented by commercial business firms contributes to improved hospital performance, a measure of performance accepted by the health administration field must be developed. Only then will we be in a position to understand strategic planning's contribution to improved hospital performance, and to assess its value as a management tool. (1984:63)

MacStravic takes a step in this direction by suggesting what he considers appropriate performance measures for hospitals. These fall into nine categories:

> Financial Health: profitability of operations, liquidity, and debt/equity status.

Image: normally requires a systematic survey of community residents, referral area physicians, industries, potential donors, lenders, etc.

Community knowledge and attitudes: knowledge of location and scope of services, preference for your hospital, etc.

Service: the extent to which the hospital offers the types and amounts of services that best fit the community's needs and institutional capabilities.

Quality of care: resources (proportion of medical staff who are board certified or eligible, proportion of nurses with BSNs), activity quality (JCAH accreditation), outcome quality (surgical mortality and complication rate, nosocomial infection rates, tissue committee estimate of necessary surgery, and the morbidity/mortality committee review results) and subjective quality (the proportion of physicians who believe that the hospital's credentialling process works, the proportion of nurses who believe that the quality of medical care is high, and the proportion of medical staff who believe the same about nursing care).

Utilization: major markets, payers, market shares in principal markets, admissions, average length of stay, program-specific use levels.

Efficiency: nursing hours per patient day, total FTEs per filled bed, occupancy levels of specific units, costs for specific departmental outputs compared to industry norms.

Resources: space, personnel, equipment, information

Contribution: the extent to which the community served by the hospital benefits, and perhaps perceives itself to benefit from the hospital's existence and operation. "In the broadest sense, contribution constitutes the reason the hospital is in business and represents the most intrinsically valuable aspect of its success." (1983:44-45)

Certainly measurement of performance in hospitals requires multiple measures of financial health and of other aspects, such as those mentioned by MacStravic. For the outside researcher, the limiting factor will be the availability of data and, in some cases, the development of valid measures.

### 2.3.8 Summary

Review of the literature dealing with theory and empirical research encompassing the complex relationships involving the environment, organizational context, planning, strategic change and performance highlights several issues. First, the body of health care research addressing change and performance in relation to management practices (of which strategic planning is one) is very limited. Second, empirical research into the effectiveness of strategic planning in health care is non-existent. Third, it appears that the experience and insights from research in business policy/strategy and organizational behavior are both applicable and needed in health care research such as that presented in this dissertation.

In Chapter 3, many of the concepts presented in the literature review are operationalized, and analytic approaches defined.

# CHAPTER 3

# METHODS

## 3.1 Introduction

This chapter includes a discussion of the conceptual basis for the hypotheses, an explanation of the study's exploratory approach, description of the population and samples, an overview of the instrumentation developed for the study, a description of the secondary data used, detailed variable definitions, and a discussion of the analytic techniques used.

## 3.2 Development of Research Hypotheses

As was apparent from the literature review in Chapter 2, health care research dealing with strategic planning is virtually non-existent. Drawing upon the strategic-planning and organizational behavior research outside of health care, one of the main organizing themes encountered was contingency theory. Simply stated, contingency theory contends that the design of an organization depends on various contextual factors. Some studies support the application of contingency theory in better understanding the "fit" between the organization's strategic planning system and the organizational context (Masoud, 1986; Calingo, 1984). Many other studies have focussed on the relationship between support for planning and planning performance (Lyles and Lenz,

1982; Wheelwright, 1984; King and Cleland, 1978; Ramanujan, Venkatraman, and Camillus, 1986), indicating that top management support is essential for successful planning. Finally, a large body of literature dealt with aspects of planning and firm performance, with both positive and negative results (Wood and LaForge, 1979; Rhyne, 1986; Shrader, Taylor and Dalton, 1984). In general, this literature points to the need for further research which takes into account the outside environment, the organizational context, the structure, functions and processes associated with strategic planning, strategic changes (e.g., major changes), and firm performance. Hypotheses were generated which reflect this multidimensional view of strategic planning in hospitals in competitive environments:

**H1:** Performance in hospitals in which planning is involved in strategic change will be better than in hospitals in which planning is not involved in change.

**H2:** The more support evident for strategic planning, the more likely that planning will be involved in strategic change.

**H3:** The greater the competition faced by the hospital, the greater the use of strategic planning.

> **H3.1:** The greater the competition, the greater the involvement of planning in strategic change.
>
> **H3.2:** The greater the competition, the greater the number of types of strategic change reported.
>
> **H3.3:** The greater the competition, the more elaborate the planning functions and processes, including support for operations and business development as well as for strategic planning.

## 3.3 Exploratory Nature of the Research

Several factors were considered in selecting the approach to this research. Chief among these was the recognition that no empirical research dealing with the effectiveness of strategic planning in health care existed. There was no evidence that hospital administrators used strategic planning and, if they did, whether they were satisfied with it and believed it contributed to superior performance. This lack of research existed despite the fact that the hospital industry has changed significantly since 1983 and that these changes were believed to be affecting the nature and extent of strategic planning in hospitals.

Additionally, descriptive studies of Zallocco, Joseph and Furey (1988) and the USC Center for Health Services Research (1980), indicated that the nature of planning in health care settings was different from that reported in industrial settings and, therefore, measurement methods from other settings might not be adaptable to health care.

With no accepted measurement methods, priority was placed on trying to capture the richness of the settings in which people were trying to carry out their jobs through a combination of qualitative and quantitative approaches. The qualitative approach was well-supported by Patton in his discussion of qualitative evaluation methods:

> When an evaluation project requires gathering data from several local sites, quantitative measures may be appropriate for comparing local programs along standardized dimensions, but qualitative methods are necessary to capture the unique diversities and contrasts emerge as local programs adapt to local needs and circumstances. (1980:66)

Further, in his discussion of the evaluation of program implementation, as opposed to outcome evaluation, he notes:

> Unless one knows that a program is operating according to design, there may be little reason to expect it to produce the desired outcomes...If program implementation is characterized by a process of adaptation to local conditions, needs, and interests, then the methods used to study implementation must be open-ended, discovery oriented, and capable of describing developmental processes and program change. Qualitative methods are ideally suited to the task... (1980:69-70)

In terms of grounded evaluation theory, he states:

> By way of contrast to logical, deductive theory construction, a grounded theory approach to evaluation research is inductive, pragmatic, and highly concrete (Patton, 1978: 179-198). The evaluator's task is to generate program theory from holistic data gathered through naturalistic inquiry for the purpose of helping program staff and decision makers understand how the program functions, why it functions as it does, and the ways in which the impacts/consequences/outcomes of the program flow from program activities. (1980:81)

The research conducted was considered an exploratory endeavor in a chaotic environment. The methods employed reflect a combination of perspectives and data sources: a case study in one community, a telephone survey of CEOs and planners in a random sample of hospitals, reliance on primarily open-ended questions, and use of quantitative data available through the AHA Guides to the Health Care Field and Medicare Cost Reports.

## 3.4 Population and Sample

### 3.4.1 Population Characteristics

Acute care hospitals of 200 or more beds located in urban areas of Washington State, Oregon and California constitute the universe for this study. Urban areas are defined as cities of at least 250,000 people (as identified in the State and Metropolitan Area Data Book, 1986) and the cities and towns located in the same county as the primary urban center, as long as these included hospitals with 200 or more beds. The size requirements are based on the findings of Zallocco, Joseph and Furey (1988) that hospitals with at least 200 beds were more likely to have adopted a formal strategic planning process.

Veterans Administration and military hospitals were excluded from the study from the beginning. After data collection, one specialty hospital, a children's hospital, was also excluded so that the sample included only general medical/surgical hospitals. The universe was developed using the 1988 American Hospital Association Guide. The characteristics of the 163 hospitals in the universe (excluding the types of hospitals cited above) are presented in Section 3.4.3, Table 3.1.

### 3.4.2 Selection of Two Samples

From this universe, two samples were drawn. First, one community was selected for an in-depth case study of its major hospitals, i.e., greater than 200 beds plus a major HMO. The

community was selected on the basis of the perceived intensity of competition as reported in the literature, its relative isolation from other major urban centers, and ready availability of information about its health care environment. The purpose of the case study was to observe the dynamics of competition as they relate to strategic planning in hospitals in a single environment. The data collection techniques used in the case study included in depth personal interviews during a one week site visit in the community, and review of secondary data including Medicare Cost Reports, American Hospital Association (AHA) Guides to the Health Care Field, and annual reports of the individual hospitals. Follow-up telephone interviews were conducted, as needed, for clarification. Detail on the characteristics of the case study hospitals will be provided in Chapter 5.

The second sample, a simple random sample, was selected to reflect the range of environments in the three states. The data collection methods used with this larger sample included telephone interviews with Chief Executive Officers and Planners, and/or other respondents selected by the CEOs, plus review of secondary data.

The second sample was selected with the aid of a published table of random numbers (Table A 1, Statistical Methods,

Snedecor and Cochran, Seventh Edition, 1980).[1] With the expectation that gaining participation in the study might be difficult, a sample of 70 hospitals was drawn, i.e., 43% of the universe. The goal was to gain participation by 41 hospitals, or 25% of the universe. In practice, it was necessary to contact 70 hospitals to gain participation by 41. The sample was later reduced to 40, with the exclusion of a children's hospital.

Two hospitals in the case study are also included in the larger sample. This was considered acceptable because the focus of the analysis differed even though the information collected was similar and they had been selected at random.

### 3.4.3 Sample Characteristics

The characteristics of the hospitals included in the study are compared with the universe in Table 3.1.

Overall, in terms of size, ownership, system participation and occupancy, sample hospitals are very similar to the universe. One exception to the similarities is that the sample contains fewer of the hospitals in the 400-499 bed range and, correspondingly, more in the 300-399 bed range.

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[1] The sample selection procedure involved starting at a fixed point (top left) on the table of random numbers, considering three digits at a time, moving from left to right. As long as the three digits fell within the identification numbers for the universe, they were included. Duplicates were excluded.

**TABLE 3.1**

**COMPARISON OF UNIVERSE AND STUDY HOSPITALS**

| | Universe | | Sample | |
|---|---|---|---|---|
| | N | % | N | % |
| Size: | | | | |
| 200-299 beds | 83 | 50.9% | 19 | 47.5% |
| 300-399 beds | 48 | 29.4% | 15 | 37.5% |
| 400-499 beds | 16 | 9.8% | 2 | 5.0% |
| 500+ beds | 16 | 9.8% | 4 | 10.0% |
| Total | 163 | 100.0% | 40 | 100.0% |
| Average Size: | 332 beds | | 315 beds | |
| Range: | 200-1454 beds | | 200-645 beds | |
| For Profit: | 14 | 8.6% | 4 | 10.0% |
| Not-for-Profit: | 149 | 91.4% | 36 | 90.0% |
| System Participation: | 91 | 55.8% | 25 | 62.5% |
| Number of Systems Represented: | 41 | | 16 | |
| Average Occupancy, 1987 | | 68.2% | | 68.1% |

### 3.4.4 Procedures and Rules

The process used to gain participants is described below. Between December, 1989 and February, 1990, letters were sent to Chief Executive Officers (CEOs) at the targeted hospitals explaining the purposes of the research and asking their participation and that of their chief planning officer, if such a position existed (see Appendix A). The letters were sent out in the order that the hospital was selected in the sample, with 10-20 letters being sent each week over a six week period. One week after sending the letter, the CEO was telephoned in an effort to schedule a specific time for an

interview and to identify the planning officer. On average, 5 telephone calls and one telefaxsimile (of the original letter), were required before an interview actually took place.

While the intent was to interview both the CEO and Planner, this was only possible in 20 cases. The CEO sometimes delegated the interview to the Planner or other member of his/her staff.

Interviews with CEOs usually lasted from 20-30 minutes, although in a few cases, they choose to speak for as long as 45 minutes. For the planner interviews, the duration typically was from 30-45 minutes. After 30 minutes, respondents were reminded about the time and asked if they chose to continue, with the knowledge of the topics yet to be covered. In most instances, they choose to complete the interviews.

## 3.5 Instrumentation

### 3.5.1 Development of Questionnaires

Questionnaires were developed for use in both the case study and telephone interviews (Appendix B). They were designed to capture aspects of the environment, the organizational context, the structure and functions of strategic planning, strategic change, and hospital performance, i.e., to provide a mechanism for testing the model described previously.

The initial questionnaires were developed for use with CEOs and planners in the case study community. These were pilot tested in Hawaii among officers and planners in three different hospitals. Modifications were made based on the pretest.

During the case study data collection, i.e., the in-depth interviews in one community, several items on the questionnaires were identified as being unnecessary. In essence, the case study involved 18 interviews and served as an extensive pre-test for the telephone interviews. The revised questionnaires used for the telephone surveys were much shorter, although administration still required at least 20 minutes.

While there was overlap in questions addressed to the Chief Executive Officer and to the Planner, the questionnaires reflect different and complementary purposes. The survey of CEOs was intended to determine his/her satisfaction with the strategic planning process, perception of the planning performance relationship, and description of major changes. The survey of Planners was designed to ascertain the planning structures, functions and processes used at the hospital as well as identifying major changes. These surveys provided the majority of data used in this study.

All interviews were conducted by the investigator in order to assure comparability and continuity of administration.

### 3.5.2 Validity

Attainment of acceptable levels of validity is a particular challenge when conducting an exploratory study and when developing and using an original survey instrument. At the most rudimentary level, the pre-test and subsequent case study interviews provided a degree of comfort with the face validity of the survey instrument, i.e., it seemed as if the questions being asked and the responses provided did relate to the concepts intended.

Other types of validity are described by Campbell and Stanley (1966) and Cook and Campbell (1979) in relation to experimental and quasi-experimental designs for research. While the cross-sectional approach to this study does not fit within their categorizations of quasi-experimental designs, the threats to validity are applicable.

Cook and Campbell (1979) describe four types of validity: internal validity, statistical conclusion validity, construct validity and external validity. Three of these types of validity are discussed in Table 3.2, along with specific threats to validity applicable to this research and the tactics employed to minimize the threat. Statistical

conclusion validity is not described here because it does not apply to the exploratory nature of this study. Internal validity refers to the possibility that the conclusions drawn from the study may not accurately reflect what went on in the study itself (Babbie, 1983). Specific threats to internal validity which apply to this study (history and maturation) result from the cross-sectional study design. While the purpose of the study is to gain understanding of strategic planning processes and functions that are carried out over time, the conclusions drawn about them are based on interviews which relate to interviewee perceptions at one point in time. These interview data were supplemented by secondary data which were more objective but were taken from only two points of time.

Other threats arise from the possibility of respondents trying to provide the "right" answers and the possibility that respondents and non-respondents differ in important (though unknown) ways. Overall, in recognition of the threats to internal validity that could not be entirely overcome by design, it must be assumed that the problems with internal validity were significant and that they should be closely considered in understanding the study results.

**TABLE 3.2**

**THREATS TO VALIDITY AND TACTICS USED TO MINIMIZE THREATS**

**Internal Validity**

| **Threat** | **Tactic** |
|---|---|
| History: Recall could easily be influenced by respondents' access to or retention of information. People have selective memories. | Different roles and years spent in the organization were collected as controlling variables. Initial responses were probed with additional questions: Why did this happen? Who was involved? What was the process? |
| Maturation: Growing "older and wiser" over the study period may have influenced respondents' perceptions. For those with limited experience with a study hospital, the perceptions may have reflected their not being "older and wiser". | The initial intent was to interview only those who had at least two years tenure in their current positions. In addition, matched CEO-Planner interviews were intended to counter-balance each other. As it turned out, neither intent was possible for the entire sample. Maturation may be a threat to internal validity, but the depth of response provided by those with years of experience may increase construct validity. |

**Table 3.2. (Continued)**
**THREATS AND TACTICS**

| | |
|---|---|
| Testing: Respondents knew that the research focused on the effectiveness of strategic planning. The threat deals with the question of whether or not they provided answers in support of strategic planning if they believed that those were the "right" answers. | When introducing the topic, emphasis was placed on strategic planning and other management activities which might lead to superior performance. Multiple questions addressed different aspects of strategic planning, other planning activities, and the identification of the role planning played in major changes. By using multiple questions and trying to interview both CEO and Planner, an effort was made to minimize the impact of testing. In reality, the professionalism of the respondents, and their apparent candor, may have minimized the threat. |
| Selection: A sample of 70 hospitals was drawn. Interviews were possible in only 40. Are there important differences between respondents and non-respondents? | By randomly selecting the sample from the universe, investigator bias over hospital selection was eliminated. Additionally, a rigid order of contact was maintained so that hospitals that were somewhat more difficult to gain entre would not be discarded prematurely. |
| **Construct Validity** | |
| Inadequate explication of constructs: The exploratory nature of the research implies that some of the concepts and constructs are yet to be defined, others need to be refined. The threat is that the constructs actually being used confound the "true" relationships. | A thorough literature review provided the basis for developing the constructs. Multiple measures and multiple perspectives were used to the extent possible. |

**Table 3.2. (Continued)**
**THREATS AND TACTICS**

| | |
|---|---|
| Mono-Operation and Mono-Method Bias: Reliance on one measure or one source of information lowers construct validity because variation is limited and irrelevant information is less likely to be filtered out. | By including multiple measures of concepts and attempting to interview both CEOs and Planners, the threats of were reduced directly. The use of secondary data to supplement the interview data further reduced these threats. |
| Hypothesis Guessing: This threat is similar to "testing" described under internal validity. The threat is that respondents were trying to conform to my hypotheses. | Same as those listed for "testing". |
| Experimenter Expectancies: This threat refers to the possibility that the expectations of the researcher will bias the data collected. | Adherence to strict procedures in data collection, coding and data entry was employed. Interviews entailed lengthy notes and frequent requests for clarification. Coding included creation of categories which were mutually exclusive and exhaustive. |
| **External Validity** | |
| Non-response: This threat is similar to the "selection" threat listed under internal validity. | Refer to the tactics under "selection". An attempt was made to make participation in the survey as convenient as possible. |

Construct validity refers to "the possibility that the operations which are meant to represent a particular cause or effect construct can be construed in terms of more than one construct...(Cook and Campbell, 1979:59). Threats to construct validity were managed through research design and through specific procedures for data collection and analysis. These are described as tactics in Table 3.2.

External validity refers to the possibility that the results may not be generalizable. The specific action taken to enhance external validity was to select a simple random sample. However, given the response rate (57%), it cannot be assumed that the results are generalizable.

Overall, the study design and execution, while appropriate for the nature of the research questions being addressed, resulted in numerous threats to internal, construct and external validity. Some of these threats could be managed within the resources available for the research, others could not.

Cook and Campbell (1979) note the need to prioritize different types of validity, according to the purpose of the study:

> The priority among validity types varies with the kind of research being conducted. For persons interested in theory testing it is almost as important to show that the variables involved in the research are constructs A and B (construct validity) as it is to show that the

> relationship is causal and goes from one variable to the other (internal validity). Few theories specify crucial target settings, populations, or times to or across which generalization is desired. Consequently, external validity is of relatively little importance. In practice, it is often sacrificed for the greater statistical power that comes through having isolated settings, standardized procedures, and homogeneous respondent populations. For investigators with theoretical interests our estimate is that the types of validity, in order of importance, are probably internal, construct, statistical conclusion, and external validity. (1979:83)

In this study, by both design and control, content validity and internal validity were emphasized over external validity.

### 3.5.3 Reliability

Reliability refers to the ability to repeatedly obtain the same results. Management of the research provided some opportunities to eliminate common sources of unreliability. Specifically, variation resulting from multiple interviewers and coders did not exist. One person (the researcher) developed the survey instruments, conducted the pre-test, the in-depth interviews, the telephone interviews, developed the coding scheme, and coded the data. This did serve to support consistency.

Another approach taken to support reliability was the targeting of respondents. The intent was to interview people who, by virtue of their positions, would be able to answer the questions. The primary target was the Chief Executive Officer (CEO) because strategic planning is one of his/her key

responsibilities. The CEO was then asked to provide entre to the hospital's Chief Planning Officer (CPO), whether that person be a Vice President or Director of Planning, Marketing, Business Development, etc.

Of the sixty one telephone surveys conducted, 49 (80%) involved a targeted respondent, i.e., either a CEO or CPO. The remaining respondents, designated by the CEO to be interviewed, were members of top management and considered acceptable respondents.

In this study, the exploratory approach taken resulted in the use of open-ended questions and the use of some measures which had not been used previously. By carrying out similar interviews in two samples (i.e., the case study and the telephone interviews), confidence in reliability was enhanced.

### 3.6 Secondary Data

Secondary data were also used for performance measures and background information. Specifically, Medicare Cost Reports Worksheets G (Balance Sheet), G-1 (Statement of Changes in Operations), G-2 (Statement of Patient Revenues and Operating Expenses), and G-3 (Income Statement) for fiscal years ending 1983 and 1988 provided the following financial performance measures: operating margin, return on assets, return on equity, current ratio, acid test, and debt/equity ratio. The

American Hospital Association Guides to the Health Care Field (AHA) provided the following performance measures: admissions per full-time equivalent (FTE), FTEs per occupied bed, market share, and occupancy rate for fiscal years ending 1983 and 1988. In addition, the AHA Guides provided background information dealing with size, ownership, number of services, and system characteristics.

Missing data was a significant problem with the secondary data sources. With the Medicare Cost Reports, two problems emerged. In some cases, the fiscal intermediary could not locate the Cost Report. In other cases, the Cost Report was filed with missing data. If the missing Cost Report was from fiscal year ending 1983 and the intermediary had provided the report for fiscal year ending 1984, the latter data were used in analysis. The extent of this problem is described in Chapter 5.

With the AHA Guides, missing data resulted from a hospital's non-reporting on the AHA annual survey. Frequently, data would be missing for only certain data elements, usually FTEs and was much more like to have been missing in 1988 than in 1983. If the facility had reported information in 1987, but not 1988, the earlier data were used.

## 3.7 Variable Definition

A full listing of variables, their definitions, and methods of measurement is provided below.

Environmental Hostility reflects the nature and extent of competition and regulation in the environment. Included as part of this are indicators of the constraints placed on payment as a result of managed care as perceived by the CEO and planner, and as ascertained through secondary data. Table 3.3 provides operational definitions of the variables reflecting environmental hostility.

The state identifiers are used as proxy measures for regulation. This approach was taken because both certificate of need programs and rate regulation programs apply statewide although they do vary from state to state. Aspects of certificate of need and rate review for each of the states are summarized in Chapter 5. These aspects (e.g., type of rate review program, basis for rate setting, number of payers covered, certificate of need capital expenditures threshold level, etc.) are included as background information and not used as analytic variables.

TABLE 3.3

VARIABLES REFLECTING ENVIRONMENTAL HOSTILITY

| Variable | Definition and Measurement | Source[a] |
|---|---|---|
| COMPNO | Number of competing hospitals by location (e.g., city) | AHA |
| CCOMPET | CEO perception of number of competitors | CQ15 |
| PCOMPET | Planner perception of number of competitors | PQ28 |
| CONEWORD | CEO description of nature of competition | CQ16 |
| PONEWORD | Planner description, nature of competition | PQ29 |
| MGCRPSA | Planner's estimate of managed care penetration in service area (percentage) | PQ31 |
| MGCRHOS | Planner's estimate of managed care mix at hospital (percentage, currently) | PQ32 |
| CALIF | Located in California (1,0) | AHA |
| OREG | Located in Oregon (1,0) | AHA |
| WASH | Located in Washington (1,0) | AHA |

[a] Three sources were used. AHA means that the data item was derived from the AHA Guides to the Health Care Field. Sources cited such as CQ15 and PQ28 indicate that the data itmes were derived from the CEO questionnaire, question 15, or the Planner questionnaire, question 28. Finally, COST REPT means that the data item was derived from the Medicare Cost Report.

Planning Context reflects the CEO's attitudes regarding the value of strategic planning, as well as the organizational culture and management philosophy, as described by the CEO and planner. Corporate culture was defined as the underlying values which drive the organization. Management philosophy was defined as the management approaches that are stressed. In addition, CEOs and planners were asked to identify issues most impacting the hospital. These perceptions were considered important because they were likely to reflect concerns that would impact management in general, and strategic planning practice in particular.

Measurement of the concepts of corporate culture, management philosophy and issues was constructed from the open-ended responses. Similarities among these responses provided a means for creating categories. Since a respondent was permitted to provide detailed descriptions of such concepts as corporate culture or management philosophy, multiple responses often resulted. The categories represented by these responses were constructed as individual dichotomous variables, i.e., it existed (1) or it didn't (0).

Operationalization of the variables reflecting planning context is presented in Table 3.4.

TABLE 3.4

VARIABLES REFLECTING PLANNING CONTEXT

| Variable | Definition and Measurement | Source |
|---|---|---|
| CMPH1 | CEO's description of management philosophy: | CQ19 |
| PMPH1 | Planner's description of management philosophy: | PQ25 |
| | Outcome orientation--effective, efficient, fix it, no margin/no mission, focus on accomplishment, expect results, appropriate (1,0) | |
| CMPH2 | Process orientation--process/teamwork, | CQ19 |
| PMPH2 | communication, common sense, respect and dignity (1,0) | PQ25 |
| CMPH3 | Decision-making--decentralize, | CQ19 |
| PMPH3 | include stakeholders, participatory decision-making | PQ25 |
| CMPH4 | Employee orientation--make it a fun place | CQ19 |
| PMPH4 | to work, safe, pleasant environment, employee recognition, allow input, give employees tools to do jobs, educate, motivate | PQ25 |
| CCULT1 | CEO's description of corporate culture: | CQ20 |
| CCULT1 | Planner's description of corporate culture: value based, all services are needed and wanted, here to serve patient, patient driven, people are important, personalization, meaningful work (1,0) | PQ24a |
| CCULT2 | Careful, must use resources carefully, do | CQ20 |
| PCULT2 | a good job within budget expectations | PQ24a |
| CCULT3 | Politically driven, territoriality, formal | CQ20 |
| PCULT3 | | PQ24a |
| CCULT4 | Action oriented, competence, quality, | CQ20 |
| PCULT4 | cutting edge, stands for doing it right, innovation, growth, candid | PQ24a |
| CCULT5 | Traditional, pride, loyalty | CQ20 |
| PCULT5 | | PQ24a |
| CCULT6 | Financially driven | CQ20 |
| PCULT6 | | PQ24a |

**Table 3.4. (Continued)**
**VARIABLES REFLECTING PLANNING CONTEXT**

| | | |
|---|---|---|
| **CISSUE1** | CEO perception of issue: | **CQ32** |
| **PISSUE1** | Planner perception of issue: | **PQ52** |
| | Financial pressures, dealing with debt, expense control, undercompensation, indigent care (1,0) | |
| **CISSUE2** | CEO perception of issue: | **CQ32** |
| **PISSUE2** | Planner perception of issue: | **PQ52** |
| | Medical staff relations, recruitment, maintaining physicians in competitive environment, unwillingness of physicians to take call, unavailability of specialists, age of medical staff (1,0) | |
| **CISSUE3** | CEO perception of issue: | **CQ32** |
| | Planner perception of issue: | **PQ52** |
| | Service mix, new technology, enhancing scope of service, balance patient care/ education/research, higher acuity, bioethics, meet population needs, quality (1,0) | |
| **CISSUE4** | CEO perception of issue: | **CQ32** |
| **PISSUE4** | Planner perception of issue: | **PQ52** |
| | Communication, keeping Board in tune (1,0) | |
| **CISSUE5** | CEO perception of issue: | **CQ32** |
| **PISSUE5** | Planner perception of issue: | **PQ52** |
| | Shortage of space, ability to expand facility in timely manner (1,0) | |
| **CISSUE6** | CEO perception of issue: | **CQ32** |
| **PISSUE6** | Planner perception of issue: | **PQ52** |
| | Personnel, staff shortages, unstable nursing union, turnover (1,0) | |
| **CISSUE7** | CEO perception of issue: | **CQ32** |
| **CISSUE7** | Planner perception of issue: | **PQ52** |
| | Competition, image, patient satisfaction, involvement in community, protection of 501.c.3 status (1,0) | |
| **PREPORT** | Planner reports to CEO (1=yes) | **PQ6-7** |
| **SPSATIS** | CEO satisfaction with SP process (1,0) | **CQ12** |
| **PSPSATIS** | Planner satisfaction with SP process (1,0) | **PQ12** |

**Table 3.4. (Continued)**
**VARIABLES REFLECTING PLANNING CONTEXT**

| | | |
|---|---|---|
| **SUMCONTR** | Number of contributions of strategic planning cited by CEO. Range of five included: positioning, direction, resource allocation, buy-in, evaluation (0-5) | **CQ5** |
| **SUPPORT** | Score reflecting CEO support for strategic planning calculated by adding values of the following: SPSATIS, TOPDIR, FTE, PREPORT, SUMCONTR | **CQ5-6**<br>**CQ12**<br>**PQ6-7**<br>**PQ8** |
| **TOPDIR** | Top management directs strategic planning, active leadership role (1,0) | **CQ6** |

Planning Structures, Functions, and Processes

This component of the model reflects several aspects of planning, including the structure of planning in the organization, the functions carried out by the Planning Department, and the processes followed. To improve the validity of the measures, multiple perspectives were sought. Interviewing both the CEO and planner provided a valuable crosscheck. Multiple questions focusing on specific aspects, such as planning functions, also served this purpose.

The variables reflecting planning structures, functions and processes are operationalized in Table 3.5 below.

TABLE 3.5

VARIABLES REFLECTING PLANNING STRUCTURES, FUNCTIONS AND PROCESSES

| Variable | Definition and Measurement | Source |
|---|---|---|
| Structure: | | |
| (Note: the variable PREPORT, reflecting the reporting relationship of the planner is included as a contextual variable because it reflects the importance of planning to the CEO. The variable is also a reflection of planning structure) | | |
| FTE | Number of full time equivalents (FTEs) devoted to planning activities (actual #) | PQ8 |
| SPCOMBD | Strategic Planning Committee includes Board Members (1=yes, 0=no) | PQ15-16 |
| SPCOMMS | Strategic Planning Committee includes Medical Staff members (1,0) | PQ15-16 |
| SPCOMTOP | Strategic Planning Committee includes Top Management (1,0) | PQ15-16 |
| SPCOMFR | Number of Strategic Planning Committee meetings per year (actual #) | PQ17 |
| Functions: | | |
| SPDESIGN | Planner designs, facilitates and/or coordinates strategic planning process (1,0) | PQ9a |
| SPDATA | Planner supplies data for strategic planning process: demographics, SWOT analysis, environmental analysis, etc. (1,0) | PQ9a 37-41 43-44 |
| SPGOALS | Planner develops goals, objectives, management expectations, document (1,0) | PQ9a 37-41 43-44 |
| OPSFORE | Planner develops forecast, volume assumptions (1,0) | PQ9a 37-41 43-44 |
| OPSMONIT | Planner monitors operations: FTEs, utilization, patient origin, etc. (1,0) | PQ9a 37-41 43-44 |

**Table 3.5. (Continued) VARIABLES REFLECTING PLANNING STRUCTURES, FUNCTIONS AND PROCESSES**

| | | |
|---|---|---|
| **OPSDOC** | Planner develops physician profiles (1,0) | **PQ9a 37-41 43-44** |
| **OPSMKT** | Planner prepares market share analysis, program profiles by DRGs, patient satisfaction research (1,0) | **PQ9a 37-41 43-44** |
| **OPSPGMPL** | Planner involved with program planning planning and evaluation, staffs task forces (1,0) | **PQ9a 37-41 43-44** |
| **OPSCON** | Planner prepares Certificate of Need or similar applications, capital projects, facilities planning (1,0) | **PQ9a 37-41 43-44** |
| **OPSTECH** | Planner develops technology plans (1,0) | **PQ9a 37-41 43-44** |
| **BDMKT** | Planner conducts or manages market research for business development (1,0) | **PQ9a 37-41 43-44** |
| **BDMG** | Planner manages business development process, new idea generation process (1,0) | **PQ9a 37-41 43-44** |
| **BDFEAS** | Planner conducts feasibility studies, needs assessments (1,0) | **PQ9a 37-41 43-44** |
| **BDMS** | Planner develops physician joint ventures (1,0) | **PQ9a 37-41 43-44** |
| **LEG** | Planner involved in legislative activities, establishing public policy agenda | **PQ9a 37-41 43-44** |
| **SUMFUNC** | Total number of planning functions reported. Sum of values for SPDESIGN, SPDATA, SPGOALS, OPSFORE, OPSMONIT, OPSDOC, OPSMKT, OPSPGMPL, OPSCON, OPSTECH, BDMKT, BDMG, BDFEAS, BDMS, LEG (0-15) | **PQ9a 37-41 43-44** |

**Table 3.5. (Continued) VARIABLES REFLECTING PLANNING STRUCTURES, FUNCTIONS AND PROCESSES**

| | | |
|---|---|---|
| **SPDOC** | Strategic planning document produced (1,0) | **PQ18** |
| **SPDOCFR** | Frequency with which strategic planning document produced (1=yearly, 0=less than) | **PQ19** |
| Process: | | |
| **SPPROC1** | Strategic planning process involves interviews with key people to identify opportunities and threats, market research, perceptual research (1,0) | **PQ10-11** |
| **SPPROC2** | Strategic planning process involves environmental assessment, competitive analysis, scenario-based, opportunities and threats (1,0) | **PQ10-11** |
| **SPPROC3** | Strategic planning process involves internal assessment, portfolio analysis, strengths and weaknesses (1,0) | **PQ10-11** |
| **SPPROC4** | Strategic planning process involves formal retreats, subcommittees, working sessions (1,0) | **PQ10-11** |
| **SPPROC5** | Strategic planning process involves issue identification, critical issues, establish priorities (1,0) | **PQ10-11** |
| **SPPROC6** | Strategic planning process tied to budget cycle, develop operating plans, business plans spin off strategic plan (1,0) | **PQ10-11** |
| **SPPROC7** | No establish strategic planning process (1,0) | **PQ10-11** |
| **SUMSP** | Total number of strategic planning processes reported. Sum of values for SPPROC1 through SPPROC6 (0-6) | **PQ10-11** |

Strategic Change

This component includes perceptions by Chief Executive Officers and Planners regarding changes implemented between 1983 and 1988 that they considered "strategic". In addition to identifying the changes, the reasons for the change, the key players and the process followed were also elicited. Responses fell into 6 categories and served as variables for quantitative analysis. Measurement reflected whether or not a particular type of change took place. For example, if 5 new services were considered of major importance, the change would be noted as Change 4, "Distribution system development, new services, new markets". Planning involvement in these changes was established if either the planner was identified as one of the key players or the change was the result of the hospital's regular planning process. Strategic change variables are described in Table 3.6.

Performance

This component of the model included two main data sources: 1) a variety of generally accepted performance measures were constructed from the Medicare Cost Reports and the AHA Guides for fiscal years ending 1983 and 1988; and 2) CEO and planner perceptions of the most relevant performance measures and a subjective grading of attainment of goals between 1983 and 1988. Table 3.7 provides details regarding definition and and measurement of these variables.

TABLE 3.6

VARIABLES REFLECTING STRATEGIC CHANGE

| Variable | Definition and Measurement | Source |
|---|---|---|
| CCHANGE1 | CEO identification: | CQ24 |
| PCHANGE1 | Planner identification: Cost control, managing risk, downsize, efficiency (1,0) | PQ33 |
| CCHANGE2 | Merger/acquisition, corporate reorganization | CQ24 |
| PCHANGE2 | (1,0) | PQ33 |
| CCHANGE3 | Information system, financial system | CQ24 |
| PCHANGE3 | development (1,0) | PQ33 |
| CCHANGE4 | Distribution system development, new | CQ24 |
| PCHANGE4 | services, new markets (1,0) | PQ33 |
| CCHANGE5 | Bricks and mortar, facility development | CQ24 |
| PCHANGE5 | (1,0) | PQ33 |
| CCHANGE6 | Management orientation, change in corporate | CQ24 |
| PCHANGE6 | culture (1,0) | PQ33 |
| CHANSCR | Sum of changes reported (0-6) | CQ24 PQ33 |
| CCHG1 | CEO identification of planning involvement in CCHANGE1 (1,0) | CQ26-27 |
| PCHG1 | Planner identification of planning involvement in PCHANGE1 (1,0) | PQ35-36 |
| CCHG2-6 | Same definition as CCHG1 | CQ26-27 |
| PCHG2-6 | Same definition as PCHG1 | PQ35-36 |
| CHGRATIO | Ratio of changes involving planning to total changes reported | PQ35-36 CQ26-27 CQ24,PQ33 |
| CHGSCR | Sum of changes involving planning | PQ35-36 CQ26-27 |

TABLE 3.7

VARIABLES REFLECTING PERFORMANCE

| Variable | Definition and Measurement | Source |
|---|---|---|
| FINAN | CEOs perception best performance indicator: | CQ28 |
| PFINAN | Planner's perception: | PQ48 |
| | margin, fiscal strength, cost per admission, lowest prices in area, ability to form capital (1,0) | |
| PEOPLE | CEOs perception: | CQ28 |
| PPEOP | Planner's perception: | PQ48 |
| | employee satisfaction, relationships, physician satisfaction, management stability, morale (1,0) | |
| MKTSHR | CEOs perception: | CQ28 |
| PMKTSHR | Planner's perception: | PQ48 |
| | market share, admissions, census, medical staff numbers and breadth (1,0) | |
| IMAGE | CEOs perception: | CQ28 |
| PIMAGE | Planner's perception: | PQ48 |
| | patient satisfaction, programs of excellence, top of mind awareness, endowment (1,0) | |
| QUAL | CEOs perception: | CQ28 |
| PQUAL | Planner's perception: | PQ48 |
| | quality and comprehensiveness of programs, mortality index, patient outcome, regulatory compliance (1,0) | |
| PROD | CEOs perception: | CQ28 |
| PPROD | Planner's perception: | PQ48 |
| | FTEs per occupied bed, FTEs per admission, Length of stay, severity of illness (1,0) | |

**Table 3.7. (Continued)**
**VARIABLES REFLECTING PERFORMANCE**

| | | |
|---|---|---|
| **SVCINC** | Increase in number of services cited in AHA Guide in 1988 minus number cited in 1983 (Actual Number) | **AHA** |
| **OMCHG** | Operating Margin in 1988 minus operating margin in 1983. Operating margin defined as operating income/operating revenue (Actual Number) | **COST RPT** |
| **OM88** | Operating Margin in 1988 (Actual Number) | **COST RPT** |
| **ROACHG** | Return on Assets in 1988 minus return on assets in 1983. Return on assets defined as (operating income + interest)/total assets (Actual Number) | **COST RPT** |
| **ROA88** | Return on Assets in 1988 (Actual Number) | **COST RPT** |
| **ROECHG** | Return on Equity in 1988 minus return on equity in 1983. Return on equity defined as excess of revenue over expense/fund balance (Actual Number) | **COST RPT** |
| **ROE88** | Return on Equity in 1988 (Actual Number) | **COST RPT** |
| **CRCHG** | Current Ratio in 1988 minus current ratio in 1983. Current ration defined as current assets/current liabilities (Actual Number) | **COST RPT** |
| **CR88** | Current Ratio in 1988 (Actual Number) | **COST RPT** |
| **ATCHG** | Acid Test in 1988 minus acid test in 1983 (Actual Number) | **COST RPT** |
| **AT88** | Acid Test in 1988 (Actual Number) | **COST RPT** |

**Table 3.7. (Continued)**
**VARIABLES REFLECTING PERFORMANCE**

| | | |
|---|---|---|
| **DECHG** | Debt/Equity Ratio in 1988 minus debt/equity ratio in 1983. Debt/Equity ratio defined as total liabilities/fund balance (Actual Number) | **COST RPT** |
| **DE88** | Debt/Equity Ratio in 1983 (Actual Number) | **COST RPT** |
| **AFTECHG** | Admissions per FTE in 1988 minus admissions per FTE in 1983. Admissions per FTE defined as total admissions/total fte (Actual Number) | **AHA** |
| **AFTE88** | Admissions per FTE in 1988 (Actual Number) | **AHA** |
| **FTEOBCHG** | FTEs per occupied bed in 1988 minus FTEs per occupied bed in 1983. FTEs per occupied bed defined as Total FTEs/average daily census (Actual Number) | **AHA** |
| **FTEOB88** | FTEs per occupied bed in 1988. (Actual Number) | **AHA** |
| **MKTCHG** | Market share in 1988 minus market share in 1983. Market share defined as total admissions at the hospital/total admissions in the community (same city) (Actual Number) | **AHA** |
| **OCCCHG** | Occupancy rate in 1988 minus occupancy rate in 1983. Occupancy rate provided in AHA guide. (Actual Number) | **AHA** |

Descriptor Variables

A series of variables are included to describe the background of the CEO, the Planner, and the hospital. These are defined below in Table 3.8.

TABLE 3.8

DESCRIPTOR VARIABLES

| Variable | Definition and Measurement | Source |
|---|---|---|
| ID | Hospital identification number, reflects order of sample selection | CQ,PQ |
| CEOTITLE | CEOs title | CQ1 |
| CEOLONG | Number of years in position of CEO | CQ2 |
| COTHPOS | Number of other positions held by CEO in the sample hospital | CQ3 |
| COTHLONG | Aggregate number of years CEO spent in other positions at hospital | CQ3 |
| CHLTLONG | Number of years CEO has worked in health care | CQ4 |
| PTITLE | Planner's title | PQ1 |
| PLONG | Number of years in position as Planner | PQ2 |
| POTHPOS | Number of other positions held by Planner in the sample hospital | PQ3 |
| POTHLONG | Aggregate number of years Planner spent in other positions at hospital | PQ3 |
| SYSTEM | Participation in multi-hospital system (1=yes, 0=no) | AHA |
| BEDSIZE | Number of beds at sample hospital in 1988 | AHA |
| FORPROF | For profit, investor-owned (1,0) | AHA |
| NFP | Not for profit (1,0) | AHA |
| ACUITY | Proxy measure of acuity of care provided by hospitals in 1988. Calculated by assigning a value of 1 for each of the following services if they existed in 1988: cardiac intensive care; intensive care--mixed, other; open heart surgery; certified trauma center; burn care unit; emergency department; neonatal intensive care. Values were added to create acuity measure ranging from 1-7. | AHA |
| ACUTEC | Proxy measure of change in acuity between 1983 and 1988. Value range : 0-2 | AHA |

## 3.8 Data Analysis

Two complementary approaches to data analysis are followed. For the case study, a content analysis of responses to the interviews produced a narrative description as well as simple descriptive statistics. The purpose of the case study is to explore the dynamics of the competitive environment as they relate to strategic planning and strategic change in individual hospitals.

Because of the nature of the data collected, analysis of the telephone interview data and corresponding secondary data reflects a variety of methods including bivariate correlation analysis, chi-square analysis and discriminant function analysis. The use of multivariate methods, as recommended by Ramanujam and Venkatraman (1987), was limited by the relatively small number of hospitals in the sample.

## 3.9 Limitations

A variety of limitations to this study have been cited throughout this Chapter. Some of the limitations (and strengths) result from the use of open-ended questions. Chief among the limitations from the qualitative nature of the information gathered is the possibility that respondents may not have provided complete answers, or answers consistent with those of other respondents. Some respondents provided more detail, others choose to respond succinctly. In dealing with

descriptions of the hospital's strategic planning process, for example, is it to be inferred that the more detailed description implies a more elaborate process? Not necessarily, but there is no way of being certain.

Another limitation results from the cross-sectional design, i.e., interviewing people at one point in time (late 1989, early 1990) regarding processes and events that took place over time (1983-1988). These and related problems are discussed in greater detail in Section 3.5.2, Validity. Threats to internal, construct, and external validity do exist, and were controlled to the extent possible within the design constraints and within the resources available to conduct the research.

Other limitations of significance relate to data quality and missing data. In terms of data quality, it must be noted that the Medicare Cost Reports, used as the source for financial data, are not audited financial statements. Some were submitted with obvious errors (e.g., $100,000,000 in revenue for sale of guest meals), others were submitted with no entries. The limitation arises from not knowing to what extent errors exist.

In terms of missing data, the actual fielding of the surveys did not meet expectations. The intent was to achieve matched

CEO-Planner interviews in all those hospitals with planning positions. That was possible in 20 cases. The result was missing data. Simply put, the more missing data, the more tenuous the results.

The tactic employed to compensate for missing data was to consolidate variables for those questions posed to both CEOs and Planners. The decision to consolidate or not was based on the degree of agreement of responses in the 20 matched interviews. If CEO perceptions were available, they were used. If not available, Planner perceptions were used if the agreement in matched interviews was at least 50%.

### 3.10 Summary

This chapter has provided a detailed account of the manner in which the research was conceptualized and carried out. Multiple methods, data sources, and measures are employed to operationalize the model and address the hypotheses.

Justification to use an exploratory method is based on the lack of previous research dealing with strategic planning in health care, and the dramatic changes in health care since 1983 which were believed to be impacting the nature and extent of strategic planning in hospitals. Hand-in-hand with the exploratory approach, the lengthy open-ended interviews, are several limitations which need to be taken into consideration

when reviewing the results. While generalizability of the results may be questioned, and the validity of some new measures (e.g., acuity) may need to be further tested, the results will set the stage for future research.

Findings from this research are presented in the next three chapters. In Chapter 4, the results of the case study are presented. In addition to statistical techniques, descriptions and quotations from the interviews will be used to provide richness to the data. Chapter 5 presents the descriptive analysis of the telephone surveys. Chapter 6 summarizes the explanatory analysis of the telephone surveys, including hypothesis testing.

Overall, multiple methods for data collection (in-depth personal interviews, telephone interviews, collection of secondary data) and analysis have been stressed.

# CHAPTER 4

# CASE STUDY: PLANNING, STRATEGIC CHANGE AND PERFORMANCE IN ONE COMPETITIVE ENVIRONMENT

## 4.1 Introduction

This chapter presents the results and observations from face-to-face in-depth interviews and secondary data collected from hospitals in one community. The interviews were conducted by the investigator while on-site at the study hospitals. The case study was the first data collection effort for this research. It served as a test of the questionnaire and provided an opportunity to assess the hypotheses in greater depth than does the more survey-oriented approach described later.

The literature review summarized several studies entailing strategy-environment and planning-performance relationships. Most recently, Shortell et al. (1990) presented a model of strategic adaptation in their study of the development and performance of hospital systems. In this study and others, environment was characterized in terms of hostility, i.e., competition and regulation (Aldrich, 1979), and munificence, i.e., resources to purchase health care services and resources to provide care (Dess and Beard, 1984; Rasheed and Prescott, 1987).

Lacking in the literature is an analysis of planning, strategy, and performance in a single, dynamic environment. This case study addresses the salient dynamics of this gap in a single competitive environment. This includes the organizational culture, planning structure and functions, strategic changes, and performance of the 7 major hospitals in a single service area.

The organization of the case study is as follows: overview of the environment, profiles of the study hospitals, analysis of relative performance in the context of planning structures and functions and strategic changes, and initial validation of the relevance of hypotheses for use with the subsequent analysis of a random sample of hospitals in urban areas of Washington, Oregon, and California.

## 4.2 Overview of the Case Study Community Environment

The health care environment of the study community is quite competitive. Respondents characterized it as "intense", "clandestine", "bellwether", and "predatory". Evidence supports their perceptions[2]. A total of 4,557 beds serve a population of roughly 1.3 million people, or 23.3 beds per

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[2] Data supplied by THE SACHS GROUP, LTD., using their planning and marketing software, THE MARKET PLANNER. Population figures were provided by the National Planning Data Corporation. To calculate physicians per 1,000 population, they used the Medoc database which compiles counts of physicians based primarily on subscriptions to the Physician Desk Reference.

10,000 population in 1989. The seven study hospitals account for 85% of the admissions in the area (AHA Guide to Hospitals, 1989). With the exception of a 182 bed hospital associated with a large HMO, the hospitals have 200 or more beds. Previous studies (Zallocco, et al, 1990) have reported that hospitals of this size are more likely to have formal planning functions than smaller hospitals. For this reason, these 7 hospitals are the focus of the case study.

Occupancy rates for the acute care beds in these hospitals (i.e., excluding their long-term care beds) provide a clearer picture of excess capacity. For the seven study hospitals, average occupancy rates over the period ranged from 58.5% to 85.6%. Only the Health Maintenance Organization (HMO), which by design controls its capacity, exceeded 75% occupancy on a consistent basis. Between 1983 and 1988, the seven study hospitals reduced their licensed bed complement by 440 beds, the equivalent of closing one large metropolitan hospital. In 1988, after the bed reductions, four of the hospitals experienced average occupancy rates below 70% and two more ranged in the 70-79% levels. The HMO maintained occupancy in the 80-89% range. The community remained over-bedded.

The availability of selected high technology services, as reported in the 1989 American Hospital Association Guide to the Health Care Field suggest an oversupply of services.

Note:

- 5 of the 7 study hospitals offered Magnetic Resonance Imaging;
- All 7 had Cardiac Catheterization Labs and 5 offered Open Heart Surgery;
- 3 were designated as Certified Trauma Centers;
- 6 offered Megavoltage Radiation Therapy.

The supply of physicians is similarly "abundant", with 4.22 physicians per 1,000 population in the county in which the study hospitals are located. One of the respondents noted that physicians had started approaching hospitals to purchase their practices.

Respondents cited managed care as a major issue of concern in terms of competitive threat and their need to develop an effective managed care system. Managed care penetration was estimated at 40-65% of the total health care market. One large HMO had captured 25% of the area's population.

Other issues of concern regarding the environment were financing care for the indigent, scarce financial resources, labor shortages, and competition.

Data for the case study were collected from a variety of sources, including in depth interviews with CEOs and Planners in the study hospitals and, in some cases, from the System offices as well; Medicare Cost reports for the period 1983-1988; AHA Guides for 1984-1989 (covering 1983-1988);

Chamber of Commerce; the state health planning office; and the Association of Hospitals for the state.

## 4.3 Profiles of Study Hospitals

Each of the study hospitals is described below in terms of its internal environment or corporate culture, its planning structures and functions, the strategic changes over the period 1983-1988, and performance from 1983-1988.

The identities of the hospitals have been changed at the request of some of the respondents. Similarly, the study community is not being identified.

### 4.3.1 Hospital 1

Hospital 1 is part of a large HMO including 28 hospitals totaling 5933 beds in 4 states. The regional office for the study hospital is located in the study community. Hospital 1 is the smallest of the study hospitals with only 182 beds. Over the study period, the bed count varied 10%, but was essentially the same in 1988 as it was in 1983. For the years for which data were reported (all years except 1984 and 1988) occupancy ranged from 80.8% to 91.4% The hospital ranked first in occupancy in 1988 and on average for the period 1983-1988. FTEs per occupied bed ranged from a low of 3.1 in 1985 to 5.9 in 1987.

In 1988, Hospital 1 offered 29 of the 54 services inventoried annually by the American Hospital Association. Specific services not offered directly by the hospital were open heart surgery, hi-tech cancer therapies, magnetic resonance imaging, and burn care. When these services were required for members, the HMO contracted with other facilities. The costs associated with the contracting were not ascertained. During the study period, Hospital 1 increased the total number of services offered by 9, including: certified trauma center[3], diagnostic radioisotope facilities, health promotion services, psychiatric outpatient services, birthing rooms/labor-delivery-recovery rooms, reproductive health services, geriatric clinics, neonatal intensive care unit, CT scanner, and cardiac catheterization.

Seven services were used to calculate an acuity index in this research: cardiac intensive care, other intensive care, open heart surgery, certified trauma center, burn care, emergency department, and neonatal intensive care. Hospital 1 offered 4 of the 7 services.

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[3] Several services tracked in the 1989 AHA Guide (1988 data) were not included in the 1984 AHA Guide (1984 data). These are certified trauma center, magnetic resonance imaging, Alzheimer's diagnostic services, women's centers, birthing rooms/labor-delivery-recovery rooms, lithotripter, recreational therapy, comprehensive geriatric assessment, and geriatric clinics.

Internal Environment

The hospital administrator declined to be interviewed, but did direct me to a Regional Office Planner. The Planner had worked in the Regional Office for four of the six year study period. His responses reflected his knowledge of the System, not the hospital. Overall, he described the System culture as analytical, hierarchical, male dominated and in transition, with some uncertainty regarding the authority levels granted middle management. A sense of tradition and protection of that tradition prevailed.

The management philosophy was described as fairly formal, yet emphasizing decentralized decision-making. The impact of the corporate culture and management philosophy on the way in which strategic planning was performed was considered to be one of emphasis on establishing goals and objectives with formal accountability--protection of history and past success rather than focus on the future.

Planning Structure and Functions

Planning functions fell under three broad categories: program planning, facility planning and strategic planning. For the hospital, functional and space planning were cited as priorities since they were in the midst of major remodelling.

No formal strategic planning committee existed, although the same group of people repeatedly worked on planning projects. In terms of staff, there were 8.5 FTEs dedicated to planning activities for two hospitals and the network of satellite clinics.

The Nature of Strategic Change

The single major change reported related to the hospital was the facility upgrade to increase Labor and Delivery space in order to meet member needs.

Performance Measures

Relevant performance measures were considered to be enrollment in the HMO, member satisfaction, employee satisfaction, provider satisfaction, and financial performance. Table 4.1 summarizes selected aspects of Hospital 1's performance over the study period.

No information on Hospital 1's profitability was available. The Medicare Cost Report worksheets G-1, G-2, and G-3, required for calculation of the measures used, were not filed by the hospital. Their charge structure (an all-inclusive rate) exempted the HMO from filing these forms.

## TABLE 4.1

## HOSPITAL 1 PERFORMANCE SUMMARY

| PERFORMANCE TYPE | FYE 1983 | FYE 1984 | FYE 1985 | FYE 1986 | FYE 1987 | FYE 1988 | AVERAGE | CHANGE 1988-1983 | AVG CHG PER YEAR |
|---|---|---|---|---|---|---|---|---|---|
| PROFITABILITY | | | | | | | | | |
| Operating Margin | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Return on Assets | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Return on Equity | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| UTILIZATION | | | | | | | | | |
| Market Share Proxy | 11.40% | 11.50% | 11.90% | 12.60% | 12.60% | 12.30% | 12.05% | 0.90% | 0.18% |
| % Outpatient Revenue | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| PRODUCTIVITY | | | | | | | | | |
| Admissions/FTE | 12.87 | 13.80 | 19.62 | 13.03 | 12.02 | 13.80 | 14.19 | 0.93 | 0.19 |
| FTEs/Occupied Bed | 5.73 | 5.52 | 3.85 | 5.80 | 6.69 | 5.52 | 5.52 | -0.21 | -0.04 |

NA not available

Market share for the hospital based on relative utilization was not considered a relevant measure since avoidance of hospital care and use of lower cost primary care resources was preferred. Nevertheless, for comparative purposes, market share is reported. Over the study period, Hospital 1 ranked 5th, 6th or 7th in terms of market share. The difference between its highest reported market share and its lowest was only 1.2%. On average, the annual change in market share was +0.2%.

In terms of productivity, Hospital 1 outperformed all other study hospitals.

When asked to grade the hospital in terms of attainment of goals since 1983, the Planner replied, "B- or C+. We're doing some things right and we're really trying".

### 4.3.2 Hospital 2

Hospital 2 had two CEOs during the study period. The most recent had held the position for five years. During the period, the bed count dropped 25%, from 451 in 1983 to 339 in 1988. Occupancy ranged from a low of 61.5% in 1985 to 69.65 in 1988, ranking fourth among the study hospitals. FTEs per occupied bed ranged from a low of 4.9 in 1983 to 8.4 in 1988, a steady increase, with the exception of one year. At the time of the interviews with the CEO and Planner, the hospital was preparing to "downsize", i.e., to lay off employees.

In 1988, the hospital offered 36 of the 54 services tracked by the American Hospital Association. These included 6 of the 7 services used in the acuity index. Hospital 2 is a high-tech facility. During the study period, the hospital eliminated its cardiac intensive care unit and hospice services, but added six others. The services added included certified trauma center, health promotion services, birthing rooms/labor-delivery-recovery rooms, reproductive health services, recreational therapy, and geriatric assessment.

The hospital belonged to a 5 hospital, local system, i.e., all the system hospitals were located in the same State. Hospital 2 had developed the system prior to 1983 as a means of creating a feeder system for its tertiary services. Since its inception, the system had undergone two transformations, the most recent being the merger/acquisition of another of the study hospitals. For Hospital 2, the system growth and transformation created role reversals expressed as "the child is now our parent".

Internal Environment

The internal environment was tense. The organization had undergone considerable change, including a recent merger, and, at the time of the interviews, the CEO said he would be leaving the organization in two weeks. His future plans were uncertain. The Planner had occupied his position a relatively

short time (six weeks), and was uncertain regarding the pending change in leadership.

The organizational culture was described somewhat differently by the two respondents. The CEO characterized his organization by the phrases: pride in accomplishment, hard working, and patient sensitive. The Planner's view: panicked, anxious, fiefdoms, perhaps a reflection of his newness to the organization and the magnitude of the recent changes.

In terms of their perception of the organizational culture, there was agreement: confusion, tension, unresolved decision-making processes, unclear roles, newness.

The management philosophy for the hospital, as described by the CEO, entailed: keep your eyes on the ball, attention to detail and outperform the competition. The Planner's description was succinct: accountability.

Planning Structure and Functions

The hospital had adopted product line management which drove and was reflected in the manner in which strategic planning activities were carried out. Product line managers, plus administrative staff and paid clinical chiefs of service all participated in the planning process focussing on particular product lines and their inter-relationships. Board

participation was being re-evaluated in terms of appropriate roles. Line staff participated in the annual exercise of business plan development. The role of the system in relation to strategic planning was in transition. At the time of the interview, the role was considered supportive and consisted of data collection and analysis.

The Planner reported directly to the CEO. Outside consultants were used to facilitate retreats, conduct consumer preference research and evaluate process and structure.

Planning staff included 2.5 FTEs; however, with the product line management structure, roughly 13 employees and 4 physiciane are involved with planning activities.

Nature of Strategic Change

Both CEO and Planner reported similar changes which they considered "strategic", or of major importance, including:

- Investment of $30-40 million in Facility Renovations/Construction in response to old commitments
- Change in Corporate Culture: CAN DO Management which pays attention to the bottom line
- System Development
- Trauma Center Designation
- Aggressive pricing structure, development of specialty contracts

Performance Measures

Market share, financial performance, and improvement in the "malpractice situation" were cited as the best indicators of performance for the hospital. Table 4.2 summarizes selected performance measures for Hospital 2.

The hospital succeeded in achieving profitability throughout the period, even increasing its profitability after the introduction of Prospective Payment.

In terms of market share, this hospital ranked fifth throughout the study period, with virtually no change in market share.

Both measures of productivity indicated deterioration during the study period.

When asked to grade the facility in terms of attainment of goals since 1983, the CEO awarded an A, "for obvious reasons". The Planner awarded a B, stating: "Most of the things they said they were going to achieve, they did. However, they haven't done well in their relationships with the local community."

## TABLE 4.2

## HOSPITAL 2 PERFORMANCE SUMMARY

| PERFORMANCE TYPE | FYE 1983 | FYE 1984 | FYE 1985 | FYE 1986 | FYE 1987 | FYE 1988 | AVERAGE | CHANGE 1988-1983 | AVG CHG PER YEAR |
|---|---|---|---|---|---|---|---|---|---|
| PROFITABILITY | | | | | | | | | |
| Operating Margin | 5.73% | 3.33% | 8.92% | 7.29% | 7.80% | 3.11% | 6.03% | -2.62% | -0.52% |
| Return on Assets | 7.99% | 5.28% | 12.00% | 6.79% | 7.20% | 4.09% | 7.23% | -3.90% | -0.78% |
| Return on Equity | 17.47% | 10.26% | 22.95% | 19.61% | 17.82% | 11.25% | 16.56% | -6.22% | -1.24% |
| UTILIZATION | | | | | | | | | |
| Market Share Proxy | 13.30% | 13.40% | 13.40% | 13.20% | 13.00% | 13.80% | 13.35% | 0.50% | 0.10% |
| % Outpatient Revenue | 9.37% | 10.18% | 13.31% | 14.26% | 13.74% | 14.38% | 12.54% | 5.01% | 1.00% |
| PRODUCTIVITY | | | | | | | | | |
| Admissions/FTE | 10.43 | 11.00 | 8.94 | 8.44 | 9.04 | 7.14 | 9.17 | -3.29 | -0.66 |
| FTEs/Occupied Bed | 4.93 | 5.00 | 6.48 | 7.00 | 6.68 | 8.38 | 6.41 | 3.45 | 0.69 |

### 4.3.3 Hospital 3

Hospital 3 has 328 beds, down 38% from 1983. During the study period, the number of beds decreased each year. Occupancy during this period ranged from a low of 55.9% in 1985 to a high of 73.4% in 1983. There was one CEO throughout the study period. In fact, he had been CEO of the hospital for 27 years. At the time of the interviews, however, he had become CEO of the system which the hospital had joined that year. The system also includes Hospital 2.

FTEs per occupied bed ranged from a low of 5.3 in 1983 to a high of 9.6 in 1988, with increases each year. During the week of the interviews, the hospital announced that it would be laying off over 100 people immediately and had plans to lay off an additional 200 people in the future.

Hospital 3 offered 41 of the 54 services tracked by the American Hospital Association, including 4 of the services comprising the acuity index. Twelve services were added between 1983 and 1988, including magnetic resonance imaging, Alzheimer's diagnostic services, hospice, psychiatric liaison services, women's centr, birthing room/labor-delivery-recovery rooms, reproductive health services, genetic counseling, home care, recreational therapy, comprehensive geriatric assessment services, and geriatric clinics.

Internal Environment

The new CEO of the hospital had a 13 year history with the institution, including 5 years as its Chief Operating Officer (COO). He readily shared a packet of information about the hospital, including its 1989 Objectives, Philosophy, Statement of Beliefs, Statement of Purpose, and Organizational Chart. The former CEO, i.e., the CEO during the study period, believed that he hired good people, then gave them the chance to act independently to achieve results. Consensus was used for issue identification, but the CEO had to make the key decisions.

Both agreed that the management philosophy revolved around their attempts to decentralize decision-making and to "get things moving in a programmatic way", a reference to their introduction of product line management. Their Statement of Purpose included the following orientation to their management philosophy:

> While goal driven, the management of Hospital 3 is process oriented. The organization is recognized as a complex system of interrelated activities focussed on the attainment of consensual goals developed by the Executive Board, medical staff leadership and Hospital and Corporate management. This recognition necessitates commitment to:
>
> o Organizational, divisional, and departmental goal setting that is complementary and mutually supportive.
>
> o Cross-functional teamwork which assures, whenever necessary, that problem resolution will occur through multi-departmental teams.

> o An acute awareness by management at all levels of the organization that interface between functions must be managed as well as the discrete functions themselves....

The corporate culture was reflected in strong collegial relationships with the Board, Medical Staff and Administration. "We stand for doing it right". Their "cultural context" was stated explicitly in their Statement of Purpose and included the following themes: "humanness", "high touch", "quality", "clinical excellence", "care", "compassion", and "innovation".

The corporate culture of the system was cited as "in transition", "in conflict", "a melding of different cultures". These observations were shared by the system staff as well.

Planning Structure and Functions

Like its sister hospital, Hospital 3 followed a product line management structure. Planning staff support program managers in the areas of strategic planning, program planning, market planning and facility planning.

The Nature of Strategic Change

The current and former CEOs identified the same changes or major decisions made between 1983 and 1988 that they considered strategic: These involved:

> o Changing the organizational structure from a functional orientation to a program orientation (product line management).

- o Corporate restructuring and diversification based on the assumption that the hospital business was a dying business (The current CEO stated that this assumption was not true).
- o Change in corporate culture resulting from entrepreneurial efforts and the types of people hired in the process.
- o Downsizing, retrenching. We couldn't afford to do everything.

Performance

Market share and financial performance were considered the best performance indicators. Performance measures for Hospital 3 are summarized in Table 4.3.

The hospital was able to maintain a positive operating margin for all years except FYE 1988. Poor performance in 1988 was cited by respondents at other hospitals as the reason for Hospital 3's merger/acquisition in 1989.

Hospital 3 began the study period as the market leader and steadily declined to 4th place by 1988, with an overall market share loss of 4.2%, the greatest loss of all study hospitals. On average, this hospital lost .8% market share each year. The hospital experienced a 29% drop in admissions over the period.

## TABLE 4.3

## HOSPITAL 3 PERFORMANCE SUMMARY

| PERFORMANCE TYPE | FYE 1983 | FYE 1984 | FYE 1985 | FYE 1986 | FYE 1987 | FYE 1988 | AVERAGE | CHANGE 1988-1983 | AVG CHG PER YEAR |
|---|---|---|---|---|---|---|---|---|---|
| PROFITABILITY | | | | | | | | | |
| Operating Margin | 1.50% | 4.54% | 8.25% | 3.61% | 4.42% | -0.66% | 3.61% | -2.16% | -0.43% |
| Return on Assets | 2.63% | 4.42% | 7.34% | 4.03% | 4.26% | 0.01% | 3.78% | -2.62% | -0.52% |
| Return on Equity | 13.20% | 12.79% | 21.06% | 11.27% | 14.12% | 0.37% | 12.14% | -12.83% | -2.57% |
| UTILIZATION | | | | | | | | | |
| Market Share Proxy | 18.40% | 18.00% | 16.50% | 16.00% | 15.40% | 14.20% | 16.42% | -4.20% | -0.84% |
| % Outpatient Revenue | 15.30% | 16.85% | 20.42% | 21.63% | 25.03% | 24.92% | 20.69% | 9.62% | 1.92% |
| PRODUCTIVITY | | | | | | | | | |
| Admissions/FTE | 9.87 | 10.79 | 8.78 | 8.39 | 7.54 | 7.42 | 8.80 | -2.45 | -0.49 |
| FTEs/Occupied Bed | 5.30 | 6.08 | 7.69 | 7.81 | 9.21 | 9.58 | 7.61 | 4.28 | 0.86 |

In terms of productivity, performance deteriorated. The increase in FTEs per occupied bed from 5.30 to 9.58, followed by layoffs, suggests that productivity was a major problem for this hospital.

The CEO gave the institution varying grades for its performance during the study period, ranging from A for its development of managed care and outpatient facilities to an F for misreading the market related to long term care. Keeping in touch with the medical staff was cited as an area where they could have done better.

#### 4.3.4 Hospital 4

Hospital 4 is an academic medical center. Unlike most of the other major hospitals in the community, Hospital 4 was not part of a multi-hospital system. Over the study period there were 2 different CEOs.

The bed count decreased by 10% between 1983 and 1988, from 365 to 328. Occupancy ranged from a low of 65.8% in 1985 to a high of 77.2% in 1988. FTEs per occupied bed can be calculated only for 1986 (9.0) and 1988 (10.0), the only years in which these data were reported to American Hospital Association.

In 1988, Hospital 4 offered 43 services, including 6 of the 7 services comprising the acuity index. This high-tech, high acuity image is consistent with that of most academic medical centers. Over the study period, the hospital added six new services and eliminated two. New services included magnetic resonance imaging, Alzheimer diagnostic services, women's center, birthing rooms/labor-delivery-recovery rooms, reproductive health services and recreational therapy. Home health services and speech pathology were eliminated.

Internal Environment

The organizational culture was described by four respondents, including the former CEO (1985-1988), the current CEO who had been the COO (1985-1988), the CFO, and the Planner. All agreed that the culture began to change in 1985 with the change in leadership and that the change was from an autocratic, paternalistic orientation to participation and decentralized decision-making, or an attempt to achieve that.

The prevailing management philosophy placed emphasis on decision-making at the appropriate level, with the recognition that people will make mistakes. The goal is a high degree of involvement, accountability and higher levels of authority. A major challenge was seen as getting beyond the territoriality of departments and supporting employees in seeing the hospital as a whole.

The CEOs (former and current) both noted a sense of instability in the hospital, characterized by many management changes, interim positions, and considerable recruitment. On the positive side, they considered that they were building on the strength of an academic, public service mission. On the negative, they noted that long-term employees had a poor image of the institution--an image built around bureaucracy. They stated they were trying to achieve a change in orientation from an academic enterprise to a patient care enterprise.

All respondents noted that the organizational culture slowed change. There was rigidity in the organization as well as uncertainty regarding management changes. In addition, respondents considered being part of an academic system instead of a health care system created significant difficulties because of the vastly different competing priorities.

Planning Structure and Functions

Planning was a new function for Hospital 4. There was no marketing function. The Planner, while in the position for two years, had over 12 years experience in the hospital. He reported directly to the CEO. Roughly, .75 FTEs were devoted to planning functions, which included market research, strategic planning, forecasting, program planning, and goal setting activities. The Hospital developed its first

strategic plan over the last two years, using the assistance of an outside consultant. Analysis was carried out by staff in Fiscal Services.

The hospital had not developed a product line management structure. Respondents believed that their academic mission made it impossible to focus on "centers of excellence".

The contribution of strategic planning was considered to be:

- Communication mechanism among staff, medical staff, and managers
- Focus on what the issues are and where the institution is going
- Clarifying the hospital's role in the community
- Minimize people being "off track"

A sub-committee of the Board's Executive Committee served as the formal Hospital Planning and Finance Committee. This committee consisted of the CEO, Chief Financial Officer (CFO), Planner and Chairman of the Medical School Board. The committee met monthly, serving as the forum for capital budgeting as well as planning.

Environmental assessments were not performed, at least not on a formal basis. There was the expectation that managers within the hospital knew their markets. Technology assessments were performed at the clinical level and did not

involve planning input. Internal assessments were not performed.

Outside consultants prepared all market research, Certificate of Need applications and all market planning.

The Nature of Strategic Change

Major changes reported by the respondents included:

- Significant decrease in length of stay achieved through educating managers and physicians regarding the impact of DRGs
- Change in corporate culture to become more business-like
- Upgraded the facility--Bricks and Mortar--to be more competitive and stay up-to-date
- Information System Development to support the business orientation

Performance Measures

Table 4.4 summarizes performance measures for this hospital. Respondents considered profitability, occupancy, regional referrals, capital improvements, and its clinical programs (e.g., heart transplants) as the relevant performance measures. They considered themselves to be striving in all of these areas.

Clearly, Hospital 4 is not profitable.

## TABLE 4.4

## HOSPITAL 4 PERFORMANCE SUMMARY

| PERFORMANCE TYPE | FYE 1983 | FYE 1984 | FYE 1985 | FYE 1986 | FYE 1987 | FYE 1988 | AVERAGE | CHANGE 1988-1983 | AVG CHG PER YEAR |
|---|---|---|---|---|---|---|---|---|---|
| PROFITABILITY | | | | | | | | | |
| Operating Margin | -17.82% | NA | -15.01% | -14.27% | -21.79% | -16.43% | -14.22% | 1.39% | 0.28% |
| Return on Assets | -33.30% | NA | -26.71% | -17.62% | -33.12% | -19.75% | -21.75% | 13.55% | 2.71% |
| Return on Equity | 4.30% | NA | -40.65% | -37.29% | 1.55% | -38.75% | -18.47% | -43.05% | -8.61% |
| UTILIZATION | | | | | | | | | |
| Market Share Proxy | 13.80% | 14.00% | 13.90% | 14.10% | 15.50% | 15.90% | 14.53% | 2.10% | 0.42% |
| % Outpatient Revenue | 16.66% | NA | 19.15% | 21.50% | 23.70% | 26.09% | 17.85% | 9.43% | 1.89% |
| PRODUCTIVITY | | | | | | | | | |
| Admissions/FTE | NA | NA | NA | 6.91 | NA | 6.53 | NA | NA | NA |
| FTEs/Occupied Bed | NA | NA | NA | 9.02 | NA | 9.96 | NA | NA | NA |

NA not available

Hospital 4 ranked fourth in terms of market share for the first four years of the study period. In FYE 1987, with a market share increase of 1.4% over the previous year, Hospital 4 achieved the number 2 ranking. In FYE 1988, it increased its share another .4%, but dropped to third in its ranking. Over the six year study period, the spread between its high and low market share ratings was 2.1. The average market share increase per year was .4%. Productivity measures were not available.

When asked to grade the facility on goal attainment since 1983, the Planner awarded a B. He stated: "We never used goals, but I feel good about what we've accomplished."

### 4.3.5 Hospital 5

Hospital 5 had one CEO throughout the study period. The number of beds remained constant throughout the period, with a total of 302. Census ranged from a low of 48.3% in 1986 to a high of 72.5% in 1983. FTEs per occupied bed increased yearly from 4.4 in 1983 to 8.2 in 1988.

Hospital 5 offers a broad array of services, 44 of the 54 services tracked by the American Hospital Association. The hospital's acuity rating is 3, i.e., it offers 3 of the 7 services comprising the acuity index. Between 1983 and 1988, Hospital 5 added the following ten services: x-ray radiation,

megavoltage radiation therapy, magnetic resonance imaging, Alzheimer's diagnostic services, hospice, rehabilitation inpatient unit, birthing rooms/labor-delivery-recovery rooms, home care, alcoholism/chemical dependency outpatient services, and cardiac catheterization. No services were eliminated.

Hospital 5 belongs to a regional health system encompassing 17 hospitals, totaling 2,507 beds across 5 states. The system's headquarters are in another state.

Internal Environment

The CEO declined to be interviewed, or rather, the executive secretary stated that "he doesn't have time for interviews". Contact with the Marketing and Planning Department was achieved through the hospital's telephone operator, not through the direction from the administrative suite.

The Director of Marketing and Planning, the only respondent for Hospital 5, envisions himself as a marketing professional, not a planner. In fact, the hospital's planner had been laid off. The Director of Marketing and Planning does participate in strategic planning activities.

Reluctance to make significant changes or spend capital reserves was cited as an example of the impact of the organizational culture on strategic planning.

Planning Structure and Functions

The Director of Marketing and Planning reports to the Senior Vice President for Operations, who reports to the Chief Executive Officer. Selected Board members participate with executive management and selected medical staff on the Strategic Planning Committee.

One FTE was devoted to planning/marketing activities. The Strategic Planning Committee included 3 Board Members, 3 Executive Staff and 5-7 Medical Staff, i.e., from 11-13 people. This Committee meets quarterly.

The stated contribution of the planning function to the hospital was the provision of market analyses (trends) and coordination of the strategic planning process (i.e., staff support for the Strategic Planning Committee). The process itself was not described. While the principal planning function was noted to be trend analysis, the marketing function (performed by the same person) was defined as new business development, market research and promotion. For purposes of comparison in Section 4.4, all of these functions are considered planning functions.

The Nature of Strategic Change

Three changes made since 1983 were considered "strategic":

- The hiring of a Director of Managed Care to negotiate managed care contracts.

- Purchasing and managing physician practices.
- Reducing advertising and hiring sales force.

None of these changes was reported to have been a consequence of the strategic planning process or to have involved planning staff. In fact, the purchasing of physician practices was cited as opportunistic--the physicians had approached the Hospital.

Performance Measures

Financial success and the maintenance of market share in a System environment were identified as relevant performance measures. Table 4.5 summarizes performance measures for this hospital.

Only in 1983 did Hospital 5 achieve a positive operating margin. All measures of profitability deteriorated over the period.

Hospital 5 ranked either 6th or 7th in terms of market share throughout the study period, and dropping 2.2% between 1983 and 1988. The decline in market share was steady, averaging -0.4% per year. Similarly, productivity declined steadily.

The Hospital was graded C+, with the explanation, "things change so fast that goals are forgotten, not tracked".

## TABLE 4.5

## HOSPITAL 5 PERFORMANCE SUMMARY

| PERFORMANCE TYPE | FYE 1983 | FYE 1984 | FYE 1985 | FYE 1986 | FYE 1987 | FYE 1988 | AVERAGE | CHANGE 1988-1983 | AVG CHG PER YEAR |
|---|---|---|---|---|---|---|---|---|---|
| PROFITABILITY | | | | | | | | | |
| Operating Margin | 3.99% | -1.04% | -3.35% | -6.02% | -8.22% | -8.67% | -3.89% | -12.66% | -2.53% |
| Return on Assets | 4.86% | 1.90% | 0.81% | -0.83% | -2.90% | -3.34% | 0.08% | -8.20% | -1.64% |
| Return on Equity | 19.78% | 14.27% | 10.26% | 11.85% | 11.50% | 12.19% | 13.31% | -7.59% | -1.52% |
| UTILIZATION | | | | | | | | | |
| Market Share Proxy | 12.40% | 12.30% | 12.30% | 11.40% | 10.90% | 10.10% | 11.57% | -2.30% | -0.46% |
| % Outpatient Revenue | 14.34% | 15.37% | 18.19% | 21.52% | 26.79% | 30.18% | 21.07% | 15.84% | 3.17% |
| PRODUCTIVITY | | | | | | | | | |
| Admissions/FTE | 14.92 | 14.57 | 12.50 | 10.89 | 10.15 | 9.35 | 12.06 | -5.57 | -1.11 |
| FTEs/Occupied Bed | 4.41 | 4.70 | 6.03 | 7.23 | 7.35 | 8.21 | 6.32 | 3.80 | 0.76 |

### 4.3.6 Hospital 6

Hospital 6 is part of the same Catholic System as Hospital 7, a fifteen hospital system encompassing 3622 beds and spanning 4 states in the West. It has a long history in the community. During the study period, there was 1 CEO who, by the time the interviews were conducted, had been promoted to a "Corporate" position within the System. He shared his insights into the corporate culture, planning orientation, and strategic changes at Hospital 6.

During the study period, the facility decreased its bed count from 483 to 397, an 18% reduction. The occupancy rate ranged from a low of 49.9% in 1985, after which the bed supply was decreased, to a high of 73.3% in 1988, after a second reduction in beds. FTEs per occupied bed ranged from 4.6 in 1983 to 5.4 in 1988, i.e., virtually no change.

Hospital 6 offers 40 of the 54 services inventoried by the American Hospital Association, including four of the seven high acuity services. Selected services <u>not</u> provided by Hospital 6 include: trauma center, organ transplantation, burn care, neonatal intensive care, and pediatric inpatient care.

Clearly, Hospital 6 offers a broad array of services and it has chosen not to offer some very expensive, often not profitable services. During the study period, eight services were added and one eliminated. Those added include magnetic resonance imaging, skilled nursing/long-term care, psychiatric partial hospitalization, women's center, birthing room/labor-delivery-recovery room, lithotripsy, comprehensive geriatric assessment service and alcoholism/chemical dependency inpatient unit. Reproductive health services were eliminated.

Hospital 6 monitors operations closely and makes changes in response to the monitoring.

Internal Environment

The organizational culture was described by three respondents including the former CEO, the Planner, and a Marketing Staff member as caring, traditional, top down, family, supportive, high quality, conservative, and somewhat insulated from the market. The culture at the System level was believed to be dominated by Catholic values, i.e., concern for the poor and elderly and financial soundness.

One respondent noted: "Risk taking isn't our thing. We hire people who fit in with the culture. There's tight control from the top. People get frustrated by their lack of control, but they still produce high quality care."

Planning Structure and Functions

Hospital 6 follows a program management structure similar to that of Hospital 7 (product line management), and their planning structure and functions reflect this organization. The planning and marketing functions were integrated under an Assistant Administrator for Planning and Marketing who reports directly to the CEO. There are 2.5 FTEs devoted to staff planning functions which include leading the strategic planning effort every other year, integrating budget and planning processes, developing public policy agenda, assisting program managers in program development (business plans), and some market research.

The Planning and Policy Committee at the Board level has a subcommittee to address strategic planning. This subcommittee has approximately equal representation by physicians, community board members, and administrators, and meets at least once a month during the development of a strategic plan. Otherwise, they meet as needed.

Overall, Hospital 6 places heavy emphasis on strategic planning and planning in support of operations. The culture supports this orientation.

Nature of Strategic Change

Major changes reported by the three respondents included:

- Introduction of Product Line Management
- Introduction of Strategic Planning Process
- Information System Development
- Change in Relationship with Medical Staff, Focus on Utilization Review
- Distribution System Development/Strengthen Primary Care Base
- Building Program to Create Pleasing Physical Environment
- Initiation of OB Services
- Managed Care Participation/Distribution System
- Initiation of Long Term Care Beds/SNF and Home Care

Performance Measures

Table 4.6 summarizes performance for this hospital.

The respondents considered market share and financial performance good measures of performance. In addition, community perception, the number of physicians wanting to affiliate with the hospital, and increasing allegiance of physicians were considered good measures, although not available for this research. New programs and services were not considered good measures of performance.

In terms of profitability, the hospital achieved favorable operating margins, returns on assets and returns on equity throughout the period, even though the degree of profitability for all measures decreased significantly over the period.

For market share, Hospital 6 began the study period in third place and held this position until FYE 1987 when it moved into and stayed in second place, following Hospital 7, its sister hospital. The spread between its highest and lowest market share over the six year period was only 1.5 points--a very stable performance. On average, Hospital 6 gained .2% market share per year.

Productivity for Hospital 6 remained fairly stable throughout the period.

When asked to grade the hospital in terms of attainment of goals since 1983, two of the three respondents awarded the hospital an A, the third declined to grade the hospital because she had not worked there long enough to pass judgement. Comments in relation to the high marks included: "It's a real turn-around from ten years ago;" and, "We've been consistent and thorough in following through on our strategic plan."

## TABLE 4.6

## HOSPITAL 6 PERFORMANCE SUMMARY

| PERFORMANCE TYPE | FYE 1983 | FYE 1984 | FYE 1985 | FYE 1986 | FYE 1987 | FYE 1988 | AVERAGE | CHANGE 1988-1983 | AVG CHG PER YEAR |
|---|---|---|---|---|---|---|---|---|---|
| PROFITABILITY | | | | | | | | | |
| Operating Margin | 12.78% | 13.96% | 7.50% | 5.25% | 4.00% | 4.87% | 8.06% | -7.91% | -1.58% |
| Return on Assets | 16.34% | 16.14% | 7.92% | 5.63% | 4.33% | 5.47% | 9.31% | -10.87% | -2.17% |
| Return on Equity | 23.00% | 23.06% | 13.79% | 10.95% | 8.60% | 10.82% | 15.04% | -12.18% | -2.44% |
| UTILIZATION | | | | | | | | | |
| Market Share Proxy | 15.00% | 14.50% | 14.50% | 14.60% | 15.50% | 16.00% | 15.02% | 1.00% | 0.20% |
| % Outpatient Revenue | 14.38% | 16.90% | 18.78% | 19.09% | 19.38% | 21.41% | 18.32% | 7.03% | 1.41% |
| PRODUCTIVITY | | | | | | | | | |
| Admissions/FTE | 11.28 | 11.34 | 11.17 | 10.65 | 10.38 | 10.12 | 10.82 | -1.16 | -0.23 |
| FTEs/Occupied Bed | 4.63 | 5.15 | 5.45 | 5.22 | 5.40 | 5.56 | 5.24 | 0.93 | 0.19 |

### 4.3.7 Hospital 7

Hospital 7 has a 114 year history of serving the community. In the mid-1960s, the hospital relocated from the inner city to a more residential area, more affluent area at the edge of the service area. The hospital has always been part of a 15 hospital Catholic system spanning 4 states in the West.

During the study period, 1983-1988, there were two CEOs. The current CEO has held the position 3 years, and worked for the hospital for 14 years.

The bed count remained constant over the study period, at 451, and the occupancy rate ranged from a low of 59.9% in 1987 to a high of 75.8% in 1983. The number of full time equivalents remained fairly constant, ranging from a low of 4.8 FTEs per occupied bed in 1983 to a high of 6.2 in 1988.

Hospital 7 offered 41 of the services inventoried by the American Hospital Association, including 4 high acuity services. Like its sister hospital, it had chosen not to provide high expense, low impact services such as burn care, organ transplantation and inpatient pediatrics. During the study period, five new services were added including magnetic resonance imaging, hospice, psychiatric outpatient services, birthing rooms/labor-delivery-recovery rooms, and recreational therapy. No services were eliminated.

Internal Environment

The CEO had previously been the Planner for the organization. He eagerly shared his description of the organization's planning process including a copy of their 5 year development plan, part of their 20 year strategic plan. In fact, everybody in the organization gets a copy. The document, produced annually and reflecting a 5 year horizon, was professionally printed and bound.

The CEO described his style as one of high expectations. He has succeeded in defining measurable performance standards throughout the hospital which he monitors on a quarterly basis. He showed me his monitoring system which he keeps in a binder on the credenza behind his desk, i.e., at hand. He sees his role as one of participation and evaluation--his primary role is to make Hospital 7 the "best there is". He sets team performance goals. An example of his quality standards is that there be 100% JCAHO (Joint Commission on the Accreditation of Healthcare Organizations) compliance with no contingencies, at all times, for all areas.

His management philosophy is that the hospital has to be driven by the mission and that there's a fine line between the business and the mission. He saw the hospital's culture as mission-driven, with an emphasis on a small-town closeness in which first names are used irrespective of position.

The Planner's view of the internal environment was consistent with that of the CEO. The CEO was seen as participatory, open, a "coach who sets the vision and doesn't tinker". The organization's culture was seen as teamwork-oriented and mission-driven. In terms of management philosophy, the Planner sees there's an orientation towards setting the standards, then giving people the freedom to get them accomplished.

As for the impact of the organizational culture on strategic planning, the Planner states: "There's a tremendous impact. The CEO is oriented towards planning...if you want to be successful, you need that orientation too."

The perception by both CEO and Planner regarding the organizational culture of the System to which they belong: it's the same--mission driven, participatory. The System's management philosophy: monitor performance often.

Planning Structure and Functions

Formal planning was reported to be highly valued and an extensive planning process was followed. The hospital had adopted a program management structure (product line management) which involved medical staff, department heads, Board members, the head of the Foundation and top management. It was described as a "bottoms up" process for 10 program

areas. The rationale for the "bottoms up" approach is that it is necessary to stay close to physicians and patients.

The Planning Policy Committee of the Board includes roughly 20 people and provided oversight to all planning activities. Membership included 3 Board members, the CEO, COO, CFO, Foundation Director, the 10 Program Coordinators, Physician Leaders, and 1 System Representative.

The Planner oversaw the integrated functions of planning, marketing, and public relations, and reports directly to the CEO. There are 2.0 FTEs devoted to staff planning activities. As stated earlier, 20 people were involved in the formal planning process through the Planning Policy Committee, which meets 9 times per year on a well-established schedule.

The Planning Department carries out a variety of functions including preparing environmental assessments, development of goals and objectives, strategic planning, program planning, market research, development of assumptions for utilization forecasting, patient origin studies, preparation of Certificate of Need applications, and integration with marketing and public relations. The planning process provides a formal mechanism for linking the planning and budgeting processes. The CEO sees that the planning process "identifies which opportunities are good for us".

The Nature of Strategic Change

The CEO and Planner identified the same changes or major decisions made since 1983 which each considered strategic. These involved:

- Introduction of Product Line Management
- Information System Development
- Distribution System Development (building Medical Office Buildings, Satellites)
- Sponsorship of an HMO/PPO

All of these "strategic" changes were considered the result of the annual planning process.

Performance

Table 4.7 presents performance measures for this hospital. While profitability decreased steadily over the study period, Hospital 7 continued to be profitable, as reflected in its operating margin, return on assets, and return on equity.

In terms of market share, Hospital 7 began the study period in second place, and, by 1985, gained and kept the market leader position. On average, the hospital gained .4% market share each year. The spread between its highest and lowest market share figures for the period was 2.3%.

Close monitoring of operations is reflected in its productivity measures. Both admissions per FTE and FTEs per occupied bed remained stable throughout the study period.

## TABLE 4.7

## HOSPITAL 7 PERFORMANCE SUMMARY

| PERFORMANCE TYPE | FYE 1983 | FYE 1984 | FYE 1985 | FYE 1986 | FYE 1987 | FYE 1988 | AVERAGE | CHANGE 1988-1983 | AVG CHG PER YEAR |
|---|---|---|---|---|---|---|---|---|---|
| PROFITABILITY | | | | | | | | | |
| Operating Margin | 9.46% | 9.90% | 9.90% | 7.95% | 5.46% | 3.95% | 7.77% | -5.51% | -1.10% |
| Return on Assets | 10.24% | 10.73% | 8.78% | 7.17% | 4.80% | 3.68% | 7.57% | -6.56% | -1.31% |
| Return on Equity | 14.82% | 20.05% | 12.42% | 10.02% | 7.01% | 9.57% | 12.32% | -5.25% | -1.05% |
| UTILIZATION | | | | | | | | | |
| Market Share Proxy | 15.70% | 16.40% | 17.50% | 18.00% | 17.00% | 17.70% | 17.05% | 2.00% | 0.40% |
| % Outpatient Revenue | 13.06% | 13.49% | 14.05% | 15.11% | 17.21% | 18.76% | 15.28% | 5.70% | 1.14% |
| PRODUCTIVITY | | | | | | | | | |
| Admissions/FTE | 10.61 | 11.18 | 11.09 | 10.72 | 11.50 | 10.81 | 10.99 | 0.20 | 0.04 |
| FTEs/Occupied Bed | 4.79 | 5.47 | 5.86 | 6.03 | 5.65 | 6.20 | 5.67 | 1.41 | 0.28 |

When asked to grade his facility in terms of attainment of goals since 1983, the CEO awarded a B+, stating, "We can always do better. We'll never be an A." The Planner awarded an A, based on objective indicators.

## 4.4 Comparisons and Conclusions

As presented in the profiles, it is clear that the hospitals varied considerably in terms of organizational culture, orientation towards strategic planning, types of changes considered strategic, and performance during the study period.

In this section, comparisons of planning functions, strategic changes, and performance are summarized. Table 4.8, the planning functions reported by respondents, further highlight differences among the hospitals. Both Hospitals 6 and 7, part of the same multi-hospital system, reported more than twice the number of functions as reported by planners in the other hospitals. Further, they emphasized support of operations over strategic planning and business development. These hospitals place high importance on planning.

Hospitals 1, 2 and 3, reporting only 4 or 5 functions, form an intermediate group. With staffing of 2.5 to 8.5 FTEs for planning functions, they appear to have adequate manpower to carry out the functions.

## TABLE 4.8

## COMPARISON OF PLANNING FUNCTIONS REPORTED

| FUNCTIONS/ACTIVITIES | HOSPITAL NUMBER 1 | 2 | 3 | 4 | 5 | 6 | 7 | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|
| STRATEGIC PLANNING: | | | | | | | | | |
| Designs/facilitates/ coordinates process | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 7 | 15% |
| Supplies data for process | 1 | 1 | 1 | | 1 | 1 | 1 | 6 | 13% |
| Develops goals, objectives and document | | | 1 | 1 | | 1 | 1 | 4 | 8% |
| OPERATIONS SUPPORT: | | | | | | | | | |
| Develops forecasts | | | | 1 | | 1 | 1 | 3 | 6% |
| Monitors operations | | | | | | 1 | 1 | 2 | 4% |
| Develops physician profiles | | | | | | 1 | 1 | 2 | 4% |
| Prepares market share analyses, program profiles | | | 1 | | | 1 | 1 | 3 | 6% |
| Program planning and evaluation | 1 | 1 | | 1 | | 1 | 1 | 5 | 10% |
| Capital projects, facility planning Certificate of Need applications | 1 | | | | | 1 | 1 | 3 | 6% |
| Develops technology plans | | | | | | 1 | 1 | 2 | 4% |
| BUSINESS DEVELOPMENT: | | | | | | | | | |
| Conducts/manages market research | | 1 | | 1 | 1 | 1 | 1 | 5 | 10% |
| Manages business development | | 1 | 1 | | 1 | 1 | 1 | 5 | 10% |
| PUBLIC POLICY | | | | | | | | | |
| Legislative activities | | | | | | 1 | | 1 | 2% |
| NUMBER OF FUNCTIONS CITED | 4 | 5 | 5 | 5 | 4 | 13 | 12 | 48 | 100% |
| Strategic Planning Orientation | 50% | 40% | 60% | 40% | 50% | 23% | 25% | 35% | |
| Operations Support Orientation | 50% | 20% | 20% | 40% | 0% | 54% | 58% | 42% | |
| Business Development Orientation | 0% | 40% | 20% | 20% | 50% | 15% | 17% | 21% | |
| Public Policy Orientation | 0% | 0% | 0% | 0% | 0% | 8% | 0% | 2% | |
| Number of FTEs Devoted to Planning | 8.50 | 2.50 | 2.50 | 0.75 | 1.00 | 2.50 | 2.50 | | |

Hospital 5, while reporting 4 functions, places less emphasis on planning, as reflected in the manpower allocated to carry out the functions. Hospital 4, with less than 1 FTE devoted to planning activities, is just developing its planning system.

Table 4.9 summarizes the types and frequency of strategic changes reported, i.e., the changes which respondents considered of major importance between 1983 and 1988. In addition, the degree of planning involvement is reported.

Again, Hospitals 6 and 7 stand out. In this case, they reported more changes than any of the other hospitals, particularly in the area of distribution system development. Also, planning involvement in these changes was higher, especially for Hospital 7.

Hospitals 2, 3 and 4 appeared less "active" in terms of number of changes reported and planner involvement. For Hospital 1, the concentration on one type of change, masks the magnitude of the facility development changes taking place in the HMO and may be an inadequate reflection of change.

Except for Hospital 1, Hospital 5 reported relatively few changes. For the changes reported, neither planning processes nor planning staff were involved.

## TABLE 4.9

## STRATEGIC CHANGES REPORTED: TYPES, FREQUENCY AND DEGREE OF PLANNING INVOLVEMENT

| STRATEGIC CHANGE TYPE | HOSPITAL 1 | HOSPITAL 2 | HOSPITAL 3 | HOSPITAL 4 | HOSPITAL 5 | HOSPITAL 6 | HOSPITAL 7 |
|---|---|---|---|---|---|---|---|
| Cost control, managing risk, downsize, efficiency | | | 1 (0) | 1 (0) | 1 (0) | | |
| Merger/acquisition, corporate reorganization | | 1 (1) | 2 (1) | | | | |
| Information system, financial system development | | | | 1 (0) | | 1 (0) | 1 (1) |

**Table 4.9. (Continued)**
**STRATEGIC CHANGES REPORTED:**
**TYPES, FREQUENCY AND DEGREE OF PLANNING INVOLVEMENT**

| STRATEGIC CHANGE TYPE | HOSPITAL 1 | HOSPITAL 2 | HOSPITAL 3 | HOSPITAL 4 | HOSPITAL 5 | HOSPITAL 6 | HOSPITAL 7 |
|---|---|---|---|---|---|---|---|
| Distribution system development, new services, new markets | | 2 (2) | | 3 (2) | 1 (0) | 4 (3) | 7 (7) |
| Bricks and mortar, facility development | 1 (1) | 1 (0) | | 1 (0) | | 1 (0) | |
| Management orientation, change in corporate culture | | 1 (0) | 2 (1) | 1 (1) | 1 (0) | 3 (2) | 1 (1) |
| TOTAL | 1 (1) | 5 (3) | 5 (2) | 7 (3) | 3 (0) | 9 (5) | 9 (9) |

(a) Planning involvement in strategic change is noted in parentheses. As an example, 4 changes involving distribution system development were reported for Hospital 6. Of these, 3 involved planning, either as the application of a planning process, or the work of the planning staff.

Given the apparent and systematic differences in orientation towards planning and types of changes managed during the study period, an obvious next question is whether or not there were also systematic differences in performance.

Table 4.10 summarizes selected performance measures for the seven hospitals, reflecting profitability, utilization, and productivity. From this summary, simple ratings of performance can be calculated based on ranking above the median (+) or below (-). Those hospitals with the most positive ratings (+) are the best performers over the range of performance measures. Table 4.11 summarizes the ratings.

Hospitals 6 and 7 consistently outperformed the other hospitals. Further, based on the grades they awarded, they recognized their superior performance. Hospitals 3, 4 and 5 consistently underperformed. Missing data for Hospital 1 makes classification of the HMO impossible.

From this analysis and from the observations of support for planning, the following hypotheses were supported:

> **H1:** Performance in hospitals in which planning is involved in strategic change will be better than in hospitals in which planning is not involved in change.
>
> **H2:** The more support evident for strategic planning, the more likely that planning will be involved in strategic change.

## TABLE 4.10

## SUMMARY COMPARISON OF SELECTED PERFORMANCE MEASURES

| | HOSPITAL 1 | HOSPITAL 2 | HOSPITAL 3 | HOSPITAL 4 | HOSPITAL 5 | HOSPITAL 6 | HOSPITAL 7 |
|---|---|---|---|---|---|---|---|
| OPERATING MARGIN: Average | NA | 6.03% | 3.61% | -14.22% | -3.89% | 8.06% | 7.77% |
| Change between 1988-1983 | NA | -2.62% | -2.16% | 1.39% | -12.66% | -7.91% | -5.51% |
| # of years < 5% | NA | 2 | 5 | 6 | 6 | 3 | 1 |
| RETURN ON ASSETS: Average | NA | 7.23% | 3.78% | -21.75% | 0.08% | 9.31% | 7.57% |
| Change between 1988-1983 | NA | -3.90% | -2.62% | 13.55% | -8.20% | -10.87% | -6.56% |
| # of years < 5% | NA | 1 | 5 | 6 | 6 | 3 | 2 |
| RETURN ON EQUITY: Average | NA | 16.56% | 12.14% | -18.47% | 13.31% | 15.04% | 12.32% |
| Change between 1988-1983 | NA | -6.22% | -12.83% | -43.05% | -7.59% | -12.18% | -5.25% |
| # of years < 5% | NA | 0 | 1 | 6 | 0 | 0 | 0 |
| MARKET SHARE: Average | 12.05% | 13.35% | 16.42% | 14.53% | 11.47% | 15.02% | 17.05% |
| Change between 1988-1983 | 0.90% | 0.50% | -4.20% | 2.10% | -2.30% | 1.00% | 2.00% |
| # losses over prev year | 1 | 2 | 5 | 1 | 4 | 1 | 1 |
| ADMISSIONS/FTE: Average | 14.19 | 9.17 | 8.80 | NA | 12.06 | 10.82 | 10.99 |
| Change between 1988-1983 | 0.93 | -3.29 | -2.45 | NA | -5.57 | -1.16 | 0.20 |
| # of years < 10.75 | 0 | 5 | 5 | NA | 2 | 3 | 2 |
| FTE/OCCUPIED BED: Average | 5.52 | 6.41 | 7.61 | NA | 6.32 | 5.24 | 5.67 |
| Change between 1988-1983 | -0.21 | 3.45 | 4.28 | NA | 3.80 | 0.93 | 1.41 |
| # of years > 5.83 | 0 | 4 | 5 | NA | 4 | 0 | 3 |

NA not available

## TABLE 4.11

## COMPARATIVE RATING OF PERFORMANCE

| MEASURE APPLIED | HOSPITAL NUMBER 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| # Yrs Op Margin < 5% | ? | + | - | - | - | + | + |
| # Yrs ROA < 5% | ? | + | - | - | - | + | + |
| # Yrs ROE < 5% | ? | + | - | - | + | + | + |
| # Market Share Losses Over Previous Year | + | - | - | + | - | + | + |
| # Yrs Admissions/FTE <10.75 | + | - | - | ? | + | - | + |
| # Yrs FTE/Occupied Bed > 5.83 | + | - | - | ? | - | + | - |
| TALLY | | | | | | | |
| + | 3 | 3 | 0 | 1 | 2 | 5 | 5 |
| - | 0 | 3 | 6 | 3 | 4 | 1 | 1 |
| ? | 3 | 0 | 0 | 2 | 0 | 0 | 0 |
| Average Op Margin | ? | + | - | - | - | + | + |
| Average ROA | ? | + | - | - | - | + | + |
| Average ROE | ? | + | - | - | + | + | - |
| Change in Market Share | - | - | - | + | - | + | + |
| Change in Admissions/FTE | + | - | - | ? | - | + | + |
| Change in FTE/Occ Bed | + | - | - | ? | - | + | + |
| TALLY | | | | | | | |
| + | 2 | 3 | 0 | 1 | 1 | 6 | 5 |
| - | 1 | 3 | 6 | 3 | 5 | 0 | 1 |
| ? | 3 | 0 | 0 | 2 | 0 | 0 | 0 |

Other hypotheses, focusing on extent of competition, were developed from the literature review.

In Chapters 5 and 6 results of the telephone interviews are presented. These interviews, conducted among CEOs and/or Planners in 40 hospitals in California, Oregon and Washington provide further insight into the practice of hospital planning and the influence of varying levels of competition on planning activities. Descriptive statistics are provided in Chapter 5. In Chapter 6, relationships among different components of the conceptual model (Figure 2) are explored and a series of hypotheses tested.

# CHAPTER 5

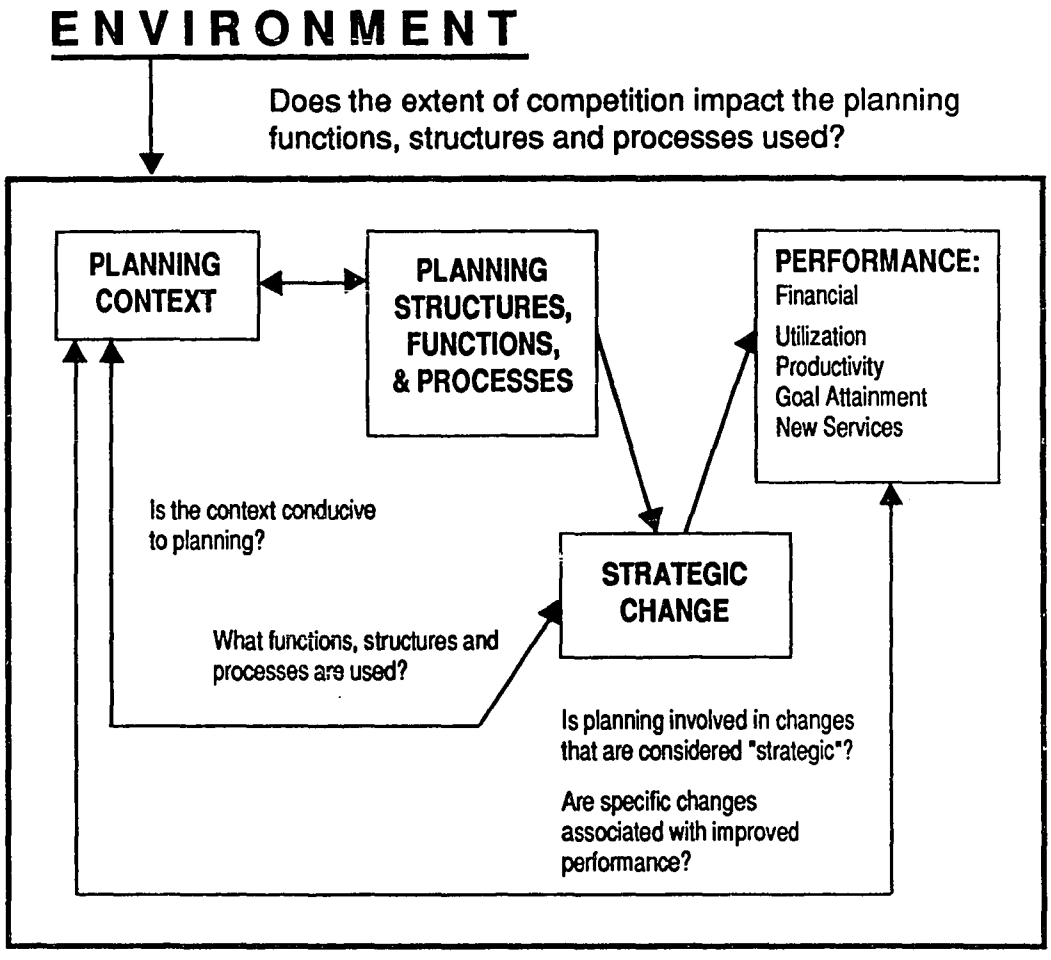
# TELEPHONE SURVEY FINDINGS: DESCRIPTIVE ANALYSIS

## 5.1 Introduction

Research findings from the telephone surveys are presented in Chapters 5 and 6. Chapter 5 includes a descriptive analysis of the environments in which the hospitals operate; the planning context, including support for strategic planning; the nature and extent of strategic planning in hospitals; the types of changes reported for the period 1983 through 1988 and the extent to which planning was involved in the changes; and perceptions of relevant performance measures and summary of various performance measures that were available. The descriptive analysis is organized around the conceptual model presented in the introductory chapter and repeated here for ease of reference. Results related to each component of the model are described separately, highlighting major variables.

Chapter 6 provides the explanatory analysis of the hypotheses, including the bivariate and multivariate relationships among performance and planning involvement in strategic change; and the bivariate relationships among support for planning and planning involvement in strategic change; extent of competition and various aspects of planning involvement in strategic change, the types of change reported and the planning functions and processes reported.

Figure 2
Conceptual Model



## 5.2 Hospital and Respondent Characteristics

The results reported are based on 60 telephone interviews for 40 hospitals. The hospitals ranged in size from 200 to 645 beds, with a mean of 315 beds. Sixteen different systems were represented. Sample characteristics were similar to those of the universe: mean size of 332 beds, 91% not-for-profit, 56% system hospitals, and average occupancy of 68%.

Acuity levels for the sample hospitals were calculated by counting the number of services offered which are "typically" associated with extremely sick patients, e.g., cardiac intensive care; intensive care--mixed, other; open heart surgery; certified trauma center; burn care unit; emergency department; and neonatal intensive care. Using this acuity index, the range of values was 1-7, with a mean value of 4.3. Only one fourth of the hospitals offered fewer than four of the high acuity services, while more than one third offered five or more of the services.

The characteristics of the respondents are presented in Table 5.1. to provide information related to the ability of the respondents to reply with expertise regarding both the hospitals, per se, and the positions held. As stated in the literature review, Child (1974) noted that age of CEO was negatively associated with performance. Years in health care was used as a proxy measure for age.

TABLE 5.1

CHARACTERISTICS OF RESPONDENTS[a]

| | CEOS N=31 | | PLANNERS N=29 | |
|---|---|---|---|---|
| **Years in Current Position** | | | | |
| 1-2 years | 7 | 22.6% | 15 | 51.7% |
| 3-4 years | 9 | 29.0% | | 7.2% |
| 5-6 years | 6 | 19.4% | 3 | 10.3% |
| 7+ years | 9 | 29.0% | 6 | 20.7% |
| Mean | | 5.7 years | | 3.8 years |
| Median | | 4.0 years | | 2.0 years |
| Standard Deviation | | 4.2 years | | 3.3 years |
| **Other Positions Held at Sample Hospital** | | | | |
| None | 19 | 61.3% | 17 | 58.6% |
| 1 or more | 12 | 38.7% | 12 | 41.4% |
| **Years in Health Care** | | | | |
| 1-15 years | 3 | 9.7% | 21 | 72.4% |
| 16-25 years | 22 | 71.0% | 6 | 20.7% |
| 26+ years | 6 | 19.4% | 2 | 6.9% |
| Mean | | 21.2 years | | 14.8 years |
| Median | | 21.0 years | | 14.0 years |
| Standard Deviation | | 6.3 years | | 7.0 years |
| **Current Position** | | | | |
| Chief Executive Officer | 27 | 87.1% | | |
| Chief Operating Officer | 4 | 12.9% | | |
| VP/Director Corporate Planning | | | 11 | 37.9% |
| VP/Director Planning/Marketing | | | 5 | 17.2% |
| VP/Director Business Development | | | 8 | 27.6% |
| Other | | | 5 | 17.2% |

[a] The variables reflecting years in current position, number of positions held and years in health care are interval-level measures, categorized in this table for descriptive purposes.

Both CEOs and Planners were relatively new to their positions, with at least half having worked for their hospitals four years or less. Additionally, neither CEOs nor Planners were likely to have held other positions at their current hospitals.

These findings were consistent with the trade literature citing significant turnover among CEOs in recent years (Weil, 1990; Wesbury et al., 1989; and Wilson et al., 1990). Notably, at some of the hospitals in which interviews were not possible with either CEO or Planner, the reason given was that the position was vacant or that the individual was too new on the job to be capable of responding.

For the "Planners" interviewed, only 16 (55.2%) had the term planner in their titles. Others either perceived themselves to be planners or were identified by the CEO as the staff person most identified with planning activities, even if no planning department existed.

Overall, based on years in current position and actual position held, it is believed that most respondents were well qualified to respond. CEOs, as a group, were better able to respond to questions requiring knowledge of actions taken between 1983 and 1988.

## 5.3 Environment

Many aspects of the environment were described in the literature review. Among these were variability, complexity, illiberality, munificence, hostility, and challenge. In this research, hostility was operationalized in terms of competition and regulation. The focus on competition and regulation was based on the recent studies by Shortell et al. (1990) and Williams et al. (1987), the only health care research encountered in which environmental dimensions were major variables.

CEOs and Planners were asked to describe their competitive environments. First, they provided one word or phrase which they considered best characterized the nature of competition in their environment. Among the 54 responses to this question, 32 (59.3%) implied harsh environments, e.g.,"Darwinian", "carnivorous", "unrelenting", "hourly battle", "dog fight", "voracious", "intense". Other responses (11, 20.4%) implied a more moderate environment, e.g., "comfortable", "healthy", "friendly", "not cutthroat, not aggressive", "I don't see it", etc. Still others (5, 9.3%) described key drivers in their environment, e.g., "managed care", "cost management", "no bed surplus".

Measures characterizing the competitive environment are presented in Table 5.2. COMPET represents the number of competitors identified by the CEO or Planner. Another measure of competition was the total number of hospitals in the city in which each sample hospital was located (COMPNO). COMPNO was included as a measure of potential competition within a community. For example, a hospital may have developed strategies on the basis of 3 primary competitors. But, if there were 10 other hospitals in the same community, there may be nothing to prevent these hospitals from entering into the sample hospital's market. The higher this measure, the greater the potential threat.

An important factor which was not available within the financial limitations of this study, was the number of inpatient beds per 1000 population, a measure of resource supply. COMPNO was used as an imperfect substitute measure.

A final measure used to estimate the harshness of the environment was the percent of managed care in the primary service area (MGCRPSA). This information was gathered only from the planners. It reflects, not competition, but payment limits imposed from the outside.

TABLE 5.2

CHARACTERISTICS OF THE COMPETITIVE ENVIRONMENT

| Variable | Category[a] | N | % | Mean | Median | Standard Deviation |
|---|---|---|---|---|---|---|
| **COMPET**[b] Perceived number of competitors | 0-2 | 9 | 23.6% | 3.4 | 3.0 | 1.5 |
| | 3 | 13 | 34.2% | | | |
| | 4 | 10 | 26.3% | | | |
| | 5-8 | 6 | 15.8% | | | |
| | Total | 38 | 99.9%[c] | | | |
| **COMPNO** # of hospitals in community | 1-2 | 13 | 32.5% | 6.5 | 4.0 | 8.9 |
| | 3-5 | 9 | 22.5% | | | |
| | 6-10 | 9 | 22.5% | | | |
| | 11-55 | 9 | 22.5% | | | |
| | Total | 40 | 100.0% | | | |
| **MGCRPSA**[d] % Managed Care in Primary Service Area | | | | 28.9 | 25.0 | 13.2 |
| | 0-20% | 9 | 31.0% | | | |
| | 21-34% | 11 | 37.9% | | | |
| | 35+% | 9 | 31.0% | | | |
| | Total | 29 | 99.9% | | | |

[a] COMPET, COMPNO, and MGCRPSA are interval-level measures, categorized in this table for descriptive purposes.

[b] COMPET represents CEO perceptions, when available. When CEO perceptions were not available, the Planner response was used. The decision to consolidate CEO and Planner responses was based on the degree of agreement in matched interviews, i.e., when both CEO and Planner responded. If agreement was greater than or equal to 50%, then consolidation took place. For COMPET, the agreement was 56%.

[c] Rounding error.

[d] MGCRPSA excluded from explanatory analysis because it was not a clear measure of competition or environmental hostility.

Sample hospitals operated in a variety of competitive environments, with 23% reporting 0-2 competitors, 34% reporting 3 competitors, and 42% reporting 4 or more. Overall, the extent of actual competition, the threat of potential competition, and the increased competition and constraints posed by managed care varied considerably.

The regulatory constraints imposed on the hospitals differed considerably among the states. A summary of the regulatory environments of California, Oregon and Washington is presented in Table 5.3. California, the most lenient, had neither Certificate of Need nor Rate Review, except through its contracting for care for Medicaid patients. In contrast, Washington retained its Certificate of Need program and exerted some control over hospitals through its budget approval powers. Oregon fell between the two in terms of regulatory constraints.

Among the sample hospitals, 33 (82%) were in California, 5 (13%) in Washington, and 2 (5%) in Oregon. Due to the concentration of hospitals in one state, neither state identifiers nor aspects of the regulatory environment were used in the explanatory analysis. Competition and regulation, taken together, describe environmental hostility.

## TABLE 5.3

## CHARACTERISTICS OF THE REGULATORY ENVIRONMENTS IN CALIFORNIA, OREGON, WASHINGTON

| State | Sunset Date for Certificate of Need | Rate Review Program |
|---|---|---|
| California | January 1, 1987 | Mandatory disclosure of costs via Medicare Cost Report.<br><br>Voluntary participation in contracting for Medicaid (MediCal).<br><br>No rate setting powers except by default through contracting system. |
| Oregon | June 30, 1991 for major medical equipment and new service development. CON will remain for new hospital construction. | Mandatory disclosure of hospital and ambulatory surgery rates. Rates filed along with budget summaries and financial statements.<br><br>No rate setting program. |
| Washington | No sunset date. | Mandatory disclosure of hospital and ambulatory surgery rates. Rates and budgets filed with state.<br><br>State has approval power over hospital budgets. |

## 5.4 Planning Context

Sample hospitals provided a wide variety of organizational environments, or planning contexts, in which to study planning functions and processes. Key elements of these environments are summarized in Tables 5.4 through 5.7.

Financial issues clearly predominated. Addressing all other issues noted, with the exception of ISSUE4, required financial resources.

CEOs and Planners were also asked to describe what they understood to be their corporate culture or cultures. As pointed out by Schein (1988) and discussed in the literature review, these perceptions should be considered reflections of the culture, not the essence of the culture.

From Table 5.5 it is evident that the most popular perception of culture was the action-oriented, competent and innovative culture. This response was consistent with the propensity of management training and executive seminars in the 1980s to focus on models such as In Search of Excellence (Peters and Waterman, 1982). In terms of the culture types presented by Deal and Kennedy (1982), it appears as though the cultures described were primarily process oriented. The typologies are presented in Table 5.6 and related to CEO and Planner responses.

TABLE 5.4

CEO AND PLANNER PERCEPTIONS OF MAJOR ISSUES [a]
MOST IMPACTING THE HOSPITAL
(N=33 unless otherwise noted)

| Issue Cited | Absolute Frequency | Percent of Responses[b] |
|---|---|---|
| **ISSUE1:** Financial pressures, debt expense control, indigent care | 26 | 78.8% |
| **ISSUE2:** Medical staff relations, recruitment, retention, unwillingness to take call, unavailability | 13 | 39.4% |
| **ISSUE6:** Personnel, staff shortages, unstable nursing union, turnover | 10 | 30.3% |
| **ISSUE3:** Service mix and scope, bioethics, new technology, quality, higher acuity, balance of patient care/education/research | 9 | 27.3% |
| **CISSUE7:** Competition, image, patient satisfaction, community involvement, protection of 501.c.3 status | 6 (N=27) | 22.2% |
| **ISSUE5[c]:** Shortage of space, ability to expand facility in timely manner | 2 | 6.0% |
| **ISSUE4:** Communication, keeping Board in tune | 1 | 3.0% |

[a] Variables ISSUE1, ISSUE2, ISSUE3, ISSUE4, ISSUE5 and ISSUE6 represent CEO perceptions, when available. When CEO perceptions were not available, planner perceptions were provided. The decision to consolidate variables was based on the degree of agreement between CEOs and Planners in matched interviews. If agreement was greater than or equal to 50%, then consolidation took place. For consolidated variables, agreement was as follows: ISSUE1, 76.9%; ISSUE2, 53.4%; ISSUE3, 61.5%; ISSUE4, 92.3%; ISSUE5, 76.9%; ISSUE6, 76.9%. Note that CISSUE7, agreement only 46.2%, was not consolidated and represents only the CEO response.

[b] Percentage totals exceed 100% due to multiple responses.

[c] ISSUE5 and ISSUE4 deleted from further analysis due to relative unimportance, i.e., only 1 or 2 respondents cited these issues.

**TABLE 5.5**

**CORPORATE CULTURE AS ESPOUSED BY CEOs OR PLANNERS [a] (N=37 unless otherwise noted)**

| Culture Described | Absolute Frequency | Percent of Responses[b] |
|---|---|---|
| **CULT4:** Action-oriented, competent, quality, cutting edge, innovative, candid, stands for doing it right, growth oriented | 15 | 40.5% |
| **CCULT1:** Value based, all services needed and wanted, here to serve the patient, people are important, personalization, meaningful work (CEO view only, N=29) | 10 | 34.5% |
| **CULT5:** Traditional, pride, loyalty | 8 | 21.6% |
| **CULT2[c]:** Careful, must use resources carefully, good job within budget | 2 | 5.4% |
| **CULT3:** Politically driven, territoriality, formal | 2 | 5.4% |
| **CULT6:** Financially driven | 1 | 2.7% |

[a] Variables CULT2, CULT3, CULT5, AND CULT6 represent CEO perceptions , when available. When CEO perceptions were not available, planner perceptions were provided. The decision to consolidate variables was based on the degree of agreement between CEOs and Planners in matched interviews. If agreement was greater than or equal to 50%, then consolidation took place. For the consolidated variables, agreement was as follows: CULT2, 88.9%; CULT3, 83.4%; CULT4, 61.1%; CULT5, 72.3%; CULT6, 83.4%. In the case of CCULT1, agreement was only 33.3%; therefore, responses represent only the views of CEOs.

[b] Percentage totals exceed 100% due to multiple responses.

[c] CULT2, CULT3, and CULT6 eliminated from further analysis due to relative unimportance, i.e., only 1 or 2 respondents cited these culture types.

TABLE 5.6

COMPARISON OF DEAL AND KENNEDY CULTURE TYPES
WITH CEO AND PLANNER RESPONSES

| Deal and Kennedy Typology [a] | Cultures Described |
|---|---|
| **Process Culture** | |
| A world of little or no feedback, where employees find it hard to measure what they do; instead they concentrate on how it is done. When out of control, this culture is known as a bureaucracy. | CCULT1<br>CULT5<br>CULT2<br>CULT3<br>CULT6 |
| **Work Hard-Play Hard Culture** | |
| Find a need and fill it. A world of small risks and quick, often intensive feedback. Activity is everything. As long as employees can keep up, the work will get done. Success comes with persistence. | CULT4? |
| **Bet Your Company Culture** | |
| Cultures with big stakes decisions, where years pass before employees know whether decisions have paid off. A high risk, slow feedback environment. | CULT4? |
| **Tough Guy/Macho Culture** | |
| A world of individualists who regularly take high risks and get quick feedback on whether their actions were right or wrong. | None |

[a] Adapted from Deal and Kennedy, Corporate Cultures, 1982:107-127.

It was unclear whether the action orientation described by respondents (CULT4), should be classified as Work Hard-Play Hard or Bet Your Company since respondents were not asked to describe the level of risk or the immediacy of feedback associated with the activity levels. However, given the changes that have taken place in health care since 1983, especially the financial risks associated with these changes, it was surprising that respondents did not clearly describe Bet Your Company cultures.

Espoused management philosophies were also reported, and are summarized in Table 5.7.

The distinction between corporate culture and management philosophy in this research mirrors distinctions reported in the literature (Schein, 1988; Deal and Kennedy, 1982) Corporate culture reflects underlying values which drive the organization. Management philosophy reflects the management approaches stressed.

Nearly a fourth of the respondents (23.7%) reported 2 prevailing philosophies, most commonly outcome orientation and employee orientation (33.3%); process orientation and employee orientation (22.2%); and process orientation and outcome orientation (22.2%).

TABLE 5.7

MANAGEMENT PHILOSOPHY ESPOUSED BY CEOS OR PLANNERS [a] (N=38)

| Philosophy Described | Absolute Frequency | % of Responses[b] |
|---|---|---|
| **MPH2:** Process orientation--processes, teamwork, communication, common sense, respect and dignity | 18 | 47.4% |
| **MPH1:** Outcome orientation--effective, efficient, fix it, no margin/no mission, focus on accomplishment, expect results | 12 | 31.6% |
| **MPH4:** Employee orientation--make it a fun place to work, safe, pleasant environment, employee recognition, allow input, give employees tools to do job, educate, motivate | 9 | 23.7% |
| **MPH3:** Decision-making--decentralize, participatory decision-making, include stakeholders | 8 | 21.1% |

[a] Variables MPH1, MPH2, MPH3, and MPH4 represent CEO perceptions, when available. When CEO perceptions were not available, planner perceptions were provided. The decision to consolidate variables was based on the degree of agreement between CEOs and Planners in matched interviews. If agreement was greater than or equal to 50%, then consolidation took place. For the consolidated variables, agreement was as follows: MPH1, 75.0%; MPH2, 62.6%; MPH3, 56.3%; MPH4, 75.0%.

[b] Percentage totals exceed 100% due to multiple responses.

There was no clear correspondence between these types of management philosophy and the management styles presented by Shortell et al (1990) drawing upon the Miles-Snow typology of defenders, prospectors, analyzers and reactors. A distinction appears to be that the prevailing management philosophies described by respondents reflected "how we run our business and manage our people", whereas the management styles in the literature reflected "how we run our business in the context of the outside world".

An essential element of the context in which planning is carried out is the support for planning expressed by the CEO through actions and perceptions. This indicator was expressed as a score based on elements including CEO satisfaction with strategic planning; CEO involvement in strategic planning; FTEs dedicated to planning; whether the planners reported directly to the CEO and the number of contirbutions of strategic planning cited by the CEO. Table 5.8 summarizes these scores.

A comparison of System and non-System hospitals revealed similar levels of CEO satisfaction with strategic planning (79% and 83%, respectively) and similar support scores with means of 3.7 and 4.2 respectively ($F=1.64$, $p<.34$).

TABLE 5.8

EVIDENCE OF CEO SUPPORT FOR PLANNING
(N=31)

| Score Element | | Absolute Frequency | Percent of Responses | Contribution to Score |
|---|---|---|---|---|
| **SPSATIS:** CEO satisfied with strategic planning | | 25 | 80.6% | 1 |
| **TOPDIR:** CEO directs strategic planning | | 20 | 64.5% | 1 |
| **FTE:** At least one FTE dedicated to planning | | 17 | 54.8% | 1 |
| **PREPORT:** Planners reporting directly to CEO | | 17 | 54.8% | 1 |
| **SUMCONTR:** # of contributions of strategic planning cited by CEO: | Score of 0 | 2 | 6.5% | 0 |
| | Score of 1 | 16 | 51.6% | 1 |
| | Score of 2 | 13 | 41.9% | 2 |

MAXIMUM SUPPORT SCORE = 6

**Distribution of Support Scores**

| | | | |
|---|---|---|---|
| LOW | Score of 1-3 | 11 | 35.5% |
| MEDIUM | Score of 4 | 10 | 32.3% |
| HIGH | Score of 5-6 | 10 | 32.3% |
| | Total | | 100.1% [a] |

| | |
|---|---|
| Mean | 3.9 |
| Median | 4.0 |
| Std. Dev | 1.4 |

[a] Rounding error

## 5.5 Planning Structures, Functions and Processes

The number of FTEs (Full Time Equivalents) devoted to planning activities was collected for all hospitals. Significant differences in the number of FTEs devoted to planning were noted between System and non-System hospitals, with System hospitals reporting nearly twice the mean number of FTEs, 2.1 compared to 1.2 FTEs ($F=5.48$, $p<.002$). In 13 of the hospitals (32.5%), no one was formally devoted to planning activities. In another 4 (10%) the investment in planning personnel was less than 1 FTE. Conversely, 23 (57.5%) hospitals reported having, within the hospital, at least one and as many as 10 FTEs devoted to planning.

The functions reported by planner respondents are summarized in Table 5.9. Three functions reported by at least half of the respondents involve support of operations. Relative emphasis on operations support (OPSPGMPL, OPSMKT, OPSMONIT, OPSFORE, OPSDOC, OPSSTECH), strategic planning (SPDESIGN, SPDATA, SPGOALS), and business development (BDMG, BDMS,BDFEAS, BDMKT) was calculated, with each general functional area (e.g., operations support) given a total weight of no more than 1 for the sum of its individual functions (e.g., OPSPGMPL, etc). Operations support accounted for 47% of all functions reported; strategic planning activities, 34%; business development 14%; and legislative activities, 5%.

The emphasis on operations support marks a shift from the findings of Thakur (1985) that planning and operations were not linked.

Strategic planning processes reported are summarized in Table 5.10. The processes reported reflected prescriptive literature on hospital strategic planning. The patterns of processes reported included: Environmental and Internal Assessments (SPPROC2 and SPPROC3), 48%; Environmental and Internal Assessments, and Formal Retreats (SPPROC2, SPPROC3, and SPPROC4), 45%; Market Research, Environmental and Internal Assessments, and Formal Retreats (SPPROC1, SPPROC2, SPPROC3, and SPPROC4), 28%; and Environmental and Internal Assessments, Formal Retreats, and Issue Identification (SPPROC2, SPPROC3, SPPROC4, and SPPROC5), 28%. Unexpected findings come, not with the types of processes reported or their patterns, but with the relatively high proportion (41.4%) reporting <u>no</u> established strategic planning process. Further, only one hospital planner reported a relationship between strategic planning and budgeting or resource allocation. In view of the importance of financial pressures as an issue impacting the hospitals, this latter finding was particularly surprising.

**TABLE 5.9**
**SUMMARY OF PLANNING FUNCTIONS REPORTED**
**(N=29)**

| Variable | Description | Frequency | Percent [a] |
|---|---|---|---|
| OPSPGMPL: | Program planning and evaluation | 17 | 58.6% |
| OPSMKT: | Market share analysis, program profiles by DRG, patient satisfaction research | 17 | 58.6% |
| SPDATA: | Data for strategic planning | 16 | 55.2% |
| OPSMONIT: | Monitors operations, patient origin, etc. | 15 | 51.7% |
| OPSFORE: | Develops forecasts, assumptions | 13 | 44.8% |
| OPSDOC: | Develops physician profiles | 12 | 41.4% |
| SPGOALS: | Develops goals, objectives, strategic plan document | 10 | 34.5% |
| BDMKT: | Conducts/manages market research for business development | 8 | 27.6% |
| BDFEAS: | Conducts feasibility studies for business development | 7 | 24.1% |
| SPDESIGN: | Designs, facilitates and/or coordinates strategic planning | 6 | 20.7% |
| OPSTECH[b]: | Develops technology plans | 5 | 17.2% |
| BDMG: | Manages business development | 5 | 17.2% |
| BDMS: | Develops physician joint ventures | 4 | 13.8% |
| LEG: | Legislative activities, public policy agenda | 2 | 6.9% |

[a] The total of percentages exceeds 100% due to multiple responses.

[b] Due to relative unimportance, i.e., 5 or fewer responses, OPSTECH, BDMG, BDMS, and LEG deleted from explanatory analysis.

TABLE 5.10

SUMMARY OF STRATEGIC PLANNING PROCESSES REPORTED
(N=29)

| Variable | Description | Frequency | Percent [a] |
|---|---|---|---|
| SPPROC4: | Formal retreats, subcommittees, working sessions | 16 | 55.2% |
| SPPROC2: | Environmental assessments, competitive analysis, opportunities and threats | 15 | 51.7% |
| SPPROC3: | Internal assessments, portfolio analysis, strengths and weaknesses | 14 | 48.3% |
| SPPROC1: | Interviews with key people to identify opportunities and threats, market research, perceptual research | 10 | 34.5% |
| SPPROC5: | Issue identification, establish priorities | 9 | 31.0% |
| SPPROC6[b]: | Tied to budget cycle, develop operating plans, business plans | 1 | 3.4% |
| SPPROC7: | No established strategic planning process | 12 | 41.4% |

[a] Percentages exceed 100% due to multiple responses.

[b] Due to relative unimportance, i.e., only 2 responses, SPPROC6 deleted from explanatory analysis.

In addition to describing the strategic planning process, planners provided background on the existence and composition of a strategic planning committee and a strategic planning document. Of the 29 planner respondents, 22 (76%) cited the existence of a strategic planning committee which consisted of top management (100%), board members (77%), and medical staff (82%). Seventy six percent of these respondents reported that a strategic planning document was produced. Of these, 77% stated that a plan document was produced yearly, although the comprehensiveness and scope of the document was not assessed.

CEOs provided insights into the strategic planning process as well. Of the 31 CEOs interviewed, 65% stated that they directed the process. Medical staff involvement in strategic planning was described in terms of participation through the formal committee structure (81%); through interviews (32%); and through review of draft documents and finalization of implementation plans (19%). Line staff participation was cited among 65% of the CEOs, although the type of participation varied considerably. Examples included:

- Provide data
- Develop objectives in response to strategies developed by top management
- Committee participation
- Through product line management, multidisciplinary approach
- Generate issues to be included in the process
- Develop proposals for new revenue generation ("Did you know that every $100 generated in food service can support 4 prenatal visits?")
- Review final plan

For those CEOs not including line staff in strategic planning, the emotional quality of the responses was noteworthy. One respondent stated:

> Let's get over the notion that strategic planning is participatory. It's a secret process of top management and the Board--period!

5.6 Strategic Change

Both CEOs and Planners provided their perceptions of the major changes at their hospital between 1983 and 1988 which they considered strategic (Table 5.11).

The most commonly reported change was in adding services and entering new markets (CHANGE4). Examples included a heart center of excellence; a new HMO/PPO; pursuing managed care contracts; adding long-term care and home care; developing new outpatient programs; and developing satellite clinics.

In terms of planning involvement in these changes, whether the result of a strategic planning process or the involvement of planning staff in the change, the results "fit" the traditional role of the planner: developing programs, supporting processes, and dealing with facility development. Changes in which planning was somewhat less involved, but which may drive the future of hospitals include cost control, managing risk, downsizing, and efficiency (CHANGE1) and information system and financial system development (CHANGE3).

TABLE 5.11

SUMMARY OF TYPES OF STRATEGIC CHANGES REPORTED [a]
(N=38 unless otherwise noted)

| Variable | Description | Absolute Frequency | Percent | Planner Involved[b] |
|---|---|---|---|---|
| CHANGE4: | Distribution system development, new services and markets | 28 | 73.7% | 67.9% |
| CCHANGE6: | Management orientation or change in corporate culture (N=30) | 19 | 63.3% | 31.6% |
| CHANGE1: | Cost control, managing risk, downsize, efficiency | 13 | 34.2% | 30.8% |
| CHANGE5: | Bricks and mortar, facility development | 12 | 31.6% | 83.3% |
| CHANGE2: | Merger/acquisition, corporate reorganization | 12 | 31.6% | 50.0% |
| CHANGE3[c]: | Information system, financial system development | 5 | 13.2% | 2.6% |

[a] Variables CHANGE1, CHANGE2, CHANGE3, CHANGE4, and CHANGE5 represent CEO perceptions, when available. When CEO perceptions were not available, Planner perceptions were used. The decision to consolidate variables was based on the degree of agreement between CEOs and Planners in matched interviews. If agreement was greater than or equal to 50%, then consolidation took place. For the consolidated variables, agreement was as follows: CHANGE1, 66.7%; CHANGE2, 66.7%; CHANGE3, 73.3%; CHANGE4, 62.5%; CHANGE5, 56.3%.

[b] Percentage totals exceed 100% due to multiple responses.

[c] CHANGE3 eliminated from explanatory analysis due to relative unimportance, i.e., only 5 respondents cited this change.

While few hospitals reported these changes, the minimal involvement of planning raises questions about whether the planning function is conceptualized, supported, and carried out in such a way that it can guide major structural changes in the organization.

Also, in consideration of the importance of financial issues impacting the hospital, it seems contradictory that more emphasis has not been placed on cost control, managing risk, downsizing, and efficiency (CHANGE1) and that planning is not more involved in the management of financial risk as a strategic issue.

## 5.7 Performance

Respondents were asked to identify relevant performance measures. Their responses are summarized in Table 5.12. These perceptions were consistent with the issues cited as most impacting the hospital. Again, a financial orientation predominated.

Measures of financial performance, productivity, market share and changes in the number of services offered were collected through secondary sources and are reported in Table 5.13. Also of importance to respondents, but unavailable to this study due to limited resources, were measures of patient satisfaction and quality of care.

TABLE 5.12

CEO AND PLANNER PERCEPTIONS OF BEST PERFORMANCE INDICATORS [a] (N=38 unless otherwise noted)

| Variable | Description | Frequency | Percent |
|---|---|---|---|
| FINANCE: | Margin, fiscal strength, cost per admission, lowest prices in area, ability to form capital | 31 | 81.6% |
| IMAGE: | Patient satisfaction, programs of excellence, top of mind awareness, endowment | 19 | 50.0% |
| MKTSHR[b]: | Market share, census, medical staff numbers and breadth (N=28) | 13 | 46.4% |
| PEOPLE: | Employee satisfaction, relationships, physician satisfaction, management stability, morale (N=28) | 8 | 28.6% |
| QUALITY: | Quality of programs, comprehensiveness, mortality index, patient outcome, regulatory compliance | 9 | 23.7% |
| PRODUCTI[c]: | FTEs per occupied bed, admissions per FTE, length of stay | 5 | 13.2% |

[a] Variables FINANCE, IMG, QUALITY, and PRODUCTI represent CEO perceptions, when available. When CEO perceptions were not available, Planner perceptions were provided. The decision to consolidate variables was based on the degree of agreement between CEOs and Planners in matched interviews. If agreement was greater than or equal to 50%, then consolidation took place. For consolidated variables, agreement was as follows: FINANCE, 93.3%; IMG, 73.3%; QUALITY, 53.3; PRODUCTI, 100%. Note that PEOPLE and MKTSHR are not consolidated, i.e., they represent only CEO perceptions.

[b] MKTSHSR and PEOPLE were deleted from explanatory analysis due to excessive missing data, i.e., 30%.

[c] PRODUCTI eliminated from explanatory analysis due to relative unimportance, i.e., only 5 respondents identified it as a performance measure.

Financial change data were available for 19 hospitals. Of these, 70% reported a decrease in operating margin between 1983 and 1988 ranging from an absolute difference of 2% to 75%. Other measures of profitability, changes in return on assets and return on equity (ROACHG and ROECHG), yielded similar results. This was not surprising given the Medicare Prospective Payment System implemented in October 1983. Specifically, this was intened to cut back on Federal expenditures for health care and to shift financial risk to providers of care, i.e, hospitals. This deterioration of profitability is consistent with the predominance of financial pressures (ISSUE1) as a concern to CEOs and Planners.

In terms of productivity, 75% of hospitals reporting a drop in admissions per FTE (AFTECHG), ranging from -.01 to -6.54.

A partial explanation may be a shift of patients from inpatient to outpatient care, with the resultant shift in manpower. A related measure, FTEs per occupied bed (FTEOBCHG), showed an increase of from .08 FTE to 4.28 FTEs per occupied bed for 81% of the hospitals. Possible explanations include an increase in patient acuity, an increase in technology requiring extra staffing, an increase in staffing to meet outpatient needs, and inadequate management control of labor costs. Actual explanations were not ascertained through this research.

TABLE 5.13

SUMMARY OF CHANGES IN PERFORMANCE MEASURES
1983-1988

| Changes in Performance | | Mean | Median | Standard Deviation |
|---|---|---|---|---|
| **Financial Measures** | | | | |
| OMCHG [a]: | Operating Margin | -12.43% | - 7.18% | 23.09% |
| ROACHG: | Return on Assets | -26.78% | - 9.89% | 74.25% |
| ROECHG: | Return on Equity | -62.90% | -30.28% | 140.01% |
| CRCHG: | Current Ratio | .60 | .21 | 1.16 |
| ATCHG: | Acid Test | -.35 | -.30 | .85 |
| DECHG: | Debt/Equity Ratio | .61 | .99 | 1.48 |
| **Productivity Measures** | | | | |
| AFTECHG: | Admissions per FTE | -.69 | -.74 | 2.21 |
| FTEOBCHG: | FTEs/Occupied Bed | .73 | .60 | 1.04 |
| **Market Share & Utilization** | | | | |
| MKTCHG: | Market Share | .50 | .13 | 4.22 |
| OCCCHG: | Occupancy Rate | -.04 | -.06 | .10 |
| **Other** | | | | |
| SVCINC: | Services Offered | 1.26 | 1.00 | 4.90 |
| ACUTEC: | Acuity Rating | .65 | 0 | .74 |

[a] Financial change measures were excluded from explanatory analysis due to excessive missing data, i.e., 73-75%. These include: OMCHG, ROACHG, ROECHG, CRCHG, ATCHG, and DECHG. Problems arose from 1) delays in obtaining cost reports under the Freedom of Information Act; 2) G-series worksheets submitted with no entries; and 3) G-series worksheets not included in the cost report.

Changes in market share (MKTCHG) varied considerably among study hospitals, ranging from a loss of 9.52% to a gain of 9.6%. Occupancy rates (OCCCHG), remained fairly stable, ranging from a reduction of -.27% to a gain of .21%. A factor which may have contributed to the limited variation of this measure was the change in bed supply during the study period, but not monitored in the study. As a result, occupancy rate was not used as a performance measure in the explanatory analysis.

Changes in the number of services offered (SVCINC), as documented in the AHA Guides, varied from a reduction of 10 services to an increase of 16 services. Changes in acuity rating (ACUTEC), on the other hand, varied little indicating that between 1983 and 1988 few hospitals added "high acuity" services, i.e., cardiac intensive care, open heart surgery, other intensive care, burn care, emergency department, certified trauma center, and neonatal intensive care. In fact, 50% of the hospitals added no such services, 35% added one, and 15% added two. When high acuity services were added, they were most likely to be certified trauma centers (53.8%), a service classification that was not available in 1983; a neonatal intensive care unit (26.9%); a cardiac intensive care unit (11.5%); or open heart surgery facilities (7.7%). ACUTEC, because of its limited variability, was not used in explanatory analysis.

## 5.8 Summary

Sample hospitals reflected a variety of competitive environments, levels of complexity, and organizational settings. While the action-oriented corporate culture was the most frequent culture type cited, a process orientation best describes the management philosophy.

Support of strategic planning varied considerably among the CEOs, yet most had an established strategic planning process. By far the issue most impacting hospitals was financial pressure.

Planners in this constrained setting reported filling traditional roles such as program planning and facility development. Obvious by its absence was planner involvement in managing financial risk, financial planning, development of financial or information systems, or resource allocation. If financial pressures are the single most important issue to hospitals, shouldn't this issue be considered "strategic" and thereby of critical importance to planners and the planning function?

Overall, secondary data produced a depressing picture of the dynamic hospital environment between 1983 and 1988: deteriorating profitability, reduced liquidity, increasing

debt, reductions in productivity, and moderate growth in market share.

In Chapter 6, relationships among environmental, organizational and performance dimensions are explored.

# CHAPTER 6

# TELEPHONE SURVEY FINDINGS: EXPLANATORY ANALYSIS

## 6.1 Introduction

The descriptive analysis provided a basis for understanding the status of planning activities in hospitals and the context in which they are performed. In this chapter, the focus shifts from what is taking place to why it is taking place. It is a search for explanations.

Results of the explanatory analysis are organized according to the hypotheses. Table 6.1, a correlation matrix of all variables included in the explanatory analysis, indicates the degree to which a change in one variable is related to a change in another. Pearson correlations, as illustrated in the table, reflect both the strength and direction of linear relationships among measures at the interval or ratio-level and for ordinal level measures with many categories (Nie, Hull, Jenkens, Steinbrenner, and Bent, 1975). The variables in the matrix meet the measurement requirements for Pearson correlations.

## 6.2 Hypothesis 1

**Performance in hospitals in which planning is involved in strategic change will be better than in hospitals in which planning is not involved in change.**

# TABLE 6.1

## CORRELATION MATRIX

| | | ACUITY (N=40) | AFTE88 (N=38) | AFTECHG (N=36) | BDFEAS (N=29) | BDMKT (N=29) | BEDSIZE (N=40) | CCHG6 (N=30) | CHANGE1 (N=38) | CHANGE2 (N=38) | CHANGE4 (N=38) | CHANGE5 (N=38) | CHANSCR (N=38) | CH (N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ACUITY | (N=40) | 1.00 | | | | | | | | | | | | |
| AFTE88 | (N=38) | -0.09 | 1.00 | | | | | | | | | | | |
| AFTECHG | (N=36) | -0.07 | 0.26 | 1.00 | | | | | | | | | | |
| BDFEAS | (N=29) | 0.21 | 0.15 | -0.06 | 1.00 | | | | | | | | | |
| BDMKT | (N=29) | 0.30 | 0.09 | -0.03 | 0.91 ** | 1.00 | | | | | | | | |
| BEDSIZE | (N=40) | 0.42 * | -0.41 ! | -0.09 | 0.30 | 0.47 * | 1.00 | | | | | | | |
| CCHG6 | (N=30) | 0.41 ! | -0.29 | -0.17 | 0.29 | 0.22 | 0.21 | 1.00 | | | | | | |
| CHANGE1 | (N=38) | -0.11 | -0.15 | 0.28 | -0.13 | -0.19 | 0.02 | -0.18 | 1.00 | | | | | |
| CHANGE2 | (N=38) | 0.04 | 0.19 | -0.11 | 0.17 | 0.09 | 0.14 | -0.15 | -0.01 | 1.00 | | | | |
| CHANGE4 | (N=38) | 0.08 | 0.10 | -0.22 | 0.18 | 0.05 | 0.01 | 0.28 | -0.07 | 0.15 | 1.00 | | | |
| CHANGE5 | (N=38) | -0.01 | -0.03 | -0.36 ! | 0.37 | 0.30 | 0.00 | 0.04 | -0.37 ! | -0.22 | 0.28 | 1.00 | | |
| CHANSCR | (N=38) | 0.21 | -0.01 | -0.15 | 0.30 | 0.26 | 0.25 | 0.10 | 0.09 | 0.34 ! | 0.64 ** | 0.40 ! | 1.00 | |
| CHG1 | (N=38) | -0.21 | -0.10 | 0.21 | 0.00 | -0.03 | 0.09 | -0.17 | 0.48 * | -0.05 | 0.01 | -0.05 | 0.14 | |
| CHG2 | (N=38) | 0.14 | 0.02 | -0.16 | 0.31 | 0.25 | 0.37 ! | 0.00 | -0.16 | 0.64 ** | 0.26 | 0.02 | 0.36 ! | |
| CHG4 | (N=38) | 0.04 | -0.08 | -0.09 | 0.25 | 0.16 | 0.32 | 0.30 | 0.06 | 0.00 | 0.60 ** | 0.34 ! | 0.46 * | |
| CHG5 | (N=38) | -0.03 | 0.08 | -0.37 ! | 0.30 | 0.25 | 0.03 | 0.08 | -0.43 * | -0.15 | 0.22 | 0.88 ** | 0.34 ! | |
| CHGRATIO | (N=38) | 0.07 | -0.03 | -0.11 | 0.32 | 0.23 | 0.28 | 0.51 * | -0.16 | -0.08 | 0.41 ! | 0.39 ! | 0.29 | |
| CHGSCR | (N=38) | 0.14 | -0.11 | -0.21 | 0.39 ! | 0.29 | 0.40 ! | 0.50 * | -0.14 | 0.08 | 0.52 ** | 0.51 * | 0.57 ** | |
| COMPET | (N=38) | 0.45 * | 0.01 | -0.42 ! | 0.20 | 0.26 | 0.23 | 0.08 | -0.18 | 0.13 | 0.20 | 0.31 | 0.16 | |
| COMPNO | (N=40) | -0.18 | 0.32 | 0.13 | 0.01 | -0.07 | 0.00 | -0.06 | -0.03 | 0.05 | 0.26 | -0.07 | -0.02 | |
| CR88 | (N=19) | 0.39 | 0.12 | 0.24 | 0.01 | 0.01 | -0.09 | 0.39 | -0.13 | -0.22 | 0.16 | -0.06 | -0.14 | |
| CULT4 | (N=37) | 0.35 ! | -0.01 | -0.34 ! | 0.25 | 0.33 ! | 0.24 | 0.2 | 0.02 | 0.20 | 0.21 | 0.00 | 0.18 | |
| FTE | (N=40) | -0.06 | -0.23 | -0.50 * | 0.25 | 0.22 | 0.28 | 0.23 | -0.02 | 0.01 | 0.12 | 0.26 | 0.11 | |
| FTEOB88 | (N=38) | 0.28 | -0.75 ** | -0.39 ! | -0.24 | -0.18 | 0.29 | 0.36 | 0.15 | -0.04 | 0.13 | 0.61 | 0.15 | |
| FTEOBCHG | (N=36) | -0.15 | -0.34 ! | -0.66 ** | -0.06 | -0.06 | 0.04 | -0.15 | 0.10 | 0.13 | 0.27 | 0.16 | 0.24 | |
| MKTCHG | (N=35) | -0.14 | 0.24 | 0.42 ! | 0.20 | 0.00 | -0.38 ! | -0.01 | 0.06 | -0.15 | 0.23 | 0.16 | 0.05 | |
| MPH3 | (N=38) | -0.06 | 0.21 | -0.14 | -0.16 | -0.20 | -0.04 | -0.28 | -0.11 | 0.34 ! | 0.14 | 0.06 | 0.13 | |
| OM88 | (N=19) | 0.20 | 0.57 ! | -0.39 | 0.12 | 0.12 | -0.35 | -0.49 ! | 0.15 | 0.17 | 0.04 | -0.09 | 0.01 | |
| OPSCON | (N=29) | -0.10 | -0.20 | -0.10 | -0.13 | 0.01 | 0.18 | 0.06 | 0.04 | -0.50 * | -0.18 | 0.00 | -0.18 | |
| OPSFORE | (N=29) | -0.10 | 0.04 | -0.27 | 0.46 ! | 0.37 | 0.04 | 0.00 | 0.13 | -0.08 | -0.05 | 0.20 | 0.06 | |
| OPSMKT | (N=29) | 0.19 | -0.09 | 0.03 | 0.47 * | 0.52 * | 0.31 | 0.15 | 0.20 | -0.04 | -0.19 | 0.19 | 0.11 | |
| OPSMONIT | (N=29) | -0.14 | -0.23 | -0.11 | 0.22 | 0.29 | 0.27 | 0.00 | 0.16 | -0.06 | -0.11 | -0.05 | 0.08 | |
| OPSPGMPL | (N=29) | 0.30 | -0.26 | -0.10 | 0.47 * | 0.52 * | 0.43 ! | 0.41 | 0.05 | 0.11 | 0.14 | 0.19 | 0.39 ! | |
| ROA88 | (N=19) | 0.27 | 0.64 * | -0.36 | -0.01 | -0.01 | -0.45 | -0.51 ! | 0.05 | 0.22 | 0.05 | -0.08 | 0.01 | |
| SPDATA | (N=29) | 0.10 | -0.45 ! | -0.26 | 0.35 | 0.40 ! | 0.57 * | 0.15 | 0.11 | -0.13 | 0.25 | 0.07 | 0.27 | |
| SPDESIGN | (N=29) | -0.08 | -0.13 | -0.33 | 0.31 | 0.26 | 0.29 | 0.67 * | -0.24 | -0.10 | 0.14 | 0.25 | 0.01 | |
| SPDOC | (N=29) | -0.27 | -0.17 | -0.40 | 0.13 | 0.17 | 0.19 | -0.25 | 0.06 | 0.10 | 0.06 | -0.06 | 0.16 | |
| SPGOALS | (N=29) | 0.07 | -0.31 | -0.28 | 0.27 | 0.20 | 0.32 | 0.49 ! | -0.14 | 0.11 | 0.31 | 0.02 | 0.13 | |
| SPPROC2 | (N=29) | -0.14 | -0.27 | -0.33 | 0.38 ! | 0.44 ! | 0.50 * | -0.10 | -0.13 | 0.23 | 0.20 | 0.27 | 0.36 | |
| SPPROC3 | (N=29) | -0.07 | -0.20 | -0.33 | 0.26 | 0.33 | 0.47 ! | -0.05 | -0.22 | 0.29 | 0.16 | 0.16 | 0.24 | |
| SPPROC4 | (N=29) | -0.16 | -0.13 | -0.36 | 0.35 | 0.40 ! | 0.39 ! | 0.16 | -0.19 | 0.17 | 0.25 | 0.23 | 0.34 | |
| SPPROC5 | (N=29) | 0.15 | 0.12 | -0.19 | 0.32 | 0.42 ! | 0.40 ! | 0.10 | -0.40 ! | 0.18 | 0.27 | 0.24 | 0.30 | |
| SPPROC7 | (N=29) | 0.16 | 0.10 | 0.27 | -0.35 | -0.40 ! | -0.42 ! | 0.16 | 0.19 | -0.17 | -0.25 | -0.23 | -0.27 | |
| SPSATIS | (N=31) | 0.18 | 0.12 | -0.08 | -0.08 | -0.03 | 0.12 | -0.21 | 0.00 | 0.15 | -0.08 | -0.22 | -0.19 | |
| SUMFUNC | (N=29) | 0.10 | -0.18 | -0.22 | 0.68 ** | 0.71 ** | 0.51 * | 0.37 | -0.04 | -0.02 | 0.08 | 0.24 | 0.22 | |
| SUMSP | (N=29) | -0.05 | -0.10 | -0.35 | 0.36 | 0.44 ! | 0.51 * | 0.01 | -0.26 | 0.28 | 0.29 | 0.21 | 0.40 ! | |
| SUPPORT | (N=31) | 0.34 ! | -0.30 | -0.19 | -0.11 | 0.04 | 0.49 * | -0.08 | 0.30 | 0.35 | -0.15 | -0.36 | -0.01 | |
| SVCINC | (N=39) | 0.00 | 0.12 | -0.16 | 0.01 | 0.03 | -0.09 | -0.06 | -0.04 | 0.13 | 0.29 | 0.23 | 0.38 ! | |
| SYSTEM | (N=40) | -0.03 | 0.13 | -0.31 | 0.43 ! | 0.31 | -0.01 | -0.03 | -0.09 | 0.23 | 0.10 | 0.20 | 0.17 | |
| TOPDIR | (N=31) | 0.28 | 0.52 * | 0.07 | 0.07 | 0.13 | 0.24 | 0.14 | 0.20 | 0.00 | -0.06 | -0.15 | 0.05 | |

| E5 ) | CHANSCR (N=38) | CHG1 (N=38) | CHG2 (N=38) | CHG4 (N=38) | CHG5 (N=38) | CHGRATIO (N=38) | CHGSCR (N=38) | COMPET (N=38) | COMPNO (N=40) | CR88 (N=19) | CULT4 (N=37) | FTE (N=40) | FTEO888 (N=38) | FTEOBCHG (N=36) | MKTCHG (N=35) | MPH3 (N=38) | OM88 (N=19) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | | | | | | | | | | | | | | | | | |
| .0 ! | 1.00 | | | | | | | | | | | | | | | | |
| 15 | 0.14 | 1.00 | | | | | | | | | | | | | | | |
| 12 | 0.36 ! | -0.15 | 1.00 | | | | | | | | | | | | | | |
| 14 ! | 0.46 * | 0.17 | 0.29 | 1.00 | | | | | | | | | | | | | |
| 18 ** | 0.34 ! | -0.21 | 0.07 | 0.36 ! | 1.00 | | | | | | | | | | | | |
| 19 ! | 0.29 | 0.21 | 0.29 | 0.78 ** | 0.49 ** | 1.00 | | | | | | | | | | | |
| 11 * | 0.57 ** | 0.18 | 0.46 * | 0.85 ** | 0.56 ** | 0.89 ** | 1.00 | | | | | | | | | | |
| 11 | 0.16 | -0.17 | 0.11 | 0.26 | 0.37 ! | 0.29 | 0.29 | 1.00 | | | | | | | | | |
| 17 | -0.02 | 0.04 | 0.05 | 0.37 ! | -0.09 | 0.34 | 0.14 | -0.14 | 1.00 | | | | | | | | |
| 16 | -0.14 | -0.06 | 0.05 | 0.26 | -0.07 | 0.29 | 0.21 | -0.03 | 0.22 | 1.00 | | | | | | | |
| 10 | 0.18 | -0.29 | 0.25 | 0.09 | -0.03 | -0.04 | 0.04 | 0.12 | -0.08 | 0.25 | 1.00 | | | | | | |
| 26 | 0.11 | 0.01 | 0.14 | 0.35 ! | 0.26 | 0.33 | 0.34 | 0.44 * | 0.02 | -0.20 | 0.29 | 1.00 | | | | | |
| 11 | 0.15 | -0.02 | -0.06 | 0.14 | -0.03 | 0.11 | 0.13 | 0.17 | -0.07 | 0.17 | 0.18 | 0.19 | 1.00 | | | | |
| 16 | 0.24 | -0.04 | -0.03 | 0.13 | 0.17 | 0.02 | 0.07 | 0.23 | 0.12 | -0.25 | 0.26 | 0.33 | 0.70 ** | 1.00 | | | |
| 16 | 0.05 | 0.02 | -0.24 | 0.09 | 0.19 | 0.09 | 0.03 | -0.14 | -0.09 | 0.06 | -0.29 | -0.34 ! | -0.28 | -0.22 | 1.00 | | |
| 06 | 0.13 | -0.18 | 0.13 | -0.16 | 0.12 | -0.16 | -0.12 | 0.32 | -0.06 | -0.11 | -0.20 | -0.08 | -0.02 | 0.15 | -0.03 | 1.00 | |
| 09 | 0.01 | -0.04 | -0.16 | -0.16 | -0.06 | -0.18 | -0.14 | 0.23 | -0.19 | 0.10 | 0.49 ! | 0.00 | -0.45 | 0.06 | -0.43 | 0.23 | 1.00 |
| 00 | -0.18 | 0.00 | -0.30 | 0.08 | 0.10 | -0.03 | -0.04 | -0.20 | -0.21 | -0.07 | 0.17 | 0.46 ! | 0.20 | 0.10 | -0.26 | -0.32 | -0.27 |
| 20 | 0.06 | 0.23 | 0.21 | 0.21 | 0.21 | 0.39 ! | 0.32 | 0.11 | -0.08 | -0.23 | 0.06 | 0.48 ! | -0.02 | 0.12 | -0.06 | -0.40 ! | 0.20 |
| 19 | 0.11 | 0.12 | 0.06 | 0.22 | 0.24 | 0.32 | 0.27 | 0.28 | 0.04 | -0.32 | 0.17 | 0.47 ! | 0.11 | -0.04 | -0.03 | -0.60 * | -0.06 |
| 05 | 0.08 | 0.38 ! | 0.14 | 0.21 | -0.04 | 0.24 | 0.23 | -0.16 | 0.06 | -0.35 | 0.23 | 0.48 * | 0.19 | 0.04 | -0.25 | -0.61 ** | -0.05 |
| 19 | 0.39 ! | 0.12 | 0.06 | 0.37 | 0.24 | 0.49 * | 0.40 ! | 0.38 ! | 0.37 | -0.11 | 0.31 | 0.45 ! | 0.35 | 0.22 | 0.02 | -0.42 ! | -0.23 |
| 08 | 0.01 | -0.07 | 0.11 | -0.21 | -0.05 | -0.22 | -0.19 | 0.32 | -0.25 | 0.05 | 0.44 | -0.14 | -0.43 | 0.01 | -0.45 | 0.28 | 0.93 |
| 07 | 0.27 | 0.15 | 0.10 | 0.43 ! | 0.10 | 0.33 | 0.34 | -0.01 | 0.31 | 0.08 | 0.31 | 0.52 * | 0.55 * | 0.42 ! | -0.11 | -0.32 | -0.22 |
| 25 | 0.01 | -0.21 | 0.15 | 0.35 | 0.36 | 0.33 | 0.35 | 0.02 | 0.04 | -0.10 | 0.43 ! | 0.68 ** | 0.06 | 0.02 | -0.18 | -0.28 | -0.13 |
| 06 | 0.16 | 0.21 | 0.27 | 0.17 | 0.06 | 0.28 | 0.24 | 0.09 | 0.21 | -0.22 | -0.25 | 0.28 | 0.29 | 0.48 ! | -0.28 | 0.11 | -0.06 |
| 02 | 0.13 | -0.09 | 0.34 | 0.45 | 0.16 | 0.44 ! | 0.43 ! | -0.09 | 0.36 | 0.19 | 0.41 ! | 0.49 * | 0.24 | 0.14 | 0.01 | -0.42 ! | -0.19 |
| 27 | 0.36 | -0.03 | 0.49 * | 0.36 | 0.31 | 0.31 | 0.41 ! | 0.08 | 0.34 | -0.16 | 0.23 | 0.49 * | 0.44 ! | 0.50 * | -0.25 | 0.06 | -0.03 |
| 16 | 0.24 | -0.20 | 0.52 * | 0.29 | 0.35 | 0.30 | 0.36 | 0.12 | 0.22 | -0.16 | 0.29 | 0.44 ! | 0.44 ! | 0.47 ! | -0.21 | 0.11 | 0.00 |
| 23 | 0.34 | -0.06 | 0.45 ! | 0.29 | 0.28 | 0.23 | 0.34 | 0.05 | 0.19 | -0.10 | 0.17 | 0.40 ! | 0.29 | 0.44 ! | -0.25 | 0.19 | -0.11 |
| 24 | 0.30 | -0.06 | 0.39 ! | 0.38 ! | 0.39 ! | 0.42 ! | 0.46 ! | 0.31 | 0.12 | 0.03 | 0.18 | 0.40 ! | 0.01 | 0.13 | -0.13 | 0.12 | 0.16 |
| 23 | -0.27 | -0.15 | -0.45 ! | -0.43 ! | -0.28 | -0.35 | -0.46 ! | 0.00 | -0.22 | 0.07 | -0.02 | -0.34 | -0.11 | -0.26 | 0.09 | -0.02 | 0.11 |
| 22 | -0.19 | -0.11 | 0.22 | -0.13 | -0.08 | 0.02 | -0.10 | -0.12 | 0.06 | 0.49 ! | 0.14 | 0.06 | 0.24 | 0.13 | -0.09 | 0.26 | 0.41 |
| 24 | 0.22 | 0.07 | 0.23 | 0.40 ! | 0.31 | 0.48 * | 0.46 ! | 0.16 | 0.11 | -0.14 | 0.41 ! | 0.66 ** | 0.19 | 0.14 | -0.08 | -0.50 * | -0.07 |
| 21 | 0.40 ! | -0.11 | 0.55 * | 0.36 | 0.34 | 0.35 | 0.45 ! | 0.13 | 0.23 | -0.09 | 0.32 | 0.47 ! | 0.34 | 0.43 ! | -0.29 | -0.40 ! | 0.01 |
| 36 | -0.01 | 0.10 | 0.35 | 0.08 | -0.38 ! | -0.03 | 0.00 | 0.32 | -0.02 | 0.28 | 0.19 | 0.50 * | 0.31 | 0.19 | -0.59 * | 0.16 | 0.13 |
| 23 | 0.38 ! | -0.23 | 0.07 | 0.13 | 0.29 | -0.04 | 0.12 | 0.15 | 0.03 | 0.07 | 0.06 | -0.06 | 0.01 | 0.25 | 0.03 | 0.17 | 0.25 |
| 20 | 0.17 | -0.13 | -0.01 | 0.10 | 0.26 | 0.06 | 0.11 | 0.15 | 0.20 | -0.36 | 0.21 | 0.27 | -0.20 | 0.11 | 0.04 | 0.11 | 0.29 |
| 15 | 0.05 | 0.00 | 0.32 | 0.19 | -0.21 | 0.14 | 0.20 | 0.17 | -0.23 | 0.40 | 0.17 | 0.20 | 0.32 | 0.03 | -0.17 | -0.08 | -0.14 |

| FTE (N=40) | FTEOB88 (N=38) | FTEOBCHG (N=36) | MKTCHG (N=35) | MPH3 (N=38) | CM88 (N=19) | OPSCON (N=29) | OPSFORE (N=29) | OPSMKT (N=29) | OPSMONIT (N=29) | OPSPGMPL (N=29) | ROA88 (N=19) | SPDATA (N=29) | SPDESIGN (N=29) | SPDOC (N=29) | SPGOALS (N=29) | SPPR (N=2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.00 | | | | | | | | | | | | | | | | |
| 0.19 | 1.00 | | | | | | | | | | | | | | | |
| 0.33 | 0.70 ** | 1.00 | | | | | | | | | | | | | | |
| -0.34 ! | -0.28 | -0.22 | 1.00 | | | | | | | | | | | | | |
| -0.08 | -0.02 | 0.15 | -0.03 | 1.00 | | | | | | | | | | | | |
| ! 0.00 | -0.45 | 0.06 | -0.43 | 0.23 | 1.00 | | | | | | | | | | | |
| 0.46 ! | 0.20 | 0.10 | -0.26 | -0.32 | -0.27 | 1.00 | | | | | | | | | | |
| 0.48 ! | -0.02 | 0.12 | -0.06 | -0.40 ! | 0.20 | 0.14 | 1.00 | | | | | | | | | |
| 0.47 ! | 0.11 | -0.04 | -0.03 | -0.60 * | -0.06 | 0.15 | 0.62 ** | 1.00 | | | | | | | | |
| 0.48 * | 0.19 | 0.04 | -0.25 | -0.61 ** | -0.05 | 0.38 ! | 0.59 ** | 0.59 ** | 1.00 | | | | | | | |
| 0.45 ! | 0.35 | 0.22 | 0.02 | -0.42 ! | -0.23 | -0.02 | 0.34 | 0.72 ** | 0.45 ! | 1.00 | | | | | | |
| -0.14 | -0.43 | 0.01 | -0.45 | 0.28 | 0.93 ** | -0.42 | 0.14 | -0.06 | -0.16 | -0.24 | 1.00 | | | | | |
| 0.52 * | 0.55 * | 0.42 ! | -0.11 | -0.32 | -0.22 | 0.51 * | 0.39 ! | 0.37 ! | 0.52 * | 0.51 * | -0.40 | 1.00 | | | | |
| ! 0.68 ** | 0.06 | 0.02 | -0.18 | -0.28 | -0.13 | 0.51 * | 0.22 | 0.26 | 0.49 * | 0.26 | -0.29 | 0.46 ! | 1.00 | | | |
| 0.28 | 0.29 | 0.48 ! | -0.28 | 0.11 | -0.06 | 0.13 | 0.51 * | 0.18 | 0.42 ! | 0.18 | -0.23 | 0.43 ! | 0.06 | 1.00 | | |
| ! 0.49 * | 0.24 | 0.14 | 0.01 | -0.42 ! | -0.19 | 0.27 | 0.22 | 0.31 | 0.56 * | 0.26 | -0.37 | 0.65 ** | 0.70 ** | 0.21 | 1.00 | |
| 0.49 * | 0.44 ! | 0.50 * | -0.25 | 0.06 | -0.03 | 0.22 | 0.32 | 0.31 | 0.31 | 0.31 | -0.24 | 0.66 ** | 0.32 | 0.56 * | 0.41 ! | |
| 0.44 ! | 0.44 ! | 0.47 ! | -0.21 | 0.11 | 0.00 | 0.26 | 0.24 | 0.25 | 0.24 | 0.25 | -0.21 | 0.59 ** | 0.36 | 0.52 * | 0.46 ! | |
| 0.40 ! | 0.29 | 0.44 ! | -0.25 | 0.19 | -0.11 | 0.35 | 0.39 ! | 0.09 | 0.24 | 0.09 | -0.27 | 0.58 ** | 0.29 | 0.60 ** | 0.22 | |
| 0.40 ! | 0.01 | 0.13 | -0.13 | 0.12 | 0.16 | 0.14 | 0.14 | 0.26 | 0.20 | 0.26 | 0.04 | 0.30 | 0.21 | 0.36 | 0.30 | |
| -0.34 | -0.11 | -0.26 | 0.09 | -0.02 | 0.11 | -0.35 | -0.39 ! | -0.23 | -0.36 ! | -0.09 | 0.27 | -0.59 ** | -0.29 | -0.60 ** | -0.36 | - |
| 0.06 | 0.24 | 0.13 | -0.09 | 0.26 | 0.41 | 0.21 | -0.14 | -0.34 | -0.14 | -0.34 | 0.24 | 0.23 | 0.14 | 0.33 | 0.28 | |
| ! 0.66 ** | 0.19 | 0.14 | -0.08 | -0.50 * | -0.07 | 0.37 | 0.66 ** | 0.73 ** | 0.72 ** | 0.72 ** | -0.23 | 0.73 ** | 0.64 ** | 0.37 | 0.64 ** | |
| 0.47 ! | 0.34 | 0.43 ! | -0.29 | -0.40 ! | 0.01 | 0.28 | 0.33 | 0.23 | 0.31 | 0.26 | -0.19 | 0.60 ** | 0.35 | 0.58 * | 0.39 * | |
| 0.50 * | 0.31 | 0.19 | -0.59 * | 0.16 | 0.13 | 0.20 | 0.00 | -0.12 | -0.10 | -0.12 | 0.02 | 0.38 ! | -0.03 | 0.36 | -0.06 | |
| -0.06 | 0.01 | 0.25 | 0.03 | 0.17 | 0.25 | -0.16 | -0.18 | -0.07 | -0.33 | 0.07 | 0.23 | 0.04 | -0.13 | 0.23 | -0.08 | |
| 0.27 | -0.20 | 0.11 | 0.04 | 0.11 | 0.29 | -0.09 | 0.10 | 0.26 | 0.20 | 0.41 ! | 0.28 | 0.26 | 0.39 ! | -0.03 | 0.40 ! | |
| 0.20 | 0.32 | 0.03 | -0.17 | -0.08 | -0.14 | 0.00 | 0.12 | 0.00 | -0.12 | 0.00 | -0.18 | 0.24 | -0.19 | -0.19 | -0.13 | |

| B | SPDATA (N=29) | SPDESIGN (N=29) | SPDOC (N=29) | SPGOALS (N=29) | SPPROC2 (N=29) | SPPROC3 (N=29) | SPPROC4 (N=29) | SPPROC5 (N=29) | SPPROC7 (N=29) | SPSATIS (N=31) | SUMFUNC (N=29) | SUMSP (N=29) | SUPPORT (N=31) | SVCINC (N=39) | SYSTEM (N=40) | TOPDIR (N=31) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ) | | | | | | | | | | | | | | | | |

NOTE:
! denotes p<.05
* denotes p<.01
** denotes p<.001

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | | | | | | |
| 0 | 1.00 | | | | | | | | | | | | | | | |
| 9 | 0.46 ! | 1.00 | | | | | | | | | | | | | | |
| 3 | 0.43 ! | 0.06 | 1.00 | | | | | | | | | | | | | |
| 7 | 0.65 ** | 0.70 ** | 0.21 | 1.00 | | | | | | | | | | | | |
| 4 | 0.66 ** | 0.32 | 0.56 * | 0.41 ! | 1.00 | | | | | | | | | | | |
| 1 | 0.59 ** | 0.36 | 0.52 * | 0.46 ! | 0.93 ** | 1.00 | | | | | | | | | | |
| 7 | 0.58 ** | 0.29 | 0.60 ** | 0.22 | 0.79 ** | 0.73 ** | 1.00 | | | | | | | | | |
| 4 | 0.30 | 0.21 | 0.36 | 0.30 | 0.65 ** | 0.69 ** | 0.45 ! | 1.00 | | | | | | | | |
| 7 | -0.59 ** | -0.29 | -0.60 ** | -0.36 | -0.79 ** | -0.73 ** | -0.86 ** | -0.60 ** | 1.00 | | | | | | | |
| 4 | 0.23 | 0.14 | 0.33 | 0.28 | 0.23 | 0.46 ! | 0.28 | 0.34 | -0.28 | 1.00 | | | | | | |
| 3 | 0.73 ** | 0.64 ** | 0.37 | 0.64 ** | 0.56 * | 0.51 * | 0.48 * | 0.41 | -0.51 * | -0.03 | 1.00 | | | | | |
| 9 | 0.60 ** | 0.35 | 0.58 * | 0.39 * | 0.90 ** | 0.91 ** | 0.87 ** | 0.78 ** | -0.83 ** | 0.42 | 0.57 * | 1.00 | | | | |
| 2 | 0.38 ! | -0.03 | 0.36 | -0.06 | 0.38 | 0.43 | 0.43 | 0.12 | -0.23 | 0.49 * | 0.04 | 0.40 | 1.00 | | | |
| 3 | 0.04 | -0.13 | 0.23 | -0.08 | 0.38 ! | 0.33 | 0.26 | 0.10 | -0.14 | 0.02 | -0.11 | 0.25 | 0.04 | 1.00 | | |
| 8 | 0.26 | 0.39 ! | -0.03 | 0.40 ! | 0.20 | 0.15 | 0.11 | 0.03 | -0.11 | -0.15 | 0.41 ! | 0.15 | -0.18 | 0.21 | 1.00 | |
| 8 | 0.24 | -0.19 | -0.19 | -0.13 | 0.24 | 0.17 | 0.30 | 0.00 | -0.06 | 0.09 | 0.04 | 0.20 | 0.58 ** | -0.05 | -0.29 | 1.00 |

Multiple performance measures were collected covering productivity, changes in the number of services offered, market share and financial health. Below, results are grouped by type of performance measure reported.

### 6.2.1 Productivity

Productivity measures included changes in admissions per FTE (AFTECHG) between 1983 and 1988, changes in FTEs per occupied bed (FTEOBCHG), admissions per FTE in 1988 (AFTE88) and FTEs per occupied bed in 1988 (FTEOB88). Bivariate correlation analysis did not support the hypothesis for either the measures of change in productivity over the study period or for productivity in 1988. However, the relationship between measures of productivity and other performance measures, i.e., market share and profitability, were noted.

Increases in admissions per FTE (AFTECHG), reflections of increases in productivity, were inversely related to planning involvement in facility development (CHG5, $r=-.36$, $p < .05$) as well as to facility development itself (CHANGE5, $r=-.37$, $p < .05$). That is, increases in this measure of productivity were likely not to be in conjunction with building programs, whether or not planning was involved. One plausible explanation is that disruption resulting from construction, especially renovation projects, may inhibit productivity.

In addition, AFTECHG was inversely related to the number of perceived competitors (COMPET, r=-.42, p <.05), the "action-oriented" culture (CULT4, r= -.34, p <.05), the number of full-time equivalents dedicated to planning (FTE, r=-.50, p <.01), and the preparation of a strategic planning document (SPDOC, r= -.40, not significant). Although not statistically significant, the relationship between AFTECHG and SPDOC is notable because of the strength of the relationship, i.e., 16% of the variation in SPDOC can be attributed to its linear regression with AFTECHG.

The one positive and statistically significant relationship with AFTECHG was with another performance measure, changes in market share (MKTCHG, r=.42, p<.05). That is, increases in productivity as reflected by admissions per FTE, were likely to be associated with increases in market share.

Increases in the number of FTEs per occupied bed (FTEOBCHG), a measure of reduced productivity over the study period, were not associated with planning involvement in specific changes, but were related to planning processes and functions, including: the production of a strategic plan document (SPDOC, r=.48, p<.05), the preparation of environmental and competitive assessments (SPPROC2, r=.50, p<.01), the preparation of internal analyses, portfolio analyses, analyses

of strengths and weaknesses (SPPROC3, $r=.47$, $p<.05$), the use of formal retreats and subcommittees for strategic planning (SPPROC4, $r=.44$, $p<.05$), the summary measure of the number of process elements employed (SUMSP, $r=.43$, $p<.05$), and the planner's efforts in supplying data for the strategic planning process (SPDATA, $r=.42$, $p<.05$). That is, increased manpower levels in relation to inpatient occupancy were associated with planning activity, but not with acknowledged outcomes of that activity. One possible explanation is that the planning process may contribute to the development of programs and activities requiring manpower, even though these activities may not have been considered "strategic change" by respondents. Further, advanced technology (e.g., magnetic resonance imaging, lithotripsy, etc.) require increases in manpower without a corresponding increase in hospitalization. Trends toward outpatient rather than inpatient care would contribute towards deterioration of productivity, as measured by FTEs per occupied bed (FTEOBCHG).

Surprisingly, the relationships between FTEOBCHG and ACUITY and BEDSIZE were quite weak. The expectation was that the increases in FTEs per occupied bed would have been greater in larger, more complex facilities.

The relationships between admissions per FTE in 1988 (AFTE88) and various measures of planning involvement in change or

specific changes themselves were inconsequential. However, AFTE88 was inversely related to hospital size (BEDSIZE, $r=-.41$, $p<.05$) indicating that productivity may actually be sacrificed in the larger facilities. The relationship between AFTE88 and ACUITY, the proxy measure for complexity, however, was quite weak.

In terms of planning activities, AFTE88 was inversely related to planner involvement in data collection for strategic planning (SPDATA, $r=-.45$, $p<.05$), but positively related to top management's active leadership role in the strategic planning process (TOPDIR, $r=.52$, $p<.01$). AFTE88 was also positively related to profitability in 1988, reflected in the operating margin (OM88, $r=.57$, $p<.05$) and return on assets (ROA88, $r=.64$, $p<.01$).

A final productivity measure, FTEs per occupied bed in 1988 (FTEOB88), was related to a variety of planning functions and processes, including: providing data for strategic planning (SPDATA, $r=.55$, $p<.01$); preparation of environmental assessments (SPPROC2, $r=.44$, $p<.05$) and preparation of internal assessments (SPPROC3, $r=.44$, $p<.05$). A possible explanation for these findings may be that the functions and processes carried out had resulted in the development of programs which required additional personnel.

AFTECHG, FTEOBCHG, AFTE88 and FTEOB88 are interrelated measures, a reflection of their derivation from the same base, i.e., the total number of FTEs employed at the sample hospitals and the number of admissions. By definition, AFTECHG and AFTE88 are inversely related to FTEOBCHG ($r=-.66$, $p<.001$ and $r=-.34$, $p<.05$, respectively) and FTEOB88 ($r=-.39$, $p<.05$ and $r=-.75$, $p<.001$, respectively). Simply stated, the more admissions per FTE, the fewer FTEs per occupied bed.

### 6.2.2 Changes in the Number of Services Offered

The increase in the number of services offered (SVCINC) was related to the number of types of strategic change reported (CHANSCR, $r=.38$, $p<.05$), as one might expect, and to the strategic planning process involving the preparation of internal analyses, etc. (SPPROC2, $r=.38$, $p<.05$), but not to planning involvement in specific changes. For this measure, the hypothesis was not supported.

### 6.2.3 Market Share

Bivariate correlation analysis of changes in market share did not support the hypothesis. There was some evidence that planning as a structured activity is at odds with increases in market share. Specific findings are reported below.

Change in market share (MKTCHG) was inversely related to the planning support score (SUPPORT, $r=-.59$, $p<.01$), indicating

that the greater the increase in market share, the lower the support for planning, as defined in terms of CEO satisfaction with strategic planning, the CEO's role in directing strategic planning, human resources committed to planning, reporting relationships, and the CEO's perceptions of the contributions of strategic planning. (Refer to Table 5.8 for support score derivation).

Also, change in market share (MKTCHG) was inversely related to two of the profitability measures: operating margin in 1988 (OM88, $r=-.43$) and return on assets in 1988 (ROA88, $r=-.44$). Neither of these relationships was statistically significant due to the small sample size (N=15), but the strength of the relationships was quite high with the correlation coefficients in excess of .40. That is, 18-19% of the variation in market share changes can be attributed to the linear regression with the profitability measures operating margin in 1988 and return on assets in 1988. The importance of the finding is the reality that performance is a complex phenomenon. Gains in market share may impact profitability in the short term and, if not managed, may also impact profitability in the long term as well.

Other noteworthy relationships with changes in market share are the inverse relationships with the number of FTES on the planning staff (FTE, $r=-.34$, $p<.05$) and the size of the

hospital as measured by the number of acute care beds (BEDSIZE, r=-.38, p<.05). That is, smaller hospitals and those with fewer planning staff were more likely to experience increases in market share than their larger counterparts.

### 6.2.4 Financial Health

Bivariate correlation analysis of financial measures did not support the hypothesis. In fact, operating margin in 1988 (OM88) and return on assets in 1988 (ROA88) [4] were inversely related to planning involvement in changes in management orientation (CCHG6, r=-.49 and -.51 respectively, p <.05 for both). Not surprisingly, both of these measures of profitability were related to higher levels of productivity as measured by admissions per FTE in 1988 (AFTE88, r=.57, p<.05 and r=.64, p<.01 respectively). Productivity was an important contributor to profitability.

The 1988 operating margin (OM88) was related to the "action oriented" culture (CULT4, r=.49, p<.05). For ROA88, the relationship between the "action oriented" culture was robust, r=.44, but not statistically significant.

Several robust relationships (i.e., r greater than or equal to .40) with OM88 and ROA88 did not achieve statistical

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[4] Note that the relationship between OM88 and ROA88 is multicollinear, r=.93, p<.001.

significance due to the small sample size (N no greater than 19). Among these are the inverse relationship with 1988 productivity measure of FTEs per occupied bed (FTEOB88, r=-.45 and -.43, respectively) and the inverse relationships with changes in market share (MKTCHG, r=-.43 and r=-.45, respectively).

Profitability as measured by operating margin in 1988 was positively related to CEO satisfaction with strategic planning (SPSATIS, r=.41). Return on assets in 1988 (ROA88) was inversely related to hospital size (BEDSIZE, r=-.45), planning functions including facilities planning and Certificate of Need preparation (OPSCON, r=-.42), and data generation for the strategic planning process (SPDATA, r=-.40).

In terms of measures of liquidity, the current ratio (CR88) was related to CEO satisfaction with strategic planning (SPSATIS, r=.49, p<.05). Although not statistically significant, the relationship between the current ratio and top management's active leadership role in strategic planning (TOPDIR) was robust, r=.40.

### 6.2.5 An Alternative Test of Hypothesis 1

The number of cases available for calculation of the correlations varied from as few as 15 cases to as many as

40 [5]. Given the fact that correlations involving small samples are quite variable (Snedcor and Cochran, 1980: 178), an additional bivariate technique was employed to test the hypothesis. By categorizing the data, cross-classification analysis was possible, with chi-square selected as the relevant statistic because it is less sensitive to sample size the Pearson correlations.

Categorized performance measures are presented in Table 6.2 and reflect improvement or deterioration of performance change measures and negative or positive 1988 performance measures. These categorizations were used in the cross-classification analysis.

Chi-square analysis was used to determine whether a relationship existed between two variables by comparing observed and expected frequencies. A large value for chi-square (3.84 or larger for 1 degree of freedom) meant that the probability of achieving a larger value was less than 5%, i.e., unlikely by chance alone.

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[5] Due to the variability of N, pairwise correlations were performed. At most, the number of cases used in the calculation would be the number of cases for the variable with the smaller N. Example: MKTCHG (N=35) with BEDSIZE (N=40) involved 35 cases. At the least, N would be $[40-(x^m + y^m)]$ where $x^m$ = number of missing cases from x and $y^m$ = number of missing cases from y. Example: MKTCHG ($x^m = 5$) with TOPDIR ($y^m = 9$). Actual N=28, but it could have been as low as [40-(5+9)] = 26 if there had not been 2 overlapping cases.

## TABLE 6.2

## SUMMARY OF CATEGORIZED PERFORMANCE MEASURES

A. CHANGE MEASURES:

| Variable | Changes in... | (N) | Percent Deteriorating or Decreasing | (Range) | Percent Improving or Increasing | (Range) |
|---|---|---|---|---|---|---|
| AFTECHG | Admissions per FTE | (36) | 50.0% | (-6.54 to -.74) | 50.0% | (-.66 to 4.36) |
| FTEOBCHG | FTE per Occupied Bed | (36) | 50.0% | (-1.01 to .60) | 50.0% | (.65 to 4.28) |
| MKTCHG | Market Share | (35) | 48.6% | (-9.52 to -.38) | 51.4% | (.13 to 9.60) |
| SVCINC | Services Offered | (39) | 41.0% | (-10 to 0) | 59.0% | (1 to 16) |

B. 1988 PERFORMANCE MEASURES (a):

| | Performance in 1988... | | | | | |
|---|---|---|---|---|---|---|
| OM88 | Operating Margin | (19) | 47.4% | (0% or less) | 52.6% | (Greater than 0%) |
| ROA88 | Return on Assets | (19) | 42.1% | (0% or less) | 52.6% | (Greater than 0%) |
| CR88 | Current Ratio | (19) | 47.4% | (Less than 2.0%) | 52.6% | (2.0 or Greater) |
| AFTE88 | Admissions per FTE | (38) | 44.7% | (Less than 10) | 55.3% | (Greater than 0) |
| FTEOB88 | FTE per Occupied Bed | (38) | 44.7% | (5.5 or less) | 55.3% | (5.6 or more) |

a. AT88 eliminated from explanatory analysis because of limited variability. DE88 eliminated because results were not interpretable, i.e., a higher or lower debt/equity ration is neither inherently good or bad. Viewed alone, or in comparison with other hospitals at one point in time, it has little meaning. The measure DECHG was eliminated due to lack of data (N=9).

Table 6.3 summarizes the chi-square analysis of the performance measures with various aspects of planning involvement with change. Hypothesis 1 was partially supported using this analytic approach. Planning involvement in cost control, managing risk, downsizing, efficiency (CHG1) and management orientation or change in corporate culture (CCHG6) were observed to a greater extent than expected with respect to productivity as measured by admissions per FTE (AFTECHG). Also, planning involvement in mergers/acquisitions or corporate restructuring (CHG2) was observed to a greater extent than expected with respect to profitability in 1988, as measured by operating margin (OM88). However, from Table 6.1, the correlation matrix, it is apparent that the direction of the relationships between CCHG6 and AFTECHG and between CHG2 and OM88 were inverse. Therefore, only the chi-square results involving the interdependence between cost control/managing risk (CHG1) and increases in productivity (AFTECHG) support the hypothesis.

Planning involvement in change was found to be independent of the other change measures, i.e., FTEOBCHG, MKTCHG, SVCINC, and of all 1988 performance measures, i.e., ROA88, CR88, AFTE88, and FTEOB88.

## TABLE 6.3

## CHI-SQUARE ANALYSIS OF HYPOTHESIS 1: CROSSTABULATIONS OF PLANNING INVOLVEMENT WITH...

| Planning Involvement In: | Cost Control, Managing Risk, Downsizing, etc. | Merger/Acq., Corporate Reorganization | Distribution System Development | Bricks & Mortar, Facility Development | Or Change |
|---|---|---|---|---|---|
| BY... | CHG1 | CHG2 | CHG4 | CHG5 | |
| AFTECHG: Changes in Admissions per FTE | | | | | |
| Chi-Square | 4.53 | 0.00 | 0.47 | 1.83 | |
| p value | 0.03 * | 1.00 | 0.49 | 0.18 | |
| FTEOBCHG: Changes in FTEs per Occupied Bed | | | | | |
| Chi-Square | 1.13 | 0.81 | 1.89 | 0.26 | |
| p value | 0.29 | 0.37 | 0.17 | 0.61 | |
| MKTCHG: Changes in Market Share | | | | | |
| Chi-Square | 0.04 | 1.33 | 0.33 | 0.38 | |
| p value | 0.85 | 0.25 | 0.57 | 0.54 | |
| SVCINC: Changes in # of Services | | | | | |
| Chi-Square | 0.17 | 0.15 | 2.37 | 0.37 | |
| p value | 0.68 | 0.69 | 0.12 | 0.54 | |
| OM88: Operating Margin | | | | | |
| Fisher's Exact Test (a) | 0.21 | 0.05 * | 0.59 | 0.33 | |
| ROA88: Return on Assets | | | | | |
| Fisher's Exact Test | 0.16 | 0.09 | 0.61 | 0.43 | |
| CR88: Current Ratio | | | | | |
| Fisher's Exact Test | 0.74 | 0.33 | 0.59 | 0.25 | |
| AFTE88: Admissions per FTE in 1988 | | | | | |
| Chi-Square | 0.13 | 1.85 | 0.11 | 1.38 | |
| p value | 0.72 | 0.17 | 0.74 | 0.24 | |
| FTEOB88: FTEs per Occupied Bed in 1988 | | | | | |
| Chi-Square | 0.06 | 0.09 | 0.45 | 0.29 | |
| p value | 0.81 | 0.76 | 0.50 | 0.59 | |

1 degree of freedom

* $p<.05$

(a) When $N<20$, Fisher's Exact Test was used instead of Chi-Square.

| ıtion /stem ɔment | Bricks & Mortar, Facility Development | Management Orientation, Change in Culture | Number of Changes with Planning Involvement |
|---|---|---|---|
| CHG4 | CHG5 | CCHG6 | CHGSCR |
| 0.47 | 1.83 | 4.73 | 0.12 |
| 0.49 | 0.18 | 0.03 * | 0.72 |
| 1.89 | 0.26 | 0.11 | 3.11 |
| 0.17 | 0.61 | 0.74 | 0.08 |
| 0.33 | 0.38 | 0.16 | 0.07 |
| 0.57 | 0.54 | 0.69 | 0.80 |
| 2.37 | 0.37 | 0.23 | 2.01 |
| 0.12 | 0.54 | 0.63 | 0.14 |
| 0.59 | 0.33 | 0.45 | 0.59 |
| 0.61 | 0.43 | 0.34 | 0.61 |
| 0.59 | 0.25 | 0.55 | 0.59 |
| 0.11 | 1.38 | 0.16 | 0.03 |
| 0.74 | 0.24 | 0.69 | 0.86 |
| 0.45 | 0.29 | 0.53 | 0.21 |
| 0.50 | 0.59 | 0.47 | 0.65 |

### 6.2.6 Multivariate Approach Using Discriminant Function Analysis

While Hypothesis 1 was partially supported through chi-square analysis of changes in one performance measure, (AFTECHG), it is important to recognize that performance is a complex phenomenon. Following the recommendation of Ramanujam and Venkatraman (1987), multivariate methods were also used in an attempt to address the multidimensional nature of performance and planning involvement in change.

Discriminant function analysis was employed, with the performance measures (AFTECHG, FTEOBCHG, MKTCHG, SVCINC, AFTE88, FTEOB88, OM88, ROA88, and CR88) included as the classification (dependent) variables. Criterion (independent) variables were selected in a stepwise manner from a pool of variables reflecting the model and taking into consideration availability of data [6]. The pool of potential criterion variables included BEDSIZE, COMPET, CULT4, MPH3, CHG1, CHG2, CHG4 and CHG5.

With discriminant function analysis, linear combinations of the criterion (independent) variables that best distinguish between cases of the classification (dependent) variable were found. Stepwise selection of criterion variables was used to

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[6] Included were criterion variables where N=37-40 cases. Excluded were variables directed to only Planners (N=29) or only CEOs (N=30).

enter variables into the analysis on the basis of their ability to maximize the discrimination between categories of the dependent variable.

Tables 6.4 and 6.5 summarize the results achieved using AFTECHG as an example of the process followed. First, criterion variables for inclusion were selected using the SAS [7] procedure STEPDISC. Only one variable, planning involvement in cost control, managing risk, etc. (CHG1), was identified as the best discriminator between the two categories of AFTECHG. This finding was consistent with the chi-square analysis. Appropriate statistics from the STEPDISC analysis include Wilks' Lambda, a test for the statistical significance of discriminating information not already accounted for by previously included variables, and $Eta^2$, a measure of the strength of association between the independent and dependent variables which indicate for each independent variable the proportion of variation in the dependent variable explained. These measures are complementary, i.e., Lambda = 1- $Eta^2$.

Stepwise selection of CHG1 as a discriminating variable for categories of AFTECHG yielded the following results:

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[7] SAS is a software system for data analysis developed by the SAS Institute, Inc.

**TABLE 6.4**

**STEPWISE DISCRIMINANT FUNCTION ANALYSIS OF AFTECHG**
**Selected Statistics**

| Criterion Variable | Wilks' Lambda | $Eta^2$ |
|---|---|---|
| CHG1 | .8242 | .1758 |

CHG1 was relatively weak as a discriminating variable. While it maximized the separation between categories of AFTECHG, it explained only 17.6% of the variation in AFTECHG. Conversely, variables not included accounted for 82.4%.

The next step involved using planning involvement in cost control, managing risk, etc. (CHG1) in the SAS procedure DISCRIM to determine the accuracy of the classification and the resulting improvement in prediction of classification based on the knowledge of the single criterion variable. The results are summarized in Table 6.5. The improvement in classification after invoking the discriminating variable CHG1 was 50% for deteriorating performance in AFTECHG but -26.47% for improved performance, with 61.8% of the cases correctly classified. That is, while knowledge of CHG1 greatly improved chances of correctly predicting decreases in productivity measured by AFTECHG, it decreased chances of correctly predicting increases in productivity.

TABLE 6.5

SUMMARY OF DISCRIMINANT FUNCTION ANALYSIS FOR AFTECHG
NUMBER OF OBSERVATIONS AND PERCENT CLASSIFIED....

| | into AFTECHG | | |
|---|---|---|---|
| | Group 1 Performance Deteriorated | Group 2 Performance Improved | |
| from AFTECHG | | | |
| Group 1 | 17 (100.0%) | 0 (00.0%) | 100% |
| Group 2 | 13 ( 76.5%) | 4 (23.5%) | 100% |

Correctly Classified: (17+4)/34=61.8%
Group 1 Improvement in Prediction: 100.0% - 50.0% = 50.0%
Group 2 Improvement in Prediction: 23.5% - 50.0% = -26.5%

TABLE 6.6

STEPWISE DISCRIMINANT FUNCTION ANALYSIS
SELECTED STATISTICS

| Classification Variables | Criterion Variables | Wilks' Lambda | $Eta^2$ |
|---|---|---|---|
| FTEOBCHG | NO VARIABLES SELECTED | | |
| MKTCHG | NO VARIABLES SELECTED | | |
| SVCINC | CHG4 | .8918 | .1082 |
| | MPH3 | .7915 | .2085 |
| AFTE88 | BEDSIZE | .9188 | .0872 |
| | CHG2 | .7873 | .2127 |
| FTEOB88 | MPH3 | .9128 | .0872 |
| | COMPET | .7676 | .2324 |
| OM88 | CHG2 | .7846 | .2154 |
| | CHG1 | .6623 | .3377 |
| ROA88 | CULT4 | .6182 | .3818 |
| | MPH3 | .4863 | .5137 |
| CR88 | COMPET | .7580 | .2420 |

Analysis of the remaining performance measures was performed in the same manner as AFTECHG. Results are summarized in Tables 6.6 and 6.7.

For the variables FTEOBCHG, changes in FTEs per occupied bed, and MKTCHG, changes in market share, the pool of criterion variables included none which met the statistical test for selection, e.g., $p<.15$. Simply stated, the pool of criterion variables provided no good discriminators for FTEOBCHG and MKTCHG. For the remaining classification variables, the stepwise selection resulted in identification of one to two criterion variables reflecting many aspects of the conceptual model. The relationships ranged from weak (e.g., BEDSIZE, number of acute care beds, explained only 9% of the variation in AFTE88) to robust (e.g., CULT4, "action-oriented" culture, explained 38% of the variation in ROA88).

The management philosophy espousing decentralized decision-making (MPH3), reported by 21% of the respondents, was selected as a criterion variable for three of the classification variables (SVCINC, FTEOB88, AND ROA88). The recurrence of this variable, more than the strength of the resulting relationships, suggests its importance. Similarly, planning involvement in mergers/acquisitions (CHG2) and the perceived number of competitors (COMPET) were each selected twice, in relation to productivity and profitability measures.

TABLE 6.7

DISCRIMINANT FUNCTION ANALYSIS RESULTS
CLASSIFICATION ACCURACY AND IMPROVEMENT IN PREDICTION

| Classification Variables (Criterion Variables) | Accuracy of Classification | Improvement in Prediction Group 1 Deterioration | Group 2 Improvement |
|---|---|---|---|
| SVCINC (CHG4, MPH3) | 69.4% | 7.0% | 27.3% |
| AFTE88 (BEDSIZE, CHG2) | 80.6% | 23.3% | 35.7% |
| FTEOB88 (MPH3, COMPET) | 65.7% | 37.5% | -26.3% |
| OM88 (CHG2, CHG1) | 68.4% | 50.0% | -10.0% |
| ROA88 (CULT4, MPH4) | 88.2% | 33.3% | 40.9% |
| CR88 (COMPET) | 78.9% | 5.6% | 50.0% |

Of particular relevance to the hypothesis are findings related to operating margin (OM88). Planning involvement in mergers/acquisitions (CHG2) and cost control, managing risk (CHG1) were the two criterion variables selected to discriminate between deteriorating versus improving profitability. Contrary to the hypothesis, CHG2 and CHG1 were associated with deteriorating performance. A plausible view is that the health care business environment is deteriorating generally. Steps taken to strengthen the hospital with merger/acquisitions (CHG2) or to mitigate the impact of the hostile business environment with cost cont. measures (CHG1)

are not likely to result in improve short-term profitability as indicated by OM88. For OM88, substantial improvement in prediction of deteriorating performance was possible through stepwise selection of criterion variables. However, the ability to predict improved performance suffered. In a deteriorating environment, the ability to predict performance deterioration will be greater than for improved performance.

Overall, discriminant function analysis provided support for the model. That is, different aspects of the model were important variables in the prediction of improving or deteriorating performance. Hospital size, aspects of planning context (e.g., decentralized decision-making and "action-oriented" culture), aspects of environmental hostility (e.g., perceived competition), as well as planning involvement with three types of strategic change, were all important variables in describing the dynamics of performance. Further, while not a direct means of testing the hypothesis, modest support for the hypothesis was provided by the findings that planning involvement in distribution system development was the best discriminating variable for increases in the number of services offered. Two findings related to profitability were contrary to the hypothesis. Given the small sample sizes involved in the analyses, however, caution must be exercised. Stevens (1986:259) has noted that small samples may result in instability of results.

### 6.2.7 Concluding Remarks for Hypothesis 1: Is Planning Related to Performance?

Bivariate correlation analysis did not support the hypothesis in terms of any of the performance measures. However, this analysis highlighted inter-relationships among performance measures. Chi-square analysis afforded limited support for the hypothesis. Specifically, planning involvement in cost control and managing risk was found to be related to increased productivity as measured by changes in admissions per FTE over the study period.

Multivariate analysis supported the model, and provided modest support for the hypothesis.

Overall, the hypothesis was modestly supported for some performance measures (increases in services offered and productivity) and not supported for others (changes in market share and profitability).

## 6.3 Hypothesis 2

**H2: The more support evident for strategic planning, the more likely that planning will be involved in strategic change.**

In the literature review, it was noted that top management support of strategic planning has been cited as a key to success of planning systems, or, rather, lack of support is a key to failure. To carry the notion of the importance of top

management support for strategic planning one step further, this research posited that support was linked to the perceived role planning played in change. The perspective of the CEOs, not the Planners, formed the basis for testing this hypothesis. As a result, the number of cases available for analysis was reduced, with a maximum of 31. In consideration of the size of this subsample, only bivariate methods were used.

### 6.3.1 The SUPPORT Score

Correlation analysis, as presented in Table 6.1, partially supported the hypothesis. The relationship between CEO support of strategic planning, as measured through the support score (SUPPORT), and the measures of planning involvement in change varied considerably. For three of the five measures, e.g., planning involvement in cost control (CHG1), distribution system development (CHG4), and changes in corporate culture (CCHG6), the relationships were quite weak, ranging from $r=-.08$ to $r=.10$. The relationship between SUPPORT and mergers/acquisitions and corporate reorganizations (CHG2) was moderate ($r=.35$) though not statistically significant. SUPPORT and "bricks and mortar" or facility development (CHG5) were <u>inversely</u> related ($r=-.38$, $p<.05$).

Chi-square analysis of SUPPORT provided a slightly different picture. A summary of cross-tabulations between SUPPORT and

CHGSCR, the sum of the changes reported in which planning was involved, as well as between SUPPORT and individual measures indicating planning involvement with particular changes is presented in Table 6.8. According to the hypothesis, hospitals in which medium or high support for planning was expressed by the CEO should yield higher scores or totals of the number of changes in which planning was involved (CHGSCR) than would be the case in hospitals in which support was low.

**TABLE 6.8**

**CHI-SQUARE ANALYSIS OF HYPOTHESIS 2: CROSSTABULATIONS OF SUPPORT WITH... (N=30)**

| Variable | Description of Planning Involvement | Chi-Square | Significance |
|---|---|---|---|
| CHGSCR | Number of changes | .74 | .39 NS |
| CHG1 | Cost control, managing risk, downsize, efficiency | 1.93 | .16 NS |
| CHG2 | Merger/acquisition, corporate reorganization | 3.47 | .06 NS |
| CHG4 | Distribution system development, new services and markets | .01 | .92 NS |
| CHG5 | Facility development | 3.14 | .08 NS |
| CCHG6 | Management orientation, change in corporate culture | 2.91 | .09 NS |

1 degree of freedom
NS Not Significant

The number of changes in which planning was involved and CEO support for strategic planning were independent. While statistical significance was not achieved the crosstabulation results involving SUPPORT and mergers/acquisitions (CHG2) and

facility development (CHG5) yielded chi-square values in excess of 3.

To further evaluate the underpinnings of CEO support for strategic planning, other aspects of the conceptual model were considered. SUPPORT was positively related to both the number of services reflecting capability to care for high risk and high acuity patients (ACUITY, $r=.34$, $p<.05$) and to the size of the hospital (BEDSIZE, $r=.49$, $p<.01$) [8]. That is CEOs of larger, more complex facilities were more likely to express greater support for strategic planning.

These were also the types of facilities characterized by:

- o perceptions of greater degrees of competition (ACUITY, COMPET, $r=.45$, $p<.01$);
- o a corporate culture described in terms of action orientation, competence and quality (ACUITY, CULT4, $r=.35$, $p<.05$);
- o a greater degree of planning involvement in strategic change (BEDSIZE, CHGSCR, $r=.40$, $p<.05$);
- o more likely to report planning involvement in mergers/acquisitions and corporate reorganization (BEDSIZE, CHG2, $r=.37$, $p<.05$);
- o more likely to report planning involvement in changes in management orientation and corporate culture (ACUITY, CCHG6, $r=.41$, $p<.05$);

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[8] BEDSIZE and ACUITY are related ($r=.42$, $p<.01$). That is, the larger facilities tend to offer more of the high technology services counted in the acuity measure, i.e., cardiac intensive care, open heart surgery, other intensive care, burn care, emergency department, certified trauma center, and neonatal intensive care.

o more likely to report a wide range of planning functions and processes, as reflected in the number of functions reported (BEDSIZE, SUMFUNC, r=.51, p<.01) and in the number of strategic planning processes employed (BEDSIZE, SUMSP, r=.51, p<.01), as well as individual functions and processes, including:

| | |
|---|---|
| Program planning (OPSPGMPL) | r=.43, p<.05 |
| Data for strategic planning (SPDATA) | r=.57, p<.01 |
| Environmental assessments (SPPROC2) | r=.50, p<.01 |
| Internal assessments (SPPROC3) | r=.47, p<.05 |
| Formal retreats (SPPROC4) | r=.39, p<.05 |
| Issue identification (SPPROC5) | r=.39, p<.05 |
| Market research (BDMKT) | r=.47, p<.01 |

These were also the types of facilities least likely <u>not</u> to have an established strategic planning process (BEDSIZE, SPPROC7, r=-.42, p<.05).

Other direct relationships with SUPPORT merit discussion. SUPPORT was related to the planning function of data collection for strategic planning (SPDATA, r=.38, p<.05). Three other relationships of note involved SUPPORT and specific planning processes. Both the use of internal assessments to identify strengths and weaknesses (SPPROC3, r=.43) and formal planning retreats and working sessions (SPPROC4, r=.43) demonstrated fairly strong relationships with the support score, though, due to sample size, the relationships were not statistically significant. Similarly, the total number of planning processes employed (SUMSP, r=.40) demonstrated a robust relationship. Finally, SUPPORT was <u>inversely</u> related to changes in market share over the study period (MKTCHG, r=-.59, p<.01).

Other statistically significant relationships were confounded, i.e., scores related to the elements which contributed to the scores, e.g., SUPPORT with SPSATIS (r=.49, p,.01), TOPDIR (r=.58, p<.001), and FTE (r=.50, p<.01).

### 6.3.2 Elements of SUPPORT

Of interest are the findings related to each element of the support score. CEO satisfaction with strategic planning (SPSATIS) was related to financial health as measured by the current ratio, a measure of liquidity, (CR88, r=.49, p<.01) and operating margin, a measure of profitability, (OM88, r=.41, not significant)[9]. Additionally, SPSATIS was related to the planning process which encompasses internal assessments, portfolio analysis, strengths and weaknesses (SPPROC3, r=.46, p<.01).

Similarly, top management's active role in directing the strategic planning process (TOPDIR) was related to admissions per FTE in 1988 (AFTE88, r=.52, p<.01), a productivity measure, and to the current ratio (CR88, r=.40, not significant).

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[9] As mentioned previously, results which are not statistically significant are cited when r is greater than or equal to .40, due to the strength of the relationship and recognition that, with a larger sample, the relationship would have achieved statistical significance.

The variable FTE, the number of full-time equivalents on the planning staff, another element of the SUPPORT score, was inversely related to changes in market share (MKTCHG, $r=-.34$, $p<.05$). In addition, FTE was related to most of the planning functions and processes cited, including:

| | |
|---|---|
| Sum of functions (SUMFUNC) | $r=.66$, $p<.001$ |
| Facilities planning (OPSCON) | $r=.46$, $p<.05$ |
| Forecasting (OPSFORE) | $r=.48$, $p<.05$ |
| Market share analysis (OPSMKT) | $r=.47$, $p<.05$ |
| Monitor operations (OPSMONIT) | $r=.48$, $p<.01$ |
| Program planning (OPSPGMPL) | $r=.45$, $p<.05$ |
| Data for strategic planning (SPDATA) | $r=.52$, $p<.01$ |
| Design planning process (SPDESIGN) | $r=.68$, $p<.001$ |
| Develop goals/document (SPGOALS) | $r=.49$, $p<.01$ |
| Sum of processes (SUMSP) | $r=.47$, $p<.05$ |
| Environmental assessment (SPPROC2) | $r=.49$, $p<.01$ |
| Internal assessment (SPPROC3) | $r=.44$, $p<.05$ |
| Formal retreats (SPPROC4) | $r=.40$, $p<.05$ |
| Issue identification (SPPROC5) | $r=.40$, $p<.05$ |

### 6.3.3 Concluding Remarks for Hypothesis 2: What Leads to Planning Involvement in Strategic Change?

The hypothesis was partially supported. CEO support of strategic planning was related to actual planning involvement in a specific strategic change, i.e., mergers/acquisitions and corporate restructuring. CEO support of strategic planning was more likely to be related to planning processes and functions than to planning involvement in specific changes.

Certain elements of the support score appeared important. Specifically, financial health was related to both satisfaction with strategic planning and top management's role in directing the strategic planning process.

## TABLE 6.9

## WHAT VARIABLES ARE RELATED TO PLANNING INVOLVEMENT IN STRATEGIC CHANGE?

| | Planning Involvement in... Cost Control, Managing Risk, Downsizing, etc. | Merger/Acq., Corporate Reorganization | Distribution System Development | Bricks & Mortar, Facility Development | Management Orientation, Culture Change | Number with In |
|---|---|---|---|---|---|---|
| | CHG1 | CHG2 | CHG4 | CHG5 | CCHG6 | |
| **Environment** | | | | | | |
| COMPET | | | | 0.37 ! | | |
| COMPNO | | | 0.37 ! | | | |
| **Descriptors** | | | | | | |
| ACUITY | | | | | 0.41 ! | |
| BEDSIZE | | 0.37 ! | | | | |
| **Functions, Etc.** | | | | | | |
| FTE | | | 0.35 ! | | | |
| SPDESIGN | | | | | 0.67 * | |
| SPDATA | | | 0.43 ! | | | |
| SPGOALS | | | 0.45 ! | | 0.49 ! | |
| OPSFORE | | | | | | |
| OPSMONIT | 0.38 ! | | | | | |
| OPSPGMPL | | | | | 0.41 ! | |
| BDFEAS | | | | | | |
| SUMFUNC | | | 0.40 ! | | | |
| SPPROC2 | | 0.49 * | | | | |
| SPPROC3 | | 0.52 * | | | | |
| SPPROC4 | | 0.45 ! | | | | |
| SPPROC5 | | 0.39 ! | 0.38 ! | 0.39 ! | | |
| SPPROC7 | | -0.45 ! | -0.43 ! | | | |
| SUMSP | | 0.55 * | | | | |
| **Performance** | | | | | | |
| OM88 | | | | | -0.49 ! | |
| ROA88 | | | | | -0.51 ! | |

! denotes p<.05
* denotes p<.01
** denotes p<.001

| Mortar, cility opment | Management Orientation, Culture Change | Number of Changes with Planning Involvement | Ratio: Planning Involvement to Total Changes |
|---|---|---|---|
| CHG5 | CCHG6 | CHGSCR | CHGRATIO |
| 0.37 ! | | | |
| | 0.41 ! | | |
| | | 0.40 ! | |
| | 0.67 * | | |
| | 0.49 ! | 0.43 ! | 0.44 ! |
| | | | 0.39 ! |
| | 0.41 ! | 0.40 ! | 0.49 * |
| | | 0.39 ! | |
| | | 0.45 ! | 0.48 * |
| | | 0.41 ! | |
| 0.39 ! | | 0.46 ! | 0.42 ! |
| | | -0.46 ! | |
| | | 0.46 ! | |
| | -0.49 ! | | |
| | -0.51 ! | | |

The question, "What leads to planning involvement in strategic change?", begs an answer. While a comprehensive answer cannot be supplied, those variables most associated with planning involvement in strategic change can be identified. Table 6.9 summarizes the responses, illustrating that specific planning functions and processes are most often associated with planning involvement in change. Of particular importance with respect to three or more of the changes in which planning was involved are issue identification and priority setting (SPPROC5), support of operations through program planning (OPSPGMPL), breadth of planning functions (SUMFUNC) and the existence of an established strategic planning process (e.g., <u>not</u> SPPROC7). From the standpoint of the conceptual model, then, it is the process of planning and perhaps its constancy (although this was not measured) that are associated with planner and CEO recognition of planning involvement in the changes they consider strategic. Priority setting and support of operations, while common aspects of planning, reflect integration of planning into the fabric of management. That is, planning is not separate from management. Variables depicting the competitive environment, the context in which planning takes place, the characteristics of the hospital, and performance measures appeared to play a much smaller role.

## 6.4 Hypothesis 3

**H:3 The greater the competition faced by the hospital, the greater the use of strategic planning.**

This encompasses three specific hypotheses on the involvement of planning in strategic change, types of strategic change reported, and planning functions and processes. Each hypothesis is tested separately using bivariate methods.

### 6.4.1 Hypothesis 3.1

**H:3.1 The greater the competition, the greater the involvement of planning in strategic change.**

Using correlation analysis, two findings partially supported this hypothesis. First, the higher the competition (COMPET), the more likely that planning was involved with facility development, "bricks and mortar" (CHG5, $r=.37$, $p<.05$). This result is intuitive. With increasing competition, it makes sense that facilities would try to be as attractive as possible, and this is an area in which planning has been involved traditionally. The second result of note was that the higher the number of hospitals in the community (COMPNO), the more likely that planning was involved in distribution system development (CHG4, $r=.37$, $p<.05$). In addition, planning involvement in distribution system development (CHG4) and "bricks and mortar" (CHG5) were related ($r=.36$, $p<.05$).

Chi-square analysis provided another approach to testing the hypothesis. Results are summarized in Table 6.10.

TABLE 6.10

CHI-SQUARE ANALYSIS OF HYPOTHESIS 3.1:
CROSSTABULATIONS OF COMPET AND COMPNO WITH...
(N=36 unless otherwise noted)

| Description of Planning Involvement | COMPET: Perceived # of Competitors | | COMPNO: # of Hospitals in Community | |
|---|---|---|---|---|
| | $Chi^2$ | p value | $Chi^2$ | p value |
| **CHG1:** Cost control, managing risk, downsize, efficiency | 3.60 | .06 NS | .05 | .82 NS |
| **CHG2:** Merger/acquisition, corporate reorganization | .09 | .76 NS | 1.39 | .24 NS |
| **CHG4:** Distribution system development, new services and markets | .09 | .77 NS | 8.62 | .00 * |
| **CHG5:** Bricks & mortar, facility development | 2.66 | .10 NS | 1.47 | .22 NS |
| **CCHG6:** Management orientation, change in corporate culture (N=29) | .08 | .77 NS | 1.20 | .27 NS |
| **CHGSCR:** Number of changes with planning involvement | .82 | .36 NS | 10.24 | .00 * |
| **CHGRATIO:** Proportion of changes with planning involvement | .36 | .55 NS | 8.32 | .00 * |

1 degree of freedom
NS not significant
* p<.05

The hypothesis was partially supported using this approach. The number of changes in which planning is involved (CHGSCR) was observed to a greater extent than expected in relation to the number of hospitals in the community (COMPNO), although

not in relation to the number of competitors identified by the respondents (COMPET). Additionally, distribution system development (CHG4) and the hospital's ratio of planning involvement in change compared to total changes reported (CHGRATIO) were also observed to a greater extent than expected in relation to COMPNO.

### 6.4.2 Hypothesis 3.2

**H:3.2 The greater the competition, the greater the number of types of strategic change reported.**

Neither correlation analysis, as presented in Table 6.1, nor chi-square analysis, presented in Table 6.11, supported the hypothesis. Measures of competition (COMPNO and COMPET) were independent of the total number of changes and specific types of changes reported.

If not competition, what variables are related to the number of strategic changes reported? Surprisingly, few relationships were noteworthy[10]. Specifically, the total number of changes reported (CHANSCR) was related to support of operations through program planning (OPSPGMPL, $r=.39$, $p<.05$), the breadth of strategic planning processes used (SUMSP, $r=.40$, $p<.05$), and, expectedly, to the increase in the number of services provided between 1983 and 1988 (SVCINC, $r=.38$, $p<.05$).

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[10] By definition, CHANSCR is related to individual changes. These are not discussed.

TABLE 6.11

CHI-SQUARE ANALYSIS OF HYPOTHESIS 3.2:
CROSSTABULATIONS OF COMPET AND COMPNO WITH...
(N=36 unless otherwise noted)

| | COMPET: Perceived # of Competitors | | COMPNO: # of Hospitals in Community | |
|---|---|---|---|---|
| **Type of Change** | **Chi$^2$** | **p value** | **Chi$^2$** | **p value** |
| **CHANGE1:** Cost control, managing risk, downsize, efficiency | 2.76 | .10 NS | 0 | 1.00 NS |
| **CHANGE2:** Merger/ acquisition, corporate reorganization | 1.41 | .24 NS | 2.24 | .13 NS |
| **CHANGE4:** Distribution system development, new services and markets | .11 | .74 NS | 2.14 | .14 NS |
| **CHANGE5:** Bricks and mortar, facility development | .33 | .57 NS | .33 | .57 NS |
| **CCHANGE6:** Management orientation, change in corporate culture (N=29) | .51 | .47 NS | 0 | 1.00 NS |
| **CHANSCR:** Number of changes reported | .21 | .65 NS | 3.61 | .06 NS |

1 degree of freedom
NS not significant

### 6.4.3 Hypothesis 3.3

**H:3.3 The greater the competition, the more elaborate the planning functions and processes, including support for operations and business development as well as for strategic planning.**

Once again, correlation analysis and chi-square analysis were used to test the hypothesis. From these analyses, reflected in Tables 6.1 and 6.12, the hypothesis was not supported directly. While the level of perceived competition (COMPET) was related to planning involvement in program planning and evaluation (OPSPGMPL, $r=.38$, $p<.05$), neither COMPET nor COMPNO demonstrated strong relationships with the total number of planning functions and strategic planning processes reported (e.g., SUMFUNC and SUMSP).

Of interest, however, was the relationship between COMPET and FTE ($r=.44$, $p<.01$), i.e., the greater the perceived competition, the more staff devoted to planning activities. Planning manpower (FTE), in turn, was related, as one might expect, to most of the planning functions and processes reported:

| | |
|---|---|
| Facilities planning (OPSCON) | $r=.46$, $p<.05$ |
| Forecasting (OPSFORE) | $r=.48$, $p<.05$ |
| Market share analysis (OPSMKT) | $r=.47$, $p<.05$ |
| Monitoring (OPSMONIT) | $r=.48$, $p<.01$ |
| Program planning (OPSPGMPL) | $r=.45$, $p<.05$ |
| Data for strategic planning (SPDATA) | $r=.52$, $p<.01$ |
| Strategic planning design (SPDESIGN) | $r=.68$, $p<.001$ |
| Goal development (SPGOALS) | $r=.49$, $p<.01$ |
| Environmental assessment (SPPROC2) | $r=.49$, $p<.01$ |
| Internal assessment (SPPROC3) | $r=.44$, $p<.05$ |
| Formal retreats (SPPROC4) | $r=.40$, $p<.05$ |
| Issue identification (SPPROC5) | $r=.40$, $p<.05$ |

One test of the hypothesis was based on the summary scores of planning functions (SUMFUNC) and strategic planning processes (SUMSP). Chi-square results using these measures as well as the individual functions and processes are presented in Table 6.12.

The hypothesis was not supported. The planning functions and processes were not associated with either perceived competition or total number of hospitals in the community.

What variables were related to the breadth of planning functions (SUMFUNC) and processes reported (SUMSP)? For both measures, hospital size (BEDSIZE) was an important variable. The larger the hospital, the more planning functions and processes reported ($r=.51$, $p<.01$, for both). In addition, system participation was associated with breadth of planning functions reported (SYSTEM, $r=.41$, $p<.05$).

In the context of the conceptual model, it has already been demonstrated that the environmental variables reflecting competition were not related to either breadth of planning functions or strategic planning processes, or rather, the various relationships were quite weak.

TABLE 6.12

CHI-SQUARE ANALYSIS OF HYPOTHESIS 3.3:
CROSSTABULATIONS OF COMPET AND COMPNO WITH..(N=28)

| Description of Planning Functions and Processes | COMPET: Perceived # of Competitors | | COMPNO: # of Hospitals in Community | |
|---|---|---|---|---|
| | $Chi^2$ | p value | $Chi^2$ | p value |
| **SUMFUNC:** Sum of planning functions reported | .48 | .49 NS | 0 | 1.00 NS |
| **SUMSP:** Sum of strategic planning processes reported | 1.69 | .19 NS | .28 | .59 NS |
| **SPDESIGN:** Design planning process, facilitates | .10 | .75 NS | .00 | .99 NS |
| **SPDATA:** Data for strategic planning | .62 | .43 NS | .44 | .51 NS |
| **SPGOALS:** Develop goals, objectives, document | .44 | .51 NS | 1.17 | .28 NS |
| **OPSFORE:** Forecasting, assumptions | .54 | .46 NS | 0 | 1.00 NS |
| **OPSMONIT:** Monitor operations, patient origin, etc. | 1.29 | .26 NS | 0 | 1.00 NS |
| **OPSDOC:** Develop physician profiles | .11 | .74 NS | .17 | .68 NS |
| **OPSMKT:** Market share analysis, DRG analysis | .19 | .66 NS | .13 | .72 NS |
| **OPSPGMPL:** Program planning and evaluation | .11 | .74 NS | 3.56 | .06 NS |
| **OPSCON:** Facilities planning, Certificate of Need applications | .04 | .84 NS | 1.51 | .22 NS |
| **BDMKT:** Market research for business development | .06 | .81 NS | .03 | .87 NS |
| **BDFEAS:** Feasibility studies, needs assessments | .43 | .51 NS | .28 | .59 NS |

**TABLE 6.12 (Continued) CHI-SQUARE ANALYSIS OF HYPOTHESIS 3.3**

| Description of Planning Functions and Processes | COMPET: Perceived # of Competitors | | COMPNO: # of Hospitals in Community | |
|---|---|---|---|---|
| | $Chi^2$ | p value | $Chi^2$ | p value |
| **SPPROC1:** Interviews with key people, identify opportunities and threats | .26 | .61 NS | .08 | .77 NS |
| **SPPROC2:** Environmental assessment, competitive analysis | .00 | .98 NS | .95 | .33 NS |
| **SPPROC3:** Internal assessment, strengths and weaknesses | .14 | .70 NS | .28 | .59 NS |
| **SPPROC4:** Formal retreats | .11 | .74 NS | .44 | .51 NS |
| **SPPROC5:** Critical issues, issue identification, establish priorities | .91 | .34 NS | 0 | 1.00 NS |
| **SPPROC7:** No strategic planning process | .19 | .66 NS | .44 | .51 NS |

In terms of the organizational environment, or the context in which planning takes place, the "action-oriented" culture (CULT4) was associated with the breadth of planning functions (SUMFUNC, $r=.41$, $p<.05$). Both the breadth of functions (SUMFUNC) and breadth of processes used in strategic planning (SUMSP) were <u>inversely</u> related to the reported management philosophy of decentralized decision-making (MPH3, $r=-.50$ and $-.40$, $p<.01$ and $.05$, respectively).

With respect to strategic change, the breadth of strategic planning processes used (SUMSP) was associated with the number

of changes reported (CHANSCR, $r=.40$, $p<.05$), the number of changes in which planning was involved (CHGSCR, $r=.45$, $p<.05$) and to planning involvement in merger/acquisitions or corporate restructuring (CHG2, $r=.55$, $p<.01$). Similarly, the breadth of planning functions was associated with the number of changes in which planning was involved (CHGSCR, $r=.46$, $p<.05$), the ratio of planning involvement to total changes reported (CHGRATIO, $r=.48$, $p<.01$) and to planning involvement in distribution system development (CHG4, $r=.40$, $p<.05$). Simply stated, the greater the number of planning functions and processes carried out, this study suggests that the greater the number of strategic changes reported and the more likely that planning will be involved in the changes.

In terms of performance, breadth of planning processes employed was related to increases in FTEs per occupied bed, a reflection of reduced productivity (FTEOBCHG, $r=.43$, $p<.05$).

#### 6.4.4 Concluding Remarks for Hypothesis 3

Overall, the data provided moderate support for the general hypothesis that, the greater the competition, the greater the use of strategic planning. Specifically, the more perceived competition, the greater the likelihood that planning was involved with facility development. Similarly, the greater the number of hospitals in a community, the greater the chance that planning would be involved in service and market

development. Planning involvement in strategic change was observed to a greater extent than expected in those hospitals located in communities with relatively more competitors. Resources available for planning provided further support for the general hypothesis. That is, the greater the perceived competition, the more staff devoted to planning activities.

Not supported was the notion that, the greater the competition, the more strategic change. Of note was the finding that breadth of planning functions was related to the "action-oriented" culture.

## 6.5 Summary

In the preceding analyses, partial support was provided for Hypotheses 1, 2 and 3. Hypothesis 1, dealing with the relationship between planning involvement with strategic change and hospital performance, was modestly supported in terms of one measure of improvement in productivity and increased in the number of services offered. The hypothesis was not supported for performance measures reflecting changes in market share or relative profitability.

Discriminant function analysis of change measures and 1988 performance measures demonstrated that knowledge of planning involvement in change as well as other characteristics of the hospital and outside environment improved the ability to

classify hospitals into deteriorating versus improving or low versus high performers. Three variables were selected repeatedly as criterion variables thereby suggesting their importance: decentralized decision-making (MPH3), planning involvement in mergers/acquisitions (CHG2) and perceived number of competitors (COMPET).

Hypothesis 2, dealing with the relationship between support for planning and planning involvement in strategic change, was partially supported. Overall, CEO support of strategic planning was reflected to a modest degree in terms of planning involvement in mergers/acquisitions and corporate restructuring (CHG2). A clearer relationship was expressed between CEO support and various planning functions and processes. Only when the elements of support were considered did specific performance measures appear as important. Financial health was related to both satisfaction with strategic planning and top management's role in directing the strategic planning process.

Hypothesis 3.1, dealing with the relationship between competition and planning involvement in strategic change, was partially supported in that the number of changes in which planning was involved (CHGSCR), the involvement of planning in distribution system development (CHG4) and the percent of all the hospital's changes in which planning was involved

(CHGRATIO) were all observed to a greater extent than expected in relation to COMPNO, the number of hospitals in the community. Further, the number of perceived competitors (COMPET) was related to planning involvement in facility development (CHG5).

Hypothesis 3.2, dealing with the relationship between extent of competition and the number of types of strategic change reported was not supported.

Limited support of hypothesis 3.3, dealing with the relationship between competition and the elaborateness of planning functions and processes, was provided. The greater the number of perceived competitors (COMPET), the more staff devoted to planning activities (FTE).

Chapter 7, summarizes this research and its implications for the practice of planning and for further research.

# CHAPTER 7

# CONCLUSIONS AND IMPLICATIONS

## 7.1 Overview of Study

### 7.1.1 The Problem Being Addressed

This was an exploratory study. The intent was to determine whether planning in any form was actually practiced in hospitals, was believed in by management, and had any relationship to performance.

Given the ever-increasing problem of limited resources and increasing competition, the need for strategic decision-making would appear acute. Hospital administrators need to mobilize planning processes to produce desirable outcomes for the institution. This is the background from which the major research question developed:

> In competitive environments, does the organization's use of strategic planning result in superior performance?

### 7.1.2 Purposes

Specific purposes of the study were:

> To determine the nature and extent of strategic planning and management activities in urban hospitals;
>
> To identify the structural features of those activities and the functions that were actually carried out;
>
> To determine the extent to which the size and nature of the competitive environment was related to the structure and functions of planning activities;

To determine the extent to which planning staff and formal planning processes were involved with strategic change;

To relate these functions, structures and changes to actual performance between 1983 and 1988.

### 7.1.3 Analytic Approach

As a rationale for using an exploratory approach, it is important to note that little previous research in health care addresses the utility of strategic planning or its acceptance by top management. In Chapter 2, the literature dealing with the development of hospital strategic planning; the effectiveness of planning in other industries; the relationships among different aspects of the outside environment; the context in which planning takes place; planning structures, functions, and processes; strategy and strategic change; and organizational performance are reviewed. From this review, two observations emerged to guide the design of the study. Specifically, the adaptation of planning systems in hospitals has not been empirically studied and no consistent evidence appears to support the belief that planning activities in the hospital industry relate to improved or superior performance.

In addition, our review of the literature describing hospital planning and the context in which planning has been carried out suggest that the impetus for planning has changed considerably over the last few years, particularly in response

to the challenges created by Prospective Payment for the care of Medicare patients. While prescriptive literature abounds regarding what planners ought to do to meet environmental challenges, little exists dealing with the actual planning practices being performed in relation to their competitive environments and internal environments.

Given this lack of research, the approach taken in this study was a) to attempt to discern salient factors about strategic planning with a qualitative analysis of interviews with CEOs and planners; and b) to couple these interview data with a quantitative approach including data from secondary sources. It was determined that such a multiple-perspective approach would have greater potential for developing an analysis which did not presume too much. Were a body of research available which indicated, or even implied, what the set of operational independent and dependent variables should be in this case, a more straightforward quantitative analysis would have been possible. The methods employed reflect a combination of perspectives and data sources: a case study involving in-depth, face-to-face interviews with Chief Executive Officers, Planners and other executive staff in seven hospitals in one highly competitive community; a telephone survey of Chief Executive Officers and Planners in a sample of forty hospitals in one region, each selected at random; and use of quantitative data available through the American Hospital

Association's Guides to the Health Care Field and to Medicare Cost Reports.

## 7.2 Discussion of Findings in Light of Conceptual Framework

The conceptual model developed in Chapter 2 prompted a series of questions and corresponding hypotheses. Findings are discussed below in relation to the components of the conceptual model.

### 7.2.1 Environment

Four questions related to the hospital's competitive environment.

> In competitive environments, does the organization's use of strategic planning result in superior performance?
>
> Does the extent of competition impact the planning functions, structures, and processes used?
>
> Are the structure and functions of strategic planning related to the environment in which hospitals operate?
>
> Is the approach to strategic planning influenced by the competitive environment?

Corresponding hypotheses included:

> **H3:** The greater the competition faced by the hospital, the greater the use of strategic planning.
>
> > **H3.1:** The greater the competition, the greater the involvement of planning in strategic change.
> >
> > **H3.2:** The greater the competition, the greater the number of types of strategic change reported.
> >
> > **H3.3:** The greater the competition, the more elaborate the planning functions and processes, including support for operations and business development as well as for strategic planning.

All of the study hospitals included in this research, i.e., case study and telephone survey hospitals, experienced an appreciable degree of competition. Generally, more elaborate the strategic planning processes, higher levels of CEO support for strategic planning, and more strategic changes reported, were related to findings that planning was involved.

The case study provided a controlled setting in which to evaluate the environment-focused research questions. All of the case study hospitals operated within a single competitive environment. Their adaptation to that environment varied considerably.

The results in the study community were clear in some significant respects. Those hospitals placing high importance on planning, as evidenced by the broad range of functions reported and the high degree of involvement of planning in strategic change, consistently out-performed all other hospitals on all performance measures. In this community, the use of strategic planning consistently, thoroughly and integrated with other management functions did result in superior performance.

The relationship between perceived extent of competition and the planning structures, functions and processes was supported in the case study. Four of the hospitals had adopted product

line management as their major planning and marketing approach, as their means of addressing intense competition. Another hospital, part of a health maintenance organization, perceived competition far differently, i.e., insurers--not other hospitals--were the competition. Their approach to planning reflected this perspective. The remaining two hospitals considered themselves somewhat insulated from competition by status (e.g., academic medical center) or location (e.g., the suburbs). Significantly, both of these hospitals invested relatively little in planning structures, functions or processes.

The telephone surveys provided a means of testing relationships between extent of competition and the use of strategic planning. From these surveys, it appeared that the level of competition impacts both the structure and functions of planning and the approach taken in strategic planning. The greater the perceived competition, the more staff devoted to planning. As one might expect, the more staff devoted to planning, the more planning functions and processes reported. The higher the perceived competition, the more likely that planning would be involved in facility development, the more likely that program planning and evaluation were reported as planning functions, and the more staff devoted to planning. Further, the more hospitals in the community, the more likely that planning was involved in distribution system development

including new services and new markets. Also, the more hospitals in the community, the greater the number of changes reported in which planning was involved and the greater percentage of all changes in which planning was involved.

The data provided moderate support for the general hypothesis that the greater the competition, the greater the use of strategic planning. The research demonstrated that competition, as one measure of environmental hostility, is an important element in our understanding of the practice of planning in hospitals.

### 7.2.2 Planning Context

Three questions focused on the planning context, or the organizational environment in which planning was carried out:

> Is the planning context conducive to planning?
>
> Does the planning context influence the degree to which planning is involved in strategic change?
>
> Is the approach to strategic planning influenced by the planning context?

The corresponding hypothesis was:

> H2: The more support evident for strategic planning, the more likely that planning will be involved in strategic change.

Once again, the case study appeared to support the hypothesis. In the case study community, support for planning varied. For those hospitals in which the CEOs were supportive of planning, the range of planning activities performed was broad and their perceived importance high. Of particular note were two hospitals in which planning was an integral part of a belief system. Key features of planning in these hospitals were consistency, thoroughness, close and frequent monitoring of performance using objective measures, and integration into daily management practice. Is this strategic management?

From the telephone surveys, two aspects of planning context repeatedly reinforced the proposition that planning context does influence the nature of planning. Hospitals in which CEOs and planners described their organizational culture as "action-oriented, competent, stands for doing it right" also tended to report a wider range of planning functions including design of strategic planning processes, goal delineation and document preparation, and market research for business development. Also associated with this "culture type" was a relative higher profitability in 1988 (compared to other hospitals), a decrease in productivity over time, and higher acuity levels reflected in the range of high acuity services provided.

Conversely, when the management philosophy of decentralized decision-making and participatory decision-making was reported, the breadth of planning functions and strategic planning processes were both reported as quite limited. Support of operations through market share analysis, monitoring, or program planning and evaluation were not likely functions for planning. Further, planning was not likely to delineate goals and objectives and management expectations, nor was planning likely to be responsible for preparing the strategic planning document. Hospitals reporting this management philosophy were likely to have experienced a merger or acquisition or corporate reorganization during the study period.

When considering CEO support for strategic planning, the impact of planning context on planning approaches and functions becomes clearer. CEOs in larger, more complex hospitals were more likely to express higher degrees of support for strategic planning. These CEOs also reported a greater degree of planning involvement in strategic change and a wider range of functions and processes. It appears as though the process of planning and perhaps its constancy that are associated with planner and CEO recognition of planning involvement in strategic change.

Certainly, planning context impacts the nature and extent of planning functions and processes carried out for larger, complex hospitals. These contextual variables are also related to the degree to which planning is involved in strategic change. The hypothesis was supported.

### 7.2.3 Planning Structures, Functions, and Processes

In terms of planning structures, functions, and processes, five questions were prominent:

Is strategic planning carried out in hospitals?

What functions, structures and processes are used?

Is planning involved in changes that are considered "strategic"?

Is there a relationship between the comprehensiveness of the strategic planning effort and the outcomes achieved?

What planning processes are associated with different levels of performance?

The case study provided insight into questions of comprehensiveness of planning and outcomes or performance. The superior performers were also the hospitals with the most extensive planning systems which were well-integrated into the management structure. While particular planning processes were not associated with different levels of performance, it is suggested that thoroughness and constancy, aspects of process **not** measured in the research, and integration with other functions such as marketing, finance, human resources, and operations, may lead to superior performance.

The telephone surveys provided a broader view of the state of hospital planning. While a majority of hospitals reported the use of a variety of strategic planning processes, over 40% reported not having a strategic planning process and not performing planning functions. The most often reported planning functions were program planning and evaluation, market share analysis, strength-weakness-opportunity-threat analysis, environmental assessment, and operations monitoring (i.e., traditional planning functions). It seems ironic that planning as a function associated with change and the creation of a desired future, should be "stuck" in a traditional role at a time when hospitals are experiencing revolutionary change and serious threats to survival.

Both program planning and evaluation and the breadth the strategic planning processes reported were related to the extent of strategic change reported. Planning involvement in strategic change was related to a variety of planning functions and processes. Four were noteworthy: issue identification and priority setting, support of operations through program planning, breadth of planning functions carried out, and the existence of an established strategic planning process. These processes and functions underscore the need for regular use of planning as part of the management decision-making and action process, i.e., the need for integration of planning in broader management practice.

There was little evidence that specific functions or processes were directly associated with improved or superior performance. Certainly the relationship is mitigated by strategic change. Profitability was not related to planning functions and processes, although future profitability related to present-day planning remains an open question. Decreases in productivity were associated with a variety of functions and processes related to strategic planning. These decreases in productivity were also associated with the development of new services and higher levels of competition. Changes in market share were not associated with planning functions and processes. Increases in the number of services offered during the study period, however, were related to the process of environmental assessment development, competitive analysis, scenario-based planning and consideration of opportunities and threats.

Comprehensiveness of planning, expressed as breadth of functions and processes reported, was not, for the most part, related to the performance measures used. However, comprehensiveness was related to other aspects of the conceptual model. Of theoretical importance was the relationship with measures of planning involvement in strategic change. Specifically, the more planning functions or strategic planning reported, the more likely that planning

was involved in the changes that CEOs and planners considered strategic.

### 7.2.4 Strategic Change

Two research questions focus on strategic change:

> Is planning involved in changes that are considered strategic?
>
> Are specific changes associated with improved performance?

While the first question has been addressed somewhat in the previous section, this research afforded insights into the types of changes most likely to have planning involvement: building programs, distribution system development including new services and new markets, mergers/acquisitions and corporate reorganizations. Still, there were other types of changes with little or no reported planning involvement: information system and financial system development and cost control, managing risk, downsizing, and efficiency.

Specific changes were not associated with improved performance. In fact, changes in management orientation or corporate culture were related to poor profit performance in 1988. A potential explanation, especially in situations in which the management team was replaced, is that the change was prompted by the previous poor performance.

### 7.2.5 Performance

A single hypothesis focused on performance:

> **H1:** Performance in hospitals in which planning is involved in strategic change will be better than in hospitals in which planning is not involved in change.

This hypothesis was supported in the case study and modestly in the telephone surveys.

## 7.3 Implications for the Practice of Planning

In interview after interview, a contradiction was expressed. Planning functions did not appear to address the issues of immediate importance to hospital administrators. The two examples from the research are intended as recommendations for further development in the practice of planning.

While planning as a function was widely valued, planners were not, for the most part, participating in changes involving information system and financial system development even though financial issues were considered as the most important issues facing the hospitals. Specifically, financial pressures, debt expense control, and concern over indigent care were reported by nearly 80% of hospitals as a major issue most impacting the hospital. The role of planning in dealing with this mix of issues was minimal. If strategic planning is to be effective, it seems that an understanding of and participation in the delineation of financial issues as driving forces in strategic planning must be added to the range of functions of planning departments.

Similarly, medical staff relations was cited, second only to financial concerns, as having the greatest impact on the hospital. While many of the planners reported developing physician profiles as a departmental function, it appears that the effort is not commensurate with the expressed concern. Once again, issues related to medical staff management and partnership have become driving forces in strategic planning.

Social issues were seldom mentioned as either major issues impacting the hospital or as issues addressed by planning activities. Care of the medically indigent was the notable exception although it was viewed as a financial concern.

Two questions of significance to both the practice of planning and further research which need to be addressed:

> Which social issues are going to greatly impact our hospitals in the future?
>
> Why not consider them driving forces in our strategic planning efforts now?

## 7.4 Implications for Future Research

Several questions arose during this research that imply the need for further research. Some of these questions resulted from compromises made in the scope of the questionnaire. Some questions resulted from the analysis itself. Some were raised by respondents during the interviews and some resulted from recognition that the model could be expanded.

Several questions involve different aspects of implementation of plans, an aspect not addressed in this study:

> Is there a relationship between commitment to the strategic planning process, commitment to implement the plan and performance of the hospital?
>
> Does the way in which the strategic plan is developed influence the way in which the plan is implemented or the strategies carried out?
>
> What is the role of planning departments in implementation?
>
> To what degree does effectiveness of implementation impact performance?
>
> How does organizational culture impact implementation?

Other questions delve into the inter-relationships of various functions of the hospital. The focus here could be categorized as strategic management:

> Does the participation of functional areas in the strategic planning process impact either the comprehensiveness or effectiveness of the strategy developed?
>
> To what degree are finance, marketing and operations involved in strategic planning?
>
> To what degree is planning involved in finance and financial planning and marketing and market planning?

A final set of questions deal with the need to consider alternative measures in the existing model:

> To what degree do other aspects of the external environment impact the functions, processes, and outcomes of planning? (Possible measures could be resource supply, technological challenges, environmental variability)
>
> To what degree are changes in productivity the result of new technologies, the shift from inpatient to outpatient

care, shortage of manpower and/or active management c control of labor costs and supply?

What is the best "acuity level" (measured in this research in terms of selected high tech services offered) for improved profitability, increased market share, and for meeting population needs?

## 7.5 Conclusions

The conceptual model was of use in exploring these extremely complex relationships. Limitations of the model appear to result from omission and limitations of some of the measures used. Both of these have already been discussed under Implications for Future Research or in Chapter 3, Methods.

As noted earlier, hospital performance is a complex phenomenon. From the results obtained, some of the performance measures appear to be mutually exclusive, or cannot all be achieved at the same time. The act of managing performance is a balancing act in which, at best, deliberate decisions are made to sacrifice one aspect of performance for another. At worst, the sacrifice is made by default.

The model indicated that it was not specific strategic changes that were related to performance, but many other factors. Through either the case study or the telephone surveys, five of the six hypotheses were supported to some extent. Planning involvement in strategic change is a concept central to most of the hypotheses and key to the conclusions.

Planning, including the range of planning functions reported and the strategic planning processes used, appears to be valued by most CEOs. For the most part, planners are performing traditional roles, and these are perceived to have a positive impact on the hospital. After all, programs and services need to be developed, and building programs require extensive planning support. However, the value of planning and the role that planning plays in strategic change and subsequent performance were not as strong as hospital planners would like to believe.

Results suggested a benefit derived from planner or planning involvement in strategic change, yet the issues of greatest import to the hospital--financial pressures and the corresponding strategic change of managing financial risk--are outside the traditional realm of hospital planning. If planning is going to play an optimal role in strategic change, planners must move beyond their traditional roles and become expert in the issues which drive the hospital's future, notably finance and medical staff relations. These issues impinge on other functional areas, specifically, finance and marketing. Far from being superseded by finance and marketing, planning should serve as a mechanism for integration and collaboration to insure that strategic issues are addressed and managed. Is was apparent from this research that this is both desired and needed.

A major observation during the course of data collection for both the case study and telephone interviews was that thoroughness and regularity in planning, and its integration with the day-to-day practice of management were critical to good planning. Planning is not a function for dabbling nor can it be practiced in isolation. Scrutiny of the individual functions and processes and their breadth leads to the conclusion that, if a hospital is going to support a planning department, the commitment should be great enough to enable a broad spectrum of activities to be undertaken. Essential activities in terms of their positive impact on the organization are program planning and evaluation, provision of data for strategic planning, design of strategic planning process, forecasting, monitoring operations, development of physician profiles, market research and the development of feasibility studies. Heavy emphasis on support of operations and strategic planning are warranted. At the same time, formal strategic planning processes are associated with both more strategic changes reported and the greater likelihood that planning is involved.

This concludes my research into the effectiveness of hospital strategic planning in competitive environments. The research has demonstrated variations in planning practice, support for planning, and perceived effectiveness. Recommendations for the improvement of hospital strategic planning, and planning

practice in general, focus on linking strategic planning to resource allocation, integrating planning into the broader management practice, monitoring hospital performance frequently and objectively, and the need for greater attention to the major driving forces for the hospital's current and future well-being.

# APPENDIX A: LETTER TO CEOS REQUESTING PARTICIPATION IN RESEARCH

# University of Hawaii at Manoa

**School of Public Health**
Department of Community Health Development
1960 East-West Road • Honolulu, Hawaii 96822
FAX: (808) 942-0432


December 11, 1989

I am writing this letter to request your participation in my doctoral research into the effectiveness of hospital strategic planning in competitive environments. Specifically, I would like to interview you by telephone. The interview itself should take no more than 20 minutes. In addition, I would like to interview your administrator or staff member responsible for planning.

The main topic areas which I would like to cover with you include:

- Levels of participation in strategic planning at your hospital and your satisfaction with the strategic planning process.
- Major decisions at your hospital since 1983 that you consider strategic and the role of planning in making these decisions.
- Your organizational culture and its impact on strategic planning.
- Issues you consider most impacting your hospital.

The interviews with your planner will cover similar topics, although additional questions will be asked about planning functions, techniques, and relationships.

Of course your responses will be confidential. Your hospital was selected at random from among the 164 hospitals with 200+ beds located in competitive environments in California, Oregon and Washington. I consider your input very important to the quality of the study.

By way of background, in addition to being a doctoral student, I am also the Director of System Planning at Kapiolani Health Care System in Hawaii, a position which I have held for several years. During this time, I have participated in a corporate restructuring, some diversification activities, and, most recently, the acquisition of a hospital. It is this experience which has guided my research interests, and I believe that I can make a contribution to hospital strategic planning. I need your help, though, to make this contribution.

Within the next two weeks, I will be contacting your office to either schedule the interview or, if you are available at the time, conduct the interview. I have enclosed a second copy of this letter which I would appreciate your passing on to your planner.

I look forward to speaking with you in the near future. Should you have any questions about this research, please feel free to contact me at 808-973-3413.

Thank you,

Susan Forbes

Susan Forbes
Doctoral Student
University of Hawaii-Manoa

SF:rmt

# APPENDIX B: QUESTIONNAIRES

QUESTIONNAIRE FOR CEOS
SYSTEM VERSION

HOSPITAL:

CEO:

Thank you for agreeing to participate in this research project. The primary purpose of the project is to determine the effectiveness of strategic planning in hospitals located in competitive environments. Conversely, for those hospitals that do not do strategic planning, I would like to identify what activities or functions do lead to superior performance.

Your hospital was selected at random. Your individual responses will be held confidential.

**I'd like to start by asking about your background and the roles you have played at this hospital.**

1. What is your current title?

2. How long have you held your current position at this hospital?

3. What other roles have you played at this hospital, and for how long?

4. How long have you worked in health care?

**The next series of questions deal with strategic planning activities at your hospital...**

5. What do you consider the most important contribution of strategic planning to this hospital?

6. In what ways does top management participate in strategic planning?

7. In what ways does System management participate in strategic planning for your hospital?

8. In what ways does your medical staff participate in strategic planning?

9. In what ways does your Board participate in strategic planning?

10. In what ways does line staff participate in strategic planning?

11. What types of planning activities do you prefer to have performed by outside consultants?

12. Are you satisfied with the strategic planning process?

13. Why or why not?

14. Do you believe that strategic planning contributes to superior performance?

**Now I would like to ask some questions about your competitive environment...**

15. Who are your hospital's competitors? (List names)

16. What one word or phrase best describes the nature of the competition in your community?

17. In what year did you begin to feel the impact of competition?

**The next few questions deal with your views of management and your organization's culture...**

18. How would you describe your leadership style?

19. What is your management philosophy for this hospital?

20. What 3 words or phrases best describe your organizational culture?

21. How does the organizational culture impact the way in which strategic planning is carried out?

22. What 3 words or phrases best describe the organizational culture of the System?

23. How does the System's organizational culture impact the way in which strategic planning is carried out?

**The next series of question I want to ask deal with major changes or decisions you and your hospital may have made since 1983...**

24. What are the major changes and/or decisions made at your hospital since 1983 that you consider "strategic"?

25. Why did you make this change?

26. Who was involved in the decision-making process?

27. Describe the planning or decision-making process that led to the change?

**We've cover a lot of territory so far, and we're almost done. The next series of questions cover your assessment of your hospital's performance since 1983...**

28. What do you consider the best indicators of your hospital's performance since 1983?

29. What new programs and services have you (or your hospital) implemented since 1983 that you consider good indicators of your performance?

30. If you were to grade your hospital anywhere from A to F in terms of attainment of goals since 1983, what grade would you give?

31. Why?

**The final series of questions deals with major issues and strategies...**

32. What are the major issues most impacting this hospital?

33. What strategies have you developed to address these?

**Thank you very much for your participation. You provided insights that will contribute to better understanding the effectiveness of strategic planning in competitive environments.**

QUESTIONNAIRE FOR PLANNERS
SYSTEM VERSION

HOSPITAL
PLANNER

Thank you for agreeing to participate in this research project. The primary purpose of the project is to determine the effectiveness of strategic planning in hospitals located in competitive environments. Conversely, for those hospitals that do not do strategic planning, I would like to identify what activities or functions do lead to superior performance.

Your hospital was selected at random. Your individual responses will be held confidential.

**I'd like to start by asking about your role in this hospital and how your department works...**

1. What is your current title?

2. How long have you held your current position at this hospital?

3. What other roles have you played at this hospital and for how long?

4. How long have you worked in health care?

5. How long have you worked in planning?

6. To whom do you report?

7. To whom does that person report?

8. How many staff (FTEs) are employed in planning, including yourself and any clerical staff?

9a. How would you describe the functions of the Planning Department at this hospital?

9b. How would you describe the functions of the System's Planning Department?

9c. How would you describe the relationship between Hospital and System Planning Departments?

Collaborative _____
Competitive _____
Open Hostility _____

9d. How long has your hospital been part of a System?

10. Does your hospital follow an established strategic planning process?

11. [IF YES] Please describe that process.

12. Are you satisfied with the results of the strategic planning process?

13. Why or why not?

14. What do you consider the most important contribution of the planning function to this hospital?

15. Is there a strategic planning committee?

16. [IF YES] Who sits on this committee?

17. How often does this committee meet?

18. Is a strategic planning document produced?

19. [IF YES] How often is this document produced and/or updated?

20. How would you describe the functions of the Marketing Department in relation to the strategic planning process at this hospital?

21. How would you describe the relationship between the planning staff and marketing staff?

Collaborative _____
Competitive _____
Open Hostility _____

22. How would you describe the functions of the Finance Department in relation to the strategic planning process at this hospital?

23. How would you describe the relationship between the planning staff and finance staff?

Collaborative _____
Competitive _____
Open Hostility _____

**The next few questions deal with your hospital's organizational culture and prevailing management philosophy...**

24a. What 3 words or phrases best describe the organizational culture at your hospital?

24b. What 3 words or phrases best describe the organizational culture of the System?

25. What is the management philosophy for this hospital?

26. How would you describe your CEO's leadership style?

27. In what ways do you think the prevailing organizational culture impacts the way in which strategic planning activities are carried out?

**Now I would like to ask some questions about your hospital's competitive environment...**

28. Who are your hospital's competitors? [List names]

29. What one word or phrase best describes the nature of the competition in your community?

30. In what year did you begin to feel the impact of competition?

31. As a percentage, what is the level of managed care penetration in your primary service are?

32. What is the level of managed care in your facility?

**The next series of questions I want to ask deal with major changes or decisions you and your hospital may have made since 1983...**

33. What are the major changes and/or decisions made at your hospital since 1983 that you consider "strategic"?

34. Why did you make this change?

35. Who was involved in the decision-making process?

36. Describe the planning or decision-making process that led to the change.

**Now I would like to ask about specific activities performed in your department...**

37. What data do you routinely collect or analyze to carry out your planning functions?

38. What do you do with these data?

39. Describe what you do to prepare environmental assessments.

40. What techniques do you use to perform technology assessments? Describe what you do.

41. What techniques do you use to conduct internal assessments?

42. What planning activities are typically performed by outside consultants?

**The next few questions--and we're almost done--deal with forecasting and results monitoring...**

43. Does your area prepare forecasts for your hospital?

44. [IF YES] What do you forecast?

45. How do you rate (as a percentage) the accuracy of your forecasts?

46. How do you know they're accurate?

**We've covered a lot of territory so far, and we're almost done. The next series of questions cover your assessment of your hospital's performance since 1983...**

48. What do you consider the best indicators of your hospital's performance since 1983?

49. What new programs and services have you (or your hospital) implemented since 1983 that you consider good indicators of your performance?

50. If you were to grade you hospital anywhere from A to F in terms of attainment of goals since 1983, what grade would you give?

51. Why did you give this grade?

**The final series of questions deals with major issues and strategies...**

52. What are the major issues most impacting this hospital at this point in time?

53. What strategies have you developed to address these?

Thank you!

## BIBLIOGRAPHY


Aaker, David A. and Briance Mascarenhas, The need for strategic flexibility. The Journal of Business Strategy, 1984, 5 (2), 74-82.

Aldrich, H., Organization and environments. Englewood Cliffs, New Jersey: Prentice-Hall, 1979.

Alexander, Jeffrey A., Michael A. Morrisey, and Stephen M. Shortell, Effects of competition, regulation and corporatization on hospital-physician relationships. Journal of Health and Social Behavior, 1986, 27, 220-235.

Amara, Roy, J., Ian Morrison, Gregory Schmid, Looking ahead at American health care. Washington, D.C.: McGraw-Hill, 1988.

American Hospital Association, AHA Guide to the Health Care Field, Guides for 1984 through 1989, covering data from 1983 through 1988.

Applegate, Lynda M., Richard O. Mason, and Darryl Thorpe, M.D., Design of a management support system for hospital strategic planning. Journal of Medical Systems, 1986, 10 (1), 79-95.

Armstrong, J. Scott, The value of formal planning for strategic decisions: review of empirical research. Strategic Management Journal, 1982, 3, 197-211.

Arnold, Mary F., Basic concepts and crucial issues in health planning, American Journal of Public Health, 59: 1686-97, September, 1969.

Arogyaswamy, Bernard and Charles M. Byles, Organizational culture: internal and external fits. Journal of Management, 1987, 13 (4), 647-659.

Arthur Anderson and Co. and American College of Healthcare Executives, The future of healthcare: changes and choices, 1987.

_____. Health Care in the 1990s: trends and strategies, 1984.

Babbie, Earl, The practice of social research. Belmont: Wadsworth Publishing Company, 1983.

Balinga, B.R. and Brad Johnson, Analysis of an industry in transition. Health Care Strategic Management, 1986, 4 (12), 5-14.

Balsano, Armand E. and J. Bruce Ryan, The dynamic nature of financial capability, Topics in Health Care Financing, 1988, 15 (1), 9-22.

Bander, Kay W., Strategic planning: reality versus literature, Hospital and Health Services Administration, Special I, 1980: 7.

Bettinger, Cass, Use corporate culture to trigger high performance. The Journal of Business Strategy, March/April 1989, 38-42.

Beyer, Janice M. and Harrison M. Trice, How an organization's rites reveal its culture. Organizational Dynamics, Spring 1987, 5-24.

Bice, Michael O., Corporate cultures and business strategy: a health management company perspective. Hospital and Health Services Administration, July/August 1984, 64-78.

Bossidy, Lawrence A., Presentation at the Strategic Management Society, 1987.

Breindel, Charles L., Health planning processes and process documentation. Hospital and Health Services Administration, 1981, Special II, 5-18.

Brown, D.R., Community health planning; or, who will control the health care system?", American Journal of Public Health. 62:1336-1339, October, 1972.

Buller, Paul F. and Ladd Timpson, The strategic management of hospitals: toward an integrative approach. Health Care Management Review, 1986, 11 (2), 7-13.

Burnett, C. Don, Dennis P. Yeskey, and David Richardson, New roles for corporate planners in the 1980s. The Journal of Business Strategy, 1984, 4 (4), 64-68.

Calingo, Luis Maria Ragas, "Tailoring strategic planning systems design to corporate strategy: effect of situational fit on system performance." Ph.D dissertation, University of Pittsburgh, 1984.

Cambridge Research Institute, Trends affecting the U.S. health care system. Washington, D.C.: U.S. Government Printing Office, 1976.

Campbell, Donald T. and Julian C. Stanley, Experimental and quasi-experimental designs for research. Chicago: Rand McNally College Publishing Company, 1966.

Caruana, Russell and E. Thomas McHugh, Comparing ratios shows fiscal trends, Hospital Financial Management, January, 1980: 12-28.

Center for Health Services Research of the University of Southern California, Hospital planning survey: final report, funded by the American Hospital Association, 1980.

Child, John, Organizational structure, environment and performance: the role of strategic choice. Sociology, 1972 (6), 1-22.

Child, John, What determines organization performance? Organizational Dynamics, 1974, 2-18.

Choate, G. Marc, Financial ratio analysis, Hospital Progress, January 1974, 49-57, 67.

Choate, G. Marc and Kazuaki Tanaka, Using financial ratio analysis to compare hospitals' performance", Hospital Progress, December 1979, 43-58.

Christensen, H.K. and C.A. Montgomery, Corporate economic performance: diversification strategy vs. market structure, Strategic Management Journal. 1981, 2, 328-343.

Clarke, Roberta N. and Linda Shyavitz, Health care marketing: lots of talk, any action? Health Care Management Review, 1987, 12 (1), 31-36.

Clement, Jan P., Does hospital diversification improve financial outcomes?, Medical Care, October 1987, 25 (10): 988-1001.

Clement, Jan P., Corporate diversification: expectations and outcomes", Health Care Management Review, 1988, 13 (2), 7-13.

Cleverly, W.O. and Nilsen, K., Assessing financial position with 29 key ratios, Hospital Financial Management. 1980, 10 (1), 30-36.

Coile, Russell C. Jr., The new hospital: future strategies for a changing industry. Rockville, Maryland: Aspen, 1986.

Conant, Jeffrey S., Michael P. Mokwa, and Steven D. Wood, Management styles and marketing strategies: an analysis of HMOs. Health Care Management Review, 1987, 12 (4), 65-75.

Conant, Jeffrey Scott, "Strategic organizational styles and marketing management performance: an empirical policy study." Ph.D. dissertation, Arizona State University, 1986.

Cook Thomas D. and Donald T. Campbell, Quasi-experimentation: design and analysis issues for field settings. Chicago: Rand McNally College Publishing Company, 1979.

Coyne, Joseph S., Hospital performance in multihospital systems: a comparative study of system and independent hospitals", Health Services Research. 2983, 17 (4): 303-329.

Coyne, Joseph S., Measuring hospital performance in multiinstitutional organizations using financial ratios, Health Care Management Review. 1985, 10 (4):35-42.

Day, George, Gaining insights through strategy analysis. The Journal of Business Strategy, 1983, 4 (1), 51-58.

_____. Strategic market analysis and definition: an integrated approach. Strategic Management Journal, 1984, 2, 281-299.

Deal, Terrence E. and Allen A. Kennedy, Corporate cultures: the rites and rituals of corporate life. New York: Addison-Wesley, 1982.

Denison, Daniel R., Bringing corporate culture to the bottom line. Organizational Dynamics, Autumn 1984, 5-22.

Desai, Harsha B. and Charles R. Margenthaler, A framework for developing hospital strategies. Hospital and Health Services Administration, 1987, May, 235-248.

Dess, Gregory G. and Richard B. Robinson, Jr., Measuring organizational performance in the absence of objective measures: the case of the privately-held firm and conglomerate business unit. Strategic Management Journal, 1984, 5, 265-273.

Dess, Gregory G. and Donald W. Beard, Dimensions of organizational task environments. Administrative Science Quarterly, 1984, 29, 52-73.

Dess, Gregory G. and Peter S. Davis, Porter's (1980) Generic strategies as determinants of strategic group membership and organizational performance. Academy of Management Journal, 1984, 27 (3), 476-488.

Dickson, John W., Participation as a means of organizational control. Journal of Management Studies, 1981, 18 (2), 159-176.

Domanico, Lee, Strategic planning: vital for hospital long-range development. Hospital and Health Services Administration, Summer 1981, 25-50.

Donaldson, Lex, Strategy and structural adjustment to regain fit and performance: in defence of contingency theory. 1987, 24:1, 1-22.

Drucker, Peter F., The coming of the new organization. Harvard Business Review, January-February 1988, 45-53.

Dyson, R.G. and M.J. Foster, Making planning more effective. Long Range Planning, 1983, 16 (6), 68-73.

_____. The relationship of participation and effectiveness in strategic planning. Strategic Management Journal, 1982, 3, 77-88.

Fahey, Liam and H. Kurt Christensen, Evaluating the research on strategy content. 1986 Yearly Review of Management of the Journal of Management, 1986, 12 (2), 167-183.

Falkson, J.L. and H. Leavitt, Strategic planning in hospitals: a business perspective", Hospitals, 56 (August 1, 1982): 51-56.

Feld, Warren S., Organizational self-assessment: knowing you did a good job in planning. Health Care Strategic Management, 1986, June, 4-8.

Files, Laurel A., Strategy formulation and strategic planning in hospitals: application of an industrial model. Hospital and Health Services Administration, 1983, November/December, 9-20.

Finkler, Steven A., Ratio analysis: use with caution. Health Care Management Review, Spring 1982, 65-72

Foster, Lawrence W., From Darwin to now: the evolution of organizational strategies. The Journal of Business Strategy, 1983, 3 (3), 94-98.

Foster, M.J. and D.N. Foster, Assessing the effectiveness of strategic planning. Omega, The International Journal of Management Science, 1982, 10 (1), 19-23.

Friedman, Bernard and Stephen Shortell, The financial performance of selected investor-owned and not-for-profit system hospitals before and after Medicare Prospective Payment. Health Services Research, 1988, 23 (2), 237-267.

Gallagher, Jack, Quality from the top: the CEO's role in setting up corporate culture. Purchasing, January 28, 1988, 70-77.

Ginn, Gregory O. and Reuben R. McDaniel, Jr., Strategic adaptation in the hospital industry. Proceedings of the Academy of Management, August 1987, 87-90.

Ginsberg, Ari and N. Venkatraman, Contingency perspectives of organizational strategy: a critical review of the empirical research. Academy of Management Review, 1985, 10 (3), 421-434.

Gluck, Frederick W., A fresh look at strategic management. The Journal of Business Strategy, 1985, 6 (2), 4-19.

Gluck, Frederick, Stephen Kaufman, and A. Steven Walleck, The four phases of strategic management. Journal of Business Strategy, 1982, Winter, 9-25.

Goldsmith, Innovation in hospital plans. Health Care Management Review, Spring, 1983, 7-16.

Govindarajan, V. and John K. Shank, Cash Sufficiency: the missing link in strategic planning. The Journal of Business Strategy, 1986, 7 (1), 88-95.

Greaf, William D., Public hospital strategic planning: does it differ from voluntary, not-for-profit hospital strategic planning? Health Care Management Review, 1988, 13 (3), 7-14.

Green, Sebastian, Strategy, organizational culture and symbolism. Long Range Planning, 1988, 21 (4), 121-129.

Greenley, Gordon E., Effectiveness in marketing planning. Strategic Management Journal, 1983, 4, 1-10.

Gupta, Anil K., SBU strategies, corporate-SBU relations, and SBU effectiveness in strategy implementation. Academy of Management Journal, 1987, 30 (3), 477-500.

Hambrick, Donald C., Some tests of the effectiveness and functional attributes of Miles and Snow's strategic types. Academy of Management Journal, 1983, 26 (1), 5-26.

_____. Taxonomic approaches to studying strategy: some conceptual and methodological issues. Journal of Management, 1984, 10 (1), 27-41.

Hambrick, Donald C., Operationalizing the concept of business-level strategy in research. Academy of Management, 1980, 5 (4), 567-575.

Hamermesh, Richard G., Making planning strategic. Harvard Business Review, 1986, July-August, 115-120.

Hamilton, Robert D. III and Alan M. Zuckerman, Strategic planning: a balanced view of a balanced portfolio. Health Care Strategic Management, 1986, August, 17-21.

Harrell, Gilbert D. and Matthew F. Fors, Planning evolution in hospital management. Health Care Management Review, 1987, 12 (1), 9-22.

Hatten, Mary Louise, Strategic management in not-for-profit organizations. Strategic Management Journal, 1982, 3, 89-104.

Herbert, Theodore T. and Helen Deresky, Generic strategies: an empirical investigation of typology validity and strategy content. Strategic Management Journal, 1987, 8, 135-147.

Horovitz, J.H. and R.A. Thietart, Strategy, Management Design and Firm Performance. Strategic Management Journal, 1982, 3, 67-76.

Hunter, Susan S., Marketing and strategic management: integrating skills for a better hospital. Hospital and Health Services Administration, May 1987, 205-217.

Jaeger, B.J., "The Concept of Corporate Planning", Health Care Management Review, 7 (Summer 1982), 19-26.

Jauch, Lawrence R., Richard N.Osborn, and William F. Glueck, Short term financial success in large business Organizations: the environment-strategy connection. Strategic Management Journal, 1980, 1, 49-63.

Javidan, Mansour, Perceived attributes of planning staff effectiveness. Journal of Management Studies, 1987, 24 (3), 295-312.

Johnson, Brad, Developing strategic planning systems for health care organizations. Health Care Strategic Management, 1986, 4 (11), 4-8.

Katz, Gerald, Leslie Zavodnick and Elaine Makezin, Strategic planning in a restrictive and competitive environment. Health Care Management Review, Fall 1983, 7-12.

Kendall, Maurice, Multivariate Analysis, Second Edition, New York: MacMillan Publishing Co., 1980: 145-169.

Kennedy, P.J., "How to Do Strategic Planning", Trustee, 34:17, Aug, 1981.

Kimberly, John R. and Edward J. Zajac, Strategic adaptation in health care organizations: implications for theory and research. Medical Care Review, 1985, 42 (2), 267-302.

King, William R., Evaluating strategic planning systems. Strategic Management Journal, 1983, 4, 263-277. Kropf, Roger and Seth B.

King, William R. and David I Cleland, Strategic Planning and Policy. New York: Van Nostrand Reinhold Company, 1978.

Krystynak, L. "Prospective Payment for Capital: The Financial Nature of Capital Allowances", Healthcare Financial Management, 37 (10): 60-76, October 1983.

Langley, Ann, The roles of formal strategic planning. Long Range Planning, 1988, 21 (3), 40-50.

Lenz, R.T., "Determinants" of Organizational Performance: an Inter disciplinary Review. Strategic Management Journal, 1981, 2, 131-154.

Leontiades, Milton, A diagnostic framework for planning. Strategic Management Journal, 1983, 4, 11-26.

_____. Strategies for diversification and change. Boston: Little Brown, 1980.

Leontiades, Milton and Ahmet Tezel, Planning perceptions and planning results. Strategic Management Journal, 1980, 1, 65-75.

Littlejohn, Stephen E., Competition and cooperation: new trends in corporate public issue identification and resolution. California Management Review, 1986, 29 (1), 109-121.

Lyles, Marjorie A. and R.T. Lenz, Managing the planning process: a field study of the human side of planning. Strategic Management Journal, 1982, 3, 105-118.

Maccoby, Michael, The gamesman. New York: Simon and Schuster, 1976.

Mahon, John F. and Edwin A. Murray, Jr., Strategic planning for regulated companies. Strategic Management Journal, 1981, 2, 251-262.

Masoud, Salah M., "Design of strategic planning systems in large corporations: a contingency approach." Ph.D. dissertation, University of Arizona, 1986.

McCue, Michael J., "Financial Assessment of Small Multihospital Systems", Hospital and Health Services Administration, May 1987, 171-189.

McDevitt, Paul, Learning by doing: strategic marketing management in hospitals. Health Care Management Review, 1987, 12 (1), 23-30.

McGinnis Michael A. and M. Robert Ackelsberg, Effective innovation management: missing link in strategic planning?, The Journal of Business Strategy, 1983, 4 (1), 59-66.

McKee, Daryl, P. "Rajan" Varadarajan and John Vassar, The marketing planning orientation of hospitals: an empirical study. Journal of Health Care Marketing, 1986, 6 (4), 50-60.

Melum, M.M., "Ten Lessons Point the Way Toward Successful Hospital Planning", Hospitals, Dec. 1, 1981, 55:58.

Michael, Jerrold M.,George Spatafore, and Edward R. Williams, "Approach to Health Planning", Public Health Reports, 82: 1063-70, Dec 1970.

Milch, Robert Austin, Product-market differentiation: a strategic planning model for community hospitals. Health Care Management Review, Spring, 1980, 7-16.

Miles, R.E. and C.C. Snow, Organization Strategy, Structure, and Process. New York: McGraw-Hill, 1978.

Miles, R.E., C.C. Snow and J. Pfeffer, "Organization Environment: Concepts and Issues", Industrial Relations, 13: 1974, 244-264.

Miller, Danny, Strategy Making and Structure: Analysis and Implications for Performance, Academy of Management Journal, 1987, 30, 7-32.

Mintzberg, Henry, Strategy-making in Three Modes. California Management Review, 1973, 16 (2), 44-53.

_____. Patterns in strategy formation. Management Science, 1978, 24 (9), 934-948.

Mintzberg, Henry and James A. Waters, Tracking strategy in an entrepreneurial firm. Academy of Management Journal 1982, 25 (3), 465-499.

Mullen, Thomas P. and Stephen A. Sturnpf, The effect of management styles on strategic planning. The Journal of Business Strategy, 1987, 7(3), 60-75.

Nie, Norman H. , C. Hadlai Hull, Jean G. Jenkins, Karin Steinbrenner, and Dale H. Bent, SPSS: Statistical Package for the Social Sciences. Second Edition. New York: McGraw- Hill Book Company, 1975.

Nordstrom, Richard D. and Bruce H. Allen, Cultural change versus behavioral change. Health Care Management Review, 1987, 12 (2), 43-49.

Nutt, Paul C., A strategic planning network for non-profit organizations. Strategic Management Journal, 1984, 5, 57-75.

Paley, M.A., "Areawide Planning: Annual Administrative Review", Hospitals, 42: 33-36, April 1, 1968.

Patton, Michael Quinn, Qualitative Evaluation Methods. Beverly Hills: Sage Publications, 1980.

Pauly, Mark V., "Returns on Equity for Not-For-Profit Hospitals", Health Services Research. 21:1 (April 1986):1-28.

Pava, Calvin, New strategies of systems change: reclaiming nonsynoptic methods. Human Relations, 1986, 39 (7),615-633.

Peters, Joseph P., A Srategic Planning Process for Hospitals, American Hospital Publishing, Inc., 1985.

Porter, Michael E., "The Structure Within Industries and Companies' Performance", Review of Economics and Statistics, LXI, May 1979: 214-227.

_____. Competitive Strategy: Techniques for Analyzing Industries and Competitors. New York: The Free Press, 1980.

Quinn, J.B., Strategies for Change: Logical Incrementalism. Homewood, Ill.: Irwin, 1980.

Ramanujam, Vasudevan and N. Venkatraman, Planning system characteristics and planning effectiveness. Strategic Management Journal, 1987, 8, 453-468.

Ramanujam, Vasudevan, N. Venkatraman, and John C. Camillus, Multi-objective assessment of effectiveness of strategic planning: a discriminant analysis approach. Academy of Management Journal, 1986, 29 (2), 347-372.

Renn, Steven C., Carl J. Schramm, J. Michael Watt and Robert A. Derzon, "The Effects of Ownership and System Affiliation on the Economic Performance of Hospitals", Inquiry. 22:219-236 (Fall 1985).

Rhyne, Lawrence C., The Relationship of Strategic Planning to Financial Performance, Strategic Management Journal, 1986, 7, 423-436.

Rumelt, Richard P., Strategy, Structure, and Economic Performance. Boston: Graduate School of Business Administration, Harvard University, 1974.

_____. "Diversification Strategy and Profitability", Strategic Management Journal, 1982, 3, 359-369.

SAS Institute, Inc., SLS User's Guide: Statistics. Version 5 Edition. Cary, N.C.: SAS Institute, Inc., 1985.

Schein, Edgar H., Organizational culture and leadership. San Francisco: Jossey-Bass, 1988.

Schlosser, Jack R., Strategies for achieving sustained competitive advantage. Health Care Strategic Management, 1987, 5 (6), 9-13.

Scholz, Christian, Corporate culture and strategy--the problem of strategic fit. Long Range Planning, 1987, 20 (4), 78-87.

Scotti, Dennis J., Organizing for strategic planning in smaller not-for-profit community hospitals. Hospital and Health Services Administration, July/August, 1984, 50-63.

Shortell, Stephen M., The evolution of hospital systems: unfulfilled promises and self-fulfilling prophesies. Medical Care Review, 1988, 45 (2), 177-214.

_____. The medical staff of the future: replanting the garden. Frontiers of Health Services Management, 1985, 1 (3), 3-48.

Shortell, Stephen M., Ellen M. Morrison, and Bernard Friedman, Strategic choices for America's hospitals: managing change in turbulent times. San Francisco: Jossey-Bass, 1990.

Shortell, Stephen M., Ellen M. Morrison, Bernard S. Friedman, Susan L. Hughes, and Edward F.X. Hughes, Executive Summary from "The Strategy, Structure, and Performance of Multi-Hospital Systems", Center for Health Services and Policy Research, J.L. Kellogg Graduate School of Management, Northwestern University, Chicago, December 31, 1987.

Shortell, Stephen M, Ellen M. Morrison, and Shelley Robbins, Strategy making in health care organizations: a framework and agenda for research. Medical Care Review, 1985, 42(2), 219-265.

Shortell, Stephen and Raymond Mickus, Standing firm on shaky ground. Healthcare Forum, January/February 1986, 55-58.

Shrader, Charles B., Lew Taylor, and Dan R. Dalton, Strategic planning and organizational performance: a critical appraisal. Journal of Management, 1984, 10 (2), 49-171.

Silverzweig, Stan and Robert F. Allen, Changing the corporate culture. Sloan Management Review, Spring 1976, 33-49.

Smith, David P., One more time: what do we mean by strategic management? Hospital and Health Services Administration, 1987, May, 219-233.

Smith, Peter B. and Mark F. Peterson, Leadership, organizations and culture. London: Sage, 1989.

Snedecor, George W. and William G. Cochran, Statistical Methods. Seventh Edition. Ames: The Iowa State University Press, 1980.

Snow, Charles C. and Donald C. Hambrick, Measuring organizational strategies: some theoretical and methodological problems. Academy of Management Review, 1980, 5 (4), 527-538.

Society for Healthcare Planning and Marketing of the American Hospital Association, Strategic Action Plan, 1988-1989. Steiner, George A., Harry Kunin and Elsa Kunin, Formal strategic planning in the United States today. Long Range Planning, 1983, 16 (3), 12-17.

_____. The practice of planning: results from a national survey of the health care field, 1990.

Starr, Paul, The social transformation of American medicine. New York: Basic Books, Inc., 1982.

Stevens, James, Applied Multivariate Statistics for the Social Sciences. London: Laurence Erlbaum Associates, Publishers, 1986: 232-260.

Swett, Jonathan N., Where is hospital planning headed? Hospital and health services administration, 1981, Spring, 5-25.

Thakur, Manab, Planning for hospitals: no focus, no strategy. Long Range Planning, 1985, 18 (6), 77-83.

Thieme, E.W., T.E. Wilson, and D.M. Long, "Strategic Planning in Hospitals Under Regulation", Health Care Management Review, 6 (Spring 1982): 35-43.

Thompson, Frank J., Health policy and the bureaucracy: politics and implementation. Cambridge: MIT Press, 1981.

Tuckman, Howard P. and Cyril F. Change, Competitive conditions and hospital strategies: a Memphis case study. Journal of Health Care Marketing, 1986, 6 (4), 34-43.

Vraciu, Robert A., Hospital strategies for the eighties: a mid-decade look. Health Care Management Review, 1985, 10 (4), 9-19.

U.S. Department of Commerce. Bureau of the Census, State and Metropolitan Area Data Book, 1986.

U.S. Public Health Service, Health, United States, 1976-1977. Washington, D.C., 1977.

Wallach, Ellen J., Individuals and organizations: the cultural match. Training and Development Journal, February 1983, 29-36.

Webber, James B., Planning: ideas outpace reality of hospital strategic planning, but do they pinpoint the future? Hospitals, April 1, 1982, 68-71.

Webber, James B. and Martha A. Dula, Effective planning committees for hospitals. Harvard Business Review, May-June 1974, 133-142.

Webber, James B. and Joseph P. Peters, Strategic Thinking: New Frontiers for Hospital Management, American Hospital Publishing, Inc., 1983.

Weil, P.A., "Job Turnover of CEOs in Teaching and Nonteaching Hospitals", Academy of Medicine, 1990 Jan.; 65 (1): 1-7.

Weintraub, Arthur E., "Health Planning Programs: the Past Suggests the Future", Health Care Strategic Management. 1986, 4 (12), 15-24.

Wesbury, S.A. and A.H. Williams, III, and M.D. Caver, "Hospital CEO Turnover: Implications for Trustees", Trustee, 1989 Apr; 42 (4): 10-11.

Wheelwright, Steven C., Strategy, management and strategic planning approaches. Interfaces, 1984, 14, 19-33.

Williams, Albert P., Grace M. Carter, Glenn T. Hammons, Dennis Pointer, Managing for survival: how successful academic medical center cope with harsh environments. Santa Monica: RAND, 1987. The research described in this report was sponsored by Public Health Service Contract 282-82-0071, Task No. 1, from the Office of the Assistant Secretary for Health, U.S. Department of Health and Human Services.

Wilson, C.N. and A.C. Meadors, "Hospital Chief Executive Turnover", Hospital Topics, 1990 Winter, 68 (1): 35-9.

Wilson, J. Tylee, Strategic planning at R.J. Reynolds industries. The Journal of Business Strategy, 1985, 6 (2), 22-28.

Wood, D. Robley Jr., The Impact of Comprehensive Planning on Financial Performance, Academy of Management Journal, 1979, 22:3, 516-526.

Wood, D. Robley Jr. and R. Lawrence LaForge, The Impact of Comprehensive Planning on Financial Performance. Academy of Management Journal, 1979, 22 (3), 516-526.

_____. Toward the development of a planning scale: an example from the banking industry. Strategic Management Journal, 1981, 2, 209-216.

Wrigley, L., "Divisional Autonomy and Diversification". Unpublished doctoral thesis, Harvard Business School, 1970.

Yip, George S., Who needs strategic planning? Journal of Business Strategy, 1985, 6 (2), 30-42.

Young, David W., Financial Control in Health Care: A Managerial Perspective, Rockville, Maryland: Aspen Publication, 1984.

Zallocco, Ronald, Benoy Joseph, and Harvey Doremus, Strategic market planning for hospitals. Journal of Health Care Marketing, 1984, 4 (2), 19-28.

Zallocco, Ronald, Benoy Joseph and Nancy Furey, Do hospitals practice strategic planning? An Empirical Study. Health Care Strategic Management, 1984, February, 16-20.